Nature on the doorstep
Nature on the doorstep
The relationship between protected natural areas and residential activity in the European countryside

Natuur bij huis
De relatie tussen beschermde natuurgebieden en residentiële activiteiten in het Europese platteland

Proefschrift ter verkrijging van de graad van doctor aan de Universiteit Utrecht op gezag van de Rector Magnificus Prof. Dr. W.H. Gispen ingevolge het besluit van het College voor Promoties in het openbaar te verdedigen op vrijdag 2 november 2001 in de ochtend om 10.30 uur

door

Berien Sjamkea Elbersen

Geboren op 22 september 1966 te Enschede
Several years have passed since I started this study. I’m glad it’s finished and I’m proud of the result. It took me much longer than the four years that are usually reserved for doing such work. I think that my optimistic attitude should be blamed for this. Firstly, for thinking that I could do fieldwork in three different countries, analyse the results and write a whole book within this four year period. Secondly, for thinking that I could combine a full time job with writing a book. I look back at it and see it as a very satisfying and exiting phase in my life in which I have matured as a geographical researcher and obtained many valuable contacts and friends.

Until I applied for this PhD position in 1993, I had never had a wish to become a doctor in the field of Geography. During my study and first two positions at the Landbouw Economisch Instituut (LEI) and STOGO, I had however become conscious of the interest I had in the countryside and especially of the need to get a better understanding of the mechanisms that influence the threatening changes in these beautiful green spaces. I think my father has always played a very important role in awaking my interest in spaces where humans and nature interact so closely. On all our trips to the many Dutch and foreign places we made, he learned us to observe. My farther explained us about the natural, socio-economic and historical processes that shaped the landscape and that influenced human behaviour in space. Applying for the PhD position in which the relationship between protected nature and residential activities had to be investigated was therefore no difficult choice for me.

The first person I should thank is Paulus Huigen who has been the main contributor to this book and my inspiring supervisor. He designed the study and helped me reshape it and adapt it to my ideas and preferences. When I started the study I knew it would become a European comparative work in which Spain at least should become one of the study countries. Paulus was also in favour of putting the study in a European context, but feared that extensive field work in other countries, besides the Netherlands, would take too much of my research time. He was right! I do not regret however being stubborn, because I would have never liked to miss the fieldwork periods in both Doñana and Northumberland. I learned a lot of it, met many interesting and warm people, and the international comparison is probably one of the strong points of this study. Paulus always supported me in the ideas I wanted to elaborate. I thank him a lot for the many things he taught me, the honesty and the space he gave me to discover the several paths, including some blind alleys, I had to take. Thank you for keeping me focussed, but letting me sometimes diverge from the main road on those places where I could not suppress my curiosity or stick to the main research object.

I also want to thank Ton Kreukels for the important and much appreciated support and supervision. He always surprised me in being so well able to indicate what the weak and strong points were in the texts I gave him to read. What I most admired in his supervision was the diplomatic way in which he combined compliments and sharp criticism. Every time it inspired me to continue with renewed energy. Ton was also very good in chairing and structuring the meetings in which the four of us discussed my research steps and different texts.

Frank van Dam has given me the most important support in the last year of my PhD. He became my immediate supervisor when Paulus Huigen left Utrecht to become a Professor at Groningen University. Frank took his job most seriously and provided me with solid and honest critique. He always read my texts very thoroughly and indicated in a very detailed way what needed to be changed. Although his critique sometimes made me insecure, Frank enabled me to satisfactory finish off the 8 chapters of this book. Frank, thank you for being such a great and reliable help, especially in the last phase of rounding off my thesis.

During my field work in the Netherlands, England and Spain I worked together with many students, interviewed many key persons and obtained support of several people working at the University of Newcastle en Sevilla. I especially thank Tony Champion who was very helpful in setting up the fieldwork in Northumberland. María-José Prados spent many days working together with me on my Doñana research and explained me many things about the Andalucian culture. We became friends and colleagues and have been involved in several joint research activities since than. I hope we will continue working together in the future.

I thank the Faculty of Geographical Sciences, URU and NETHUR for giving me the opportunity to do this research and for providing the resources and the working space, also in the period when I had already started a
job in Wageningen. At the Faculty there were many other people that have become important to me as they added to the pleasant atmosphere I could work in. Alice de Boer and Irina van Aalst have become friends when I was working at the University. We still see each other regularly and I hope we will continue to have the fits of laughter we always have. I also thank Anton Smets and Herman Kok for the interesting conversations and the extreme energetic behaviour they both displayed and that stimulated me to also work harder. Ton van Rietbergen, Alfonds de Vocht, Frank Bonnerman and Frank van Dam were excellent company during lunch and in the pub with their often pessimistic world views that made me laugh but also look more profoundly at important and futile matters of life. I also want to thank the good company and advice of Veronique Schutjens, Ronald van Kempen, Claartje Mulder, Tejo Spit and many others at the Faculty of Geographical Sciences.

After more than 4 years working on my PhD I started my present job as a researcher at Alterra in Wageningen. This new job took very much of my time and it proved very difficult to combine the job with finishing the PhD. The head of my department, Peter Smeets, and my direct colleagues were however very considerate and enabled me to make special arrangements to obtain unpaid leave or use my saved up holidays to work longer periods on the thesis. This year they made it possible for me to stay away for 5 months. Other people had to take over my tasks. I want to thank all my colleagues for this, especially Janneke Roos and Marta Perez Soba, who worked very hard to keep our preferred ELPEN project going.

Writing in English is not always easy and both Bob and Freeda Bunce have been extremely helpful in editing the long chapters of ‘Denglish’. They taught me many new English words and phrases and corrected me in an effective and subtle way. Bob has improved my understanding of the English but also of the English and Spanish landscapes and processes of change in them. He spent many hours correcting my last chapters in the period before handing in the text to the printer and I think I still owe him many beers to thank him for the great job he did.

Gérard van Betlehem, Rob Kromwijk, Gerrit van Omme and Margot Stoete have produced the tables, figures and layout of this thesis and did a very good job.

My parents and grandparents have always encouraged me strongly to invest in my study and personal development and were able to make me feel proud and certain about myself. Without their support I would have never finished this book and probably would not have even have started it. I’m very sad that two women who mean extremely much to me and who have showed me what perseverance is, are not able to celebrate this important milestone with me. They were my mother and my aunt Berien. My mother insisted that I had to leave for England to do my fieldwork, at a moment when she had just heart that she did not have much time left. She even came to visit me in Northumberland and I cherish the beautiful moment when we visited one of the Roman fords near Hadrian’s Wall. My aunt Berien was the sweetest and most optimistic person I have ever known in my life. When I visited her a couple of months ago, she ‘instructed’ me not to let myself be distracted by concerns about her. In turn she promised me that she would do every thing to be present at my defence on the second of November, but unfortunately she lost the battle.

Ronald, my partner, deserves many words of thanks for the support he gave me in this last year. He had to accept that I needed to invest a lot of spare time in working on my thesis. He was able to cheer me up and reminded me regularly that finishing my thesis on the short run should be my main priority, but also, that writing a thesis is not the most important thing in the world.
## Contents

Preface .............................................................................................................................................. 5  
List of Tables ..................................................................................................................................... 10  
List of Figures ..................................................................................................................................... 13  
List of Boxes ....................................................................................................................................... 14  
List of Photos ...................................................................................................................................... 14  
List of Annexes ................................................................................................................................... 14

### 1 Introduction

1.1 Social and scientific relevance and research objective ................................................................ 15  
1.2 The research approach .................................................................................................................. 15  
1.3 Theoretical considerations ............................................................................................................ 17  
1.4 Central research questions and structure of the study .................................................................. 23

### 2 Rural change in The Netherlands, the United Kingdom and Spain

2.1 Introduction ..................................................................................................................................... 27  
2.2 The changing countryside ............................................................................................................. 27  
2.2.1 Trends and changes in rural areas .............................................................................................. 29  
2.2.2 The rural restructuring process ................................................................................................. 30  
2.2.3 Rural policies ............................................................................................................................ 31  
2.3 Post-1945 changes in agriculture and land use ........................................................................... 34  
2.4 Post-1945 population dynamics in rural areas ............................................................................ 35  
2.5 Rural policies in a differentiated countryside .............................................................................. 42  
2.5.1 Rural policy in the European Union ........................................................................................... 49  
2.5.2 Rural policy in The Netherlands ............................................................................................... 49  
2.5.3 Rural policy in the United Kingdom ......................................................................................... 50  
2.5.4 Rural policy in Spain ................................................................................................................ 55  
2.6 Summary and conclusion ............................................................................................................. 58

### 3 Nature conservation and rural areas

3.1 Introduction ..................................................................................................................................... 65  
3.2 The concept of nature .................................................................................................................... 65  
3.3 Protected nature ........................................................................................................................... 71  
3.3.1 Types of protected nature ......................................................................................................... 72  
3.3.2 Establishment and management of protected natural areas .................................................... 74  
3.4 The conservation of nature and rural policy .............................................................................. 76  
3.4.1 Nature conservation in The Netherlands .................................................................................. 76  
3.4.2 Nature conservation in the UK .................................................................................................. 83  
3.4.3 Nature conservation in Spain ................................................................................................... 87  
3.5 Nature and other activities in rural areas ..................................................................................... 89  
3.5.1 Nature and residential activities ............................................................................................... 90  
3.5.2 Nature and economic activities ............................................................................................... 93  
3.5.3 Nature and tourism .................................................................................................................. 93  
3.6 Summary and conclusion ............................................................................................................ 96
7.3 Protected nature and recreational use
7.4 Protected nature and employment
7.4.1 Protected nature and employment in The Netherlands
7.4.2 Protected nature and employment in Northumberland
7.4.3 Protected nature and employment in Doñana
7.5 The constraining influence of protected nature on economic development
7.5.1 Conflicts and the National Park Northumberland
7.5.2 Conflicts and the protected territory of Doñana
7.6 Summary and conclusion

8 Conclusion and recommendations
8.1 General findings
8.2 Data collection and research approach
8.3 Protected natural areas and population development
8.4 Protected natural areas and residential choice
8.5 Appreciation of protected nature in the residential environment: perceived advantages and disadvantages
8.6 Functional changes in rural areas and policy implications
8.7 Further research?

Dutch summary
References
Annexes
2.1 General characteristics of the three research countries and the EU-15
2.2 Rural restructuring and land use changes, some key statistics
2.3 Land use changes in The Netherlands between 1950 and 1996
2.4 Population change per 1000 inhabitants, 1940-1991 in Spain’s rural and urban areas

3.1 Public interest and participation in environmental organisations in Western-Europe in 1995 and Gross Domestic Product (GDP) and urbanisation level
3.2 Protected areas in the world and in the three case study countries according to the IUCN management type classification in 1997
3.3 Four models of the relationships between protected natural areas and local population groups according to Zube and Bush (1990) applied to the situation in the five case study areas of this study
3.4 Main protected area designations in The Netherlands (situation 1997)
3.5 National Parks in The Netherlands (situation 1999)
3.6 Main protected area designations in England (situation 1997)
3.7 National Parks in England and Wales (situation 2000)
3.8 Protected area designations in Andalucía
3.9 The significance attached to specific characteristics of the residential environment by potential residents of VINEX(1) locations in The Netherlands

4.1 Main characteristics of the regional context of the five case study area
4.2 Main characteristics of the five protected areas

5.1 Development of number of households in Dwingelderveld and reference areas
5.2 Development of housing stock in Dwingelderveld and reference areas
5.3 Migration and natural change in Dwingelderveld and reference areas
5.4 Development of number of households in Weerribben and reference areas
5.5 Development of housing stock Weerribben and reference areas
5.6 Migration and natural change Weerribben and reference areas
5.7 Development of number of households in Lauwersmeer and reference areas
5.8 Development of housing stock in Lauwersmeer and reference areas
5.9 Migration and natural change in Lauwersmeer and reference areas
5.10 Development of number of households in Northumberland and reference areas
5.11 Development of housing stock in Northumberland and reference areas
5.12 Migration and natural change in Northumberland and reference areas
5.13 Development of housing stock in Doñana and reference areas
5.14 Relative distribution of housing stock (first and second houses) in Doñana and reference areas
5.15 Migration and natural change in Doñana and reference areas
5.16 Expected characteristics of the newly settled households and expected dynamics in residential activities and population composition in or close to protected natural areas in remote rural locations
5.17 Demographic and socio-economic characteristics of recent and autochthonous residents in Dwingelderveld and in reference areas
5.18 Work and income organisation characteristics for recent and autochthonous residents in Dwingelderveld and in reference areas
5.19 Demographic and socio-economic characteristics for recent and autochthonous residents in Weerribben and in reference areas
5.20 Work and income organisation characteristics for recent and autochthonous residents in Weerribben and in reference areas
5.21 Demographic and socio-economic characteristics for recent and autochthonous residents in Lauwersmeer and in reference areas
5.22 Work and income organisation characteristics for recent and autochthonous residents in Lauwersmeer and in reference areas
5.23 Demographic and socio-economic characteristics for recent and autochthonous residents in Northumberland and in reference areas
5.24 Work and income organisation characteristics for recent and autochthonous residents in Northumberland and in reference areas
5.25 Demographic and socio-economic characteristics for recent and autochthonous and second home residents in Doñana and in reference areas
5.26 Work and income organisation characteristics for recent, autochthonous and second home residents in Doñana and in reference areas

6.1 Assumptions on the residential choice process in the five case study areas
6.2 Ties of second home residents with area of Doñana
6.3 Relative number of incomers that mentioned a disadvantage of their former place of residence
6.4 Stated disadvantages of the former place of residence in the Dutch case study areas
6.5 Stated disadvantages of the former place of residence in Northumberland
6.6 Ranking of the importance of the characteristics of the dwelling and the residential environment in the residential choice process
6.7 The two most important reasons to choose the case study area as a new place of residence
6.8 The two most important reasons to choose the case study area as a new place of residence
6.9 The two most important reasons to choose the case study area as a new place of first and second home residence
6.10 The two most important reasons to choose the present dwelling
6.11 The two most important reasons to choose the present dwelling
6.12 The two most important reasons to choose the present dwelling as first or second home

7.1 The two most important reasons for residential satisfaction
7.2 The two most important reasons to find it pleasant to live near a protected natural area
7.3 Average level of individual preference for presence of nature in the direct living environment as deliberated against the nearby presence of certain services
7.4 The two most important reasons for residential satisfaction
7.5 The two most important reasons for being unsatisfied with the residential environment
7.6 The two most important reasons for finding it pleasant to live near a protected natural area
7.7 The two most important reasons to find it unpleasant to live near a protected natural area
7.8 Average level of individual preference for presence of nature in the direct living environment as deliberated against the nearby presence of certain services
7.9 The two most important reasons for residential satisfaction
7.10 The two most important reasons to find it pleasant to live near a protected natural area
7.11 Average level of individual preference for presence of nature in the direct living environment as deliberated against another typical feature of the region
7.12 Visitor frequency to the protected natural areas (on average in last year)
7.13 Answer to the question whether the presence of the Northumberland National Park stimulates or restrains the local economy
7.14 Relative distribution over motivations to think that the presence of the Northumberland National Park stimulates the local economy
7.15 Motivations to think that the presence of the Northumberland National Park restrains the local economy
7.16 Relative distribution over answers to the question whether the presence of the Doñana protected territory stimulates or restrains the local economy
7.17 Relative distribution over motivations to think that the presence of the Doñana protected territory stimulates the local economy
7.18 Motivations to think that the presence of the Doñana protected territory restrains the local economy
7.19 Answers to the question whether the government takes enough measures to compensate for the restraining influence of the protected natural area on the local economy
7.20 The two most important measures to be taken by the government to compensate for restraining influence of the protected area of Doñana according to local population
7.21 Evaluation of restrained influence of the protected area of Doñana on housing construction in the area
7.22 Relative distribution over answer categories of most important reason to see the restraining influence of the protected natural area on construction activity as positive
7.23 Relative proportion of people that considers itself pro- or anti-Doñana or not anti-nor pro-Doñana
Figures

1.1 Location of five case study areas within Europe
1.2 Residential choice behaviour within the context of societal changes and functional changes in rural areas
1.3 Residential choice in relation to the presence of protected natural areas within the context of societal changes and functional changes in rural areas
1.4 Structure of the study

2.1 Annual population growth in rural and non-rural areas in the Netherlands 1973-1994
2.2 Relevant Policy documents in The Netherlands
2.3 The 17 autonomous regions (Autonomías) of Spain

3.1 Commulative growth of the world’s protected areas 1900-1990
3.2 National Parks in The Netherlands (situation 1999)
3.3 National Parks in England (situation 2000)
3.4 National Parks (Parques Nacionales) and Natural Parks (Parques Naturales) in Andalucía (situation 1996)
3.5 The tourism life cycle

4.1 Location of the three case study areas in The Netherlands
4.2 Dwingelderveld National Park
4.3 Weerribben National Park
4.4 Lauwersmeer protected natural area
4.5 Northumberland National Park
4.6 Doñana National Park and Entorno Park

5.1 Population development in Dwingelderveld and reference areas
5.2 Population development in Weerribben and reference areas
5.3 Population development in Lauwersmeer and reference areas
5.4 Population development in Northumberland and reference areas
5.5 Population development in Doñana and reference areas
5.6 Representation of way specific household groups that are more than average attracted to protected natural areas overlap

6.1 Factors involved in the residential choice process
6.2 Ties with present place of residence
6.3 Former places of residence of residents of the Dwingelderveld area
6.4 Former places of residence of residents of the Weerribben area
6.5 Former places of residence of residents of the Lauwersmeer area
6.6 Former places of residence of residents of the Northumberland area
6.7 Former places of residence of permanent residents of the Doñana area
6.8 Permanent places of residence of second home residents of the Doñana area
6.9 Distribution of residents over migration distance categories
6.10 Urbanisation level of former place of residence for incomers and locals
6.11 OPCS categorisation* of former place of residence of incomers and locals in the Northumberland case study area
Boxes

2.1 Characteristics of rural areas that attract residential activities under contemporary modes of regulation

3.1 Definitions of the IUCN Protected Area Management Categories
3.2 Benefits and negative impacts from tourism

Photos

4.1 Typical landscape in Dwingelderveld; open moorland
4.2 Typical farmhouse in Dwingelderveld converted into residential dwelling
4.3 Bridle and biking paths over the moorland in the Dwingelderveld
4.4 View of reed land in Weerribben
4.5 Reed harvesting in Weerribben
4.6 Typical wetland landscape in Lauwersmeer
4.7 Recreational houses and sailing in Lauwersmeer
4.8 Extensive grazing by horses in wetlands of Lauwersmeer
4.9 View on Hadrian’s Wall, southern part of Northumberland National Park
4.10 The Cheviots in Northumberland National Park
4.11 Entry to Otterburn military training area in Northumberland National Park
4.12 View on flamingos from El Rocio, Doñana
4.13 Guided visit to Doñana National Park
4.14 Typical pine tree park landscape in Doñana Entorno Park

Annexes

1 Institutional and legal framework of government interference in The Netherlands, the UK and Spain
2 Main characteristics of the post 1945 rural development processes in the Netherlands, the UK and Spain
3 Main characteristics of protected nature in The Netherlands, the UK and Spain
4 Justification of the primary data collection: representativity, response, non-response and weighing factors
5 The questionnaire
6 Results of the primary data analysis
Introduction

1.1 Social and scientific relevance and research objective

The visible features of the countryside and the so-called charm of country life have been increasingly 'commodified' in their various ways by urban consumers, advertisers and environmental experts as desirable places for first homes, retirement living, second homes, recreation, conservation or delineating national parks and areas of special ecological worth.

(Clout, 1993, p. 2)

The above quotation identifies the issues central to this study. It indicates that the presence of protected nature and residential use of rural areas are playing an increasingly important role in the 'commodification' of rural areas. Since 1945, rural areas of Western Europe have been losing their relatively remote position and have increasingly been integrated into urban society. Changes have occurred in the roles played by rural areas, based on localised activities. In some instances a decline in the importance of agriculture and a rise of residential activities was the most important functional change: other areas showed an increase in nature conservation at the expense of agriculture. The most common change overall has been 'commodification' of the countryside; which means that its specific characteristics have become economic 'commodities', for which an increasing demand has evolved (see e.g. Marsden et al., 1990 and Cloke & Goodwin, 1992). One of the signs of this 'commodification' is the increased use of the countryside for consumer activities, such as residence and nature conservation. This study investigates whether there is a relationship between these two. More specifically it will concentrate on the ability of protected natural areas to attract new residential activity to rural areas and on the role they play in the enhancement of the quality of life of local residents.

The expansion of areas designated for protection is an expression of the growing political and public interest in the natural environment and the conservation of nature, from which follows the focus on protected nature. Rural areas are increasingly attracting first or second home residents, which is the reason for the residential focus in this study. There is an increasing recognition that conservation of natural areas cannot work effectively unless there is consultation with local population groups and their interests are taken into account (see e.g. Olwig & Olwig, 1979; Sadler, 1989; Rao & Geisler, 1990 and Wells et al., 1992), therefore it is relevant to carry out a combined study of protected nature and its relationship with its associated communities.

The increase in protected nature can be illustrated by figures produced by the World Conservation Monitoring Centre (WCMC, 2000). Between 1993 and 1997 the area of protected sites increased from 3.9 million km² to a total of 13.2 million km². One third of this increase can be attributed to the designation of newly protected sites, while the other two thirds result from changes in definition and the inclusion of a new type of a designated area category. A major stimulus to political action for environmental conservation came from the publication of the Brundtland report 'Our common future' (WCED, 1987). This report advocates that economic growth and conservation of the environment can better be combined through policies of 'sustainable development'. Consequently, in rural policy, the involvement of environmental considerations have become a central focus, and many national and international conservation policy instruments have been developed (e.g. the World Heritage Convention, 1978; the European Union (EU) Habitat Directive, 1992 and the Biodiversity Convention, 1993). This is particularly true of the rural policy of most western European countries, the USA, Canada, Australia and New Zealand. According to Harper (1993, p. 4) ‘it is now politically and socially acceptable to be ‘green’, indeed almost unacceptable not to be seen to be so’. At the same time the public awareness of the importance of protecting the natural environment, has also steadily increased. This can be illustrated by the growing number of members of conservation organisations in many countries, e.g. in The Netherlands, where the members of the biggest nature conservation organisation Natuurmonumenten increased from 259,000 in 1980 to 900,000 in 1998 (Natuurmonumenten, 1999) and in the UK, where membership of the National Trust increased from 1 million in 1980 to 2.4 million in 1997 (National Trust, 1999).

Phillips (1996), Chairman of the Commission on National Parks and Protected Areas of the International Union
for the Conservation of Nature (IUCN), explains the recent upsurge of environmental and green political and public thinking by two factors. In the first place, it is a ‘response to the serious loss of biodiversity, and the erosion of habitats and landscapes’; in the second place, he claims that ‘the surplus agricultural capacity creates opportunities for restoration’. In the EU for example, the expectations are that less land will be needed for agricultural production (Bischoff & Jongman, 1993) and the possibilities for using surplus agricultural land for the rehabilitation and restoration of nature are therefore expected to increase. The growing attention paid to the restoration and rehabilitation of nature has caused the EU to set up the Natura 2000 network, which is a Europe-wide network of protected sites. With the setting up of the Habitats Directive in 1992, all the countries of the EU have committed themselves to take measures to create this ecological network.

The increased use of rural areas for housing has become widespread in most rural areas of western, urbanised countries. However, this is a relatively recent phenomenon, as many rural areas in Western European countries experienced rural depopulation until the 1960s. After the Second World War, the rural depopulation process continued, although signs of a reversal of this movement gradually occurred, especially near to economic and urban concentration areas. The developments in The Netherlands, England and Spain, the three research countries of this study, also illustrate this. According to Lewis (1992), a clear population de-concentration process was already apparent in England in the 1960s and 1970s. People started to move out to rural areas, and even to places remote from daily urban systems. In the 1980s the rural areas of England started to depopulate again, but Champion (1998) indicates that this rural migration of the eighties was ephemeral, as the loss seems to turn into a population gain for the 1990s. In The Netherlands the population de-concentration process started by the end of the 1960s, but was confined only to the western part of The Netherlands, around the larger cities, and started to spread to the more remote rural areas of The Netherlands by the 1970s (De Bakker, 1989).

According to Van der Aa and Huigen (2000), the population in Dutch rural areas increased by 25% between 1972 and 1999, which is remarkable as the urban population only increased by 15% in this same period. The population density in rural areas also increased significantly in this period; a 20% increase was measured by Van der Aa and Huigen (2000) with the strongest increase detected in the 1970s. In Spain the population concentration in the urban areas started much later than in England and The Netherlands and signs of a slight slow down of the urban growth only became apparent at the beginning of the 1970s (Camarero, 1994). Many rural areas of Spain have now experienced some re-population, and second home ownership also increased significantly in the past few decades. According to Camarero (1994), most of these second homes are located in very rural locations.

Different sources indicate that the increasing preference for living in a greener environment, away from crowded conurbations, is in line with the recent population movement towards rural areas (e.g. De Bakker, 1989; Lewis, 1992; Camarero, 1993; Van Dam, 1996; Champion, 1998 and Van Der Aa & Huigen, 2000). Also among planners and urban designers the concept of the ‘compact city’ is increasingly becoming a subject for debate (see Brehemy, 1992; Ewing, 1997 and Gordon & Richardson, 1997). The question therefore arises whether it is wise to continue building new houses in densely urban environments, which are lacking the green amenities which residential consumers are increasingly looking for. Obviously, there seems to be a growing demand for residential environments whose characteristics include peace and quiet, space, and the presence of greenness and natural amenities. In addition, the transport of goods and people over considerable distances has become increasingly easy. A combination of growth in disposable income of certain social groups (Bowler et. al., 1992b and Pacione, 1984), a rising number of people with more spare-time, and increasing concern for the environment, has led to a change in values and life-styles. This has implications for where people choose to live.

Several researchers have referred to a growing interest in the quality of life, to indicate a process in which the residential preferences of people are guided more by aspects influencing mental and physical wellbeing than by employment considerations (see Pacione, 1984; Rasker, 1993; Johnson & Rasker, 1995 and Williams & Jobes, 1995). All these developments have important consequences for rural areas, especially those with superior amenities or a diverse natural environment. According to Bowler et al. (1992b, p.8) these changes in preferences in combination with the increased ability to act on these preferences become apparent in ‘a greater value placed upon quality of the rural environment, outdoor recreation, and living in rural communities’. At a time in which the functions of urban and rural spaces have become increasingly integrated, this also sheds light on the specific
characteristics of rural spaces that are a reason for the relatively increased interest for rural living. The indigenous values attributed to the countryside appear to be the most important discriminating factor. According to Hoggart et al. (1995, p. 253), ‘environmental characteristics remain a powerful and pertinent basis for rural distinctiveness, whether in terms of relations between rural and urban areas, with respect to individual and collective representations of rurality and rural identity, or in the biological resource that non-urban zones represent’.

Another important characteristic of the current attitude towards nature conservation is the growing awareness that conservation management cannot work effectively if areas are set aside for protection, whilst the economic, social and cultural wellbeing of local populations is ignored. In addition, there is now a recognition and acceptance that many threatened cultural landscapes are the product of human activity and that some traditional management practices are necessary to maintain biodiversity. Until recently there was a common assumption that people should be separated from nature because they were seen as ‘intruders on the natural world’ (Stankey, 1989, p. 246). As a consequence, human activities and the protection of nature had to take place in spatially separated sites, and the conservation measures imposed by mainly government institutions, in and around designated areas, were aimed at stopping activities that might threaten the natural quality of nature within the protected site (e.g. Stankey, 1989; Zube & Busch, 1990 and Fletcher, 1990). Consequently, little attention was paid to the wishes and needs of local people when establishing and managing protected areas. Politicians considered that it was only necessary to have a good understanding of how human activities damaged the natural environment and how these influences could be excluded.

In time, more evidence emerged that ignoring the needs of local people when establishing and managing protected areas caused major threats to the natural environments under protection. Politicians and conservationists then started to recognise that the projects would fail without the support of the local populations. As a result, in the last two decades, there has been an increased emphasis on designing methods to combine the conservation and restoration of nature and landscape with local cultural and economic interests. In the Dutch Fourth Planning Memorandum (Ministry of Housing, Physical Planning and Environment, 1988) there is already mention of ‘regional development through one’s own efforts’ ('Regio's op eigen kracht'). This also agrees with the endogenous development approach, as proposed by Van Der Ploeg and Long (1994). According to their approach, rural development should be stimulated through the combined mobilisation of different local resources. The ecological resources should therefore be combined with other resources such as local labour, knowledge and production techniques. Since the 1980s integrated approaches to nature conservation have also been promoted by several international organisations such as the World Wildlife Fund (WWF), the IUCN, the United Nations (UN) and the EU. Both the UN and the IUCN connect the integration of conservation and rural development to the concept of sustainability. In the Lake District Declaration (October, 1987), the outcome of an International Symposium on Protected Landscapes organised by the IUCN, it was suggested that ‘governments should use Protected Landscapes as models or greenprints for the sustainable development of the wider countryside’ (Lucas, 1992).

This research also starts from the acknowledgement that protected natural territories are an important endogenous quality of rural areas and can therefore have an important function in integrating the development of these areas. The main aim of this study is: to gain insight in the ability of protected natural areas to attract new residential activity to rural areas and in the role they play in the enhancement of the quality of life of local residents.

1.2 The research approach

The empirical and theoretical approaches in this study are derived from the extensive literature that already exists in the field of residential behavioural research, rural planning policy, rural restructuring and, more specifically, a scarce number of studies on the function and impacts of protected natural areas. For practical reasons, it was necessary to take decisions on the delimitation of the research in relation to the study area and the type of theoretical and empirical approaches used. It was decided to study the function of nature in a European perspective, which meant that the study needed to involve protected natural areas in
different European countries. The main reason for this is that comparative research can help to identify the differences and the common features of rural areas in the EU. Additionally, it may also deliver useful information to improve methods of targeting and monitoring policies for rural development and nature conservation; especially those measures that have been designed on a supra-national level.

Although international comparative research can be very complicated, it has several advantages. Such research gives the opportunity to set observations from one country in a wider perspective by relating it to information from other countries. The comparison of case studies in different countries also helps to indicate whether the situation in one country is specific to itself and to the building up of experience that can be compared and transferred to similar situations elsewhere.

In addition, a decision was made to confine the research to protected nature situated only in relatively remote rural areas, i.e. areas with relatively low population densities and located away from main economic and urban concentration areas. The decision for this delimitation is based on the following two observations.

1) Different studies have shown that remote rural areas of western urbanised societies are often characterised by development problems, such as depopulation, function loss, and under-performance of their economy compared to the situation in centrally located rural areas (see Deavers & Brown, 1980; Cottam & Knox, 1982; Keeble et al., 1986; Commission of the European Communities, 1988 and 1991a/b; Huigen & Van Der Velden, 1989; Keeble, 1991 and Huigen et al., 1992). The focus of different EU development programmes, i.e. the Less Favoured Areas (LFA) programme, the LEADER-programme (Liaison Entre Actions de Développement de l’Économie Rurale) and the structural development support of remote rural areas, also confirms the relatively disadvantaged position of these areas in Europe. However, there are also other groups of researchers who claim that distance is no longer the only factor that determines the development level of rural areas; in other words ‘geographic peripherality’ does not automatically have to lead to ‘economic peripherality’. The reason for this assumption is increased mobility, which enables distances to be covered faster and more easily as discussed in Chapter 2.

Volker and De Vocht (1992, p.2) therefore introduce a new approach to the concept of peripherality and refer to ‘peripherality in a new context’. According to them ‘Peripherality in the new context, is less a matter of distance, but more a matter of endogenous qualities of the regions. If a region does not have enough qualities of its own, it could become peripheral, not in the sense of distance, but more in the sense of attractiveness’. As stated in the first section, this study proposes that an important endogenous quality of rural areas could be the presence of nature. To determine whether this can help rural areas to overcome their ‘economic peripherality’ by becoming more attractive to other activities, the function of nature needs to be investigated in remote rural areas.

2) Another reason to choose a case study in a remote rural area is that, in general, that is where most of the undisturbed natural land occurs (see also Bischoff & Jongman, 1993). For this reason, protected status is more likely to be given to parts of such areas, along with inclusion in the European Natura 2000 network. This type of investigation would therefore be inherently less relevant in more centrally located sites.

It was also decided to adopt a case study approach. Because most policies on rural development and nature conservation are both decided at a national and supra-national level, it was necessary to spread these case studies over different countries within the EU. A total of five study areas was selected in three different countries; the Netherlands, the UK and Spain. The selection of these countries is based on the assumption that the three can be considered to represent diverse parts of the EU in relation to landscape types, the natural and physical environment, rural and socio-economic development, policies, and cultural characteristics (see Hoggart, et al., 1995 and Bunce, 1995 & 1996). Practical considerations were important in the selection of sites, as were factors such as their relative position in the geographical perspective. The size and other basic characteristics of the protected natural areas were also taken into account. On a national level, all five case study areas are situated in regions, which are relatively far away from the economic and political centre of the country and have a relatively low population density. These regions can be characterised as predominantly rural, the proportion of people employed in agriculture is above the national average, and the income per capita is generally below the national average. Features such as accessibility, nature and landscape characteristics, and management practices, vary considerably between these areas. It was necessary to set a minimum size for the sites, because it was likely that very small, protected areas would have too little influence on their surroundings. All these considerations resulted in the following selection (see also Figure 1.1):
Finally, it was decided to study the relationship between protected nature and residential development at an individual level. An understanding of macro-level phenomena, such as the changing function of nature in remote rural areas, could be gained by analysing underlying micro-level processes, such as the interaction of individuals with protected nature. This approach is suggested by the theory of structural individualism (Wippler, 1978 and Coleman, 1986 & 1990), which starts from the principle that the behavior of individuals has collective outcomes. It is assumed that potential residents take certain decisions that lead to specific spatial behavior, which will be influenced by the presence of a protected natural area, and also by government policies, national and local circumstances and other trends. This behaviour (micro) affects the residential function of a remote rural area (macro). The empirical part of this study will concentrate mainly on micro-level processes, namely the behavioural responses of residents towards the presence of protected nature.

1.3 Theoretical considerations

The starting point of this study is the relationship between the presence of protected nature and residential activities, in the context of functional change in rural areas. In order to increase the understanding of this relationship, the theory of structural individualism (Wippler, 1978 and Coleman, 1986 & 1990) was used as a heuristic for this study. According to this theory, there is a reciprocal relationship in which the behaviour of individuals takes place within and under the influence of the structure of society, which, at the same time, is itself influenced by the aggregated outcome of individual behaviour. It is this connection and relationship that is important.
In Figure 1.2 an overview is given of the general analytical approach in this study. It becomes clear that there are two levels at which the relationship between the presence of protected nature and residential activities in rural areas can be understood. On the macro level, it is assumed that functional changes in rural areas are occurring as a result of societal changes. More specifically, the increased interest in, and an altered political and public perception of nature and nature conservation and a shift in residential preferences and ability of people to act on these preferences, as discussed in section 1.2. On a micro-level it is assumed that individuals, within the context of societal changes, are influenced in certain decisions by the presence of an attractive natural environment, which affects behavioural response. The aggregated outcome of this behaviour is functional changes in rural areas. In this study it is assumed that the most important elements that characterise these functional changes are an increased use of rural areas for consumer orientated activities like nature conservation and residential development. It should be emphasised that Figure 1.2 illustrates the assumed relationships on and between the macro-level and micro-level. However, this study only empirically tests the micro-level relationships between factors concerning choice of residence, and the behavioural response in relation to the proximity of protected nature. The way the empirical research results are expected to work out for the functional changes in rural areas will only be discussed in chapter 8.

Individual behaviour can be approached from opposite ends of a continuum of visions that is used in the social sciences to research the determinants of individual behaviour (see Coleman, 1990 and Groenewegen, 1992). This continuum is shaped by the relationship between the individual, the actor, and the structure. At one extreme is the actor-approach, where the emphasis is on the freedom of will, of choice, and of action that an individual has. The changes in the structure are seen as the product of the behaviour of individuals. In the structure-approach, emphasis lies on the constraining influence of the structure on the individual. These constraints allow only limited freedom of choice in determining behaviour, and the structure is not affected.

In the theory of structural individualism, both the actor-approach and the structure-approach are integrated. According to this theory, relationships between collective phenomena cannot be understood without paying attention to the underlying causal mechanisms on the individual level (Coleman, 1986). Relations between macro-level phenomena are the aggregated, or transformed, consequences of processes on the micro-level, determined by individual behaviour. According to Coleman the substantive problems of the social sciences are usually macro-level relations, but the micro-level is the level on which explanations usually start.

The macro level
In this study the macro-level is seen as the context within which the relationship between the presence of protected natural areas and residential activity is investigated. The central characteristics of the macro-structure are assumed to be the increased political and public interest in nature and nature conservation, the changed views on nature and nature conservation, the changing preferences of people and the increased ability of people to act on these preferences. To investigate the consequences of these societal processes for rural areas, it was decided to concentrate on the developments in different European rural regions, in relation to the presence of protected nature. It is expected that this presence will have consequences for other characteristics of the macro-structure of these regions, which, in this study, are residential activities. For present purposes, residential
activities are defined as: any use of land which includes either permanent or temporary residence.
It is assumed that the consequences of the presence of a protected natural area for residential activities can be worked out along two dimensions. In the first place, the presence of the protected natural area can lead to an increase, a decrease, or even appearance or disappearance of residential activities in a rural area. This means that the area used for residence can increase because of new land being taken into use for the construction of new dwellings, or because of the conversion of pre-existing, non domestic buildings, like farm barns. Another possibility is that the area used for residence decreases because houses are demolished or abandoned. In this research it is assumed that the presence of a protected natural area increases the demand for residential buildings in an area. In the second place, the presence of a protected natural area may influence the composition of the residential population in a rural area. This composition is determined by two interrelated aspects: (1) the characteristics of the total housing stock in relation to, for example, its style, size, quality and price, but also by (2) the characteristics of the people that reside in the dwellings. In this research it is assumed that the presence of a protected natural area can influence both the characteristics of the housing stock and the characteristics of the people that reside in these houses.

The micro level
Central to the micro level of the model is the individual, the actor, who will be represented in the empirical part of this study by households that live in, or close to, a protected natural area in one of the five case study locations. It is assumed that the protected natural area offers possibilities and imposes constraints on the behaviour of these residents. This research focuses especially on favourable or unfavourable reactions to the living-environment; either, attraction, satisfaction or a desire to move away. Before it is explained how such residential choices will be investigated, it is necessary to understand the theoretical approaches in residential choice research.
Several studies have been performed on migrational decision making and it has become clear that there is no clear consensus regarding methodology. One classic approach to the subject is the pull and push model, in which the decision process that precedes residential choice behaviour is divided into three aspects (see e.g. Brown & Moore, 1970 and Lewis, 1982).

1. The wish to move
There is always a cause for deciding to move. In most cases these causes stem from a combination of changes in the quality of the dwelling and/or the residential environment, and changes in the personal characteristics and/or circumstances of the actor. Wolpert (1966) simplified the psychological factors behind the motivation to move into the concept of ‘place utility’. It implies that the decision to move is determined by the level of satisfaction or dissatisfaction with the place where an individual lives. The wish to move will evolve when stress develops, as a result of the current place of residence ceasing to be in balance with personal characteristics and circumstances. If this stress is severe the actor will decide to move. The factors that create residential stress can be seen as the push factors.

2. The deliberation of alternatives
Once the actor has decided to move, he or she must develop plans, which will incorporate residential preferences, current housing status, and the options that are available. Within Wolpert’s (1966) place utility approach, the migrant will seek a location that offers a higher degree of satisfaction than the original dwelling place, and then available alternatives. It means that the actor goes through a process of deliberation in which a compromise must be reached between his or her residential preferences and what is available on the housing market. The ideal image of future habitation is gradually adapted to a more realistic ‘aspiration image’ (see Priemus, 1969). This ‘aspiration image’ is determined by the situation on the housing market and other external factors. Individual characteristics of the actor are also incorporated. In this process, the push factors of present circumstances are considered in conjunction with the pull factors of the potential habitation.

3. The decision on the eventual move
The deliberation process leads to the decision on whether or not to move. The outcome depends on whether the actor succeeds in finding housing that agrees with his/her eventual aspiration image. The move will only take place if the pull factors override the push factors.
The push-pull approach described above in combination with Wolpert’s place utility concept offer a framework to conceptualise the migration decision making process. However, when considering the numerous other theoretical lines of thought developed in this field several other considerations need to be included. Firstly, it should be realised that the three stages in the push-pull approach are not successive. Usually these processes are interwoven. The definite decision to move is greatly dependent on whether one has a clear idea of the residential characteristics one regards as essential. This construct has to be produced during the deliberation process, in which the characteristics of present housing are compared with potential alternatives. The final decision to move will only occur if a more favourable residence is discovered. Potential movers are therefore shifting constantly between the three distinctive decision-making phases in the pull-push approach.

Secondly, the above approach has so far paid little attention to the actor’s personal situation and characteristics, especially in relation to individual preferences and constraints. These are inevitably involved when housing is considered. Clark and Dieleman (1996) emphasise the concept of life cycle as an important force in the residential choice process. This means that life events, such as leaving home, getting married, having children and changing jobs are very important reasons affecting people’s decisions about moving. In addition to the above, Floor and Van Kempen (1994) indicate that other important influences include previous residential experience and the nature of the household; which may be defined by characteristics such as age and income, which are themselves linked to other factors, including educational status, employment situation, and values in relation to household formation.

Income in particular can be an important constraint or resource for a household. In general one can assume that people with a higher income have greater freedom to follow their preferences, and are more likely to find a residential situation that satisfies their aspiration level than people with a lower income (see Premus, 1984 and Floor & Van Kempen, 1994). Floor and Van Kempen (1994) also point out the important influence of life-styles on the residential preferences of people. The involvement of these factors should be seen as a conclusion to the life-cycle approach, in which shifts in family composition were regarded as the key factor governing choice of abode. In this approach the starting point was the traditional household that followed the well-known sequence of leaving the parental home, getting married, having children oneself and perpetuating the cycle. Variations now include single person, single parent and double income households. Furthermore, not all households have freedom of choice when a house move is considered as several constraints can influence the process.

Thirdly, the importance of external influences, such as institutional factors and societal changes, should not be underestimated. Access rules to the housing markets and the availability of accommodation have already been mentioned in relation to the former. In the context of this research, processes such as increased mobility and the desire for a good quality of life, are very relevant phenomena, which increasingly influence residential preferences and possibilities. Floor and Van Kempen (1994) also emphasise this point and indicate that social changes in recent decades have created an increased plurality in society. This has led to a growth in different types of households, accompanied by increasing variations in residential preferences. Constructing a comprehensive model of the choice process has therefore become more complex.

Fourthly, in order to adequately study the decision making process that governs migration, Lewis (1982) suggests concentration on the following three main components.

1. The basis for the decision to move is stress and the degree of satisfaction with existing conditions.
2. The way that people evaluate their present and future living place can vary strongly between households and depends entirely on personal characteristics, constraints and preferences.
3. The information that people have and the way that they seek a new place to live vary greatly. These factors are very important in determining how a search for a new dwelling is carried out, and in the deliberation process a potential mover goes through.

Mulder (1993) tried to incorporate the above mentioned aspects in one framework which could serve to explain differences in behaviour. She describes migrational decisions as ‘made on the basis of preferences, in a context of perceived opportunities, resources and constraints’ (Mulder, 1993, p.20). Every actor is assumed to have different preferences. An opportunity is created exogenously, but whether the actor perceives it favourably and acts upon it depends on his/her preferences, resources and constraints, which are determined by the actor’s personal situation and also by external factors; which are of significance at the macro level. These include

Introduction
housing shortages, changing views on nature conservation, and increased personal mobility. Mulder’s description and Lewis’s three components incorporate all the relevant factors in the migrational choice process, and offer a comprehensive framework for empirical investigation in the present study. Combining both approaches also enables the presence of protected nature to be included in the residential decision-making process, as an exogenous factor that can influence specific groups that have certain characteristics. In the next section, Mulder’s approach is used as the starting point for the empirical evaluation of the residential choice behaviour that is central to this study. Chapter 4 and 6 will demonstrate how the combined approach has been used as a structure for secondary data collection and analysis.

1.4 Central research questions and structure of the study

Previous sections indicate that rural areas in western, urbanised societies have experienced important functional changes, which have become pronounced because of an increased use of these areas for consumption-orientated activities. This research will concentrate principally on the use of rural areas for residential and nature conservation activities, which have increased in most rural areas of western urbanised countries. A relationship is expected to exist between the two activities, and a fuller understanding of such, within the context of present societal changes and as part of the functional changes within rural areas, can be derived by concentrating on the behaviour of the individuals that play a pivoting role in this relationship. In Figure 1.3 a more precise overview is given of the components and their expected mutual relationships, derived from the theoretical approaches used as the basis for the empirical research of this study.

The central research question of this study can be formulated as follows:

**How can the behavioural responses of households to the presence of protected natural areas be characterised and what does this imply for the functional changes in rural areas of western urbanised countries?**

In the next seven chapters, the central research question will be answered in a series of steps (see Figure 1.4). Each chapter will deal with a sub-research topic, which will provide a better understanding of the macro and micro processes investigated in this study.

**Figure 1.3 Residential choice in relation to the presence of protected natural areas within the context of societal changes and functional changes in rural areas**

- **Societal changes**
  - increased personal mobility
  - increased welfare
  - increased spare time
  - increased interest in quality of life
  - increased political and public interest in nature and nature conservation

- **Functional changes in rural areas**
  - increased residential activity near protected natural areas

- **Residential choice set**
  - preferences
  - resources
  - constraints
  - preference for nature in the residential environment
  - increased ability to act on preference

- **Behavioural response**
  - choice for living near a protected natural area in a rural location

**Assumed relationship**

**Empirically tested**
In Chapters 2 and 3, the rural restructuring of western, urbanised countries is discussed extensively, as are the main rural policy measures that accompany this process, and the resultant consequences for the residential and nature conservation activities in the three research countries. In Chapter 2 the rural restructuring process is discussed through the concepts of ‘commodification’, ‘urbanisation’ and ‘differentiation’. They are illustrated by focussing on post-war changes in land use, population dynamics, agricultural and other economic activities, and by describing the rural policies that accompanied these changes in the three research countries. The research questions to be answered in Chapter 2 is:

1a. How can the post-1945 rural restructuring process in The Netherlands, the UK and Spain be characterised and how did this affect the residential activities in rural areas?

In Chapter 3, the concept of nature conservation is discussed by answering the following question:

1b. How did the post-1945 rural restructuring process in The Netherlands, the UK and Spain affect the nature conservation activities in rural areas?

A general description is given of the current and historical attitudes towards nature and nature conservation, nature conservation policy in the different research countries and the relationship between protected natural areas and other activities in rural areas. Chapters 2 and 3 provide a description of the different characteristics of the social, national and regional context within which the relationship between residential and nature conservation activities are investigated in the five study areas.
In Chapters 4-7, the empirical research is presented. In Chapter 4 the selection of the case study areas is explained together with the specific characteristics of the five areas in order to determine the differences and similarities of the context within which the function of nature is investigated. In Chapters 5, 6 and 7 the explanatory analysis of this study is discussed. In each Chapter, sub-research questions are elaborated in order to assist in resolving the central research question of this study. In Chapter 5 a description of the primary data collection is given, the dynamics in population development and the characteristics of households that live in the case study areas is discussed. This is done by answering three research questions:

2. Is population development in and around protected natural areas different from other rural areas?
3. What are the characteristics of households moving towards protected natural areas?
4. In what way have recent migrational flows effected the population composition in and around protected natural areas?

Chapter 6 deals with the residential choice process in relation to the presence of protected nature. The research question answered in this chapter is:

5. What importance does the presence of a protected natural area play in the decision to make a residential move?

In Chapter 7 the function of protected nature is further analysed by focussing on residential satisfaction, perceived advantages and disadvantages of living near protected natural areas and recreational use and employment in relation to the presence of a protected natural area. The conflicts that arise from the presence of nature are also discussed in this Chapter. As major conflicting situations have come to the fore for the Doñana and Northumberland areas, the focus will be on the situation and attitudes of the local population of these case study areas. This is done in order to answer the following research questions:

6. How does the presence of a protected natural area contribute to satisfaction with the residential environment?
7. What possibilities are offered and what constraints are imposed by the presence of protected natural areas?

In Chapter 8 the main conclusions of the empirical research results are presented and used to answer the second part of the central research question by translating these in implications for the functional change process in rural areas of western urbanised countries. In addition, policy implications of the research outcomes are formulated for European rural areas in general and the specific situation for Dutch, British and Spanish rural areas. Further research recommendation in the field of rural development and residential choice behaviour are also given.
2 Rural change in The Netherlands, the United Kingdom and Spain

2.1 Introduction

‘Whilst it is true that many people still retain some mental picture of an overly romanticised unchanging countryside, the reality is of profound change during the last two centuries and especially post 1945’ (Robinson, 1990, p.XIX)

The changes that rural areas in western urbanised societies experienced since 1945 revealed itself in shifts in economic activities, changes in land use, demographic and social cultural changes. According to Clout (1993) ‘Across the whole of Western Europe the days of a traditional, inward looking, rural community are over’. Just after the second World War the rural economy and land use were still one-sidedly focussed on agricultural production. Now rural areas are increasingly integrated into the urbanised society. Agricultural productive functions have gradually made room for non-agricultural ‘consumption’ functions and typical rural traditional values and life-styles are gradually starting to fade away, bringing about important social changes. In this Chapter the rural restructuring process is summarised through three concepts; commodification, urbanisation, and differentiation. These will be discussed for Dutch, British and Spanish examples, which illustrate that the European countryside has experienced the same process although in somewhat different ways resulting in a strongly diversified European rural space.

In this Chapter the first research question of this study is answered:

1a. How can the post-1945 rural restructuring process in The Netherlands, the UK and Spain be characterised and how did this affect the residential activities in rural areas?

The Netherlands and the UK are representatives of highly urbanised Northern European countries, whereas Spain is representative of the Mediterranean lower income and welfare countries of the European Union. Both The Netherlands and the UK belong to the most urbanised and densely populated countries of the EU while Spain takes an intermediate urbanisation and has the lowest population density in the EU (Table 2.1). Within the UK the population distribution is more polarised than in The Netherlands. Many parts of northern England, Scotland and Wales have a population density that is even lower than the Spanish average, whilst the south-east of England has densities even above the densely populated Dutch Randstad.

The urbanisation in the three countries started at different moments in the past. In both The Netherlands and the UK urbanisation began relatively early. This had other causes in the UK than in The Netherlands. In The Netherlands the urbanisation started earlier than in the UK, and speeded up in the Golden Age, when the craft and trade industries expanded in the cities of The western Netherlands. By 1600, more than 25% of the Dutch population lived in a town of over 10,000 inhabitants, whilst this proportion was less than 10% in England (Israel, 1995, p. 113). By 1622 already 54% of the Dutch population lived in cities (Harten, 1972). In spite of the early and rapid urbanisation in The Netherlands, there was no strong concentration on one single location, creating a metropolis comparable to those in most European countries, such as the UK. In this respect, The Netherlands again played a unique role and the result of this is still visible in the relatively even population distribution over the country and the urban structure of The Netherlands (see Israel, 1995). Very large cities do not exist in The Netherlands and the Dutch Randstad, the biggest population concentration in the country, still consists of four main cities; Amsterdam, Utrecht, Den Haag and Rotterdam, which together form a conurbation that does not even reaches the size of London or Madrid. Britain was one of the first countries where industrialisation started giving an important impulse to the urbanisation process. Consequently, there was a strong population movement from the countryside into the cities where manpower was needed to work in manufacturing and mining. Contrary to the Dutch situation this urbanisation concentrated strongly on one place, i.e. the city of London, and created a
A major metropolis surrounded by a large rural and small town hinterland. In Spain urbanisation was delayed which only started about 40 years ago. The rural to urban population movement has mainly been focused on the six largest conurbations (Madrid, Barcelona, Valencia, Sevilla, Zaragoza and Málaga) and was strongly stimulated by the late but accelerated ‘exode agraire’ (Camarero, 1993).

The per capita Gross Domestic Product (GDP) in The Netherlands is highest, whilst Spain has a lower per capita GDP. Although Spain belongs to the lower income countries of the EU it still has a higher GDP than Greece and Portugal. In terms of recent economic growth, Spain is performing well. Many regions in Spain have experienced an increase in per capita GDP exceeding by far the increase rates of most of European regions. However, this increase did not go together with a decrease in unemployment. Hoggart et al. (1995) explain this presumed contradiction by the one-sided attraction of capital intensive industries. Spain’s unemployment rate is the highest of the EU; suggesting that there is a low welfare level in part of the Spanish population. It should also be realised that the contrasts in welfare level between regions within Spain and the UK are also much bigger than in The Netherlands.

The state organisation and the legal and administrative systems are different in the three research countries. This has led to important differences in the way governments administer in rural areas, the flexibility of the rural planning system and the distribution of power between the central and the lower tier governments. As The Netherlands and the UK are both unitary states, the overall planning competence is with the national government. In Spain, with the introduction of the new constitution in 1978, most of the planning competence shifted from the national level to the regional level, to the level of the autonomous government (so-called

| Table 2.1: General characteristics of the three research countries and the EU-15 |
|--------------------------------------------------|-----------------|-----------------|-----------------|-----------------|
| **The Netherlands** | **United Kingdom** | **Spain** | **EU-15** |
| **Total area (km²)** | 41,029 | 241,751 | 504,790 | 3,191,120 |
| **Population density**<br>(inh./km², 1996) | 374 | 243 | 78 | 118 |
| **Urban population as % of tot. pop.**<br>(1993) | 89 | 89 | 76 | n.a. |
| **GDP ECU/inh. 1996**<br>(1) | 20,027 | 15,504 | 11,891 | 18,103 |
| **% active population employed in agriculture 1996**<br>(1) | 3.8 | 2.0 | 8.6 | 5.1 |
| **Unemployment rate 1997**<br>(% tot employed pop.)<br>(1) | 5.1 | 7.1 | 21.1 | 10.7 |
| **State organisation**<br>(see also Annex 1) | Decentralised<br>unitary state | Unitary | Federal | - |
| **Planning system** | Not flexible | Flexible | Medium | Flexible |
| **Source:** (1) Eurostat (1998) and (2) Worldbank, 1996 | n.a. No data available |
This is however only applicable to the regional and town planning competence while at this moment the national government still retains responsibility for National Parks. Another important discriminating feature of the planning systems of the three countries is the rate of flexibility. If mutually compared, the British planning system is most and the Dutch is least flexible. In The Netherlands every parcel of land is under a detailed planning regulation, whilst in the UK and Spain, local plans are not worked out in such great detail for every unit. Officially, the influence of local government on planning matters is greater in the Dutch and Spanish systems than in the UK. This is linked to the special status by law on which the local planning authorities in The Netherlands and Spain can act. In practice however, the Spanish local authorities have more autonomy in steering the land use developments in their territory than the Dutch. This is because the conformity of the local plans with higher order plans is very strict in The Netherlands, leaving little scope to the local authorities to develop the plans according to their own requirements. In Spain however, the higher order plans have not always been available when making local plans, giving the municipalities many possibilities to make autonomous decisions about certain land use prescriptions. A further and more detailed description of the planning systems can be found in Annex 1.

When studying the rural development in the three case study countries, the wide diversity in the European countryside becomes apparent, which is the result of the different ways planning proceeded. The decline of the agricultural sector, both as an economic activity and as a land-use activity, population movements, social cultural changes and rural policies have been playing a central role. The agricultural sector has ‘made room’ for other activities. People who worked in agriculture left the countryside and other people moved from urban to rural areas. Commuters, retired people, second-home owners and other people of all ages and social-economic classes have moved into the countryside. The complexity of the rural restructuring and the difficulty to detect uniform developments or regularities is also confirmed by observations of Cloke and Goodwin:

‘rather than searching for one movement from Fordism to post-Fordism, we should look to understand rural change as a whole series of movements between the differing practices and procedures of various strategies of regulation operating at overlapping scales. When successful, in achieving partial and contested stability, these help to form a particular structured coherence. This allows us to see rural regions undergoing a series of diverse and contested changes and developments, all socially constructed, rather than leaping from one ideal typical stage to another’ (Cloke & Goodwin, 1992, p. 22)

In spite of the complexity of the rural restructuring process, in the next Sections the similarities and differences in the rural development of Dutch, UK and Spanish areas become readily apparent. It is also made clear that similar developments in the rural process have not always been taken place simultaneously and the way they have developed has often been different for the various rural areas in the case study countries. In the next section of this Chapter the main trends driving the rural developments and the way the rural restructuring worked out for western urbanised countries are discussed. In the Sections 2.3, 2.4 and 2.5 the rural restructuring is illustrated by focussing on different aspects of this process. In Section 2.3 the agricultural restructuring and the related changes in land use patterns get attention. In section 2.4 the population changes are described in the post war period. The planning and policy process that followed and accompanied the rural changes is described in Section 2.5. In Chapter 3, attention will further focus on the increasing importance of protected nature and other related non-agricultural land use activities and government policy.

2.2 The changing countryside

Rural areas of western urbanised societies have experienced important changes in the post Second World War period and especially in the last 40 years. The reasons for these changes are several but can be categorised as societal changes or ‘megatrends’, a term that originates from Naisbitt (1982) (see also Naisbitt & Aburdene, 1990 and Slaughter, 1993) and is used by several researchers for addressing a range of shifts or driving forces that restructure society and operate on a global scale. Some important megatrends responsible for the changes in rural areas were nominated by Huigen et al. (1992, p.13): ‘the restructuring of the world economy, the increase in scale of operation of firms, institutions and households (internationalisation), technological progress, increased attention for free-market policies, a growing concern for environmental issues and individualisation’.
2.2.1 Trends and changes in rural areas

Bowler et al. (1992) have classified the trends steering the rural restructuring process into three categories: ‘(1) the emergence of ‘new needs’ in societies, (2) the development of new transportation and communications technology; and (3) the development of new technology affecting production processes’. Within these categories several trends, that produce effects on both macro and micro levels, can be described that are important for the relation between nature and residential activities in rural areas.

New needs

The ‘new needs’ that Bowler et al. (1992) discuss, are linked to value changes in Western urbanised societies. Main developments that triggered these value changes are the increase of disposable incomes of several household-groups (Pacione, 1984 and Bowler et al., 1992), an increase in personal mobility (e.g through higher rates of personal car ownership, see van Dam, 1995), a growing number of people with more spare-time (e.g. through early retirement and reduction in working hours) and the growing concern for the environment (see Sections 1.1 and 3.2). A consequence of these shifts is a change in values and lifestyles which express themselves in changed preferences and changed spatial behaviour of people regarding residence, recreation and working in rural areas. Several researchers have characterised these value changes as ‘a growing interest in quality-of-life aspects’ which refers to a process in which the preferences of people are less driven by economic considerations and more by aspects influencing one’s mental and physical well-being or simply by more consumption (Pacione, 1984; Williams & Jobes, 1995; Rasker, 1993 and Johnson & Rasker, 1995). For rural areas, especially those with amenity rich or rich natural environments, this has important consequences. According to Bowler et al. (1992) these value changes become apparent in a greater value placed upon quality of the rural environment, outdoor recreation, and living in rural communities. North and Smallbone (1993), Rasker (1993), and Johnson and Rasker (1995) also point to an increased popularity of amenity rich rural areas as settlement locations for residents and businesses. Robinson (1990) points to several studies that have proven that changes in values and life styles of people have acted in favour of rural areas in urban to rural migration patterns.

Transportation and communication

The changes in transportation and communication technology have important consequences for rural areas. Developments such as increased car ownership and the extensive use of different communication techniques like fax and computer-based communication networks have increased personal mobility and communication and information exchange possibilities have been extended. The consequences of these developments have led to an ever increasing time-space-compression (Cloke & Goodwin, 1992 and 1993), a process in which covering geographical distances by people, goods and information takes increasingly less time. The most important consequence of this process at the micro level is that an increasing number of people are more able to act on their preferences in choosing a place to live and/or work. Travel to work distances have become easier to overcome and the use of telecommunication facilities make it possible for people, who live in decentralised places, to reduce visits to the traditional work place by working at, or from, home. Therefore, choosing a place to live is less driven by working considerations and more by quality of life factors. For businesses these same processes are applicable. Entrepreneurs are also more able to settle in decentralised locations and pay more attention to quality-of-life and amenity considerations when making locational decisions. These processes have important consequences for the function and position of rural areas as many of these areas have become attractive places to live and work.

Production technology

The changes in production technology, as Bowler et al.(1992) characterise the last group of changing processes, indicate technological developments that increase the scale of operation of production processes and make the exchange of labour for capital increasingly possible. The changes in production technology have been, for an important part, responsible for the rural depopulation process, the increase of agricultural production, the rationalisation of the agricultural production process and the degradation of the quality of the natural environment and the rural landscape. Also under the influence of the introduction of labour-saving technology a
massive labour expulsion out of the agricultural sector has taken place. Together with other developments this has led to much rural depopulation in several areas. The introduction of modern production techniques, the increased scale of operation of agricultural businesses has gone together with a major growth of agricultural output. Supply of many agricultural products exceeds the demand causing prices to drop on both European and world market scales. The price reducing effect of the Common Agricultural Policy (CAP) on the world market is increasingly opposed in Europe and public willingness to support the unproportionally high government support to a sector that has only decreased in relative economic importance in the last few decades, has declined strongly. In addition the agricultural changes had, and still have, several undesirable side-effects on the environmental and scenic quality of rural areas. Since the 1960s, because of this agricultural restructuring, the development of other activities, like residence, economic activities other than agriculture, recreation and nature conservation, have not only been facilitated but also become more needed in many rural areas. This rural diversification may become even more prominent in the future as it can be expected that a further agricultural restructuring will lead to a surplus of agricultural land. The Commission of the European Communities (1991b) expected this surplus to amount between 6 to 16 million of hectares. Another scenario study ‘Ground for choices’ (Grond voor keuzen: Wetenschappelijke Raad voor het Regeringsbeleid, 1992) came, which given a set of assumptions, predicted that between 30% to 80% of the agricultural area in the EU would become redundant. Overall, since the end of the Second World War, the economic structure of most rural areas in Western urbanised countries has been altered from an economy focussed on agricultural production, to a more diversified economy in which other economic sectors are represented.

2.2.2 The rural restructuring process

The three different types of changing processes, as described in the former Section, have induced major changes in rural areas of western urbanised societies. For this research it is necessary to understand how these changes have developed for the different types of rural areas and what it means for the present function and position of rural areas. To structure the changing processes that have determined the present function and position of rural areas, three types of interdependent developments can be distinguished: Commodification of the countryside which leads both to the integration of rural areas in geographically wider entities and differentiation of the countryside.

Commodification

In the last decades the countryside has been confronted with a process in which the agricultural production function of rural areas has shifted into a consumption function. There is ‘an expanded use of rural areas for consumption-oriented activities - such as amenity, environmental protection, leisure and, above all, residence’ (Marsden et al., 1990, p.2). This shift from production function into consumption function is called ‘commodification’, which refers to the increased use of the countryside for consumer activities. It means that the specific characteristics of the countryside have become an economic ‘commodity’, for which an increasing demand has evolved. In other words, the commodification induced a ‘functional change’ of the countryside because it stimulated new functions to develop beside the core agricultural function.

This commodification process is a direct result of the different societal changes as described above. Because of the changes in preferences and lifestyles of individual people, but also corporate actors, have become more interested in using rural areas for living, working, recreation but also conserving the natural and scenic beauty in them. This is especially stimulated by the increase in the number of people that have become more able to act on their preferences. Personal mobility has greatly increased and sophisticated communication techniques are available that make it possible that ‘almost anyone, anywhere is ‘reachable’ by anyone else from anywhere else’ (Cloke & Goodwin, 1992, p. 19). Furthermore, the agricultural restructuring, which is the result of the ever increasing technological development, has made it possible to use part of the area of agricultural land for activities other than food production. The societal changes have not only caused the commodification of the countryside but have also led to extended integration of the countryside into geographically wider entities.
Integration
Integration of the countryside, points to a process that rural areas have become more linked with the urban economy and society. The commodification of the countryside plays an important role in this process but is also influenced by a process in which rural areas have become an increasingly important reserve space for the expanding activities in urban areas. Overall however, until a couple of decades ago, most rural economies of western urbanised societies were dominated by agriculture and the rural society could be characterised as traditional and inward-looking (see Pacione, 1984; Driessen et al., 1995; and Clout, 1993). Consequently, rural areas were separate from the urban society that was characterised by multi-functionality and dynamism. According to Driessen et al. (1995) the countryside was mainly ‘not-city’. Since the nineteen fifties this dichotomy has progressively declined under the influence of the above processes. Rural areas have gradually become integrated into urban society as residential, recreational and non-agricultural-economic activities, started to increasingly invade rural space.

Cloke and Goodwin (1992) indicate that the growing integration of the rural areas into the urbanised society also went together with an increase in the interdependence between cities and rural areas. Clout (1993) stresses the ever increasing scale which characterises this integration process; ‘Productive functions and service activities located in the European countryside are increasingly controlled by trans-national corporations and shaped by national and supranational policies’. The central steering mechanism is the impact of time-space compression that is used by Cloke and Goodwin (1992, p. 19) to refer to a process of ‘the geographical stretching out of social relations’ under influence of increased mobility that enable more people and goods to cover growing distances in an increasingly shorter time. At first, this time-space compression only affected the rural areas directly surrounding the urban centres. But, as personal mobility further increased and communication facilities developed, the urbanisation of the countryside gradually diffused into more peripheral rural areas, leading to a further integration of the remoter parts of the countryside.

Lewis and Maund (1976) developed a model to identify the processes underlying the urbanisation of the countryside. Population movements are central in this model and cause the diffusion of new ideas and attitudes into rural societies. Three types of population movement are distinguished in their model, which are all age-specific and cause changes in the value-system that leads to the displacement of traditional rural values. Firstly, depopulation in rural areas takes place as a result of the labour declining in the agricultural sector. This often involves a population move of younger as well as higher educated groups of rural society. Subsequently, an urban to rural migration starts to develop which Lewis and Maund characterised as population and re-population. The population process consists of a flow of often relatively young and wealthy people, with middle-class lifestyle, who seek a residence in the countryside but continue working in the urban centres. Re-population refers to retirement to the countryside by people in the retirement or early retirement age. In the model of Lewis and Maund a time-dimension and a distance dimension is added, the so-called ‘time-space order of urbanisation’.

The types of population movement change in course of time and also in distances covered by the movers. Firstly, there is only depopulation and population movement between urban centres and the rural areas nearer to the towns. Subsequently, as personal mobility increases and the number of early retiring people grows, population movements also go beyond the ‘daily commuting range’. The more remote rural areas start to be involved in the urbanisation process. Although the urbanisation model of Lewis and Maund helps to bring more understanding in the integration process of rural areas into the urban society, it ignores the spatial selectivity. This spatial selectivity, which implies that only certain parts of the rural territory are involved in this integration process, cannot only be explained by the distance of rural areas in relation to urban centres. In the next section the selectivity of the process which results in a more differentiated countryside is further addressed.

Differentiation
The differentiation of the countryside is the most important and complex aspect of the rural restructuring process and is important in the context of this study. It refers to a development in which the above described processes of ‘commodification’ and ‘integration’ of the countryside, develop differently in each rural area, resulting in a diverse position and function of rural areas in relation to other urban and rural areas. Because of this process, a diversified countryside has emerged in the post-Second World War period, characterised by
uneven regional development. According to Cloke and Goodwin (1992) this differentiation is driven by the uneven influence of time-space-compression. Several researchers have tried to explain the differences in response of rural areas to the societal changes and have produced several explanations. The most popular explanation of variations in development between rural areas, is their relative position in relation to urban centres. As geographical peripherality frequently coincides with economic marginality, the relative remoteness from urban centres is often used as an explanatory factor for uneven rural development (see e.g. Keeble et al., 1986; and Commission of the European Communities, 1987). This leads to the assumption that the relative location of rural areas in relation to urban areas and urban influences is an important factor explaining the diversity of rural areas. However, according to Clark et al. (1989), Huigen and Volkers (1992), Huigen (1992), Clout (1993), and Ramos and Cruz (1995) the differentiation of rural areas can no longer be explained only by proximity to urban centres. The endogenous characteristics of rural areas play an equally important role in this differentiation process. Also Cloke and Goodwin (1992), point to the combination of factors that explain the variation in rural development. To get a better understanding of the rural restructuring process, Cloke and Goodwin make use of parts of regulation theory and come up with three main groups of interrelated explanatory components:

1. Elements of economic restructuring: or how attractive is the area to capital accumulation, under contemporary modes of regulation?
2. Elements of socio-cultural re-composition: or how attractive is the area to those seeking a ‘rural experience’?
3. The role of the state: or how and why should the state intervene to make rural places more ‘attractive’?

The first two components point to the importance of certain characteristics of rural areas, endogenous qualities, that make certain rural areas attractive or suitable for residential and economic use (see Box 2.1). Although the focus in this research is on the relationship between natural amenities and residential activities, economic activities are also considered as these can be very influential in the residential choice considerations; decisions on where to live may influence decisions on where to work and vice versa. The third component points to the question of government intervention in the rural development process.

Box 2.1
Characteristics of rural areas that attract residential activities under contemporary modes of regulation:
I. What features might attract residential activities?
- the presence of an amenity rich environment with natural and scenic amenities
- space
- relatively low housing and land costs
- openness
- peace and quiet
- clean and healthy air
- traditional rural community atmosphere
- safety, low crime rates

II. What features might attract economic activities?
- the availability of cheap labour
- the presence of an amenity rich environment with natural and scenic amenities
- relatively low land and rent costs
- an isolated position in combination with low population-density characteristics which make the area suited for ‘dangerous’ or polluting activities (like nuclear installations, military training activity, industrial waste dumping etc.)
- availability of surplus labour and land

Source: Cloke and Goodwin, 1992 and own elaboration
The characteristics that make rural areas more attractive for people who want to live in rural areas (for ‘those seeking a rural experience’) are typical characteristics that people associate with rurality. The so-called ‘cultural issues of attractiveness and idyll’ (Cloke & Goodwin, 1993). From the enumeration of endogenous qualities that attract capital and people to rural areas, it becomes clear that the natural amenity of rural areas is an important endogenous quality. As the endogenous quality of rural areas is becoming increasingly important for rural development, the contribution of nature to the rural development process is also increasingly important (Hoggart, et al., 1995). Getting more information about the contribution of the presence of protected natural areas to the attractiveness of rural areas for economic and residential development is therefore very relevant in the context of the changing position and function of rural areas. Especially if the contribution of nature is studied in those remote rural areas that are characterised by a relative underdevelopment.

2.2.3 Rural policies

In the explanation of the rural restructuring process, attention should also be paid to the important role of government. Overall this government intervention has been subject to important alterations in the Post War Period also under influence of the shift of competencies to the supranational bodies of the EU and the more recent de-centralisation of powers to local authorities. Although state intervention varies importantly in rural areas of the different western urbanised countries, there are two common tendencies that have characterised the rural planning processes in the last two decades, besides the greening of rural policy, as already discussed in Chapter 1.

Firstly, state intervention can be characterised by a process of withdrawal that went together with privatisation and sometimes also an anti public involvement atmosphere in rural areas. According to Clark et al. (1989) these processes have served to enhance the importance of regional and local conditions. Cloke and Goodwin (1992) also emphasise the increased region specific approach by stating that the deregulatory ideologies have led to a shift from a top-down to a bottom-up approach, resulting in a policy focus that is more based on localised resources and enterprise. Apparently, the increased importance of endogenous developments is not only visible in the rural restructuring process but is also becoming an important attribute of rural planning policy. For rural areas it is another important incentive to exploit their local endogenous qualities.

Secondly, rural development is becoming an increasingly important item on the policy agenda of many western urbanised countries and also of the EU. In this process policy is clearly widened to other issues than agriculture. In addition, the different sectoral approaches have shifted to a more comprehensive approach in most European countries. According to Errington (2000) the reason for this shift is not simply the structural changes in the agricultural sector, but ‘rather the result of fundamental economic and social restructuring which is linked to changing power relationships within rural areas’ (Errington, 2000, p. 115). For the EU, this shift to a broader rural policy started in 1988 with the reform of the CAP. Since then, increased emphasis was placed on targeting funds to the rural problem regions in order to develop their local economies, increase incomes, address liveability problems such as loss of services and ageing, and to stimulate local initiatives to participate in improvement measures. The LEADER program and the appointment of areas with specific rural development problems, Objective 1 and 5 regions, are well known examples of the way the EU organised this rural development policy. In The Netherlands and the UK this shift to a broader and comprehensive rural policy started earlier than elsewhere in the EU. However, in the last decade one can clearly see an even stronger emphasis on residential, recreational, service and industry sectors for rural areas in these two countries. The environmental and Rural White Paper of the UK government and the contents of the Dutch fourth and fifth planning memorandums (VINEX and ‘VIJNO’), which will be discussed in Section 2.5, illustrate this. In Spain the broadening of rural policy came later than in the northern case study countries, but with the decentralisation of planning competencies to the autonomous governments, comprehensive approaches to rural policy issues have been introduced in most regions in an accelerated manner (see Section 2.5).
2.3 Post-1945 changes in agriculture and land use

In the post-war period in most rural areas farming was still the most important labour supplier, self-sufficiency in foodstuffs was highly valued and all efforts were therefore focussed on increasing the agricultural production.

<table>
<thead>
<tr>
<th>Table 2.2 Rural restructuring and land use changes, some key statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The Netherlands</strong></td>
</tr>
<tr>
<td>% active population employed in agriculture 1950</td>
</tr>
<tr>
<td>% active population employed in agriculture 1996</td>
</tr>
<tr>
<td>Gross value added in agriculture as % of GDP 1960</td>
</tr>
<tr>
<td>Gross value added in agriculture as % of GDP 1997</td>
</tr>
<tr>
<td>Agricultural land 1960 (km²)</td>
</tr>
<tr>
<td>Agricultural land 1990 (km²)</td>
</tr>
<tr>
<td>% change in agricultural land (1960-1990)</td>
</tr>
<tr>
<td>Wooded area 1960 (km²)</td>
</tr>
<tr>
<td>Wooded area 1990 (km²)</td>
</tr>
<tr>
<td>% change in wooded area (1960-1990)</td>
</tr>
<tr>
<td>Other land* 1960 (km²)</td>
</tr>
<tr>
<td>Other land* 1990 (km²)</td>
</tr>
<tr>
<td>% change in other land* (1960-1990)</td>
</tr>
</tbody>
</table>


GDP = Gross Value Added

* other land refers to land that is not agricultural nor woodland, it includes built-up areas, roads, barren land, recreational land, protected areas, water catchment, garbage disposal etc.

In all three countries policies for rural areas were then mainly focussed on the farming sector to increase the agricultural production. They induced the same changes: productivity increase, regional and on-farm specialisation and rationalisation, a decline of agricultural labour, a decrease in the number of farms, shifts in land use types, an increased pressure on the environment and landscape degradation. However, the characteristics of the rural environment and therefore the points of departure to develop new policies for the rural areas, varied considerably between the three countries and led to a rather diverse rural development process (see Table 2.2). The way and extent in which agricultural land was converted to other non-agricultural activities therefore varies widely. In Spain the role of the agricultural sector in the rural development process is still more important than in the Dutch and UK rural areas.

**The Netherlands**

Since the Second World War, price- and income-policy- instruments were combined with measures to improve the farm structure and the marketing of agricultural products. Much money was invested in agricultural research institutions, such as Wageningen University, and also extension and educational services. This desire for agricultural-support was directly caused by the serious food deficit that existed during and just after the war. All these measures and improvements brought about major changes in the Dutch countryside. These were revealed in a decline of agricultural labour, a decrease in the number of farms, productivity increases, shifts in land use
types, regional and on-farm specialisation and rationalisation, increased use of chemical products and improvement of land through draining, clearing and reallocation. Between 1950 and 1996 the active population working in the agricultural sector decreased from 14% of the active population to less than 4% (CBS, 1997). However, the proportion of active population in agriculture and agriculturally related industrial and service sector is still 10% (LEI-DLO, 1997). The number of farms decreased from 300,702 in 1960 (1960 World Census of Agricultural Holdings) to 110,667 in 1996 (CBS, 1997). The proportion of Gross Value Added in agriculture as proportion of the total national Gross Domestic Product decreased strongly (see Table 2.2). It should however be realised that agricultural products are still a significant part of Dutch exports. In 1998 21% of the total exports existed of agricultural products, the total value of the agricultural exports was 42 billion EURO, whilst agricultural imports were only 24 billion. This makes The Netherlands after the United States, the most important agricultural export country in the world (LEI-DLO, 1999). The main export products are flowers, bulbs and meat and dairy products.

The post-war agricultural restructuring process in The Netherlands is characterised by some particular Dutch factors. Firstly, agricultural land is relatively scarce. Secondly, the Dutch agricultural sector is supported by an extensive network of agricultural research institutions that have been able to supply the sector with the newest technologies, plant and animal varieties and excellent vocational training facilities. This has stimulated the agricultural sector to become very capital and knowledge intensive. This has also helped to develop an important horticultural sector producing high value products, such as flowers and bulbs, for international markets. Thirdly, the Dutch temperate maritime climate and natural physical condition of the land are well suited for agricultural production. The production capacity of the soils is generally high and there is hardly any relief that restraints the agricultural use of the land. The only problem is that part of the land is under sea level. Water balance control is therefore imperative in almost all areas. An extensive water infrastructure, has therefore been set up which makes it possible to almost completely control the water levels of the majority of the agricultural land. Fourthly, the Dutch agricultural sector has been under the influence of the CAP of the EU longer than the UK and Spanish agricultural sectors. The effects of this CAP, which already came into effect in 1968, have strongly stimulated Dutch farmers to increase their production and productivity.

At this moment The Netherlands have the most intensive agricultural land use of the whole EU, although parts of the UK and Belgium are comparable. The number of animals and use of pesticides and fertilisers per hectare of agricultural land are in no other European member state higher than in The Netherlands. The post-war continuous improvement of the farming structure, through enlargement of fields, draining, reclaiming, straightening of roads and of waterways and building of modern farm buildings have broken down the differentiation and quality of the rural landscape.

Meanwhile, the markets for many agricultural products have become progressively saturated since the beginning of the eighties. The modernisation of the agricultural sector is meeting increasing opposition from the non-farming world (Van Den Berg, 1989). Since the 1980s the power of the farming lobby has started to erode and more pressure is being forced on the farming sector to extensify and pay more attention to the quality of the environment. Through government interference the agricultural sector has also been forced to make more room for other non-agricultural functions like nature, forestry, recreation and residential and other economic activities. The described developments in the Dutch rural areas are reflected in considerable land use changes (see Table 2.3). Parts of the former agricultural and natural land were mainly used for urban purposes. Built-up land, used for residential, industrial, commercial and public services, increased progressively both in absolute and negative terms making it the second most import land use category in The Netherlands in the 1990s. The land use category 'other', which also mainly consists of urban land use activities, increased most in relative terms, which was especially caused by the huge increase in recreation area. Woodland increase was also significant: increasing by more than one third since 1950, whilst the area of natural land declined importantly. This decline was especially large in the 1950s and 1960s when much semi-natural vegetation was converted into agricultural use. Contrary to the decrease of such land, the number and surface of areas with protection status increased significantly after the 1950s (see Chapter 3).

When looking at the changes in Table 2.3 it should be realised that the land use changes in the Randstad area, the most urbanised area in the country, and the rest of The Netherlands are rather different. In the Randstad area, the
decrease of agricultural land started earlier than in the rest of the country but over the 1950-1996 period it became relatively small in comparison with the rest of the country. This relative smaller decrease is related with the fact that the Randstad area already contained relatively more urban and less farmland than the rest of the country.

The forestry sector, the third most important activity in terms of land use, only covers 9% of The Netherlands, which is well below the EU average of 24% (Eurostat, 1995). This category increased by more than 30% between 1950 and 1996. Traditionally, forests were only found on the poor sandy soils in The Netherlands as these were not fit for agricultural use and forest was also needed to prevent sand-drifts and afforestation proved useful to relieve unemployment. Since 1966, recreational and amenity function has been added to the productive function of forestry. Central to the present-day Dutch forestry policy is the aspiration that woodlands are multi-functional and sustainable in recreational, ecological and economic terms. The contribution of forests to reduce the carbon dioxide emission is very much stressed. Subsidies for woodland production are only available if woodlands are opened to the public (Van Der Windt, 1995). Therefore, since the 1960s woodlands have been planted on the richer, often non-sandy, soils, nearer to the urbanised areas where the need for recreational opportunities is larger. RIVM et al. (1997) mention in their report about the state of Dutch nature, that since 1950 the average age of woodlands has increased from 30 to 50 years, as well as an increase in the proportion of indigenous tree varieties and of miscellaneous forest as compared to pine forests.

Table 2.3 Land use changes in The Netherlands between 1950 and 1996

<table>
<thead>
<tr>
<th></th>
<th>1950</th>
<th>1996</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1000 ha.</td>
<td>%/total</td>
<td>1000 ha.</td>
</tr>
<tr>
<td>1) Agricultural area</td>
<td>2512.9</td>
<td>76.1</td>
<td>2351.0</td>
</tr>
<tr>
<td>2) Woodland area**</td>
<td>242.2</td>
<td>7.3</td>
<td>323.4</td>
</tr>
<tr>
<td>3) Natural area***</td>
<td>264.2</td>
<td>8.0</td>
<td>137.9</td>
</tr>
<tr>
<td>4) Infrastructure</td>
<td>89.6</td>
<td>2.7</td>
<td>131.2</td>
</tr>
<tr>
<td>5) Urban area</td>
<td>185.9</td>
<td>5.6</td>
<td>369.8</td>
</tr>
<tr>
<td>6) Other</td>
<td>5.5</td>
<td>0.2</td>
<td>72.8</td>
</tr>
<tr>
<td>Total (water excluded)</td>
<td>3300.3</td>
<td>100.0</td>
<td>3386.1</td>
</tr>
</tbody>
</table>


** The Figures in this Table are partly distorting as, because of changes in definition, part of the land falling in the category ‘natural land’ in the 1950s has shifted to the category ‘woodland’ in 1996.

*** The decrease in ‘natural area’ in this Table is somewhat distorted because of the exclusion of water as there are relatively many wet natural areas in The Netherlands (see also Chapter 3).

1) Glasshouse horticulture and other agricultural use
2) Forests (at least 20% tree coverage). The dominant land use activities in these areas are either wood production, nature management, bufferzone objectives, recreation or a combination of these.
3) Natural drylands (i.e. dry moorland, sand dunes, sand drifts, sand bars and beaches) and natural wetlands (wet moorland, peatlands, reed land, mud-flat land, wet polder land, wet grasslands and ponds and other small waters). These areas can be nature reserves and other managed or unmanaged natural lands but may also include military training areas and water protection areas that are managed in a natural way.
4) Consists of roads and railways
5) Consists of built-up area which can be in residential, industrial, and commercial use and used for public service areas like sport fields, parks, allotments, (cultural) service areas and cemeteries.
6) Consists of construction sites, (residential and non-residential) recreational areas, airports, quarry sites, garbage dumping sites and other.
Overall, it is also expected that the productivity per hectare of the Dutch agriculture will further increase under influence of the market and policy developments. The number of agricultural holdings will continue to decrease and that the land under arable production will decline, while the horticultural production will further grow (see Veeneklaas et al., 2000). The continued decrease in number of farms may also lead to a further release of agricultural land, on which new activities need to be established. The shift towards the production of high quality products may also continue, especially in relation to food safety, human health, environmentally sound and animal friendly products. Many farmers may also choose to diversify their income sources, by starting up other non-agricultural activities such as tourism, processing and selling of agricultural products on the farm, nature and landscape conservation. This will stimulate the diversification process in rural areas. With respect to the expected decrease in agricultural subsidies and the increased liberalisation of the European markets under influence of the restructuring of the CAP, the Dutch agricultural sector is in a relative good position. Within the EU, The Netherlands belongs to the countries that are least dependent on agricultural subsidies (Ministry of VROM, 2001). This is likely to stimulate the Dutch agricultural sector to further concentrate on cost reduction, and production of high quality and high value added products. At this moment, the biggest part of the EU subsidies still goes to the dairy sector, but this will change soon with the expected reduction of milk prices in the EU. With the high proportion of dairy farmers in The Netherlands this will have important consequences for the agricultural sector. The stricter environmental measures in the EU (Nitrate and Phosphate Directives) will also have major consequences for the Dutch agricultural sector, because of high production and land use intensity. Much investment will need to be done by the remaining farmers to comply with these stricter environmental requirements.

The United Kingdom

The proportion of the agricultural labour in the total labour force was already much lower than in the rest of Europe in the 1940s (see Clout, 1972). Already at the end of the 1940s, the English agricultural sector started to introduce labour saving technologies. The rapid introduction of these technologies on farms forced farm workers to seek jobs outside the agricultural sector. At the same time price and income policy instruments were combined with measures to improve the farm structure and the marketing of products. Agricultural research institutions, advisory and educational services were also set up. These measures and improvements led to a agricultural labour decline, a decrease in the number of farms, major productivity increases, shifts in land use types, regional and on-farm specialisation and rationalisation, increased use of chemical products and improvement of land through draining, clearing and removing of hedges. Between 1960 and 1996 the total agricultural labour force decreased by more than 60%, from 6% of the active population to 2%. The number of farms decreased from 467,580 in 1960 (1960 World Census of Agricultural Holdings) to 243,500 in 1993 (Eurostat, 1993). The proportion of land in agricultural use changed between 1960 to 1990 from 81% to 73%, which is still a relatively large proportion of the land surface in comparison to The Netherlands. The agricultural sector in the UK can be characterised by a relatively efficient farm structure with the largest average agricultural area by holding in the EU. The physical and climatic circumstances vary widely between different regions in Britain. The regional differences in type of agricultural activity and agricultural performance are therefore large. The regions in the west have extensive types of agricultural activities because of the restraints of the physical environment. The regions in the south and east have generally an efficient and modern agricultural structure where productivity is above the European average. In 1973 the UK joined the Common European Market. The market protection and support measures of the CAP, work differently from the previous British agricultural support system but led to even further increases in production and rationalisation. Although the UK farmers had been protected by the state before entry into the Common Market, the UK system of guaranteed prices and deficiency payments still allowed supply of agricultural products to be controlled relatively effectively. Under the CAP, this was no longer the case as, according to Grigg (1989), prices were not established with reference to demand but as a result of political bargaining in which member states tried to ensure target prices that would give their least efficient farmers a livelihood. As in The Netherlands, in Britain the stage for a reformulation of agricultural policy was also set by...
the beginning of the eighties (Robinson, 1989; Cloke, 1989; Grigg, 1989; Bowler, 1992 and Dwyer & Hodge, 1996). The markets for many agricultural products had become saturated. As a result the negative impacts of the highly intensive agricultural sector on the environment and the landscape became an increasing cause for concern. Furthermore, there was a progressive worry about the increasing costs of agricultural support by the UK taxpayer (Winter, 1996).

Although the decrease in agricultural land in the UK has been relatively low in comparison to other European countries (Parry et al., 1991) the replacement of agricultural activities by other more ‘consumption’ activities is still clearly reflected in land use changes. Figures for the UK are not available but for England the total farm land reduction between 1945 and 1990 amounted 600,000 hectares which was a 5.7% reduction from 81 % of the total land area in 1945 to 77 % in 1990 (Sinclair, 1992). This relatively small decline can partly be explained by the early urbanisation process, which had already taken place before the Second World War. Much farmland had therefore already been used for previous urban growth. The mean annual rate of farmland decline in the last five decades, only amounted two-thirds of the rate in the 1930s (Parry et al., 1993). Most of the farmland was used for urban, industrial and recreational development, but 30% had been converted to woodland. Until the 1960s, the Ministry of Defence (Mod) also acquired land for military purposes. According to Sinclair (1992) between 1945 and 1990 England lost 705,000 hectares of rural land, with 14.9% of the total land area of England being urban.

Data about the exact division of the converted rural land over the different urban land use types is not available for the whole post war period. However from several studies and surveys (Coleman, 1977; Department of the Environment, 1978; Institute of Terrestrial Ecology, several years) it is clear that between 50% to 60% of the agricultural land loss was converted to residential uses. Other important shifts were to industrial and commercial land-use and quarrying, especially open pit mining for the extraction of sand, gravel, limestone and ironstone. In the beginning of the post war period the urbanisation of rural areas mainly concentrated in the most urbanised areas of the UK, the east Midlands and the Southeast, but more recently urban growth has shifted to the less urbanised areas (Parry, et al., 1993).

Forest occupies only 10% of the UK territory, with only The Netherlands, Belgium and Denmark having less in the EU. However, afforestation has always been one of the key objectives of forestry policy since the end off the First World War. Forestry has been in competition for land mainly with upland sheep farming. As a consequence forestry was mainly concentrated in the hills and uplands, in Scotland, Wales and Northern England. By the end of the 1960s the benefits of forestry in comparison to hill farming, and the ‘coniferisation’ of the uplands (Cloke & Park, 1985) became an important policy issue. A study was therefore commissioned by the government, which subsequently proved that forestry showed lower returns on investment than hill farming, but it provided more permanent jobs in upland areas (Robinson, 1989; and Pacione, 1984). However, recently it is generally accepted that with the progressive increase in contracting, this is no longer true. The outcome of the discussion in the 1960s was that grants for afforestation, both for the Forestry Commission as for private woodland companies, should be continued. More attention was however progressively paid to amenity, conservation, access and local employment. The function of forestry was no longer only aimed at reducing the import need for wood. Only by the end of the 1980s, with the formulation of the new objectives of the Forestry Commission, a stronger focus on the amenity, conservation, access, and employment function of forests was induced. In addition, the Forestry Commission also started to collaborate more strongly with other organisations and actors in the countryside to encourage multi-functionality in land use. Several activities with the Countryside Commission have been initiated to create forested areas with multiple objectives, linking recreation, conservation, landscape enhancement and the need to withdraw land from agriculture. Community forests were also created especially in lowland areas near towns. In 1988 a Farm Woodland Scheme was also introduced and more recently a series of measures have been introduced to encourage tree planting.

Overall, the UK contains the largest average farms in terms of area, although this is variable regionally, being biased by large upland farms. It is expected that especially the larger arable farms can adapt well to further liberalisation of the European markets as they are among the largest farms in Europe. In the animal sector a significant proportion of farms has an intensive and efficient farmstructure, being comparable with Dutch dairy farms and the pig and poultry agro-industries. They will also need to comply with the stricter environmental directives. In contrast, for most UK livestock enterprises in sheep and cattle farming, which are usually large in
area but are characterised by extensive land use as most of them are located in hill and mountainous regions, it will become more difficult to survive in the future. The recent problems with animal diseases, e.g. BSE and Foot and Mouth, and low meat prices have already demonstrated how vulnerable these farms are. Their future is rather uncertain as farm subsidies and prices are expected to decrease. It can therefore be expected that a reduction in farms will continue, larger farms will become larger from buying up farm land. Farm production may well be intensified. Increase in farm size may also have important implications for the maintenance of the landscape, which depends strongly on continuation of extensive livestock farming.

Spain
In the 1940s, in contrast to Dutch and British society, Spanish society was still largely rural or even agricultural with more than 50% of the population living in rural areas and in agricultural employment (Yruela, 1995). The rural areas were found in a deep crisis with widespread hunger and a lack of resources to import machinery and fertilisers. This situation was further worsened by the international boycott of Spain in order to encourage political liberalisation. This international boycott, strengthened the Franco regime even more to strive for self-sufficiency. As a consequence policies for protectionism and import substitution determined the political agenda in the agricultural sector throughout the 1940s. The production for self-sufficiency in wheat, rice and olive oil, was stimulated through a system of price guarantees and government purchasing. The production of export crops, mainly citrus, was restrained and livestock, specifically dairy farming, were virtually ignored by government support mechanisms (Harrison, 1993).

By the beginning of the 1950s Spanish food shortages were still large and the Spanish government decided to alter its interventionist policy. Agricultural prices were permitted to rise again and initiatives were taken to modernise the agricultural sector. Some foreign capital was allowed into the country to import farm machinery, fertilisers and new seed varieties. In addition an agrarian reform policy was started which comprised of large-scale irrigation projects, land consolidation and redistribution projects. The area under irrigation increased importantly because of this policy, but according to Yruela (1995) the redistributive effects of it were rather disappointing in that the large-landowners tended to benefit the most. However, by the end of the 1950s the pre-civil war levels of agricultural production were restored, and for the heavily subsidised products, such as wheat and rice, surpluses began to develop.

As landed property was still polarised, there was more than adequate supply of cheap labour in the 1940s and 1950s and, according to Yruela (1995), up until the 1950s there was little stimulus for the Spanish agricultural sector to introduce labour saving technologies. Consequently, the Spanish rural exodus, which only started by the late 1950s, was mainly brought about by pull factors, namely the much better paid employment opportunities in the Spanish growing industrial sector and in industrial and service sectors in other countries. Because of the massive exodus in the 1960s, wages started to increase and farms were then obliged to introduce labour saving technologies and thus productivity started to increase. But by the 1970s, because of the economic crisis, employment opportunities outside the agricultural sector reduced. In spite of this the labour force in agriculture continued to decline. According to Etxezarreta (1992), Spanish agriculture lost about one million workers in the midst of an industrial economic crisis, manpower diminished at an annual rate of 4.3-4.7 % while in the rest of the EC countries this decline amounted only 2.1-2.8 % in the same period. The agricultural labour surplus, which had persisted to exist during the 1950s and 1960s, in spite of the recent massive rural exodus, started to grow again leading to large rural unemployment. The overall result of the agricultural restructuring process in Spain was a major decline in agricultural labour. Thus between 1950 and 1993 the agricultural labour force decreased by more than 100%, from 50% of the active population to 10%. The number of farms decreased from 3.6 million in 1960 (1960 World Census of Agriculture) to 1.4 million in 1993 (Eurostat, 1995).

Spain became a member of the EC in 1986. According to Etxezarreta (1995), since the transformation to a democratic political system in 1978, the Spanish agricultural policy, was already focussed on preparing the agricultural sector for the Common European Market. This policy concentrated on decreasing the major regional development differences in Spain and increasing the production and productivity of the agricultural sector by introducing modern technologies. The consequences of this were indeed an important increase in productivity. However, according to Varela-Ortega and Sumpsí Viñas (1995), this did not take place in all regions and all
agricultural sectors. There was only modernisation and intensification in the most favourable agricultural production zones while the marginal agricultural areas were abandoned. The modernisation of the agricultural sector has led to a major increase in production productivity. Conversely the environmental impacts of the agricultural modernisation process have been severe (see Campos Palacín, 1993 and 1994; Cruz Villalón, 1994 and Varela-Ortega & Sumpsi Viñas, 1995), especially through the constant increase of the irrigated area, which has led to overexploitation, salinisation, erosion, pollution of aquifers, the drying out of wetlands and natural areas. The disappearance of many valuable cultural landscapes, because of land abandonment, has also been an important process.

When focussing on the land use changes in Spain one can conclude that the loss of agricultural land has been relatively small and the percentage of other land-use types as percentage of the total area, has even decreased (see Table 2.2). This contrasts to the development in the Dutch and British situations, which has several reasons. Firstly, as the population density in Spain is much lower than in the northern Europe, the pressure on land for urban development is lower. Secondly, relatively large parts of rural Spain contain areas of natural lands with no or little agriculture, which are part of the category ‘other land’ in Table 2.2. In the last 40 years many of these natural lands were put into agricultural use. Thirdly, the total area of built-up land increased as a result of the strong growth of the urban population and infrastructure; between 1960-1985 with 1.6%, from 3,167,500 to 3,217,600 hectares (Ministerio de Agricultura, Pesca y Alimentación, 1988). This increase amounted more than 50,000 hectares in absolute terms, but is small in relation to the total land area of Spain.

Forest is an important land use category in Spain as more than 30% of the country is covered by forest, which is three times as much as in The Netherlands and the UK. Spain as in other European countries showed major decline in woodland, but in the last century many of these areas have been reforested again. This woodland loss has also been an important impetus for the creation of protected nature as will become clear in Chapter 3. Nevertheless, Spain is one of the few countries in the EU that contains extensive areas of semi-natural woodlands with a high proportion of native species (Bischoff and Jongman, 1993). Since 1970, the recreation function of forestry was also officially recognised by the central Spanish government. Several measures have been approved to increase the recreation value of forested mountain areas. Although the attention for the recreational function of Spanish woodlands has increased, this does not agree with measures to improve the natural quality of woodlands. The economic return of woodlands continues to be the main motive for forestry in Spain and few measures have been taken to prevent the negative effects of forestry practices on the environment. This has two reasons. Firstly, only 4% of the total Spanish wood area is in central state ownership, whereas 66% is in private hands and 30% in local government ownership (European Environmental Agency, 1995). Secondly, local governments are able to follow an independent forestry policy within the decentralised Spanish government system. As a consequence, the Spanish government can extent little influence on the forestry development in the country. For that reason, only limited intervention measures in forestry could be taken, except for the provision of subsidies.

Overall, one can see that the transformation process proceeded rapidly in Spanish agriculture but the major regional differences in climate, soil types, relief, and agrarian structure and the strong polarised landed property in most of rural Spain, have created contrasts in agricultural practices. In contrast to The Netherlands and the UK, Spain experienced a rapid development in the intensive and modern agricultural sector, but a traditional mixed farming sector was simultaneously maintained. Some farms and regions are therefore better prepared for the further liberalisation of the European agricultural markets than others. In general, the dependency on agricultural subsidies is large in most Spanish agricultural sectors. The Mediterranean regions also have to contend with limitations caused by low and uncertain rainfall. On the extensive fields of the ‘latifundistas’, which are still widespread in Spain, low yields can be partly offset by the efficient use of mechanisation and more and more dry land agriculture continues being transformed to irrigated agriculture. Along the Mediterranean coast and major rivers there is a concentration on the irrigation of fruit and vegetables using intensive horticultural methods producing high yields. The climate, with mild winters and a high amount of sunshine in Mediterranean Spain, and the relatively low labour costs give large parts of the country a competitive advantage to the rest of the EU. It can therefore be expected that agricultural production will continue to be an important activity in most parts of the Iberian Peninsula, certainly in comparison to other EU countries.
2.4 Post-1945 population dynamics in rural areas

Most of the rural areas in Western European countries experienced rural de-population until the 1960s. After the Second World War, this process has continued although the first signs of a reversal of this movement became apparent in some rural areas, especially those nearest to the urban centres. In several rural areas a strong increase of the residential and recreational activities took place because of urban to rural population movements. Rural areas also experienced an out-migration process, which was selective in character. The selectivity of this migration process may lead to a decline in economic base and service provision and demographic imbalances. In The Netherlands, the UK and Spain comparable processes of rural-to-urban and subsequent urban-to-rural population shifts took place. The periods in which these shifts evolved and the intensity of the processes vary strongly however. Pitt-Rivers (1976) states that the post-1950 population changes in Mediterranean countries are comparable with those changes that had begun earlier in northern Europe and North America. Spain has shown a delayed but intense urbanisation process, which is closely linked to the growth of manufacturing and services, but confined to certain regions. Naylon (1987) characterises this Spanish post-1945 population development as common to countries in an intermediate stage of development while The Netherlands and the UK belong to the group of countries in the world to experience the first signs of urban-to-rural migration.

From several studies on the process of rural de-population, it becomes clear that the agricultural restructuring is only one of the causes, with other important reasons not being related to agriculture. Therefore Mitchell (1950) adds to the primary decrease of agricultural employment other causes such as:

1. The changing economic structure of rural centres which already in the past decades led to a narrowing of the local rural economy
2. The limited accessibility to services
3. The decreased attractiveness of rural life because of the limited educational and alternative labour opportunities.

That the rural-to-urban migration has important demographic and social-economic consequences for the departure area has become apparent from several studies (see Atzema & Huigen, 1989; Camarero, 1993; and Champion et al., 1996). Central to the depopulation is that it often involves an age, sex, socio-economic and occupational selective migration process. This has led in many rural areas that suffered from a population loss, to fertility decline, ageing of population, an imbalanced sex structure, unilateral composition of the local labour force and a decline in local purchasing power. This process of economic, demographic and social decline is often self-reinforcing, bringing the rural community into a vicious circle of decline (Gilg, 1983, p. 94).

The rural re-population process, which results from an urban-to-rural population movement, is especially interesting in the context of this study as it involves a development in which rural areas increasingly attract urban people to live, work and recreate. This urban to rural population movement is important in the functional change process of rural areas. In western urbanised countries, the urban-to-rural population flow already started to become apparent in the 1950s, but the extent of the population movements was still very small. Only in the United States the urban-to-rural population flow showed serious dimensions in this period. In the 1960s the more centrally located rural areas of western countries such as Japan, Switzerland, Norway, Italy, Denmark, New Zealand, Belgium, France, Germany and The Netherlands also started to experience the same population gains. Wardwell (1980) refers to these first rural re-population countries as the twelve ‘turn-around countries’. At the same time, in the UK a strong decline of the urban growth was observed (Vining, 1982) while in Spain some signs of a slight slow down of the urban growth only just became apparent in the beginning of the 1970s (Camarero, 1993).

Berry (1976) was one of the first authors to suggest that a population ‘turnaround’ was taking place in western urbanised countries. He characterises the process as a prolonged tendency and refers to it as ‘counterurbanisation’: a process of population de-concentration; it implies a movement from a state of more concentration to a state of less concentration’ (Berry, 1976, p. 17). Vining and Strauss (1977) use the words ‘a clean break with the past’ referring to a population de-concentration process that is in contrast with the urbanisation process in the past. In The Netherlands, the UK and Spain there were indeed tendencies of a population ‘turnaround’. In The Netherlands and the UK these started in the 1960s, and in certain areas in Spain,
at the end of the 1970s. Whether this was a matter of a ‘clean break’, that is a definite turnaround, is to be discussed since the rural de-population process still goes on in different remote rural areas in both The Netherlands, the UK and Spain after the 1970s.

Camarero (1993) quotes Wardwell’s reasons for the urban de-concentration which are based on changes in the residential preferences of people. These reasons can also be supported by findings in several other studies:

1. There is an increased tendency among older people and/or retired people to choose a non-metropolitan place of residence. As the number of older and retired people increases in western society, the number of people that wish to live outside metropolitan areas also increases. This same conclusion is drawn by Law and Warnes (1982), Fuguitt and Heaton (1985) and Zuiches (1989) who observe an increase of people not engaged in economic activity and of retired people in rural areas.

2. The deterioration of the living conditions in metropolitan centres leads to a shift in the residential preferences of people. The deterioration of the urban environment, increases the interest of people in environmental considerations. According to Huigen (1996) ‘Rural areas are every time more perceived as the opposite of developments connected to the metropolitan living environment: rural areas are associated with peace and quiet, space and environment’ (Huigen, 1996, p. 1, original in Dutch). This observation is also confirmed by Swanson (1984) who found that most of the recent population growth in rural areas in the USA is from city migrants who are attracted ‘less by economic reasons than by the perception of a better quality of life’.

Although different people might be attracted to rural areas, and the ability of people has increased to move to more decentralised places, this does not necessarily imply that these people will move permanently to rural locations. A compromise, which has become very popular in many western urbanised countries, is to acquire a second home in an attractive rural area (see Gilg, 1985; Pacione, 1984; Robinson, 1990; Camarero, 1993 and Gallent & Tewdwr-Jones, 2000). However lack of comprehensive data on second home ownership in almost all European countries, including the case study countries, makes reliable generalisations about this issue complicated however. For example in 1995, the Official Journal of the European Communities stated that problems with classifying different types of holiday accommodation prevented the collection of accurate information. Nevertheless it is recognised that second home ownership is an important aspect of the recent urbanisation of rural areas. Some people have tried to derive information on second homes from indirect sources such as Gilg (1985) who observed that second homes are more concentrated in the scenically attractive areas, and within these areas a contagious process can lead to a further concentration of second home residential activity. This was also confirmed by findings from Champion et al. (1996) for the UK who saw a stronger concentration of second homes in coastal areas, and the attractive inland areas known for their rural scenery such as National Parks or Areas of Outstanding Natural Beauty. In general the presence of specific physical features such as sea, rivers, lakes and mountains is an important factor determining the location of second homes (e.g. Camarero, 1994 and Gallent & Tewdwr-Jones, 2000). Gilg also found that second homes tend to form a ripple of urbanisation beyond the immediate commuter belt of big cities. This was also confirmed in several studies on second home development referred to by Gallent and Tewdwr-Jones (2000). They also showed that with increases in personal mobility, patterns in geographical distribution of second homes have also changed further away from main urban centres. On the basis of the occasional data sources on second homes it has also become clear that there is a strong difference in the importance of second-home ownership in Europe (Pacione, 1984; Robinson, 1990 and Tewdwr-Jones, 2000). In Spain it is more widespread than in the UK and The Netherlands as will become clear in the next part, where the post-war population development in the Dutch, UK and Spanish rural areas is discussed separately.

One can conclude that the increased freedom of choice for many people in selecting the place to live has made that migration behaviour in the last decades is increasingly guided by non-economic considerations such as quality of life. Because of this, rural areas in general have become more attractive as places to live and work. Within rural areas, those places with plentiful natural amenities will attract relatively more first and second home residents and businesses, as these are better able to satisfy people’s desire for a high quality environment. This will lead to a further differentiation of the countryside as will be illustrated by the situation in the three case study countries.
The Netherlands

To determine the differences in effects of migration on the population development and population composition of rural and urban areas, it is essential to use commonly accepted definitions of rural and urban areas. In all the studies that are used to describe the post-war population dynamics in The Netherlands, the starting point of rural distinctiveness is a morphological one. A proxy indicator used to distinguish urban from rural areas is population density (see e.g. Atzema & Bargerman, 1986; de Bakker, 1989; Atzema & Huigen, 1989 and Atzema, 1991). Instead of using population density figures Van Dam (1996) and Van der Aa and Huigen (2000) used a comparable but more accurate indicator i.e. the density of human activities. This density is expressed by the address density, a criterion of rurality developed by the Central Bureau of Statistics (Den Dulk et al., 1991).

Address density does not only refer to the number of inhabitants but also to other activities that occupy space such as business and industry.

Before looking at the population development in the rural and urban areas in the post-1945 period, it is important to keep three aspects in mind. Firstly, the year that is taken as a reference for both population and address density determines the outcome of an analysis of time series. On balance, population or address densities are dynamic entities that usually increase with time. This implies that municipalities may shift from a rural to an urban category within the period for which an analysis of population change is carried out which may influence the interpretation of the data. If the reference year is set at the end of the analysis period, which is usually the case, this may lead to an overestimation of the population dynamics in urban areas and an underestimation of the in rural areas. Secondly, population flows to and from rural areas are usually smaller than population flows within and between urban areas, since only 36% of the Dutch population lives in rural areas, i.e. municipalities with an address density of less than 1500 addresses per km2, and 74% in urban areas (Van der Aa & Huigen, 2000). This suggests that, although the size of population flows within rural areas are usually smaller in absolute terms, their net effect on the population development of a rural community can be more far-reaching than in urban areas. An analysis of Dutch migration figures in the last three decades by Van der Aa and Huigen (2000) has shown that 45% of the migration flows take place between urban areas, whereas only 15% are population movements within rural areas. 40% therefore consists of urban-rural and rural-urban movements and shows the biggest variation in population flows. Thirdly, the whole analysis of population development in a time-series may be distorted by the continued increase in number of households but a corresponding decrease in household size. In The Netherlands for example the number of households was around 5 million in 1980 but by 1995 this number had increased to 6.5 million. Over the same period there was a decrease in household size from 2.8 to 2.3 persons per household. The effect of this so-called ‘household thinning’ is that population in many areas may show a decline, even though the number of households in these areas is still growing.

Figure 2.1 Annual population growth in rural and non-rural areas in The Netherlands 1973-1994

* Non-rural areas have an address density of >= 500 addresses per km2, reference year 1994
** Rural areas have an address density of < 500 addresses per km2, reference year 1994
Source: Van Dam, 1996
According to Wardwell’s (1980) observations The Netherlands is one of the twelve so-called ‘turn around’ countries where the first signs of rural re-population had already occurred by the beginning of the 1960s. These first signs of rural re-population were restricted only to the Western part of the Netherlands around the larger cities. This led to a population de-concentration in the central zone of The Netherlands which manifested itself in a population gain in the rural areas around cities situated within or just outside the Randstad (Atzema, 1991 and De Bakker, 1989). By contrast, through the 1950s and 1960s the small rural settlements in the peripheral provinces of The Netherlands - Drenthe, Groningen, Friesland and Zeeland - showed population loss (De Bakker, 1989; Atzema, 1991 and Van Dam, 1996). This decline in Dutch rural areas was characterized by two processes: In the first place the de-population went together with a selective out-migration which implied that the younger, usually higher educated people migrated away to the more urbanised areas leaving the older people behind in the remote rural areas. In the second place this de-population process led to a population concentration in the larger rural villages.

In the beginning of the seventies a clear migration flow to the remote rural areas of The Netherlands started to take place (De Bakker, 1989). This population ‘turnaround’ is also confirmed by analyses done by Atzema and Vargerman (1986) and Van Dam (1996). Suddenly population loss turned into a population surplus in the remote rural areas. As Figure 2.1 shows, this population de-concentration had a temporary character however; since in the middle of the 1980s population growth in Dutch rural areas started to lag behind the national average again (see Atzema & Huigen, 1989; Atzema, 1991 and Van Dam, 1996). From this period onwards the whole picture of rural population development becomes more diffuse. There was also stagnation of the average population development in these rural areas and a small but constant fluctuation in the development pattern (see also Figure 2.1). It is expected that the variation in population development figures between rural areas has increased in this period with some rural areas continuing to show a positive, but others a negative, growth.

Van Dam (1996) refers to this process as ‘the turnaround after the turnaround’ when he described the population dynamics between in the 1970s and 1980s. This implies that the shift from depopulation to re-population of rural areas in the beginning of the 1970s now turns into a de-population of rural areas in the 1980s again. The same study of Van Dam (1996) also indicates that during the 1980s the Dutch peripheral rural areas show a larger net migration loss than the rural areas in and around the Randstad. It was also noticed that the urban to rural migration took place in waves, which were influenced by societal changes (i.e. increase in welfare), while the rural to urban population flow was more constant in character. Only in periods of welfare increase did the urban to rural population flow turn out to be bigger than the rural to urban flow. The research described by Atzema and Huigen (1989) also showed that the rural migration loss in the 1980s period was strongly age-specific, leading to a relative increase in the older population in most rural areas.

The net population development for rural and urban areas in the 1990s is still not completely clear. The Figures of Van Dam (1996) in Figure 2.1, which refer to the period until 1994, suggest a return to a positive urban to rural migration flow in the 1990s. However, a more recent analysis of population data for the period 1972-1998 by Van der Aa and Huigen (2000) disagree Van Dam’s predictions. They detected a shift in rural migration from a surplus between 1990-1994, to a slight population loss between 1995-1998.

Whether the 1990s will therefore be characterised by a net population growth in rural areas is still to be seen. It will certainly not be such a convincing ‘turnaround’ process as took place in the 1970s. The 1990s may well be characterised by a continuation of the population development, which was already started in the 1980s with a limited but positive average growth in all rural areas but with strong local variations in the pattern. This conclusion agrees with the increased diversification in rural areas and associated social change processes which have led to increased plurality in household types and residential preferences. Some rural areas will attract more residents than other rural areas, and the selectivity of the migration flows will also show strong variations between different rural areas.

Overall, however there are clear indications that the demand for residential environments with ‘rural’ endogenous qualities will continue to increase through the 1990s and the first decade of the 21st century (see also Section 3.5). The increase in second homes in the Dutch countryside is another aspect that adds to the commodification of the Dutch countryside. It is however not easy to give a good indication of the importance and development of second
homes in The Netherlands since few recent data and relevant studies are available, and no unambiguous
definitions exist on what can be seen as a second home. Thissen (CBS, 1978), indicates that the number of
second homes in The Netherlands, increased from around 4000 in 1966 to almost 16,000 in 1976. These Figures
refer to second homes, as defined by Statistics Netherlands (CBS, 1978) as those that are temporarily occupied.
Mobile recreational accommodations and permanent recreational residences in allotment areas were excluded by
this definition. When dwellings on camping and allotment areas were however included, the number of second
homes would have been larger. A total of 185,000 recreational houses was recorded in 1972 (Van Dord et al.,
1976). This means that about 4% of the Dutch households had a recreational dwelling at their disposal. In 1993
the second homes were estimated again by Statistics Netherlands (CBS, 1994) and it turned out that 2% of the
Dutch households owned a second home and 2% a mobile recreational dwelling on an allotment or camping
site. This means that between 1972 and 1993 there was no change in relative terms. However, in absolute terms
the number of recreational homes almost doubled, as the number of households in The Netherlands in this
period also doubled from 4.3 million in 1972 to 7.5 million in 1993.

Ypma (1997) addressed the issue of the permanent habitation of second homes in The Netherlands and showed
that it had increased in many rural areas. As such it can be regarded as an obscure form of urbanisation of the
countryside. The extend of the increase is difficult to determine, but for several Dutch provinces an estimation of
the proportion of second homes used for permanent residence varies between 5% to 45%. The reasons for this
growth could be the increasing pressure on rural housing markets. Furthermore, living in a recreational dwelling
with an official second home status is often financially more attractive than living in a dwelling with permanent
residence status. Municipality councils often overlook the permanent use of recreational dwelling in the
countryside as it helps to release the pressure of the local housing market in municipalities for which new
housing construction is restricted.

**The United Kingdom**

As in all western countries, the UK also showed an important population de-concentration process in the post-
war period, that became prominent in the 1960s (Woodruff, 1976; Fielding, 1982; Champion, 1989 and Lewis,
1992). This early de-concentration process was however confined to the rural areas in the most urbanised
southern parts of England and the immediate vicinities of the larger urban centres. By contrast most of the more
remote areas of Scotland, Wales and the northern part of England still continued to lose population in this
period. According to Champion (1989) and Champion and Watkins (1990) the de-concentration process became
especially important in the 1970s. An analysis of the CURDS (Centre for Urban and Regional Development
Studies) Local Labour Market Areas, showed that the rural population growth rate amounted 8.9% above the
national average between 1971-81 compared with 5.5% below the average in 1951-61 (Champion & Watkins,
1990). Furthermore, in the period 1971-81 the largest relative population growth took place in the most rural and
remote areas (Champion, 1982).

The following authors described the de-concentration process on a regional level, Woodruff (1976) for the period
1951-1971 and Lewis (1992) for the period 1971-1991. In the fifties most population growth was concentrated on
the metropolitan and urban fringes of the British cities. In the 1960s and 1870s Britain’s de-concentration process
also started to shift to the more remote rural areas, situated outside the so-called daily urban systems. Within
these remoter rural areas the population flows were still mostly concentrated on the small towns and rural market
places. For the period between 1951 and 1971 counterurbanisation in the rural areas was mostly limited to rural
areas in the southern half of England and Wales. Elsewhere in Scotland, Wales and the northern part of England
population still declined. However, between 1971 and 1981 this trend changed into a population gain for many
remote rural parts of Britain. As shown by a study of the Scottish Highlands (Jones et al., 1986).

By the 1980s, the sudden population gain of the remote rural areas in Scotland and northern England started to
shift again in a southern direction. A suburbanisation process also developed that was more ‘socially and
spatially selective and the location of a settlement in its regional context became a more significant parameter
than trends in the country as a whole’ (Sherwood 1986). This selectivity was also detected in the Dutch urban to
rural population flows, especially since the 1980s. Whether this will continue into the 1990s is still to be
determined, since population census data have only been available up to 1991. A study by Champion et al.
(1998b) suggests however, that the attraction of people to the rural areas of England continued through the 1990s. In this study an analysis was done of the population movement in England in the 12 months period before January 1991. A distinction was made between metropolitan and non-metropolitan England and the main conclusion was that all seven metropolitan areas lost population at an average rate of 4.4 per thousand inhabitants. London was outstanding with a net loss of 7.7 per thousand. Champion et al. (1998b) use the concept of the ‘counterurbanisation cascade’ to describe the way the metropolitan leavers are spread over the destination areas. The larger cities at the top of the hierarchy lose most population and the largest gainers are the more rural and remoter districts at the base.

The selectivity of the migration flows towards rural areas in the UK was well illustrated by Fielding (1992) who linked migration with mobility in the social ladder. For this purpose Fielding compares the migration process between the south east of England, of which the London Metropolitan area forms part, and the rest of England and Wales, with a trip on an escalator. The escalator metaphor refers to the geographical mobility of people, which is often linked with upward social mobility. People that were more likely to change class, were also more inclined to change their geographical location and participate in inter-regional migration. Young career oriented people in the south east region often had such an escalator function. Two observations confirmed this: Firstly, the 1971-1981 data indeed showed that the south east was a net gainer of relatively young people with positive career perspectives. In comparison with other regions, the south east attracted significantly more young people that were leaving education and entering the service class. Secondly, Fielding showed that in the south east, the proportion of people that went through an accelerated social promotion was much higher than in any other region of England and Wales. The last step in Fielding’s approach, which is most relevant to this study, was to show that these same career oriented young people once they were over the age of 40 were more inclined to leave the south east to move to amenity rich countryside after they had gained their higher position on the social ladder. The south east was a net loser of people in the age groups of 40-49 and 60-69 and these net-outflow figures were the highest in southern Britain. Further analysis also confirmed that there was a strong over-representation in the outgoing population flow of the south east of people who had changed from working to retirement or self-employment. Such shifts were particularly large in the service class and white-collar group. Like in The Netherlands, it is also difficult to trace second homes in British statistics. Different definitions of second homes are applied at different dates. In the UK census of 1991 there were 149,336 second homes and 154,802 holiday lets in England and Wales (Champion et al., 1997). These second homes and holiday lets were owned by only 1.2% of the population. Most of these houses were concentrated in the coastal zones and in rural areas of south west England, Wales, northern England and Scotland. In an EU publication (1996) the proportion of households with a second home in 1988 was however estimated at 3% for the UK, which demonstrates the inaccuracy of the data on second homes. However there is no doubt that second home ownership is not common in Britain. Robinson (1990) explains this limited number because it is more common in Britain to have private gardens than elsewhere in Europe, where relatively more people live in flats. People who normally live in flats often take recreation in the countryside. It can be expected that this explanation is also applicable to the Dutch situation.

Spain

In Spain, the rural de-population proceeded rapidly after the 1950s. According to Naylon (1989), in the 1960s during the ‘Spanish economic miracle’, more than 5 million Spaniards out of a population of around 34 million, left their homes. They migrated to larger, industrialised cities, the Mediterranean coast or abroad. Although almost all rural areas in Spain lost population in the 1960s and 1970s, this decline was largest and most persistent in the centre of Spain (Castilla y León, Castilla-La-Mancha, Extremadura and the interior of Andalucía). By the early 1970s Madrid’s population was increasing by about 100,000 people per year and 25% of Spaniards eventually lived in either greater Madrid or greater Barcelona (Naylon, 1989). This process of rural population loss and urban growth continued until the 1990s (Table 2.4), although since the middle of the 1970s the rate slowed and some metropolitan centres even started to lose population again. Furthermore, some rural areas around the metropolitan areas of Madrid and Barcelona and on the Mediterranean coast also started to show population growth.
In Spain the de-population of rural municipalities (< 10,000 inhabitants) continued through the 1950s until the middle of the 1980s (see Table 2.4). In the 1960s and 1970s rural population loss was substantial and population growth was mostly concentrated in metropolitan and smaller urban areas. By the beginning of the 1970s the metropolitan areas started to lose population to the medium sized urban areas. In contrast by the beginning of the 1980s the decline in rural population slowed down.

Within this broad pattern some rural areas showed re-population already from the second half of the 1970s. The first of these were those situated on the Mediterranean coast, including the rural areas near Barcelona, and those adjacent to Madrid. The rural areas on the Mediterranean coast were always popular for immigration in the post-1945 period. Their attractiveness increased in the middle of the 1970s with the economic decline. In this period the industrial centres of the country could not absorb more labour force, but in the Mediterranean there were still growing employment opportunities in tourism, in intensive export-oriented agricultural production and in small industrial concerns. In this period in-comers settled in major urban centres, whilst people who already lived in the Mediterranean urban centres migrated to the adjacent rural areas. A comparable process of urban to rural migration occurred around Madrid, Barcelona and in Navarra, but elsewhere during the 1970s the population continued to move to the major cities.

During the 1980s the migration rate to rural areas increased. Around Madrid and in the Mediterranean the urban to rural migration starts to spread to rural areas situated further away from the urban centres. A similar process also took place in the Guadalquivir valley (Andalucía). In contrast rural areas, especially those in the north of the country, with the exception of Galicia, and in mountainous areas, continued to lose population.

According to Hoggart (1997) counterurbanisation is normally associated with north-western Europe, the US, Canada, Australia and New Zealand. However the discussion above shows that for Spain there is also counterurbanisation movement. As in The Netherlands and the UK, this process also started rural areas around the bigger urban centres and it spread gradually to more distant rural locations. However, not only did the re-population process start later in Spain than in the Netherlands and the UK, in Spain there are also many rural areas that have never stopped losing population over the post-1945 period. The process of population de-concentration has obviously still been confined to certain parts of Spain whilst other parts of Spain have a population development that is typical for southern-European countries.

Spanish rural areas have a high frequency of second homes and only Denmark and Sweden have a higher proportion of second home ownership (see Robinson, 1990 and Camarero, 1993). According to Robinson (1990), it is also the country that experienced the greatest increase in second-home ownership in the post-1945 period, especially in the 1970s. According to Camarero (1993) there were 800,000 second homes in 1970 and their number exceeded more than 2 million by 1981. In the beginning of the 1980s it was estimated that around 20% of all Spanish households had access to a second home (Robinson, 1990, p.122). Camarero (1993) also showed that most of these second homes are located in very rural locations. About 50% of the second homes are located in villages with less than 2,000 inhabitants, constituting about 30% of all occupied dwellings. Outside

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>1.2</td>
<td>-1.9</td>
<td>-14.9</td>
<td>-11.4</td>
<td>-1.1</td>
<td>-6.6</td>
</tr>
<tr>
<td>Urban</td>
<td>14.3</td>
<td>17.2</td>
<td>26.6</td>
<td>19.9</td>
<td>5.6</td>
<td>5.1</td>
</tr>
<tr>
<td>Total</td>
<td>7.8</td>
<td>8.4</td>
<td>10.5</td>
<td>10.4</td>
<td>3.8</td>
<td>2.1</td>
</tr>
</tbody>
</table>

* The municipalities that are considered rural are those with a population under 10,000 inhabitants

Source: Camarero, 1993
rural villages 40% of the dwellings that are dispersed in the countryside are second homes. One of the explanations for this high proportion is due to the recent and intense character of the rural de-population process. Many people left the countryside to find jobs in the urban centres and coastal areas of the country, but often retained their original family houses to return to during weekends and the hot summer. These family houses thus became second homes for the many Spaniards with rural family roots. Furthermore, there is also a substantial proportion of second homes owned and/or used principally by foreigners. Most of these houses are on the Mediterranean coast with a high proportion of Dutch and British.

2.5 Rural policies in a differentiated countryside

In the previous Sections the rural restructuring process was examined from a broadly policy-free viewpoint. However, during the post-1945 period in most western urbanised countries, government policies began to influence rural areas. These policies started to become more wide-spread and influenced the rural restructuring process in different ways in the three research countries. A comparative description is therefore given of the way the rural restructuring was accompanied and driven by national and EU (rural) policies. These differences should be seen within the cultural and political context and the specific socio-economic circumstances in the rural areas of the three case study countries. These circumstances have also created differences in the political and institutional framework between the research countries, which are discussed separately in Annex 1. The specific policy measures in relation to landscape and nature conservation are explained later in Chapter 3.

In the 1940s, when central government intervention became common in most rural areas of western urbanised countries, rural policy was mainly concerned with agricultural development. The focus of the rural economy was based on agriculture and objectives of most governments were to ensure security of food production. In all three case study countries the domination of agricultural policy in rural areas lasted several decades. This predominance was further encouraged and prolonged by the implementation of Common Agricultural Policy (CAP) in the three countries. On a national level non-agricultural issues were involved in rural policy development in an earlier stage than in the European supra national arena. However, the way and moment in which national governments changed their rural policies varied strongly between the European countries. Overall, the main driving force for national governments to become involved in rural policy was to control the urbanisation and intervene in the competition between the different functions of rural economies. In the UK and The Netherlands, spatial planning was implemented in an earlier stage than in Spain, and became an important instrument through which local and national governments became involved in the countryside. In all countries shifts were detected from sectoral towards regional and comprehensive policy and to paying more attention to endogenous qualities.

In the 1940s in the UK the Scott Report on Land Utilisation in Rural Areas (1942) was already published, identifying measures to preserve the countryside for urban enjoyment. The UK was therefore the first country to create a formal basis that provided the legal powers for rural planning. This however did not involve the control of agricultural activity. In The Netherlands this widening of rural policy started in the 1950s and in Spain in 1956 but it was not until recently that attention was paid to other than agricultural issues in rural policy. The picture in Spain was further complicated by the establishment of a federal state in 1978, which led to decentralisation of powers and transfer of planning authority to the autonomous regions.

2.5.1 Rural policy in the European Union

The consequences of the CAP, which uncoupled agricultural production in the Community from world markets, are well known (see Bowler, 1992a & 1992b; de Hoogh & Silvis, 1994 and Lowe et al., 1997). On the one side, the CAP can be seen as very successful in that it was set up with the aim to stimulate the food production, to guarantee farmers a basic standard of living and to provide consumers with reasonable food prices and to stabilise the agricultural market. These aims have been achieved and have created an efficient and modern farming sector within the EU.

Since the 1980s however the question has arisen as to whether the CAP has not been too successful in supporting
agricultural production. Food production has increased to the extent that large sums of money had to be paid to get rid of the food surpluses and maintain farm incomes. Meanwhile, external forces e.g. the free trade negotiations within the WTO (World Trade Organisation), are increasing their pressure on the EU to change their present market intervention policy. Furthermore, the CAP is widely perceived to have indirectly caused many environmental problems and costs. The extent of agricultural support is also increasingly questioned by the public since the 1980s because of its dominance in the central budget of the EU. Furthermore, only a small proportion of farmers have benefited substantially from the CAP, while the vast majority of European farmers have become increasingly marginalised’ (O’Cinneide & Cuddy, 1992, p.11). Other recent farming crises, such as BSE, have further focused public attention on the way CAP is distributed and the concentration of the policy on production increases and efficiency.

At a regional level the differences between the rural regions of Europe have been further emphasised. In general the wealthier countries received more income supplements from the CAP than the poorer countries. In addition the richer farming areas received more in comparison with the poorer ones (see Robinson, 1990, p. 182). This uneven distribution of the CAP resources is especially applicable to Spanish farmers. Spain joined the EC later than the UK and The Netherlands, in 1986. The reassessment of the CAP then commenced and the Spanish agricultural sector was no longer able to profit as much as the Dutch and UK farming sectors. Furthermore, the Spanish agricultural sector immediately had to cope with the problem of surplus production. Since the agricultural sector still plays a relative important role in the Spanish rural economy, for the Spanish rural areas the problems with the European agriculture had larger consequences than for The Netherlands and the UK. For the whole EU, the domination of rural policy by agricultural policy have continued and it was only at the end of the 1980s that measures were taken to reform the CAP and widen the objectives of the supra-national policy involvement in rural areas. Within the CAP there is some reorientation towards direct income support, such as measures to combine agricultural production with environmental protection and conservation of the countryside.

Within the overall European policy involvement in rural areas more scope has been created, in financial and instrumental terms, for approaching rural problems in a region specific way. The central aim of this rural policy is to decrease regional differences by giving more support to the poorer regions. The most important aspect of the reform is the shift from a sector specific approach, to a region specific approach by targeting support in such a way that the specific endogenous characteristics of an area are exploited and local initiatives mobilised. In practice it has meant that the European Commission have offered the financial resources, while on a national and local level, initiatives had to be displayed and an organisational structure has to be set up to stimulate the developments in rural areas. Regions with specific problems have been identified throughout the EU. For these areas local development agencies were established who developed special development programs to be (partly) financed out of the European Structural funds (e.g. ESF, ERDF, EAGGF) and the European Investment Bank (EIB). These programmes are aimed at stimulating activities such as promotion of local products, setting up of small and medium sized enterprises, promotion of rural tourism, training of labour force, improving infrastructure and conserving natural resources and the environment (Clout, 1993, p. 25).

2.5.2 Rural policy in The Netherlands

Following the Second World War the main objective was recovery and quick reconstruction. In rural policy priority was therefore given to modernisation of the agricultural sector. Under these circumstances, the agricultural sector regained its influence on rural policy development, which it had started to lose in the period before the War. It was not until the 1980s that their influence began to decline. In addition, the further implementation of spatial planning policy in rural areas received less priority than before the Second World War. An important instrument deployed for the rapid rationalisation of the agricultural sector was the ‘Re-allotment Act’ (Ruilverkavelingswet, 1924) which was a useful tool to enforce the power of the agricultural sector, as it enabled the allocation and execution of re-allotment schemes outside the spatial planning arrangements. In practice this has meant that agricultural and forestry land were excluded from planning control. This was not surprising as it was not until the beginning of the 1960s, when the First National Planning Memorandum was published and the Spatial Planning Act (Wet op de Ruimtelijke Ordening, see Annex 1) came into effect, that the countryside became involved in spatial planning.

2 Rural change in The Netherlands, the United Kingdom and Spain
Before spatial planning policy came to rural areas, a regional development policy was initiated in the 1950s. This policy resulted from the concern about the uneven regional development, with a strong concentration of people and economic activities in the Randstad area. In the first phase of this regional policy (1952-1958) development areas outside the Randstad were identified. These areas were characterised by a high unemployment rate. Remote rural areas confronted by declining agricultural labour forces were also included. Within the development areas, migration of industries and people was stimulated, but only towards the nuclei in these areas. Premiums were paid for taking on unemployed people in these areas. Most of these development areas were situated in the north of The Netherlands. In the second phase (1958-1968) the regional policy was broadened through the implementation of more diverse instruments and investment of more money. Subsidy was not only given for the creation of labour but also for the development of industrial areas outside the Randstad. The number of regional development areas and their size was also increased in comparison with the first regional policy phase. For rural areas this policy was however not very relevant as instruments and subsidies were only valid for the bigger and middle sized urban nuclei, and rural areas outside these nuclei were kept outside this policy.

More important for the second phase of regional development policy was that it was linked to the newly developed spatial planning policy, introduced in the first National Spatial Planning Memorandum (Nota over de Ruimtelijke Ordening, 1960). In this first Memorandum the strong concentration of people and activities in the western part of the country and the de-population of rural areas of the northern and south western part of the country, were points of concern (Gorter, 1986). The further concentration of people in the Randstad was therefore to be resisted through a policy of harmonious dispersion of economic activities and people. For the first time the instrument of land use planning was deployed in rural areas. This was necessary because of increased urbanisation pressure through the growing population flows from urban to rural areas in the Randstad as discussed in the former section. Because of the increased use of rural areas by urban people for recreation, the Memorandum also dictated the creation of recreational facilities in rural areas.

A Second National Spatial Planning Memorandum (Tweede Nota over de Ruimtelijke Ordening) was introduced in 1966, which was based on the expectation that population, economy, mobility, urbanisation and welfare would increase strongly until the year 2000. Rural areas were considered to change in multi-functional spaces where besides agriculture other activities such as recreation, residential activity, nature protection (see Chapter 3.4.1) and military training, took place. The development of these rural areas should also be made complementary to the urban changes. Recreational facilities were to be created near the bigger urban centres. As far as agriculture was concerned, modernisation of the sector was to be further stimulated through re-allotment of land, land reclamation- (Dutch polders), and other infrastructure projects. Because the urbanisation pressure was especially large in the rural areas in the western part of the country, the ‘Green Heart’ in the Randstad should be kept ‘open’ which implied that the nuclei in this region were supposed not to grow. Overall urbanisation in rural areas was to be guided to the most centrally located bigger rural nuclei, the policy of so-called ‘joined de-concentration’ (gebundelde deconcentratie). For small nuclei (< 5000 inhabitants) the housing stock was supposed to only grow by 1 % a year. In more peripheral rural areas in the northern, eastern and southern region of The Netherlands, urbanisation pressure was not so much of a problem, but much more loss of population and associated loss of services. In this period authorities of the northern provinces of Groningen and Friesland started to produce reports in which the problems of small rural nuclei were addressed. For the solution to the problems of service loss, they also followed the national approach, which was to stimulate concentration of population in the largest villages, in order to create a minimal population concentration to at least maintain a certain service level within the municipality as a whole (see De Bakker, 1989). Groenendijk (1987), concluded that since the 1960s almost all Dutch municipalities followed a policy of concentration. By the 1970s opposition from rural population groups against this concentration policy starts to grow because of the social problems associated with population and service loss in the small rural villages. The 1970s were characterised by the occurrence of two oil crises, which led to economic recession. The disadvantages of the agricultural intensification process became more visible in this period and caused an increased concern about the protection of the environment. This was further stimulated by the publication of the Report of the Club of Rome (1972). These developments had their influence on the contents of the Third and
Even more on the Fourth National Spatial Planning Memorandums. Contrary to the First and Second Planning Memorandums, which were strongly influenced by optimistic expectation on economic growth, the next Memorandums were more determined by concerns about the negative impacts of continued economic and population growth and emphasis was less on welfare and more on wellbeing.

Of the Third Memorandum, separate sections were published between 1973-1977 (see Figure 2.2). The first

---

Figure 2.2 Relevant Policy documents in The Netherlands

<table>
<thead>
<tr>
<th>Year</th>
<th>Documents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960s</td>
<td>Oriënteringsnota, Tweede Nota Ruimtelijke Ordening</td>
</tr>
<tr>
<td>1970s</td>
<td>Nota Nationale Parken, Nota Nationale Landschapparken, Relatienota, Verstedelijkingsnota, Nota Landelijke gebieden, Structuurvisie Natuur- en Landschapsbehoud</td>
</tr>
<tr>
<td>1980s</td>
<td>Vierde Nota (VINO), Structuurschema Natuur- en Landschapsbehoud, Structuurschema Landinrichting, Structuurschema Openlucht recreatie</td>
</tr>
<tr>
<td>1990s</td>
<td>Landbouw Structuur Plan, Natuurbeleidsplan, Nota Landschap, Vierde Nota Extra (VINEX), Structuurschema Groene Ruimte</td>
</tr>
<tr>
<td>2000s</td>
<td>Vijfde Nota (VIJNO)</td>
</tr>
</tbody>
</table>

Source: After de Lange (1995, p.70) and own elaboration
section was the orientation memorandum (Oriënteringsnota, 1973) which formed the starting point for the spatial policy described in next sections; the urbanisation memorandum (Verstedelijkingsnota, 1976) and the memorandum for rural areas (Nota Landelijke Gebieden, 1977). In the first section the general objectives of the spatial policy are worked out. Environmental concern is incorporated in spatial planning objectives and more environmental and nature protection objectives become part of the policy aims. Space was perceived as a scarce commodity. The shift from a policy of separation of functions towards the mixing of functions, especially of nature and agriculture was now important. In addition because of the increasing public desire for involvement, space was given to public participation in implementation of spatial policy. This process was especially important for nature conservation groups, which then became more influential.

In the urbanisation memorandum (Verstedelijkingsnota) dispersion of population, urbanisation and mobilisation were the major issues. There are five general points of departure (Borchert, 1983, p.125):
1. Congestion and unbalanced urban development was to be avoided
2. Open spaces and high value ecological and landscape areas were to be protected
3. Regional differences in socio-economic development were to be diminished
4. Regional differences in service level were to be diminished
5. The further increase in mobility was to be avoided.

Most of these points were especially applicable to the situation in the Randstad, where the pressure on the rural areas and the open spaces was severe and was still increasing under influence of growing mobility and extensive commuting. The item concerned with services was particularly relevant for the remoter rural areas in the northern part of The Netherlands, because of the first time that attention was paid to living conditions in small settlements. Until the 1970s rural policy with regard to the settlement pattern was mainly focussed on concentration of people and services in the larger rural villages. However, opposition began to grow against this concentration policy and the government was forced to combat the further deterioration of the quality of life in small rural settlements. These measures were further developed in the memorandum for rural areas.

The specific spatial policy for rural areas was further worked out in the memorandum for rural areas (Nota Landelijke Gebieden, 1977) (see Figure 2.2). The official policy of population concentration in the bigger rural nuclei was dropped, but it is left to the decision of the lower tier authorities (provinces) to determine a policy of population concentration or de-concentration. Further measures were also taken by the national government to reduce problems associated with loss of services, e.g. education, in the small rural villages (see De Bakker, 1986).

In this period more provincial authorities began to produce plans to address the liveability problems of rural communities. In spite of the increased autonomy obtained by the lower tier governments, in practice most concentrated on a policy of concentration (Groenendijk, 1987). The attitude towards housing construction in the smaller nuclei became more flexible however, as long as this was to satisfy the housing demand of local population groups.

The most innovative in the memorandum for rural areas in relation to overall spatial planning policy was that land use was regulated through the principles of ‘separation’ and ‘integration’ of the different activities in rural areas. This was worked out in a policy of zoning which is aimed at: ‘enhancement of heterogeneity in land use and warrant and assure heterogeneity, coherence and sustainability in the physical environment’ (De Lange, 1995, p. 72). The weaker functions, e.g. nature and landscape, were therefore protected by constraining the stronger functions, e.g. agriculture and housing. In practice rural areas were divided into four landscape zones, varying from zones with agriculture as the main function, to zones with nature as the main function. The idea behind this zoning policy was that the protection of nature and landscape should be realised as much as possible through integration. However, ‘in practice this was very difficult as it was complicated to combine the post-war agriculture with the interests of nature and landscape conservation’ (Zonneveld, 1991, p.3). Therefore, where no integration was possible, different functions were separated.

An important instrument to regulate the integration of functions in rural areas was introduced in the report concerning the relation between agriculture, nature conservation and landscape conservation (Rdattentera, 1975, see Figure 2.2). Through the execution of this plan, agricultural land was designated as nature development area or as a reserve area. This designation needed to be translated into municipal land use plans by the lower tier governments (see Annex 1). Within these designated areas farmers could, and still can, enter into management
agreements on a voluntary basis. On the long run these areas would be acquired and designated as nature reserves. In the first decades after the execution of this plan there was relatively little interest among farmers to enter into management agreements and therefore the total target area was not realised (see de Lange, 1995). In the last decade however, because increasing problems in the farming sector, the interest to enter into management agreements has grown, as did the opportunities for the government to acquire agricultural land for nature conservation purposes. At this moment the Relatienota is an important instrument to realise the government’s set targets to acquire land for conservation purposes (see also Section 3.4).

Beside the Relatienota other structural reports appeared of which two were especially relevant for nature and landscape protection (see Figure 2.2): The first report was the Report on National Parks (Nota Nationale Parken, 1975) in which a first selection was made of areas that could potentially develop into a National Park (see also section 3.4). The second report was the Structural Vision Nature and Landscape conservation (Structuurvisie Natuur en Landschapsbepaald, 1981). In this last report a general policy objective is described aimed at maintenance of ecological, cultural and landscape quality in rural areas. The objectives of this Structural Vision, together with the policy objectives as described in the memorandum for rural areas (Nota Landelijke Gebieden, 1977) were then further translated into policy in three structural reports (see Figure 2.2). In the first structural report (Structuurschema Natuur- en Landschapsbepaald, 1986), policy for nature and landscape conservation was worked out and specific areas are designated for conservation and/or development of ecological values and conservation and recovery of specific landscape values. Several new designated areas were introduced and the location of these areas was also indicated in the report. In section 3.4 these newly designated areas are discussed. In the structural report of land use restructuring (Structuurschema Landinrichting, 1981) the plans for reallocation schemes of the agricultural sector were worked out. Outdoor recreation policy was also described in another separate report (Structuurschema Openluchtrecreatie, 1986).

In the 1980s, because of the crisis in the agricultural sector, the power of the farmers on rural policy formulation began to diminish. Other societal trends already also began to influence policy formulation and the introduction or adaptation of new legislation and planning instruments. Legislation in relation to nature conservation, environment and land consolidation was adapted. In 1988 the third memorandum was partly replaced by the fourth national spatial planning memorandum (VINEX) which was again partly replaced by the fourth national spatial planning memorandum extra (VINEX) in 1991. In this last memorandum environment received much attention. Furthermore, in these two last memorandums, which are the basis for present day government intervention in rural areas, a number of central issues appear: In the first place, the policy of ‘zoning’ of rural areas was further extended. As in the third memorandum rural areas were divided into four types of rural zones: two zones in which a functional specialisation is determined for agriculture and for nature (yellow zone and a green zone respectively); and two zones (brown and blue zones) in which multi-functional land use should be realised. In the second place, the concept of sustainability was introduced in spatial policy. This concept implied that quality of life aspects and environmental and natural qualities in rural areas became a central policy focus. In the third place, more attention was paid to endogenous qualities of rural areas. Development of remote rural areas was stimulated by concentrating on local characteristics and initiatives, ‘regional development through one’s own efforts’ ('Regiën op eigen kracht') (see Driessen, et al., 1995). In this approach more free-market principles were encouraged by the government. In the fourth place, there was a stronger government initiative for a policy that integrates the interests of the different sectors and of groups that were active in rural areas. As a reaction to the urbanisation pressure a new policy instrument, the ‘Compact City’, was introduced in the fourth memorandum extra (VINEX). Derelict land and open spaces were considered to be used as new building sites, before sites outside the urban areas were taken into use. Several greenfield locations, within or near bigger urban centres were also specified, so-called VINEX locations, where dwellings will be constructed within a relatively short period of time to release the pressure of the (Randstad) housing market. The urban pressure on agricultural, natural and forested land was relieved in this way and more sustainable land use was encouraged. However, according to Van Den Berg (1989, p.57), although the allocation of new building sites in rural areas declines by this ‘Compact City’ and VINEX-locations approach, it does not combat the pressure on the countryside caused by the invasion of new activities like leisure villages, caravan sites and marinas, new highways, urban uses of vacated farm buildings which he calls ‘hidden urbanisation and urban sprawl’. Despite
measures to relieve the invasion of the countryside with new construction activities the multi-functionality of rural space increases, there was a further rise in the pressure on rural land making government intervention progressively more difficult. This invasion is however more a problem in the more centrally located rural areas, while many remote rural areas continue to suffer from problems of de-population, loss of services and a lack of economic resources (see also Van Dam, 1995).

In the VINEX an important new type of area specific policy was introduced, the so-called VINEX-liveability projects (VINEX-leefbaarheidsprojecten) because it was concluded that there were rural areas that were confronted with specific problems endangering their liveability. These areas had problems connected with a decrease of labour opportunities, ageing and decline of the population, and a decline of services. The national government created funds and, in consultation with lower tier authorities, six liveability projects were started in rural areas of The Netherlands. One of these was the area of northeast Friesland /northwest Groningen, the region in which the Lauwersmeer case study area is located (see also Section 4.3). In 1996 the liveability projects were completed, but a new area specific policy is introduced: the Valuable Cultural Landscape policy (Waarddevolle Cultuurlandschappen= WCL). In this policy conservation of landscape quality was combined with measures to improve the socio-economic developments of these areas. The WCL-policy will be further discussed in Section 3.4.1, where the specific Dutch policy in relation to nature and landscape conservation is discussed.

To work out the rural planning policy in greater detail a series of sectoral documents, national structure plans, were produced by the end of the 1980s. Three important plans in the context of this study were published (see Figure 2.2); the agricultural structure plan (Landbouw Structuur Plan, 1989), the nature policy plan (Natuurbeleidsplan, 1989) and the landscape plan (Nota Landschap, 1991)(see also Section 3.4). In the Landbouw Structuur Plan, the functional specialisation of intensive and economically healthy agricultural activities is promoted. Environmental measures were worked out to combat the negative externalities of intensive agricultural production on the landscape and environment and a more market oriented agricultural production is promoted.

In 1993 a new green structure plan (Structuurschema Groene Ruimte) was published which integrated the different policy objectives in the former green plans and memorandums (e.g. Natuurbeleidsplan Landbouw Structuur Plan, Nota Landschap, VINO and VINEX) and translated these in land use planning (see Figure 2.2). The contents of this green structure plan has determined the present government policy in rural areas. It has two central characteristics:

1. There is more de-centralisation of the powers in relation to rural policy. Lower tier governments, especially the provinces, get more power to focus on detailed planning, while the central government confines itself to general rural policy objectives.
2. The protection of the natural environment is increasingly recognised as an important issue in rural policy. More money has been invested and planning instruments brought into action to increase the total surface under protection status within a national ecological network (Ecologische Hoofdstructuur) (see section 3.4).

Overall, one can see that since the 1960s in Dutch spatial policy the attention for the landscape and ecological qualities has increased and this is certainly continued in the new fifth planning memorandum (VIJNO, 2000). For the direction of the urbanisation process in rural areas the lower tier authorities (provinces and municipalities) have become increasingly responsible, because of the increased differentiation of the rural development process. The shift from a sectoral policy in the 1950s and 1960s, led to an more comprehensive policy since the 1970s in combination with an area policy approach since the 1990s can be clearly detected. In the UK similar developments are detected as will become clear in the next section.

2.5.3 Rural policy in the United Kingdom

In the UK rural government intervention in other than agricultural affairs started early in comparison to the Netherlands and Spain. Probably because of the highly urbanised character of British society and the early idealisation of the rural areas (see i.e. Pacione, 1984; Jones, 1986; and Dean et al., 1984). Land use control was organised through the implementation of a rural planning system. Three reports determined the post-war planning legislation in rural areas of the UK: The Barlow Report on Distribution of the Industrial Population (1940), the Uthwatt Report on Compensation and Betterment (1942), and the Scott Report on Land Utilisation in...
Rural Areas (1942). The main recommendations in these reports that had important consequences for the post war rural government interference were that:

1. Measures should be taken to combat the regional variations in economic and population growth, the urban sprawl in the countryside, and the loss of good agricultural land. Especially the concern about the loss of farmland led to a strong emphasis on the importance to maintain good agricultural farmland.

2. Post-war land use control should be organised through a system of central government control over planning and development rights and the institution of the obligation to apply for planning permission prior to development.

These recommendations were followed in the 1947 Town and Country Planning Act. This Act became the basis of government intervention in rural areas, beside the 1947 Agricultural Act, which determined the principle objectives of agricultural support in the UK before the entry in the EC. The Town and Country Planning Act specified that planning permission had to be obtained from the local planning authority for developments in rural areas (see Annex 1). Development embraced ‘the carrying out of building, engineering or mining operations in, on, over, or under land or the making of any material change in the use of any building or other land’ (Pacione, 1984, p328). In other words, as in The Netherlands, agricultural land and land used for forestry were excluded from planning control. This privileged position was caused by the fact that in this period agricultural and conservation interests were still not seen as conflicting, as was also the case in The Netherlands in this period. It was assumed that conservation of the countryside could be left safely in the hands of the farmers (Newby, 1980 and Cloke, 1989).

In the beginning of the creation of the rural planning system ‘rural planning was seen in terms of preservation of the countryside for urban enjoyment’ (Robinson, 1990, p.281). The importance attached by the government to preservation of the countryside for the recreational opportunities for the urban mass was further confirmed with the acceptance by parliament of the 1949 National Parks and Access to the Countryside Act. This Act, which was also a way to respond to the increasing public support to amenity organisations, led to the establishment of separate areas in which nature and landscape could be protected and recreational and educational objectives could be realised. The designation of these areas was an appropriate instrument to keep both the farmers, the landowners and the amenity organisations happy as the farming interests were protected and conservationists obtained their high quality nature and landscape (see also Section 3.4).

During the 1960s, it was being recognised that increased agricultural production had caused environmental problems. Furthermore, the economic prosperity in combination with population growth in this period led to a major increase in car ownership. As a result, more attention was needed for countryside recreation planning, to handle the increased recreational pressure on the countryside, especially in the National Parks. Under influence of these developments the 1947 Act was subsequently modified into the 1968 Countryside Act. Although the essential arrangements for planning remained the same, two new elements were introduced in countryside policy: In the first place, the protection of nature and landscape outside the designated areas became an issue of concern. As a result, the one sided attention paid to the agricultural sector was reduced, making more room for conservation and recreation issues (see Cloke, 1988). To reduce the recreational pressure on National Parks new Country Parks and picnic sites near major centres were allocated. In the second place, the National Parks Commission was replaced by the Countryside Commission. This new Commission could become more actively involved in planning and management matters, also outside the designated areas. In the third place, a government reorganisation was carried through which led to an allocation of detailed planning authorities to the newly created lower tier, District authorities.

Beside the intervention in the agricultural sector, recreational development (including access to the countryside) and landscape and environmental protection, from the 1940s onwards, the UK government imposed controlling measures on population developments and service provision in rural communities. As in The Netherlands, also in England the problems associated with concentration of economic activities and population in and around the major urban areas, mainly in the south of England, was an issue of concern. Therefore, the industrialisation of small market towns outside the bigger urban conurbations was stimulated. Country towns were seen as suitable recipients of urban over-spill. New Towns (New Town Act, 1946) had also been built since the 1950s in England and Wales, in order to achieve the objective of planned dispersal of population from the overcrowded urban
areas (see Hall et al., 1973). But elsewhere in the countryside the Town and Country Planning Act was strictly implemented by the local authorities and economic development in remote rural parts did not arise until the 1980s (Cherry & Rogers, 1996).

The main instrument used to stimulate the development of non-agricultural economic activities was through the activities of the Rural Development Commission (founded in 1909) and other rural development agencies. Until the 1960s the activities of this Development Commission had a more ‘ad hoc’ character (see Cherry & Rogers, 1996) but from the end of the 1960s a comprehensive system was set up of concentrating their assistance to growth centres, bigger urban nuclei, from where the development of the rest of the area was triggered. This was very similar to the Dutch regional development policy in the 1950s and 1960s in which support was also targeted at growth centres. In 1973 a system of Special Investment Areas (SIA) was created. For these areas, local authorities were asked to develop plans in which the needs, problems and actions required were indicated. The concentration of employment in key-settlements went together with a concentration of building activities and services in the bigger rural centres.

By the end of the 1960s it became clear that the concentration of support on the bigger nuclei led to a general deterioration of service, housing and employment opportunities in small villages often causing further depopulation in remote rural areas. Contrary to the Dutch situation, the UK government took few measures to combat this decline. According to Cloke (1988, p.35) this was particularly related to the strong control of central government on local planning. The focus on concentration policies was further continued through the following decades for two main reasons. Firstly, because of the oil crises in the 1970s, which led to economic depression, there was a clear shift to even more economically driven government intervention in rural areas. Secondly, the emphasis on the working of the market was further prolonged and increased under the Thatcher government and other conservative governments through the 1980s and early 1990s.

In 1984 the first signs developed of a more integrated approach towards socio-economic problems in rural areas. The 1973 programme of the Special Investments Areas (1973) was replaced by a system of Rural Development Areas (RDA). The improvement in relation to the old programme was that there was no longer only a single focus on unemployment problems. Both unemployment programmes and problems related to the lack of service provision in rural areas are handled with in an integrated manner. In 1995 these rural Development Areas, of which most are situated in the rural periphery, cover 35% of England and 6% of the population (Cherry & Rogers, 1996, p. 121).

An integrated approach towards agriculture and environmental protection started to become more popular at the end of the 1970s. In this period the post-war productionist policies were abandoned enabling the government to render this concern for landscape and nature values into political action. The first steps were taken in the direction of a more comprehensive rural policy when the English government radically renounced its single policy orientation on the agricultural sector. Firstly, the 1981 Wildlife and Countryside Act was implemented which permitted relevant authorities to enter into management agreements with landowners for the purpose of conserving or enhancing the natural beauty of the countryside. Through the 1986 Agricultural Act this principle of compensation payments to farmers was further worked out in a system of Environmentally Sensitive Areas (ESA). This system is comparable with the Dutch ‘Relatienota’ policy (see Section 2.5.1). In these designated ESAs, farmers are able to enter into agreements with local authorities to apply restrictions to their agricultural practice in exchange for compensation.

Secondly, in an attempt to encourage the integration of farming with care for the environment and the rural landscape, a policy was issued in 1987 by the Thatcher administration to develop initiatives for issues of Alternative Land Use and Rural Economy (ALURE). As a result resources came available to encourage farmers to convert farmland into woodland and to diversify farm activity, and to designate more Environmentally Sensitive Areas. With the introduction of the 1987 ALURE programme, the door was opened in British rural policy for a broader rural, rather than a narrow agricultural policy. Societal trends (see Chapter 1 and Section 2.2.1) and the negative impacts of the CAP forced to involve environmental issues and strategic thinking about the countryside in English rural policy. In 1990 this resulted in the first environmental White Paper, ‘This Common Inheritance’ (DoE et al., 1990). Subsequently in 1995 a second White Paper was published titled ‘Rural England: A Nation
Committed to a living Countryside’ (DoE, MAFF, 1995) in which some major shifts in rural policy can be detected. Lowe (1996), summed these shifts as follows:
1. ‘a shift from an agricultural to a rural focus in combination with a more territorial approach instead of a sectoral one’
2. ‘a shift in emphasis from a concern for resource management and planning to a concern for people, communities and livelihoods’
3. ‘a shift away from seeing the countryside as a unitary national space and towards an acknowledgement of the diversity of rural areas and a recognition that different kind of rural areas need different kinds of development trajectories’ (Lowe quoted by Ward, 1996, p.12).
These shifts are the basis for the present day government policies in rural areas of the UK. There is a striking resemblance between these and the approaches to rural development issues in present Dutch, Spanish and European rural policy.

2.5.4 Rural policy in Spain
The post-1945 government intervention in rural Spain developed differently from the Dutch and UK situation. Firstly, with the death of general Franco (1975) a federalist political system was introduced which led to a shift of most of the planning responsibilities from the national government to the autonomous governments. Under the Franco regime government decision making was highly centralised. The shift to the federalist system had far reaching consequences for planning legislation, and thus for rural policy. Therefore in this Section, only national policies for Spanish rural areas before 1978 are described. For a description of the post-1978 period of government involvement in rural areas, focus is mainly on the situation in different autonomous regions (=Autonomias), especially Andalucía, the region where the Spanish case of this study is located.
Secondly, in The Netherlands and the UK planning in rural areas mainly arose from the necessity to arrange for the mutual tuning of the different ‘consumption’ functions that increasingly appeared in the countryside. In Spain this commodification process started much later. Therefore in the 1950-1970 period Spanish government intervention in rural areas was mainly dominated by regional policies aimed at stimulating economic growth in order to diminish the regional and social inequalities. There was little attention paid to land use planning in rural areas in that period. After the 1970s more attention was directed towards urbanisation, recreation and conservation.

Spain before 1978
After 30 years of a highly centralised and hierarchically organised rule under the Franco regime there was widespread movement towards local decision making. Nevertheless, the Spanish situation was no different from other unitary nation states of that time in Europe, such as Greece and Portugal. During this Spanish dictatorial period, local initiatives were strongly discouraged and regional policies were always subordinate to national economic growth (Naylon, 1987, p. 395). According to Richardson (1975), in the 1940s and 1950s there was no question of any real planning in Spain. Government intervention in rural areas in these decades consisted of interference in the agricultural markets to stimulate the production of products for internal use and measures were taken to modernise the agricultural sector. These comprised of large scale irrigation projects, land consolidation and redistribution projects. The area under irrigation increased under this policy, but the re-distribution effects of it were limited (see Section 2.3).
In 1964 economic planning measures became part of government intervention in Spanish rural areas. These measures were regional in nature. Between 1964 and 1975, three National Plans (Plan de Desarrollo Economico y Social) were developed. The main objective of these plans was to improve the economic and social state of the country. These plans were based on a growth pole approach, which meant that resources were allocated and measures were taken to stimulate the growth in certain growth poles. It was intended that growth would then diffuse from these poles to the surrounding areas. In the first plan (1964-1967) measures were mainly taken to raise the productivity level in the economy as a whole. The second and third plan had a more re-distributive character since further measures were taken to reduce differences in economic and social well-being of the different regions in the country. For rural areas most planning intervention was aimed at improving the
productivity of the agricultural sectors. However, the provision of services in education, housing, health, transport and tourism was also stimulated. In the third plan a more regional specific approach was to be detected than in the first two plans. However, in the middle of the 1970s most of productive capacity, jobs and population, became strongly concentrated in the conurbations of Madrid, Barcelona, the Basque Country and the Mediterranean Coast. The Spanish rural areas, continued to suffer from de-population and there was little evidence of an increase in the standard of living since the 1950s (see Table 2.3).

**Spain post-1978**

With the death of Franco in 1975, democracy was restored and a new Constitution was formulated and legislation agreed in 1978. A federalist political system was introduced by this legislation, which led to a shift of many competencies from the central government to the authority of the autonomous regions. Although there exists a high degree of variation in the powers delegated to the 17 autonomous regions, the urban and regional planning competence now belong to the autonomous regions (see Figure 2.3).

These autonomous authorities have powers to make and approve laws and plans, involving regulations on land use in cities, villages, agricultural lands, forests and coasts. However, since the introduction of the new Constitution in 1978 the distribution of competencies over the national and autonomous authorities continues to be in a constant state of evolution resulting in local variations. For example, not all autonomous have laws to develop their competencies in relation to planning. If they have not developed these laws they use the National Land Act as their autonomous law. The Land Act of 1992 (Ley sobre el Regimen de Suelo y Ordenacion Urbana) has however been abolished, because it did not give enough room to the central government to dictate laws that could effect the autonomous legislative competencies. As a result the 1992 Land Act has now almost completely been replaced by the 1998 Land Act (Ley sobre Regimen de Suelo y Valoraciones). At a national level it is the Ministry of Public Works and Town Planning (Ministerio de Obras Publicas y Urbanizacions) that coordinates planning. At the autonomous level separate planning agencies have been set up. Another example is that at this moment the national government

**Figure 2.3 The 17 autonomous regions (Autonomías) of Spain**
still retains responsibility for National Parks, although there has been resistance to this, especially in Andalucía (see next Chapter). Since municipalities have little higher level guidance (Newman & Thornley, 1996) the Spanish local authorities have a high degree of freedom in steering land use developments (see Annex 1). Over the last decades this has in many rural areas, this has led to uncontrolled urbanisation of the countryside. The ongoing urbanisation of the Atlantic coast in the case study area of Doñana is a well-known example of this (see Section 3.4 and Chapter 4).

Regional development support has been a central issue in the post-Franco period especially during the pre- and post accession period to the European Community (EC). When Spain entered the EC, the strong regional differences in development levels within Spain and between Spain and the rest of the EC was one of the main concerns. Within Spain regional differences were already large and, because of the de-centralisation of powers to the autonomies, further complications arose to decrease the regional development differences. At that time, the regions that were most lagging behind in economic terms were the southern and centrally located autonomous regions of Andalucía and Extremadura. At present these regions still have the highest unemployment and lowest income rates of Spain. Both on national and regional levels, several initiatives were started to decrease the regional development differences during the 1970s and 1980s. At that time these initiatives were always sectoral in nature. Some examples were the designation of zones where industrialisation and re-industrialisation should be promoted. For the agricultural sector a programme was set up in 1984 with the main objective to resolve social problems that had developed from decrease in agricultural employment and associated increase in unemployment. In Andalucía and Extremadura, which were most affected, the results of implementation of this programme were positive (see Fernandez-Cavada & Ortuño, 1994). The short term effect was that the programme improved the economic situation of many people, but on the long term it slowed down the modernisation of the agricultural sector. The effects of the programme would have been larger if a more integrated approach was followed, e.g. creation of alternative employment opportunities in other than agricultural sectors.

Within the European Community, the whole of Spain obtained the status of regional development area (Objective 1 under the Structural Development Funds). The advantage of having this status was that by 1986, when Spain entered the EC, the whole country could apply for funding from the different European regional development funds. However, as all the autonomous regions were in the process of developing their own development policies, it was difficult to develop a coherent structure to co-ordinate and target various European regional development funds with national and local development initiatives. The national government therefore decided to set up a special programme for regional development (Programma de Desarrollo Regional, PDR).

From the beginning of the 1980s several regional development initiatives and organisations were set up by autonomous governments to promote development. The number of initiatives and the type of approaches varied strongly between the autonomous regions. Valcarcel-Resalt (1991) described 258 local development initiatives between 1980-1990 of which 24% were found in Andalucía. These initiatives were initiated by local governments and partly financed by European regional development funds. Special rural development agencies (Sociedades e Institutos de Fomento) to coordinate and stimulate these initiatives have been created by the autonomous regions, who distribute resources and stimulate and finance private initiatives. These agencies have often developed into large organisations managing billions of pesetas (i.e. Instituto Madrileño de Desarrollo, Instituto de Fomento de Andalucía etc.). They play an important role in the present implementation of rural development policy.

From the middle of the 1980s the autonomous regions also started to produce more comprehensive regional development plans. These plans were not implemented before the 1990s. An example is the Andalusian Rural Development Plan (1994-1999) (Plan de Desarrollo Rural Andalucía, 1993). The central objective of this plan was to increase the living standards and the quality of life of the local population, improve the employment situation and stimulate a sustainable and stable economic development, especially in economic and environmental terms (Mosca, 1994). The emphasis of the plan was to modernise and diversify the local economic activities in the region as 55% of the budget was to be spent on this. The emphasis was however still on the agricultural and forestry sector as these received more than 40% of the total 55% spent on economic activities. Another 30% was to be spent on improvement of the infrastructure and public and social services. The sustainable approach in the plan was made visible by reserving 6% of the budget for improvement of the cultural and natural heritage of the
area. According to Mosca (1994) the plan is new and progressive, as it takes account of the actual issues relevant in the present approach to rural development. It is also a useful starting point for negotiation to realise more consensus between the different forces protecting the economic, social and environmental interest in the Autonomy. Some negative points mentioned by Mosca (1994) were that the environmental sector, the Research and Development sector and professional schooling issues did not get sufficient attention in the plan. Finally, Mosca indicated that the inter-sectoral coordination of the plan is weak and the institutional and administrative implementation still needs further elaboration.

Policies for the protection of the natural environment in Spain have always been the responsibility of the national authority. Since 1978 it has increasingly been taken over by the autonomous administrations. This shift gives the increasing acknowledgement of the need for integrated and sustainable development. It also involves the recognition that the quality of the rural society can only be guaranteed when attention is also paid to the natural environment.

2.6 Summary and Conclusion

The aim of this Chapter was to investigate the characteristics of the rural development process in the three case study countries by answering the first sub-research question of this study:

How can the post-1945 rural restructuring process in The Netherlands, UK and Spain be characterised and how did it affect the present day residential activities in rural areas?

Overall, the most striking characteristic of the whole rural restructuring process is the differentiation of the countryside and this can be explained by the diverse ways that the commodification and integration process have developed in the different rural areas within the three research countries. The individual characteristics of these areas are the most important factor in determining the present position and function of a given rural region. Certain parts of the rural areas have become more able to attract consumption oriented activities, such as recreational, residential and economic activities than elsewhere. Overall, the relative location of these rural areas was an important factor influencing this process in the first decades after the Second World War. However, in the most recent decades, other factors especially those related to the presence of specific rural amenities, have become increasingly important in driving this differentiation process.

The answer to the first part of the central question is more extensive when concentrating on the specific situation in the three research countries. Although it was not always possible to precisely compare all developments, because of differences in available information per country, the overall picture is that large parts of the rural spaces in the case study countries experienced similar processes of change. The circumstances in these areas, the point of departure at the end of the 1940s and the government involvement, were however very different, and the pace and time of the restructuring process varied strongly between the rural areas within and between the three research countries. It left all three with a very diversified rural space. The rural areas of Spain and the UK are especially marked by strong regional differences.

Many similarities were found in the commodification, in the Dutch, British and Spanish rural areas. It has resulted in a lower proportion of agricultural activities, an increased use of rural areas for recreation, nature conservation, forestry, first and second homes and other non-agricultural activities. Also the whole process of rationalisation and agricultural production increase was comparable to other EU countries. This process has the same negative effects on landscape, environment and saturation of markets. Integration of the rural space was also detected, as ‘consumption’ activities became more widespread in rural areas and became more strongly integrated into the wider urban society. These developments started firstly in the most centrally located rural areas around the bigger urban centres but have dispersed gradually to more remote areas. In Annex 2 all the differences and similarities between the rural restructuring process in relation to agricultural changes, land use changes, population dynamics and rural policy are summed. In Chapter 3 the role of nature conservation and amenity is further developed and completes the whole rural restructuring story of this study.

When looking more closely at the rural development process, important differences have also been detected between the three case study countries. These variations come from differences in the way the rural restructuring
has developed, but should be seen in the context of national and regional differences in physical, climatological, social-economic, political and social-historical characteristics (see also Annex 2). It should be realised that these specific national and regional circumstances determine the context within which the relationship between the presence of protected nature and residential activities are being investigated in the five case study areas of this study.

One overriding difference, is the scale in which the commodification and integration process has affected rural areas in the three different countries. In comparison to the UK and The Netherlands, regional differences in the extent and the way to which rural areas in Spain have been integrated in urban society by the introduction of new consumption activities, has been much larger.

In relation to agricultural change, it can be observed that in The Netherlands virtually all farms were included in the rationalisation and specialisation process, whilst in the UK and especially in Spain, traditional extensive agricultural systems still continue to exist beside the intensive and highly modernised agricultural systems. In the UK these traditional systems are less numerous but can still be found in remote rural areas of Scotland and sometimes in the remoter areas of National Parks or other protected areas of England and Wales. In Spain, in spite of the intensive and rapid agricultural intensification process, traditional agricultural systems and associated cultural landscapes are still wide spread. Largely because of the size of the country, Spain still contains many relatively remote rural areas with low population densities and with extreme natural circumstances, which make these areas less suitable for intensive agriculture.

Land use change in the three case study countries show some similarities but generalisation is difficult because of local differences. In general, agricultural land decreased, and an increase in woodland and other land was seen. However, in The Netherlands the loss of farmland has been much larger, while woodland increase was relatively small and urban land large. The UK is characterised by a relatively small loss of farmland in the post war period. Although the UK still has the lowest proportion of agricultural employment, and is amongst the most urbanised countries of the world, it still contains a high proportion of agricultural land. The most divergent land use change was found in Spain. Here agricultural land did not decrease significantly, while urban land even decreased in relative terms in the last decades. This is to be explained out of the delayed and continued agricultural modernisation process, which implied that until recently large areas of natural lands were converted for agricultural production. The decrease in urban land only involves a relative decrease and is related with the much bigger increase in woodland and the huge land surface of the whole of Spain, making large land use changes in absolute terms small in relative terms.

All three countries experienced important population dynamics, which first started with population movements from the rural spaces towards the cities, leading to further urbanisation. Population movements from the cities to the rural areas then followed, causing a population de-concentration and involved an urbanisation of rural areas. Once these processes were started, population concentration and de-concentration took place at the same time within the same country. In Netherlands and the UK the population de-concentration started relatively early. First in the rural areas around bigger cities and than it dispersed gradually to more remote rural areas. The result was that almost all rural areas in these two countries have experienced a population stabilisation or increase in some stage in the post-war period. This was however not the case for Spain. Here the ‘exode agraire’ started only in the 1960s, and since than population dynamics were very intense and rapid. Once the de-population process took off, it started first around the bigger cities and the regions on the Mediterranean coast. This process then extended to several areas further away from the urban centres but, in contrast to the UK and The Netherlands, large rural areas were never involved in this process. Some rural areas have never stopped losing population. Recent population flows between urban and rural areas in the UK and The Netherlands, have also become more diffuse. No clear distinction can be made between population dynamics between more centrally located rural areas and more remote rural areas. This implies that distance has become a decreasingly important determinant in the urban-rural migration process.

In addition, second home ownership is also widespread in Spain. In The Netherlands and the UK it has never developed into an important widely spread phenomenon. This may be related to the intense and recent rural de-population process which has resulted in a high proportion of urban people that still have strong ties with the rural communities.
Governments in the three countries have driven the rural restructuring processes in different ways, but in recent years a clear divergence of rural policy has taken place. The differentiation process in rural areas has also had implications for rural policy. It has resulted in more attention for area specific characteristics, more attention for integration of policy through comprehensive and area specific policy and a shift from top-down to bottom up policies. Three common tendencies were detected in government intervention:

1. The increased attention for environmental issues in society led to an increase in measures to conserve the environment (see also Chapter 3).

2. Government intervention could be characterised by a process of withdrawal and de-centralisation of powers, which has resulted in increased attention for regional resources and local initiatives, especially in relation to physical planning approaches in rural areas. Endogenous development is becoming an important issue in rural policy which is a direct reflection of the overall increase in public appreciation of the specific characteristics of rural areas, making them different from urban spaces, and other rural areas.

3. The increased internationalisation and liberalisation of the agricultural markets has forced governments to follow a more market-oriented policy. The increase in surplus agricultural production in combination with associated negative environmental externalities have resulted in more scope in rural policy, for non-agricultural use of the countryside. The multi-functionality of rural areas has not only forced governments to pay attention to other than agricultural functions but they have also been urged to look for more comprehensive means of government intervention in rural areas. Planning policy appeared to be the best vehicle to co-ordinate the multi-functional use of rural areas. In the UK and The Netherlands planning policy was developed earlier and was especially focussed in the beginning on regulating the urbanisation of the countryside. In Spain rural planning policy did not come into effect until the 1980s with the introduction of the federal system. This new situation changed the whole administrative structure and delayed the implementation of rural planning measures. Rural planning is now the responsibility of the regional governments and since the 1980s a comprehensive approach is followed in several regional plans. However other regional governments still follow a sectoral approach.

In relation to the present day residential function of rural areas the overall conclusion is that the residential use of rural spaces in all three case study countries has increased importantly with the centrally located and/or amenity rich rural areas obtaining the largest proportion of the residential growth. At the same time this specific process of urbanisation has been more applied to rural areas in The Netherlands and the UK, than in Spain, where relatively more rural areas continued to lose population. In addition, second homes play a more important role in the residential development function of Spanish rural areas than in the Dutch and British cases. The increased use of rural areas for residential activities has several reasons, but overall, an increased freedom of choice was detected for a growing group of people which made that migrational behaviour in the last decades was increasingly steered by non-economic considerations such as quality-of-life. Because of this, rural areas in general have become more attractive as places to live. Within rural areas, those places with plentiful natural amenities can be expected to attract relatively more first and second home residents and other activities as these are better able to satisfy people’s desire for a high quality environment. It is expected to have led to a further differentiation of the countryside within and between the three case study countries. Relative location of rural areas has become less influential in this process, but endogenous quality of an area has become more determinant in the ability of rural areas to attract new activities.

Notes

1. In 1995 the conurbation of Amsterdam, The Hague, Utrecht and Rotterdam consisted of 4.2 million inhabitants (CBS, 1996); Greater London had a size of 7.0 million (Eurostat, 1998) and Madrid 5.0 million (Eurostat, 1998).

2. According to Lazaro Araujo (1994, p. 253) 70% of the Spanish territory is Objective 1 area, which contains 60% of the total Spanish population. At that time it was estimated that Spain would receive 4,703,360 million pesetas out of the EU structural Funds in the 1995-1999 period.

3. The total budget to realise the plan amounted more than 500000 million pesetas.
Rural change in The Netherlands, the United Kingdom and Spain
3. Nature conservation and rural areas

3.1 Introduction

‘Environmental characteristics remain a powerful and pertinent basis for rural distinctiveness, whether in terms of relations between rural and urban areas, with respect to individual and collective presentations of rurality and rural identity, or in biological resource that non-urban zones represent’ (Hoggart, et al., 1995, p. 253)

At a time when urban and rural spaces have become increasingly functionally integrated, the endogenous values of the countryside, including the important role played by ‘nature’, are what discriminates between them. In almost all European countries nature conservation considerations have become increasingly prominent in recent policy decisions. This process is referred to by many as the ‘greening’ of rural policy and society (see e.g. Harper, 1993 and Hoggart, et al., 1995). As will be discussed in this chapter in Section 3.4, evidence for the increasing importance of nature in rural areas will come from the way recent rural policies have been developed in the three case study countries, and from the positive responses to nature as described in Sections 3.2 and 3.5. It is also confirmed by the increase in the total surface area that is protected (see Section 3.3) and the number of members of nature conservation organisations (see Section 3.2).

In this chapter the second sub-research question of this study is answered:

1b. How did the post-1945 rural restructuring process in The Netherlands, the UK and Spain affect the nature conservation activities in rural areas?

By answering this question a better understanding is gained of the function of protected nature, its characteristics, and the way it may influence other interests in rural areas; especially the residential activities which are central to this study. In Section 3.2 the concept of nature is clarified by focussing on how it is perceived and experienced in present western society. In Section 3.3 the different approaches towards protection of natural areas is examined. In Section 3.4, conservation policies in the three countries are described. In Section 3.5, focus is on the influence of the presence of protected nature on other rural activities. In the conclusion of this chapter the main differences and similarities in relation to the function and conservation of nature in the three case study countries are discussed (see also Annex 3).

3.2 The concept of nature

For the purpose of this study it is important to gain an understanding of how people perceive nature, and the aspects of nature that influence this perception and consequent behaviour. This Section therefore focuses on how and why nature is appreciated.

Changing attitudes towards nature

The relationship between man and nature has always been an important issue in the science of geography. This is not surprising, as people’s behaviour in space has always been strongly influenced by the natural environment. To describe the ways that different man-nature relationships have influenced the science of geography, De Pater and Van der Wusten (1991, p. 22) refer to the classification of the American geographer Glacken (1967). He divided the different attitudes from the Greek-Roman period until the Industrial revolution into three groups:

1. Earth is a finished house created by God for man, the most superior being on earth, of which man is the landlord.
2. Earth with its climate, relief and coasts, determines (or strongly influences) the conduct of man.

3. Man changes the appearance of earth: as a consequence of man’s labour the natural landscape has been transformed into a cultural landscape.

Glacken’s categorisation incorporates, on the one side, the Christian belief that nature was created by God who appointed mankind its guardian. On the other side, it also involves the continuum that is used to represent the man-nature relationship or, in the human geographical perspective, the relationship between the individual, the actor, and the structure. At one extreme ‘man is completely dominated by nature’ and at the other ‘nature is dominated by man and subordinated to man’s wishes’. In the first extreme; the deterministic image of man; the emphasis is on the constraining influence of nature on behaviour, i.e., individuals have no influence on nature. In the second extreme, the voluntary image of man, the emphasis is on an individual’s freedom of will, choice and action. In this last approach, changes in the natural environment are the product of the behaviour of individuals, whether purposeful or intentional.

Our present western perceptions and understanding have been strongly influenced by the three different attitudes towards nature, which have shifted in different periods of the past. In the Middle Ages, for example, the man-nature relationship dominated, in which man was seen as the landlord of the house of God and nature as subordinate to man’s wishes. From the Renaissance onwards the attitude towards nature was increasingly influenced by the belief that man is part of nature and is therefore dominated by nature and/or able to dominate nature (De Pater & Van der Wusten, 1991). This change was related to technological development.

‘As science and technology gradually replaced God and theology in determining humanity’s relationship to the natural world, the relationship shifted dramatically. The anthropomorphism introduced by the Renaissance, based more on technological aptitude than on moral imperative, provided the philosophical and scientific justification for ever-greater changes to the natural world.’ (Hoggart et al. 1995, p. 228)

With this growing ability to dominate natural processes, the natural environment was increasingly changed by man, but at the same time respect for nature also started to develop. For example, in painting, and also during the 16th to 19th century, natural features were increasingly introduced in garden design (see Van Der Windt, 1995). The English landscape garden style is an example of this, in which more space was given to non-cultivated, less organised, natural looking patterns, known as wildscapes. Another important reason for interference in landscapes was that woodlands had been disappearing on a great scale in most European countries, and this caused natural disasters. Concern about this and a preoccupation with loss of the habitats in general, made tree planting popular, and this also became apparent in the way landscapes were changed in the 18th century. As a result, in this period, many tree lines and patches of woodland were created in the English countryside. In The Netherlands, the increasing concern for loss of woodland led to the planting of trees on an increasing number of newly created estates in the 18th and 19th century. These were mainly located on the sandy soils on the higher parts of The Netherlands (for example, ‘t Gooi, Veluwe and Twente).

With the glorification of wild nature by the Romantic movement, and the increasing influence of geographical and biological studies by people such as Alexander Von Humboldt (creation of ‘Monuments de la Nature’, 1814), Arnold Guyot (The Earth and Man, 1849) Eliseo Reclus (La Terre, 1868) and Charles Darwin (The Origin of Species, 1859), nature conservation measures also became more popular. A growing number of people became involved in the conservation and study of wild nature, and initiatives and organisations aimed at conserving the natural environment became numerous. The earliest and most influential expression of this, was the establishment, in 1864 and 1872 respectively, of the Yosemite and Yellowstone National Parks in North America. This was a reaction to the rapid destruction of natural resources that accompanied growing economic and social changes, and under influence of nationalistic sentiments aiming at the conservation of uncultivated areas (see Bosque Maurel, 1996 and Van Der Windt, 1995). The American example of establishing National Parks was followed soon by other countries like Canada, Australia, Sweden, Germany, Switzerland and Spain. As well as the creation of protected areas, more organisations were created, and political measures were taken, which focussed on the protection of particular species, especially birds.

The American approach to nature conservation differed from what occurred in most European countries during this period. In North American National Parks the emphasis was especially on aesthetic appreciation of wild and untouched nature for mental relaxation and for scientific purposes. National Parks were not and are not

3 Nature conservation and rural areas
permitted to have any productive function, and interference in natural processes is prevented as much as possible. In many European countries, there was less interest in the concept of wilderness than in the conservation of natural resources, and in preventing the disappearance of particular plant and animal species (see Van der Windt, 1995). This was not surprising since, by the end of the 19th century, there was much less wilderness left in most European countries than in many overseas areas. Furthermore, private initiatives aimed at conserving nature were numerous in all countries and were important for the setting-up of specific conservation measures. However, government support for these initiatives came much later in most European countries than in North America.

In The Netherlands nature conservation measures started relatively late, because the industrialisation process also occurred later, and political and social movements, like Romanticism; which played an important role in exalting nature; were less influential (see Van Der Windt, 1995). In the 19th century the Dutch conservation initiatives were influenced less by American ideology than by what was occurring in Germany, with the creation, by the end of the century, of Naturdenkmäler (Natural Monuments) and Staatsparks (State Parks); which were especially inspired by Wetekamp and Conwentz. They based their ideas on the scientific ecological approach to nature, in which natural communities were perceived as part of a related network that should be in balance with each other. These ideas also influenced the private nature conservation initiatives in The Netherlands, especially among Van Eeden, Thijssse and Heimans, a group that has played an important role in the foundation of Natuurmonumenten (1905) (Natural Monuments) the main private Dutch organisation responsible for the conservation of protected natural areas. An important feature of their approach was that they did not aim at protecting the whole rural territory or the whole natural resource, but only specific parts that were needed for the conservation of particular species, which were considered important by nature conservationists and/or artists. Nature conservation was therefore focused on exceptional elements, and was more related to rarity than to wilderness. What was deemed worthy of protection was determined by the leading conservationists of that time; usually belonging to groups of nobility, businessmen or biologists. According to Van Der Windt (1995) the Dutch conservation approach was unique, in that aesthetic considerations, the protection of wilderness and wildlife, and national significance were less important than in other countries.

Since industrialisation and related urbanisation started early in the UK, one would also expect an early conservation movement in this country. Nostalgic feelings for disappearing pre-industrial features, and an ecological consciousness, did indeed develop at an early stage, but while a drive to preserve rurality emerged as a significant force in politics in the 19th century, conservation of the natural environment did not become translated into policy until the middle of the 20th century. In spite of the late political response to the conservation of nature, ecological consciousness took root in English society at a relatively early stage, and stimulated the establishment of many voluntary and/or pressure groups, which formed the basis of the present day conservation movement; especially in the field of animal welfare protection. The environmental consciousness of the groups, which was mainly concerned with human destruction of nature and species, was inspired by Darwin’s theories. The groups were rather extreme in their views, and encouraged the powerful conservative forces in the countryside to assert their property rights; making the acquisition of land for conservation purposes impossible in the 19th century. Only the National Trust, which was founded in 1865, managed a greater degree of success. Because this organisation placed firm emphasis on conserving places of beauty and of historical interest, as well as nature and species, it was therefore regarded as less threatening. Political support for the aims of the National Trust increased and, because there was already a strong link with landowners, the acquisition of land became very successful from the beginning of the 20th century. The Trust obtained its first property in 1896 and at this moment it is the largest private landowner in England and Wales (Lowe, 1989), with considerable power in the fields of nature conservation and historic preservation. The main feature that differentiated the UK approach was the emphasis on beauty of landscape, rather than wilderness; as in North America; or rare species or elements; as in The Netherlands. Another specific characteristic of the UK conservation approach was the strong focus on the protection of animals. Already in 1824, the Society for the Prevention of Cruelty to Animals was established by aristocratic groups.

In Spain, from the 17th century onwards, there were several scientists and conservationists who produced works expressing their concern over the ecological deterioration of Spain (see Mulero Mendigorri, 1995). These
expressions reached their climax at the end of the 19th century, when there was great anxiety about excessive deforestation, the destructive influence of agriculture, and the regular occurrence of natural disasters. A very illustrative quotation from this period says ‘as one glorious day the Reconquest against the Arabs commenced in Covadonga, it is also from there that the Reconquest against desertification will commence’ (Solé I Masip & Solo de Zaldivar, 1986, p.24). According to Mulero Mendigorri (1995) one should realise that Spain has always had a strong tradition in conserving its natural resources. The main reason for this was that the nobility and the royal family were, and still are, important land owners and were therefore able to keep huge areas of wild lands exclusively to themselves for hunting and fishing purposes. One of the most important European National Parks, Doñana, owes its existence to the fact that it had always served as a hunting ground for the nobles and royalty, until it came under national and international protection.

In 1918 Covadonga, in the Picos de Europa, and Ordesa, in the Pyrenees, became the first National Parks in Spain. Their creation was partly driven by concern about the deterioration of the natural environment, and ecological disasters that could result, but there were also groups that concentrated on the scientific and recreational aspects of the environment; especially the mountainous areas of the country. First of all the Spanish Geographical Association had already produced many publications on the natural and historical resources of Spain. Then there were others who focussed on the recreational and scientific value of the Spanish mountains; like several exploration and scientific study groups. All these internal developments were much influenced by external developments in the rest of Europe and especially North America. First of all, the Spanish scientists and conservationists picked up the ideas from, for example, Von Humbolt and Darwin. The North American model had a greater influence on the measures adopted in Spain than it did in the UK and The Netherlands. The political willingness to implement conservation into policy was already clear as early as 1857, when a directory of mountain areas that were of public interest was created (Catálogo de Montes de Útilidad Pública). Because of this, Spain was also relatively quick in incorporating the international movement for the protection of natural areas into its national policy. By 1916 the Law for National Parks came into use, and in 1918 the first National Parks of Spain were declared. In the UK this only started in the 1950s, and in The Netherlands not before the 1960s. Several features set the Spanish conservation model apart from others in Europe. Firstly, through the declaration of National Parks, early nature conservation in Spain shows its similarities with the American system. It differs from the Dutch and British approaches in its greater emphasis on wilderness. Because there is more untouched natural land left in Spain than in many other European countries, including The Netherlands and the UK, Spanish National Parks are not in productive use. Secondly, in Spain, ecological concerns emerged earlier as a strong influence on both politicians and conservationist groups. In particular, the fast disappearance of woodland played a key role. Thirdly, even more than in the UK and The Netherlands, the conservation pressure was widely spread among the intellectuals and the nobles, while the big majority of the Spanish population was not involved in conservation issues at all. The long-lasting power of the aristocracy, which owned and still owns extensive tracts of land, has for a very long time ensured the complete segregation of protected and agricultural land. Fourthly, the sparse population in parts of Spain also made it easier to establish National Parks at an earlier stage. This is also confirmed by Hoggart et al. (1995, p. 245) who explains the early and late establishment of National Parks in European countries as follows: “Where land occupation was denser, economic problems (as in the 1930s) tended to favour policy emphases on rural economic expansion rather than landscape protection....”.

**Appreciation of nature**

Many environmental psychologists and other social scientists have done research on the man-nature relationships and several common findings have been produced in the way people value nature. The most important and generally accepted outcome of research is that a higher degree of naturalness is preferred as opposed to more human interference (see for example Ulrich, 1986; Maciá & Huici, 1986; Herzog, 1989; Kaplan & Kaplan, 1989; De Castro, 1990; Hartig, 1993). This was most directly shown in studies on the aesthetic appreciation of nature (see e.g. Hendrix and Fabos, 1975; Ulrich, 1983 and Kaplan & Kaplan, 1989). Other studies indicated that the preference for the natural even goes beyond the aesthetic appreciation. For example Ulrich (1979, 1981) showed proof of the restorative power of nature for people that were coping with psycho-physiological stress or that were recovering from an operation. Research done by Kaplan et al. (1988) showed a
positive relationship between access to nature at the workplace and lower levels of perceived job stress and higher levels of job satisfaction.

Besides the benefits of being able to see nature, being surrounded by nature can also be very stimulating; as Levitt (1988) and Driver et al. (1987) showed in studies evaluating outdoor activities in natural areas. Both studies indicated that the range of benefits was considerable and related to improved physical wellbeing, fitness, and self-esteem. Hartig (1993) compared the learning and concentration abilities of students after walking in urban and natural settings, and concluded that the latter performed significantly better.

Beside the positive relationship between nature and wellbeing, individual differences and cultural differences in the appreciation of nature have also been found. A recent study from Van Den Berg (1999) indicated that there is a clear link between perceived degree of human influence and individual differences in landscape preference. Van den Berg’s research results showed that farmers, older people, and people with low levels of education and income had a relatively stronger preference for natural landscapes that had a high degree of human influence; whereas experts, people who were highly concerned with the environment, younger adults and people with high levels of income and education had a relatively stronger preference for natural landscapes with a low level of human influence. Van Den Berg (1999) explains this difference by suggesting that groups who are dependent on the countryside, or are vulnerable to the risks and dangers inherent in natural landscapes, like farmers, or older people who are less robust, display a relatively strong preference for well-kept landscapes. Comparable research outcomes were also found in studies done by González Bernáldez (1985) and Macía y Huici (1986) who found that students preferred wild landscapes while farmers and people that worked as servants preferred more uniform, cultivated landscapes that lacked relief.

Another important finding has been that outdoor recreation is often motivated by the desire to be in a natural environment. The motivations to visit natural areas have been reviewed by Hartig (1993) and split-up into five different groups: (1) the wish to get away from the everyday, build-up environment, the so-called ‘escape character’ visits, (2) the search for a religious/aesthetic experience, (3) the wish for tranquillity, (4) the solitude experience and (5) the enjoyment of nature. The last three aspects especially are strongly associated with landscapes that show little human influence.

Finally, evidence has also been produced in psychological studies of the positive influence of proximity to nature, especially in the residential environment. The presence of nature or natural elements such as trees were reported to be responsible for higher residential satisfaction (Kaplan, 1983). This is very relevant in the context of this study and will be discussed more extensively in Section 3.5, where attention is paid to the influence of the presence of protected nature on other activities in rural areas.

Public interest in nature conservation

Evidence for the increased public awareness of environmental issues also comes from the magnitude of voluntary contributions to private conservation agencies like the WWF (World Wildlife Fund), which receives nearly $100 million dollars per year of voluntary donations (McNeely, 1988)). But also the growing number of people who have become a member of an environmental or nature conservation organisation confirm this. In The Netherlands for example the number of members of the main private nature conservation organisation, Natuurmonumenten, increased nine-fold between 1970 and 2000; from 100,000 members to 900,000 (Natuurmonumenten, 2000). An even bigger growth rate was experienced in the UK by the National Trust, which increased its membership from 0.2 million members in 1970 to 2.4 million members in 1997 (National Trust, 1998).

In Spain the public involvement in environmental issues has also grown considerably, but the proportion of people actively involved in environmental issues is still much lower than in the two Northern European countries studied (see Table 3.1). If the membership situation in the different countries is compared, The Netherlands is remarkable. Only in Scandinavian countries is the number of donors/members as high as in The Netherlands, where, out of the total population (>=18 years), 22% are members and 26% are donors of an environmental organisation (Nas et al., 1997). In the UK and Spain this proportion is much lower; however, the Dutch dominance only applies to the number of members and donors, not to the relative number of people participating in environmental demonstrations (see Table 3.1). According to Nas et al. (1997) this is probably
related to the fact that the Dutch environmental organisations are more institutionalised than in most other countries, and therefore less dependent on protest actions to forward their interests. In Spain environmental organisations are much younger and still have a longer way to go to build up their position as institutionalised pressure groups.

The variations between the three countries in public involvement in environmental issues and organisations can be related to the specific socio-economic, historical, cultural, political, and environmental characteristics of the countries. Explaining such differences in the levels of public awareness will be complicated and speculative, but there are some plausible factors that may explain part of the differences. Three of these factors will be investigated as follows:

Firstly, differences in environmental concern between the three countries may be related to income levels. A regression analysis was carried out to investigate the relationship between Gross Domestic Product (GDP) per inhabitant and the proportion of the population that was a member, donor or demonstrator. The results, in Table 3.1, show a weak but significant relationship between the two variables. This means that the differences in public involvement in nature and environmental conservation between the three countries can be at least partly explained by differences in average income. To determine whether an increase in income has also been a reason for the growth in public involvement in conservation, van Zanden (1996) compared the development of the

<table>
<thead>
<tr>
<th></th>
<th>Demonstrator (1)*</th>
<th>Member and/or donor (1)*</th>
<th>Either member, donor or demonstrator (1)*</th>
<th>GDP per inhabitant EU-15=100, 1994 (2)</th>
<th>Urban population as % tot. population, 1993 (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Netherlands</td>
<td>5</td>
<td>33</td>
<td>35</td>
<td>111</td>
<td>89</td>
</tr>
<tr>
<td>Finland</td>
<td>6</td>
<td>31</td>
<td>33</td>
<td>97</td>
<td>62</td>
</tr>
<tr>
<td>Sweden</td>
<td>7</td>
<td>30</td>
<td>33</td>
<td>114</td>
<td>83</td>
</tr>
<tr>
<td>Denmark</td>
<td>5</td>
<td>30</td>
<td>32</td>
<td>142</td>
<td>85</td>
</tr>
<tr>
<td>Austria</td>
<td>11</td>
<td>23</td>
<td>29</td>
<td>122</td>
<td>55</td>
</tr>
<tr>
<td>Western-Germany</td>
<td>13</td>
<td>17</td>
<td>23</td>
<td>n.a.</td>
<td>86</td>
</tr>
<tr>
<td>UK</td>
<td>6</td>
<td>18</td>
<td>21</td>
<td>88</td>
<td>89</td>
</tr>
<tr>
<td>Ireland</td>
<td>7</td>
<td>18</td>
<td>21</td>
<td>76</td>
<td>57</td>
</tr>
<tr>
<td>Belgium</td>
<td>6</td>
<td>15</td>
<td>18</td>
<td>115</td>
<td>97</td>
</tr>
<tr>
<td>Italy</td>
<td>9</td>
<td>8</td>
<td>15</td>
<td>88</td>
<td>67</td>
</tr>
<tr>
<td>France</td>
<td>11</td>
<td>7</td>
<td>14</td>
<td>116</td>
<td>73</td>
</tr>
<tr>
<td>Greece</td>
<td>9</td>
<td>3</td>
<td>11</td>
<td>48</td>
<td>64</td>
</tr>
<tr>
<td>Spain</td>
<td>7</td>
<td>6</td>
<td>11</td>
<td>62</td>
<td>76</td>
</tr>
<tr>
<td>Eastern Germany</td>
<td>6</td>
<td>5</td>
<td>10</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Portugal</td>
<td>6</td>
<td>6</td>
<td>10</td>
<td>43</td>
<td>35</td>
</tr>
</tbody>
</table>

Regression analysis to determine relationship between:
GDP per inhabitant and % member, donor or demonstrator: Adj. R²=45% (=0.01)
Urbanisation level and % member, donator or demonstrator: Adj. R²=3% (=0.27)
(Eastern and Western Germany have been excluded in the analysis)
* Persons of >=18 years as proportion of total population
n.a.: not available
Source: (1) Nas, et al. (1997); (2) Eurostat, 1998; and (3) Worldbank, 1996
National Gross Domestic Product with membership numbers of Natuurmonumenten for a period between 1910 and 1996 in The Netherlands. He discovered a parallel development: in years of strong economic growth the number of members increased considerably, while in depression years the numbers decreased. This implies that in The Netherlands at least, one can assume that one of the reasons for the increased public interest in nature conservation issues in the last decades is related with growing income.

Secondly, it was expected that differences in the degree of urbanisation in the three research countries could also be a reason for the lower environmental involvement of the Spanish, compared to the Dutch and UK populations. However, a regression analysis, shown in Table 3.1, between urbanisation and the proportion of the population that was a member, donor or demonstrator, does however not confirm this assumption. No relationship was detected between the two variables. It is, however, possible that such a relationship may exist within a country. Arisó (1982) found that, in Spain, concern within the urban population about the ecological deterioration of the countryside had been growing markedly, while no increase was detected among the rural population groups.

Thirdly, the lower inclination of the Spanish population to be involved in environmental organisations may also be related to the higher proportion of wild lands that is still present in the Spanish territory. Although the transformation of the Spanish rural spaces has also been drastic, there is still relatively more land left where human involvement is small or absent than in The Netherlands and the UK. Reasons for this can be searched in the overall lower population density, specific historical and social factors and physical conditions, which prevented human occupation in large parts of the territory (see also chapter 2). In Spain there might therefore be a difference of perception, related to the relative lower scarcity of natural lands. Hartig (1993) indicates that relative scarcity might be a determining factor in the value that people place on something: ‘if people are concerned about scarcity, their preference judgement will involve placing additional weight on that which is relatively scarce in less preferred alternatives’. In The Netherlands and the UK undisturbed land is virtually absent, which makes nature a scarce resource for which there is more public concern than in Spain.

3.3 Protected nature

Figure 3.1 Cumulative growth of the world’s protected areas 1900-1990

Source: World Conservation Monitoring Centre (WCMC), 1997 UN list of protected areas.
Since the establishment of the Yosemite and Yellowstone National Parks in 1864 and 1872, almost every country has set up some type of protection within its boundaries, using its own criteria. There has been a great expansion not only of the total area (see Figure 3.2) but also of the diversity of territory now protected.

### 3.3.1 Types of protected territories

In 1962, at the request of the UN, a list of National Parks and Equivalent Reserves was produced. The IUCN together with the WCMC are responsible for the compilation and maintenance of this list. Sites that are included in the IUCN list must have a size of over 1000 hectares and must meet the IUCN definition of a protected area:

*An area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and management through legal or other effective means.* (IUCN, 1994).

The IUCN organises the different types of national designations by defining six types of protected area categories, according to the type of management in place (see Box 3.1), and the degree of human intervention in the natural processes. This ranges from practically zero human interference in categories Ia/Ib to relatively high levels of human intervention in categories IV and V. Category VI was only added to the classification in 1994, but its interference level places it between category III and IV (Green & Paine, 1997). A distinction can be made between mono-functional and multi-functional land use where, respectively, management is for conservation only, or in combination with sustainable utilisation. In categories Ia, Ib, II and III management is aimed only at protection of either wilderness and/or species; usually combined with scientific, recreational and educational objectives. On the contrary, in areas that fall into categories IV, V and VI, human habitation and exploitation of natural resources, on a sustainable basis, are primary or secondary management objectives, because this

#### Table 3.2 Protected areas in the world and in the three case study countries according to the IUCN management type classification in 1997

<table>
<thead>
<tr>
<th>IUCN-type*</th>
<th>World</th>
<th>Netherlands (England, Wales, Scotland &amp; N-Ireland)</th>
<th>UK</th>
<th>Spain</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of sites</td>
<td>Area ha. (*1000)</td>
<td>Number of sites</td>
<td>Area ha. (*1000)</td>
</tr>
<tr>
<td>Ia: Strict Nature Reserve</td>
<td>1423</td>
<td>978</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>Ib: Wilderness Area</td>
<td>654</td>
<td>939</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>II: National Park</td>
<td>2233</td>
<td>3994</td>
<td>9</td>
<td>27</td>
</tr>
<tr>
<td>III: Natural Monument</td>
<td>409</td>
<td>191</td>
<td>7</td>
<td>24</td>
</tr>
<tr>
<td>IV: Habitat/Species</td>
<td>3622</td>
<td>2451</td>
<td>45</td>
<td>210</td>
</tr>
<tr>
<td>Management area</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V: Protected Landscape/Seascape</td>
<td>2418</td>
<td>1051</td>
<td>11</td>
<td>22</td>
</tr>
<tr>
<td>VI: Management Resource Protected area</td>
<td>1995</td>
<td>3599</td>
<td>2</td>
<td>247</td>
</tr>
<tr>
<td>Total</td>
<td>12754</td>
<td>13204</td>
<td>82</td>
<td>561</td>
</tr>
<tr>
<td>% of total land area</td>
<td>-</td>
<td>9</td>
<td>-</td>
<td>14</td>
</tr>
</tbody>
</table>

extensive exploitation of natural resources is crucial for the maintenance of the natural and cultural features that characterise them. Dutch, UK and Spanish protected areas have also been included in the IUCN list and categorised in the IUCN

---

**Box 3.1 Definitions of the IUCN Protected Area Management Categories**

**CATEGORY Ia: Strict Nature Reserve:**
Protected area managed mainly for science
Area of land and/or sea possessing some outstanding or representative ecosystems, geological or physiological features and/or species, available primarily for scientific research and/or environmental monitoring.

**CATEGORY Ib: Wilderness Area:**
Protected area managed mainly for wilderness protection
Large area of unmodified or slightly modified land, and/or sea, retaining its natural character and influence, without permanent or significant habitation, which is protected and managed so as to preserve its natural condition.

**CATEGORY II: National Park:**
Protected area managed mainly for ecosystem protection and recreation
Natural area of land and/or sea, designated to (a) protect the ecological integrity of one or more ecosystems for present and future generations, (b) exclude exploitation or occupation inimical to the purposes of designation of the area and (c) provide a foundation for spiritual, scientific, educational, recreational and visitor opportunities, all of which must be environmentally and culturally compatible.

**CATEGORY III: Natural Monument:**
Protected area managed mainly for conservation of specific natural features
Area containing one, or more, specific natural or natural/cultural feature which is of outstanding or unique value because of its inherent rarity, representative or aesthetic qualities or cultural significance.

**CATEGORY IV: Habitat/Species Management Area:**
Protected area managed mainly for conservation through management intervention
Area of land and/or sea subject to active intervention for management purposes so as to ensure the maintenance of habitats and/or to meet the requirements of specific species.

**CATEGORY V: Protected Landscape/Seascape:**
Protected area managed mainly for landscape/seascape conservation and recreation
Area of land, with coast and sea as appropriate, where the interaction of people and nature over time has produced an area of distinct character with significant aesthetic, ecological and/or cultural value, and often with high biological diversity. Safeguarding the integrity of this traditional interaction is vital to the protection, maintenance and evolution of such an area.

**CATEGORY VI: Managed Resource Protected Area:**
Protected area managed mainly for the sustainable use of natural ecosystems
Area containing predominantly unmodified natural systems, managed to ensure long term protection and maintenance of biological diversity, while providing at the same time a sustainable flow of natural products and services to meet community needs.

types of protected area (see Table 3.2). The Netherlands have the biggest variety of protected area categories, including two aquatic reserves, the Waddenzee and the Oosterschelde, which are in category VI. They contain predominantly natural ecosystems but fishing, and gas and oil exploitation are allowed, under strict regulations. Aquatic natural ecosystems have not been put under protection in the other two countries. In the UK there are only designated areas in category IV and especially V, which implies that in these areas habitation and exploitation is allowed. These areas consist of cultural landscapes, which are the result of long time interaction of people and nature. For maintenance of the ecological and cultural qualities of such areas, a continued intervention by man is needed. In Spain the variety of protected area categories is smaller than in The Netherlands but bigger than in the UK. The cultural landscape categories IV and V are also the main categories, but category II is also very important, both in the number of sites and in the amount of terrain covered. These category II areas are under strict regulation, as neither exploitation nor occupation is allowed, and the natural character is very high, because intervention is limited, even for conservation purposes.

The UK has the highest proportion of land under designation. More than 20% of the total (land) area is under protection in the UK, in Spain this is only 8% and in The Netherlands this is 14% of the land area, excluding the aquatic reserves (category VI in Table 3.2). The relatively large surface of protected territory in the UK, is probably related with the fact that areas under designation are not subject to a very strict protection regime, in the sense that there is a multi-functional land use in these areas. Exploitation of natural resources, which is extensive farming, and habitation is allowed and human interaction with nature is intensive. The reason for this is related with the historical changes in the UK landscape and approaches in conservation policy as will become clear in the following. In Spain the proportion of land under designation is relatively small, but in absolute terms Spain still contains the biggest surface of relatively undisturbed land of high ecological quality where no human occupation or intervention is allowed. The picture for The Netherlands is deviant, because of the inclusion of the protected territory of the huge Waddenzee, but overall the average size of designated areas is very small in comparison to the UK and Spain. The protected areas are also very fragmented which explains why The Netherlands was one of the first countries to incorporate the ecological network approach in its conservation policy (see next Section). In comparison to the UK, The Netherlands has relatively less land under designation but the sparse patches of natural land that are still left, are usually very strictly protected. The differences in protection regimes between the three countries will be discussed more extensively in the next Section.

3.3.2 Establishment and management of protected natural areas

Although the overall objective for establishing a protected territory has been the same; i.e., setting a territory aside to protect it against further human exploitation, in order to conserve the biological diversity, and sometimes also the cultural resources; the criteria chosen have been very diverse. According to Spellerberg (1992, p. 185) ‘the most common criteria used for the selection and designation of protected areas are related to the wish to protect habitats of species or groups of species that are under threat, the level of naturalness or rarity, the historical, cultural, educational, scientific value or the typicalness or representativeness’.

Over the years several people have sought to rationalise the necessity for conservation of the natural environment. Many economists, for example, assume that if it can be proved that nature areas have a certain economic value it will encourage people to take measures to conserve the biological resources of the earth. Other groups are more inclined to connect the arguments for nature conservation to indirect values that do not normally appear in the national accounting systems, and which are related to the functioning of ecosystems, e.g. maintenance of water cycles; erosion-protection of soils and the maintenance of the oxygen-carbon dioxide balance, but also the provision of recreational, aesthetic, scientific, educational, spiritual and historical values (see e.g. McNeely, 1988).

Overall, it is clear that there are several scientific, economic, emotional and political arguments supporting the conservation of the natural environment, and the importance of setting aside land for protection. World-wide this has also resulted in a great variety of ways in which protected areas are designated and managed. However, these efforts have not always been successful. Several examples can be given of where things have gone wrong, in area designation and management and have led to adverse effects on the quality of the natural and cultural resources that were meant to be conserved (see e.g. Sadler, 1989; Rao & Geisler, 1990; Wells et al., 1992).
Another problem frequently encountered, is where designated areas were established in such a way that no attention was paid to the needs and wishes of local population groups (see Olwig & Olwig; 1979; Stankey, 1989; Rao & Geisler, 1990; Zube & Busch, 1990; Fletcher, 1990 and Wells et al., 1992). This has had many negative effects on both the natural resources and the development opportunities of local communities. In the last two decades in most western countries a trend can be detected of nature conservation being combined with rural development measures. These approaches, in which the management of a protected area is combined with measures to improve the cultural, economic and social interests of local communities, are often referred to as sustained or sustainable development. In addition, natural amenities are also increasingly seen as a resource for endogenous development of rural areas (Harper, 1993 and Hoggart et al., 1995). Searching for mutually supportive interactions between natural areas and local population groups is therefore important for stimulating the development of rural areas and very relevant in the context of new rural policy strategies.

Zube and Bush (1990) investigated situations in which local populations were involved in natural area management, or related development, in order to find strategies and techniques to improve park/people relationships. Although, in practice, more models usually apply to the situation in any one locality, as has been found in this study, the four examples that they identified provide a comprehensive overview of the most common relationships (see Table 3.3).

Table 3.3 Four models of the relationships between protected natural areas and local population groups according to Zube and Bush (1990) applied to the situation in the five case study areas of this study

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dwingelerveld</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Weerribben</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Lauwersmeer</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Northumberland</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Doñana National Park</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Doñana Entorno Park</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Model 1: local participation in park management and operations and/or residence within the park.
Model 2: services delivered by park personnel to local populations living outside the park.
Model 3: maintenance of traditional land uses inside the park for the local population.
Model 4: local population involvement in park related tourism.

The first model is often found in British National Parks where a very small percentage of the total park land area is in public ownership and it is quite common for people to live within the boundaries of the Park. This applies most clearly to the UK example in the current study: Northumberland National Park. Here the local population and the local authorities are directly represented on the National Park body, which is responsible for the management of the park. In this way, local people can collaborate on the issues of conservation, the application of specific farming techniques, land management, and the restoration of farms and other historical features. In the Doñana Entorno Park the different landowners live on their farms that are situated within the boundaries of this protected territory.

In the second model, local people have no access to the park anymore, but they are compensated for this by the provision of several kinds of social services by park staff; such as education programmes, assistance with the improvement of existing agriculture, and by the introduction of alternative economic activities. The Spanish case study, Doñana, best fits this model. Locals only have very limited access to the protected area, but the number of education programmes, compensatory measures for creating alternative economic activities, and the provision of services have increased considerably in the last decade.

In the third model, traditional land uses are still allowed within the boundaries of the protected area. This model...
applies to almost all designated areas that have category IV, V and VI status in the IUCN protected area categories (see Box 3.1). Also, in four of the current study areas some form of traditional land use activity takes place. In Doñana, for example, gathering, hunting and extensive agriculture and forestry takes place. However, these activities are limited to certain areas. Reed harvesting is carried out in the Weerribben area, and extensive agriculture and forestry are found in the Northumberland National Park and also in part of the Dwingelderveld.

In the fourth model, local populations gain economic benefits through tourism. They are involved in activities such as selling handicrafts, serving as tourist guides, and providing tourist services outside the parks. Natural areas play an important role in attracting tourists to a region. In almost any protected territory local population groups will gain some advantage from eco-tourism, but benefits are often accompanied by negative side-effects such as over-crowding. This model applies to all five case studies.

3.4 The conservation of nature and rural policy

Government involvement in nature conservation started at different times in The Netherlands, the UK and Spain, and there are many differences, though also similarities, in approaches to designation. An important common feature has been the increased integration into rural policy of conservation of the natural environment. Signs of this process are seen in the introduction of the concept of sustainable development in all three countries, and the gradual shift towards landscape conservation. Because these changes in approaches to designation started earlier than in Spain, Dutch and British developments have been more pronounced.

The IUCN categorisation, as previously discussed, is a helpful tool for comparing the types of protected areas that have been established. However, this categorisation is only based on general management objectives, and it excludes areas below 1000 hectares. When looking from a national perspective at the type of designated areas in the three countries, there is a huge variety in type of designations and the incorporation of nature conservation into rural policy. In the UK for example there are already 29 different types of protected areas, which have been established under a local, national or international authority (Bishop et al., 1997). The number of designations is also still increasing. Only in recent years on a European authority level, new area designations have been developed of which the most important is the result of the EU Habitats Directive, which aims at establishing a comprehensive network of protected areas; the NATURA 2000 network. At this moment all EU countries are in the process of putting their already designated or newly designated sites on the NATURA 2000 list to be approved by the EC.

3.4.1 Nature conservation in The Netherlands

In The Netherlands the government first became involved in nature conservation through Staatsbosbeheer (National Forest Service). This organisation was founded in 1899 and charged mainly with maintaining forests and reforesting state-owned wasteland. In 1929, nature conservation was officially added to its mandate. Although there were several private initiatives (e.g., Natuurmonumenten since 1905) that took care of the conservation of nature on private lands, government involvement in nature conservation was only constrained to state lands until the 1940s when involvement was broadened. Firstly, directly after the Second World War the Ministry of Education, Arts and Science was officially entrusted with the governmental nature conservation task. Secondly, a land use planning instrument was introduced, a regional plan, in which in consultation with private nature conservation organisations a list of areas with high nature value could be incorporated. For these areas (‘Meldingsgebieden’, 1942) the obligation was created that the government had to be officially informed about any planned changes in use or ownership of these lands. The government could then object against these intentions if needed. This instrument stayed effective until 1970, when it was replaced by other legislation and planning instruments. Thirdly, the government started to acquire land for nature conservation purposes in a more active way and also through subsidising land acquisition by private nature conservation organisations. By the beginning of the twentieth century the first legislation for conservation purposes had been created. As in many countries, one of the first enactments was the law for the protection of birds (Vogelwet, 1912). This was replaced by the present ‘Vogelwet’ in 1936, which covers the protection of all European bird species; except for a
few mentioned in the hunting act (Jachtwet). Several species of native plants and animals were brought under the protection of the nature conservation act (Natuurbeschermingswet), which only came into force in 1968; although it had first been announced in the Queen’s speech in 1928. This act is still in force and controls the protection of natural areas as well as species. It provides the government with an instrument to safeguard areas of high ecological value; whether state owned or private. Another important law was the estate act (Natuurkhoornwet), which was approved in 1928 and still is effective. It qualifies estate owners for favourable tax arrangements if they preserve their estate, manage it in a satisfactory way and keep it open to the public.

In the 1950s the fast reorganisation of the agricultural sector, especially through the extensive execution of land consolidation schemes, was very threatening for the natural attributes of the countryside. Because of the strong power of the farming sector (see Section 2.5.1), the absence of legislation for the protection of natural areas (the Nature Conservation Act was not approved until 1968), and the lack of planning policy in rural areas, nature conservation organisations did not have the power to act effectively against the environmental losses (Gorter, 1986). These organisation were therefore very happy with the publication of the Nota inzake de Ruimtelijke Ordening (national spatial planning memorandum) in 1960 (see Section 2.5.1); through which they obtained more power to object against planned changes in the countryside. It also gave the national government a new instrument to guide land use changes and to coordinate better the fragmented conservation measures at a national level; especially important with the increasing pressure on nature and landscape from urban, agricultural and recreational development. Even more crucial was the creation of a legal base for Dutch area planning with the passing of the spatial planning act (Wet op de Ruimtelijke Ordening, 1965) (see Annex 1 and Section 2.5.1). With this act the government authorities were not only able to direct or stimulate certain spatial developments, but they could also make land use changes conditional on municipal authorities incorporating the higher order schemes into local planning. These decisions were legally binding for both the individual and the municipality (see Annex 1).

Unlike the optimistic expectations of the 1950s and 1960s, by the 1970s concerns about the negative impacts of continued economic and population growth started to affect policy formulation, and emphasis shifted from welfare to wellbeing (see also Section 2.5.1). In this period it also became increasingly clear that the designation of areas under the nature conservation act (1968), and the acquisition of land for conservation purposes; effectively segregation of nature; had not achieved the desired improvement in ecological quality that had been expected. These developments stimulated new policy formulation in favour of broader scale environmental conservation. Two important policy shifts in this context were detected (see De Lange, 1995): Firstly, the principles of integration and broadening, by the inclusion of landscape, were introduced into conservation policy; resulting in the combined consideration of nature and landscape. Secondly, new designations, such as National Parks and National Landscape Parks, were introduced, in which nature conservation was arranged through spatial planning. All these new policy initiatives were announced in the Nota Landelijke Gebieden (1977), together with other structural plans and structural vision plans (see also Section 2.5.1 and Figure 2.2). A central element was the introduction of the principles of separation and integration of the different functions of rural areas through division into four types of landscape zones. The idea behind this zoning policy was that the protection of nature and landscape should be achieved as much as possible through integration. The rationale is based on three main objectives:

1. to guarantee the protection of areas with high ecological, cultural and amenity value
2. to maintain and improve the quality and diversity of the natural environment
3. to maintain and develop the quality and diversity of the landscape (De Lange, 1995, p. 72).

The most important instrument regulating the integration of functions in rural areas was introduced through the report concerning the relationship between agriculture, nature conservation and landscape conservation (Relatienota, 1975) (see also Section 2.5.1). The main aim in this report was the conservation of the most valuable and vulnerable parts of the cultural landscape. In order to achieve this, it was recommended that parts of agricultural land should be designated as nature development areas or as reserve areas, in order to acquire these lands as nature reserves in the long term.

As already mentioned in Section 2.5.1, government policy for rural areas clearly changed course again in the
1980s. This became manifest through the introduction of the sustainability concept, adapted legislation, new measures, and more financial resources to improve the quality of life and the environmental and natural qualities in rural areas. New policy in relation to nature and landscape is prepared in two sectoral plans; the nature policy plan (Natuurbeleidsplan, 1989), and the landscape plan (Nota Landschap, 1991). In these plans it was announced that policy should be aimed at the sustainable conservation, restoration and development of natural and landscape qualities. The innovation was that restoration and development of characteristics of nature and landscape were added to the already existing conservation objectives. In the Nota Landschap it was announced that policy should concentrate on the sustainability and identity of the landscape. To realise this the landscape should not only be aesthetically attractive and form a good structure for healthy ecological development, but it should also provide a good economic and functional basis for different land use activities.

In 1993 a new green structure plan (Structuurschema Groene Ruimte) was published which integrated the different policy objectives of the sectoral plans (Natuurbeleidsplan, Nota Landschap and Landbouwstructuur Plan) with other policy objectives in other structural plans and memorandums (see Section 2.5.1) and translated these into land use planning. The most important spatial planning objective in relation to nature conservation was that an ecological network on a national scale was to be created. This network approach is determinant in current government intervention in nature protection. The network (Ecologische Hoofdstructuur) consists of core areas (Kerngebieden), nature development areas (Natuurontwikkelingsgebieden) and corridors. Core areas have nature values of national/international importance and should have a minimum size of 500 hectares. Within the second area, the development of a high quality natural environment of national/international importance should be realised. The corridor areas should enable the exchange of species between core and nature development areas. The Ecologische Hoofdstructuur will be realised by 2018 and should cover a total of 700,000 hectares. An important part of this network will consist of already existing conservation areas, but a considerable part of it still needs to be acquired under the nature conservation act and the implementation of the Relatienota policy. At this moment it is aimed at acquiring 150,000 ha of land for nature conservation purposes before 2018 (RIVM et al., 1999a). Of the 100,000 hectares of agricultural land planned as nature reserves through the application of the Relatienota instrument, 35% was acquired by 2000, as was 21% of land earmarked for nature development purposes. The execution of the Natuurbeleidsplan depends mainly on the lower-tier governments, who have to incorporate the exact location of the potential reserve areas in their regional and land use plans (see Annex 1). Considerable resources are also required to pay for the purchase of land from farmers by the government, or subsidising acquisition by private nature conservation organisations, and to fund management agreements with farmers. There are doubts as to whether enough money will be available to realise the total 700,000 ha. Ecologische Hoofdstructuur by 2018, especially because prices for agricultural land are expected to further increase.

The policy developments described above have had an important result for nature conservation in The Netherlands, in the variety of different categories of protected areas that have been designated since the beginning of the twentieth century. In 1996 the total area protected was 450,000 hectares, divided into 300,000 ha of multi-functional forest and 150,000 natural land. This was equivalent to 13% of the total land surface (RIVM, 1999b and Ministry of Agriculture, Nature Conservation and Fisheries, 2000). Many different protection statuses are available; either as a planning label and/or falling under various legislation. In addition, there are also many areas that have obtained international protection status; i.e., EU Birds and Habitat Directive and Ramsar sites (see Table 3.4). Often one natural area has more than one planning and/or legislative label. It should therefore be realised that there is a considerable degree of overlap between the different categories in Table 3.4; e.g., many National Parks consist of private and state-owned nature reserves and all National Parks are part of the Ecologische Hoofdstructuur. This Ecologische Hoofdstructuur should also be the Dutch contribution to the European Ecological network, Natura 2000, which automatically implies that these areas overlap with the EU Habitat Directive sites. In the following, the main categories of designated areas in The Netherlands, as summarised in Table 3.4, are discussed.

Firstly, attention is paid to the national designations and then the international designations are discussed. The first protected territories in The Netherlands were in the hands of private bodies that managed these areas with conservation as the main objective. From the 1920s onward, these bodies were given government support, through the passing of legislation, and later through subsidies for the acquisition of land. Private nature reserves are a good example of this. These nature reserves are located in rural areas and are aimed at the conservation of nature and landscape. They are managed by private bodies, often with the support of the government. These nature reserves are often located in areas with a high natural value and are managed with the aim of preserving this value for future generations.
already existed before 1906, however that year was important in that Natuurmonumenten purchased its first ‘Nature monument'; the Naardermeer in Table 3.4. From that moment on the total area managed by this organisation increased strongly. At this moment (1999) Natuurmonumenten owns and/or manages around 300 nature reserves with a total surface of 78,000 hectares. The first private estates protected by legislation were brought under the estate act (Natuurschonwet). At this moment a total of 1,354 estates make use of this arrangement (Ministry of Agriculture, Nature Management and Fisheries, 1998). In 1929, nature conservation was officially added to the tasks of Staatsbosbeheer and land in hands of this organisation obtained the status of state nature reserves (Staatsnatuurmonument). A large proportion of the land that is owned and/or managed by private organisations and government bodies has been brought under the Natuurbeschermingswet (1968) as nature reserves. In 1971 only 502 hectares of privately owned lands held this status and by 1996 the total had increased to 313,885 hectares; of which 36,478 are privately owned and 277,407 are state owned.

Although there were two private National Parks, De Hoge Veluwe and the Veluwe Zoom, already established through private initiative in the 1930s, government intervention in this field only started in 1980. In 1975 the report on national parks (Nota Nationale Parken) appeared in which a first selection was made of areas with potential (see also Section 2.5.1). National Parks are an important category in the context of this study, as two of the areas investigated have the status of national park and the third Dutch case study area, the Lauwersmeer, obtained the status of National Park in foundation (Nationaal Park in Oprichting) in 1999. The first National Park in The Netherlands, founded by Ministerial Order, was Schiermonnikoog in 1989. In 1999 ten National Parks and seven prospective ones were in existence. There are also three areas selected with potential for development, but this is currently under review (see Table 3.5 and Figure 3.3).

The definition of a Dutch National Park is similar to that applied by the IUCN:

A National Park is a connected area of minimal 1000 ha, that exists of land and/or water, with special natural (including plant and animal life) and landscape qualities. In these areas nature must be maintained, conserved and developed, environmental education and research should be stimulated and nature related recreational activities should be enhanced.

### Table 3.4 Main protected area designations in The Netherlands (situation 1997)

<table>
<thead>
<tr>
<th>(Protection) status</th>
<th>Date of origin (plan, legislation or establishment)</th>
<th>Estimated surface (ha) 1997</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land of private conservation organisations (e.g. Natuurmonumenten)</td>
<td>1906</td>
<td>131,000</td>
</tr>
<tr>
<td>Land under the Estate Act</td>
<td>1928</td>
<td>72,000</td>
</tr>
<tr>
<td>State-owned nature reserves (Staatsbosbeheer, municipalities and others)</td>
<td>1929</td>
<td>277,407</td>
</tr>
<tr>
<td>National Parks</td>
<td>1930</td>
<td>45,670</td>
</tr>
<tr>
<td>Nature Reserve (=Land under the Nature Conservation Act)</td>
<td>1971</td>
<td>313,885</td>
</tr>
<tr>
<td>Ramsar Sites</td>
<td>1971</td>
<td>326,763</td>
</tr>
<tr>
<td>Protection areas under the EU Birds Directive</td>
<td>1979</td>
<td>341,148</td>
</tr>
<tr>
<td>Protected Nature Unit (Grote Eenheid Natuur=GEN)**</td>
<td>1988</td>
<td>n.a.</td>
</tr>
<tr>
<td>Large Landscape Unit (Grote Landschapsenheid=GLE)**</td>
<td>1988</td>
<td>n.a.</td>
</tr>
<tr>
<td>Sites designated under EU Habitat Directive (NATURA 2000-sites)</td>
<td>1992</td>
<td>281,946</td>
</tr>
<tr>
<td>Valuable Cultural Landscapes (Waarderwol Cultuurlandschap=WCL)</td>
<td>1993</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

* Have been replaced in 1993 by Core areas in the Ecologische Hoofdstructuur or by National Parks
** Have been replaced in 1993 by WCL areas

In contrast to the IUCN definition, land in agricultural use can be included in Dutch National Parks. However, such land is designated under the Relatienota policy (see Section 2.5.1), which means that in the long term these areas will become nature reserves (Reservaatgebieden). In National Parks land is usually in hands of the state (Staatsbosbeheer), private nature conservation organisations (e.g. Natuurmonumenten and Provinciale Landschappen) and/or private landowners. The management of National Parks overrules the ownership situation, which implies that the complete commitment of all landowners is needed before establishment can be achieved. National Parks must be open to the public, and all landowners and managers must actively participate in nature conservation and development; which should be centrally coordinated. Measures and instruments for nature management, education, research and recreation must be harmonised. National Parks are part of the Ecologische Hoofdstructuur as previously described. The foundation of a National Park is carried out by the Minister of Agriculture, Nature Conservation and Fisheries following the advice of the National Parks Commission.

Activities that produce a lot of noise will be excluded from National Parks as the Noise Pollution Act (Wet Geluidshinder) dictates. In addition, the national government also dictates that regional governments (the provincial authorities) must incorporate the territory of the National Park in their regional plan as a core area Kerngebied within the Ecologische Hoofdstructuur. In such areas nature and landscape conservation are the main management objectives and therefore any increase in other activities, such as habitation, intensive agriculture, recreation, large-scale infrastructural projects or quarrying are prevented by the local authorities. Local authorities are also required to apply a buffer policy to the area bordering such a Kerngebied. In these buffer zones a restrictive policy must be followed in relation to any activity that will negatively influence the environmental quality of the National Park.

In 1975, the same year as the publication of the report on National Parks (Nota Nationale Parken), the report on national landscape parks (Nota Nationale Landschapsparken) was produced, in which a first selection was made of

<table>
<thead>
<tr>
<th>Name</th>
<th>Size (hectares)</th>
<th>Year of establishment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Veluwezoom</td>
<td>4,800</td>
<td>1930</td>
</tr>
<tr>
<td>Hoge Veluwe</td>
<td>5,400</td>
<td>1935</td>
</tr>
<tr>
<td>Schiermonnikoog</td>
<td>5,400</td>
<td>1989</td>
</tr>
<tr>
<td>Dwingelderveld</td>
<td>3,600</td>
<td>1991</td>
</tr>
<tr>
<td>Weerribben</td>
<td>3,345</td>
<td>1992</td>
</tr>
<tr>
<td>Groote Peel</td>
<td>1,320</td>
<td>1993</td>
</tr>
<tr>
<td>Biesbosch</td>
<td>7,100</td>
<td>1994</td>
</tr>
<tr>
<td>Meinweg</td>
<td>1,525</td>
<td>1995</td>
</tr>
<tr>
<td>Zuid-Kennemerland</td>
<td>3,800</td>
<td>1995</td>
</tr>
<tr>
<td>Maasduinen</td>
<td>1,560</td>
<td>1996</td>
</tr>
<tr>
<td>Loonse en Drunense Duinen*</td>
<td>3,400</td>
<td>1994</td>
</tr>
<tr>
<td>Drents-Friese Woud*</td>
<td>6,130</td>
<td>1996</td>
</tr>
<tr>
<td>Duinen van Texel*</td>
<td>4,300</td>
<td>1998</td>
</tr>
<tr>
<td>Oosterschelde*</td>
<td>35,000**</td>
<td>1999</td>
</tr>
<tr>
<td>Lauwersmeer*</td>
<td>5,800</td>
<td>1999</td>
</tr>
<tr>
<td>Utrechtse Heuvelrug*</td>
<td>6,000</td>
<td>1999</td>
</tr>
<tr>
<td>Alde Feanen*</td>
<td>2,100</td>
<td>1999</td>
</tr>
</tbody>
</table>

* National Parks in Foundation
** Mainly water

Source: Ministry of Agriculture, Nature Conservation and Fisheries, 2000
areas that could potentially develop into a National Landscape (Nationaal Landschap) (see also Section 2.5.1). The location of the Nationale Landschappen was announced in the Structuurvisie Natuur en Landschapsbehoud (1981). These areas had to have a minimal size of 10,000 hectares and were characterised by pleasing landscape, high ecological value, and a rich history, which made them touristically attractive. Within these areas inhabitants, entrepreneurs, public bodies and authorities had to organise themselves to reconcile their often conflicting interests, in order to conserve and restore the value of the natural, landscape and cultural heritage. These Nationale Landschappen were usually composed of areas that already had been protected under different statuses and legislation, such as National Parks, GENs, GLEs (see below and Table 3.4), and privately and state owned nature reserves, and wetlands.

In the 1980s, beside the Nationaal Landschap, other area designations were also announced in the Structuurvisie Natuur en Landschapsbehoud (1981) which were aimed at protecting and recovering high landscape values. These

**Figure 3.2 National Parks in The Netherlands (situation 1999)**

- National parks
- National parks in foundation
- National parks in preparation

Nature conservation and rural areas
were the protected nature unit (Grote Eenheid Natuur=GEN) and the large landscape unit (Grote Landschaps-enheid=GLE) (see Table 3.4). A GEN needed to be an area with a minimum size of 1,000 ha. The reason for giving this status to such an area was an ecological one, which implied that certain natural communities had developed in a spontaneous way, or through human interference. The real protection of such an area was achieved through the application of existing legislation, such as the Wet Ruimtelijke Ordening (1965), Natuurbescherminswet, Wet op de Bodembescherming (Soil Conservation Act) and through the acquisition of land under the Relatienota instrument.

A GLE was a much bigger area (minimum size of 5,000 ha.), which mainly consisted of agricultural land with high ecological, cultural, and landscape values. The difference between a Nationaal Landschap and a GLE was that recreation was one of the main objectives for the first category. Many of these GLEs have however been incorporated in Nationale Landschappen, which were normally composed of areas that already had different protection statuses. The advantage of bringing these different area designations together under the GLE was that greater consistency was brought to their development and management. After all, the main policy objective of the creation of the GENs and Nationale Landschappen was conserving and further enhancing the character of and the coherence between the different land use functions in these areas. As with all new area designations, the eventual allocation of the Nationale Landschappen, GENs and the GLEs was initiated by the national government, but the lower-tier governments were then required to translate such proposals into actual planning statuses in their regional and local plans. From 1988 onwards 17 Nationale Landschappen were appointed, 39 GLEs and 24 GENs. Two of the Dutch case study area of this study, the Dwingelderveld area (GEN Dwingeloo-Ruinen) and the Lauwersmeer area also became a GEN (see De Lange, 1993).

It transpired that the implementation of the policy for these GLEs and GENs was not a success. Overall the policy objectives were received positively by the lower level authorities, but there was much criticism because too few resources and instruments were available for efficient management of these areas. In addition, the policy objectives, which were defined by the national government, were too general and insufficiently responsive to the specific circumstances in the designated areas (see also Pleijte et al., 2000). Because of this, by the beginning of the 1990s it had already been decided to alter and simplify the area specific policy. In the 1993 Structuurschema Groene Ruimte, a new type of designated area category was introduced: the valuable cultural landscapes (Waardevol Cultuurlandschappen=WCL), which will replace the Nationaal Landschap and GLE area categories. Replacement of the GENs by either a Kerngebied in the Ecologische Hoofdstructuur or a National Park is also announced in this Structuurschema Groene Ruimte. The WCLs have to meet the following criteria (Pleijte, et al., 2000):

1. they consist of regions that are characterised by important nature, landscape and recreational values that give the total area its own specific character
2. both agriculture and forestry have important economic functions and are crucial for the maintenance of the character of the area
3. the specific characteristics of the area will become or are already threatened by changes in agriculture or other functions
4. they should be located in the green and blue zones appointed in the fourth planning memorandum (see also Section 2.5.1)

Contrary to the top-down approach pursued with the former area categories, a bottom up approach is followed for the implementation of the WCL policy. This means that the national government appoints the rough location of the WCL, but the provincial governments are asked to decide on the exact delimitation of the area. For the WCLs, an area plan (Gebiedsperspectief) is worked out in consultation with local groups. The provincial government has to create a coordination office and, in collaboration with local organisations, the initiatives as described in this plan are executed, including decisions on how the budget per WCL area is distributed over the different sectors and initiatives. In total 11 WCL areas have been appointed, but financial resources for the execution of the area plans will stop in 2001. What will happen afterwards remains to be seen.

The last group of designations are the areas with an international protection status. By the end of the 1960s international cooperation in the field of nature conservation started to become wide-spread and several international conventions were approved. For The Netherlands three Conventions are very important. The first is the World Wetland convention, which was held in Ramsar in 1971. The Ramsar convention was ratified in 1980.
by the Dutch government. It aims at protecting wetland areas which are of international importance for the survival of bird species. Since The Netherlands contain much wetland, a large area has been brought under this convention. Between 1980 and 1996 nineteen Ramsar sites have been officially declared, but many more will follow in the future, e.g. the Lauwersmeer area is nominated to become a wetland area. The two other international designations are based on the 1979 Bern convention (Convention on the Conservation of European Wildlife and Natural Habitats). From this convention two EU directives have resulted: the EU-Birds directive (79/409/EEG) and the EU-Habitats directive (92/43/EEG). In both directives lists have been prepared of bird, animal and plant species that need special protection. All the areas that contain important habitats for these species have to be brought under protection by the EU member states. These areas will become part of the European Ecological Network; the Natura 2000 network. At this moment all EU countries are in the process of putting their existing and newly designated sites on the Natura 2000 list to be approved by the EC. According to the European Natura 2000 Barometer, seventy nine areas with a total of 10,000 km\(^2\) have already been brought under the EU-Birds Directive, compared with only twenty seven in 1996. In addition, 76 were designated under the Habitat directive, covering a total of 7,078 km\(^2\). Together they cover almost 41% of the Dutch territory (European Commission, 2000). This proportion is very high because most of the Birds directive sites include large water surfaces, such as the Waddenzee and the Oosterschelde.

3.4.2 Nature conservation in the UK

As already mentioned in Chapter 2, the preservation of the countryside plays a key-role in the UK rural planning system. Through the publication in 1949 of the National Parks and Access to the Countryside Act the path was opened to the establishment of separate areas in which nature and landscape could be protected, and recreational and educational objectives could be realised. Soon after the publication a National Parks Commission (NPC) and the Nature Conservancy (NC) were established. Under the 1949 National Parks and Access to the Countryside Act the first officially protected areas were designated. It also gave the Nature Conservancy powers to purchase, lease, or arrange agreements for management of land as National Nature Reserves.

During the sixties, more focussed planning was needed to handle the increased recreational pressure on the countryside, especially in the National Parks. In addition, under influence of other developments (see Section 2.5.2) the 1947 Act was modified in the 1968 Countryside Act. The National Park Commission was reorganised under this Act and became the Countryside Commission. An important development in the context of nature conservation was that the protection of nature and landscape outside the designated areas also became an issue of concern. To reduce the recreational pressure on National Parks, new Country Parks and picnic sites near major centres were allocated. The new Countryside Commission could become more actively involved in planning and management matters, not only within designated areas but also outside the designated areas.

The strong emphasis on the importance of the use of the countryside for recreational purposes is also apparent in the appointment of a Special Committee on Footpaths and Access in 1946. This commission recommended that the County Councils should undertake a survey to map all rights of way in their territory. In the 1949 National Parks and Access to the Countryside Act the allocation of rights of way was arranged, an instrument which appears only in the UK rural planning system. According to the 1949 Act, the County Councils were to reach Access Agreements with landowners, or even access orders were to be made with compensation payments. These rights of way had to be mapped by the County Council, and since 1949 the allocation has been adjusted several times. In 1990 the Rights of Way Act arranged the current system of access. According to the Act, landowners are obliged to restore bridleways and footpaths after ploughing.

In comparison with The Netherlands, the situation in the UK is more complicated because differences in legal systems and designations exist between all the regions. This was especially furthered by the 1990 Environmental Protection Act, which established new specific administrative arrangements for nature conservation in England and Wales, Scotland and Northern-Ireland. Also from 1992 onwards it was decided that in England, English Nature would become responsible for conservation of nature and the Countryside Commission for countryside matters. However, in Wales the Countryside Council for Wales is responsible for both issues and in Scotland both are the responsibility of Scottish Natural Heritage. In Northern-Ireland there is no separate public body for...
nature nor for landscape conservation. Since the UK study area is in England, the focus will be especially on conservation practice of this region. In Table 3.6 an overview is given of the most important protected area categories in England. These categories will be discussed in the following.

As in The Netherlands, conservation issues also involved the Forestry Commission. They were the first in England to set aside an area for recreational use: a Forest Park. This was an innovative step for this organisation, which until then had only one objective, which was the reforestation of land for timber production, to relieve Britain’s enormous dependency on timber imports. In 1935 an exception was made to this policy when the Council for the Preservation of Rural England (CPRE) and the Forestry Commission formed an informal Committee to approve a plan for the conservation of the Breckland heath-forest region. The Forestry Commission’s concern for nature conservation and recreational access was further increased in the second half of the twentieth century, especially in the 1960s, when the recreational use of the countryside was growing rapidly. The 1967 Forestry Act established that the Forestry Commission was allowed to create recreation facilities in its forests. In the 1980s, the stronger focus on the amenity, conservation, access, and employment function of forests by the Forestry Commission also resulted in a new designation the Forestry Nature Reserve. This status is given to the best conservation sites that are managed by the Forestry Commission.

### Table 3.6 Main protected area designations in England (situation 1997)

<table>
<thead>
<tr>
<th>Protection status</th>
<th>Date of origin (legislation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forest Park</td>
<td>1935</td>
</tr>
<tr>
<td>National Park</td>
<td>1949</td>
</tr>
<tr>
<td>Area of Outstanding Natural beauty (AONB)</td>
<td>1949</td>
</tr>
<tr>
<td>Local Nature Reserve (LNR)</td>
<td>1949</td>
</tr>
<tr>
<td>National Nature Reserve (NNR)</td>
<td>1949</td>
</tr>
<tr>
<td>Site of Special Scientific Interest (SSSI)</td>
<td>1949/1981</td>
</tr>
<tr>
<td>Heritage Coast 1970 Ramsar Site</td>
<td>1971</td>
</tr>
<tr>
<td>Site protected under the EU Birds Directive</td>
<td>1979</td>
</tr>
<tr>
<td>Area of Special Protection (ASP)</td>
<td>1981</td>
</tr>
<tr>
<td>Environmentally Sensitive Areas (ESA)</td>
<td>1986</td>
</tr>
<tr>
<td>Forestry Nature Reserve</td>
<td>1988</td>
</tr>
<tr>
<td>Site protected under the EU Habitat Directive</td>
<td>1992</td>
</tr>
</tbody>
</table>

Source: Bishop, et al, 1997

Through the 1949 National Parks and Access to the Countryside Act, separate categories of designated areas were created. Policy instruments also came into effect for the designation of National Parks in England and Wales and Areas of Outstanding Natural Beauty (AONBs). In addition, land was acquired for the creation of National Nature Reserves (NNRs) and Sites of Special Scientific Interest (SSSIs).

Conservation interests and recreational interests were integrated in management objectives for National Parks. This was catalysed because already in the 1950s it was clear that there was a broad public interest in the preservation of the British countryside, and recreational pressure on the countryside was expected to increase greatly during this period. The main objectives of National Parks were therefore “the preservation and enhancement of natural beauty and promotion of enjoyment by the public” (Cloke, 1989, p 30). The emphasis in the designation as a National Park is especially on the visual amenity of an area; as becomes clear from the motivation which empowered the National Parks Commission to designate the parks:

‘those extensive tracts of country in England and Wales, as to which it appears to the Commission that by reason of their natural beauty and the opportunities they afford for open-air recreation having regard to their character and their position in
relation to centres of population, it is especially desirable that the necessary measures shall be taken for the preservation and enhancement of their natural beauty and promotion of their enjoyment to the public’ (Northumberland National Park, 1992).

By 1989, National Parks covered about 10% of the total land surface of England and Wales (Table 3.7 and Figure 3.4). Scotland had no National Parks until 1998. The UK National Parks do not correspond to the IUCN definition of National Parks, as they do not incorporate lands from which man’s influence is excluded, nor land that is under some form of specific exploitation. It is rather the contrary, as all UK National Parks are characterised by cultural landscapes that are the product of centuries of often extensive agricultural use. Therefore the UK National Parks correspond to the IUCN category V; Protected Landscapes (see Section 3.3) and are more or less comparable with Dutch area categories such as Nationaal Landschap and Grote Landschapsenheid (GLE).

TABLE 3.7 National Parks in England and Wales (situation 2000)

<table>
<thead>
<tr>
<th>Name</th>
<th>Size (ha.)</th>
<th>Year of establishment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dartmoor</td>
<td>94,400</td>
<td>1951</td>
</tr>
<tr>
<td>Lake District</td>
<td>229,200</td>
<td>1951</td>
</tr>
<tr>
<td>Snowdonia</td>
<td>214,200</td>
<td>1951</td>
</tr>
<tr>
<td>Peak District</td>
<td>143,800</td>
<td>1951</td>
</tr>
<tr>
<td>North York Moors</td>
<td>143,600</td>
<td>1952</td>
</tr>
<tr>
<td>Pembrokeshire Coast</td>
<td>58,400</td>
<td>1952</td>
</tr>
<tr>
<td>Yorkshire Dales</td>
<td>176,900</td>
<td>1954</td>
</tr>
<tr>
<td>Exmoor</td>
<td>89,300</td>
<td>1954</td>
</tr>
<tr>
<td>Northumberland</td>
<td>104,900</td>
<td>1956</td>
</tr>
<tr>
<td>Brecon Beacons</td>
<td>135,100</td>
<td>1957</td>
</tr>
<tr>
<td>Broads</td>
<td>30,300</td>
<td>1989</td>
</tr>
</tbody>
</table>

Source: World Conservation Monitoring Centre, 2000

Every National Park has a National Park Authority (NPA), which is responsible for the management of the Park. The NPA is established by legislation and its membership composition is two-thirds county and district council representatives (see Annex 1) and one third, including the National Park Officer, independent members appointed by the Secretary of State for the Environment. The NPAs are also the planning authorities for the Park. This implies that they are responsible for giving planning permission for changes such as construction of new buildings, alterations and extensions of existing buildings, changes in land use, mineral extraction and waste disposal. The policies for the control of these developments are found in the National Park Plan, which has been produced by the NPA. However, the influence of the NPA on development is limited, as planning authorities have little control over so called permitted developments by statutory undertakings, such as electricity and water companies or the Ministry of Defence (MoD) and there is no clear-cut definition of what is allowed and what is not allowed. As in the Dutch planning system, the planning law does not cover agriculture or forestry, which means that conservation and access aims of the NPA can only be achieved through negotiation, and financial grants. However, many parts of National Parks are in the hands of nature conservation organisations (e.g. the National Trust) and are therefore managed as National or Local Nature Reserves, usually in close cooperation with the NPA. In addition, most agricultural areas in National Parks are under SSSIs legislation. This instrument was introduced through the 1949 Act and was reviewed in the 1981 Wildlife and Countryside Act. The Nature Conservancy Council (NCC) is responsible for the establishment and management of SSSIs. The NCC is obliged to provide any landowner or manager in an SSSI with a list of operations that are likely to damage the scientific qualities. Scientific interest refers to specific features of the flora, fauna or geology. The landowners or managers...
Figure 3.3 National Parks in England (situation 2000)
are then obliged to inform the NCC about any planned changes in land use, in order to enable the NCC to enter into management agreements for which compensatory payments can be made available. In 1991 England and Wales contained 4,352 SSSIs (Cherry & Rogers, 1996).

NPAs are also responsible for the management of the National Park; which should be aimed at conserving nature, landscape, heritage and the enhancement of education and recreation. Like all planning authorities NPAs are required to produce a National Park Plan and a Local Plan (see Annex 1). These plans are subject to a five-yearly review and to formal consultations with the local residents and other interested groups. In practice the management tasks of the NPA consist of maintenance of paths, walls, hedges, buying land, setting-up of information centres and recreational facilities, and negotiating and advising on agreements on land management and access for the public. Their capabilities depend heavily on their budgets and the number of staff that can be employed. National Parks receive a yearly grant from the national government which is usually 75% of the total budget. The other 25% comes from local authority sources. There is moreover a trend that NPAs will have to compete with other nature conservation organisations for acquisition of their financial resources.

Other protected areas, that were designated under the 1949 National Parks and Access to the Countryside Act and are still extant, are Areas of Outstanding Natural Beauty (AONBs), National Nature Reserves (NNRs), Local Nature Reserves (LNRs) and Areas of Special Protection (ASPs). AONBs are areas with an attractive landscape that do not qualify for recognition as National Parks because they “lack extensive areas of open country suitable for recreation” (Countryside Commission, CCP 362, 1992). In 1988 there were 38 AONBs which covered 12.8% of the total territory of England and Wales (Curtis, 1991). They were designated by the National Parks Commission (later the Countryside Commission), but the local authorities were made responsible for their protection. Usually there are development constraints in these areas and grant schemes are applied. NNRs are declared by nature conservation authorities under the 1949 and 1981 Act and they should be managed for conservation, education and scientific purposes. By 1991 174 of these NNRs were established (Cherry & Rogers, 1996). The ASPs were also created under the 1981 Act (Wildlife and Countryside Act). These areas are designated by the Secretary of State to provide protection for individual bird species under threat from human activity. The LNRs were also established under the 1949 Act, but by local rather than national authorities. They have the same management purposes as a NNR. Environmentally Sensitive Areas (ESAs) have existed since 1986, and they can be selected and designated by the Ministry of Agriculture and the Nature Conservancy Council. These areas are comparable to SSSIs and also the Dutch Relatienota. Within these areas farmers who undertake practices to maintain and enhance environmental and landscape quality can enter into management agreements. There were 22 ESAs in England in 1996 (Cherry & Rogers, 1996). Another important category of protected territory is the Heritage Coast, which is a non-statutory protected area established by the Countryside Commission and the Countryside Council for Wales; which was inspired by a National Parks Commission survey in 1960 which confirmed widespread erosion of coastal landscapes. There are 41 Heritage Coast areas in England and Wales, comprising the most undeveloped stretches of coast, and they must be designated in consultation with the local authorities. The management of such areas should aim at conservation of the natural and landscape features and facilitate their recreational use.

Finally, as in The Netherlands, the UK also ratified some international Conventions. In 1996, 119 Ramsar sites had been officially established. The contribution of the UK to the European Ecological Network; the Natura 2000 network consists of EU-Birds Directive areas and EU-Habitat Directive areas. According to the European Natura 2000 Barometer, 209 areas with a total of 8’648 km² have already been brought under the EU-Birds Directive, and 386 sites were designated under the Habitat Directive, covering a total of 17,660 km². Together they cover almost 11% of the UK territory (European Commission, 2000).

3.4.3 Nature conservation in Spain

In Spain nature conservation ideas were taken up relatively early by the government. As industrialisation and urbanisation were late in this country, they were less influential on the evolution of conservation activities. The early Spanish inclination to conserve natural lands was catalysed especially by ecological concerns relating to deforestation, the increasing disappearance of virgin land, and the influence of internal and external ideas about the idolisation of nature and landscape values.
As mentioned before, Spain was the first European country to establish a regime for the protection of the natural environment. As early as 1918, two National Parks had been created. In this early period three other categories of protected territories were also devised, and several areas were designated with these specific protection statuses: protected natural area (Espacio Natural Protegido), under the royal decree of 1917 and, under a 1927 decree, areas of national interest (Sitios de Interes Nacional) and natural monuments of national interest (Monumentos Naturales de Interes Nacional). Unlike the Dutch and British situation, Spanish protected territories are mainly protected through specific legislation, while planning instruments have not been very important, although this has changed in recent decades.

Between the 1950s and the creation of the autonomous regions in 1985, several areas throughout Spain obtained these protection statuses, and seven National Parks were created, including the National Park of Doñana in 1978. In 1977 and 1989 the old 1916 national parks act (Ley de Parques Nacionales) was replaced by the new protected natural areas act (Ley de Espacios Naturales Protegidos, 15/1975) and the conservation of protected areas and of wild flora and fauna act (Ley de Conservacion de los Espacios Protegidos y de la Flora y Fauna Silvestre, 4/1989). Under these the protection status of all categories of protected territories in Spain is arranged. Additional specific laws also have to be established for all National Parks. The 1989 act was especially needed for coordination of the national protection competencies regarding the role of autonomous authorities with respect to nature conservation, and to arrange for a juridical base for the Spanish implementation of the EU Habitat Directive. This act indicates on what basis areas can obtain protection status and how this should be worked out in physical plans. In the national 1989 act (Ley de Conservacion de los Espacios Protegidos y de la Flora y Fauna Silvestre, 4/1989), the Ministry of Agriculture, Fisheries and Foods and ICONA (Instituto para la Conservación de la Naturaleza) were granted the legislative power to designate and arrange for the general guidelines, according to which areas must be protected. The main task of ICONA is the setting of these recommendations for the protection regime in the different designated areas, and to judge whether protection measures comply with the international guidelines to which the Spanish government has committed itself. Four types of protected areas were created in the 1989 act, which were designated on the basis of different criteria and obtained different protection regimes. They are National Parks (Parques Nacionales), Nature Reserves (Reservas Naturales), Natural Monuments (Monumentos Naturales) and Protected Landscapes (Paisajes Protegidos). The international protected area designations Spain committed itself to are the same as in The Netherlands and the UK. There were 38 Ramsar sites in Spain in 1996. The number of sites designated under the EU Birds Directive amounts to 260, and under the Habitat Directive there are 937. According to the European Natura 2000 Barometer (European Commission, 2000) the total area covered was 141,678 km², which is 29% of the whole land area of Spain. A complicating factor that delayed the implementation of the physical planning regulations in the protection regimes, was the redistribution of competencies between the national and regional (autonomous) governments after the introduction of the new Constitution in 1978. Since that date the autonomous government has been responsible for physical planning. A transition period was needed for the reassignment of this task, which slowed down the development of regional land use plans by the autonomous authorities. This further complicated the process of checking the local plans, prepared by the lower-tier municipal governments, against the main regional plans. In practice it meant that municipalities had very little higher level guidance. For many designated areas it meant a long delay before the land use regulations in the local plans were brought into accordance with the regime needed to protect the ecological, cultural and landscape values of these areas (see also Annex 1). The Parques Nacionales in Spain comply with the definition of National Parks as developed by the IUCN, the category II areas (National Parks, see Section 3.3.1). The Reservas Naturales are areas that should be protected because of the presence of unique and fragile ecosystems and species. Exploitation of resources is not allowed in these areas unless it is compatible with the necessary protection of ecosystems and of rare species. Areas are designated Monumentos Naturales if they contain geological as well as ecological elements that are unique, rare or have an exceptional beauty. In these areas the land use regulations are less strict than in the Reservas Naturales. In the Paisajes Protegidos, the conservation is mainly aimed at protecting aesthetic and cultural assets, and in these areas too the land use regulation are less strict than in the Reservas Naturales. For the Parques Nacionales and the Reservas Naturales, the national government dictates that two types of plans have to be worked out and approved before the final designation of a protected territory can be confirmed. The first plan, ‘Plan Rector de Uso y Gestión’
(PRUG), is a nature conservation management-plan, which establishes priorities for the management of the ecosystems and guidelines for public access. The second is the ‘Plan de Ordenación de Recursos Naturales’ (PORN), which manages the practicalities of the use of natural resources within the protected territory. Both PORN and PRUG have to be prepared by the managing technical staff of the park, and approved by the ‘Junta Rectora’ of the park, which is usually the national government and/or the autonomous government. Local and regional land use plans have to be in accord with the PRUG and PORN. The 1989 act also allows lower tiers of government the opportunity to establish a buffer zone around Parques Nacionales and Reservas Naturales, in which sustainable socio-economic development should be stimulated. The economic activities that are allowed must be prescribed and funds have to be available for compensation payments for the constraints imposed.

The 1989 act dictates that the National bodies should leave enough freedom to the autonomous authorities to widen and further detail the protection regime of designated areas and to increase the area that brought under it. The autonomous authorities may also create additional categories. Because of this, since 1989 there have been great changes. The total area under protection has greatly increased, and the further implementation of the protection instruments between the autonomous regions has started to diverge. To describe the way designated areas are protected the focus will be on the autonomous region of Andalucía, as this is the region where the Spanish case study area, Doñana, is situated.

Table 3.8: Protected area designations in Andalucía

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of sites</th>
<th>Total area (ha.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parques Nacionales</td>
<td>1</td>
<td>50,720</td>
</tr>
<tr>
<td>Parques Naturales</td>
<td>22</td>
<td>1,389,867</td>
</tr>
<tr>
<td>Parajes Naturales</td>
<td>31</td>
<td>63,222</td>
</tr>
<tr>
<td>Reservas Naturales</td>
<td>28</td>
<td>4,369</td>
</tr>
<tr>
<td>Reservas Naturales Concertadas</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Parques Periurbanos</td>
<td>3</td>
<td>3,238</td>
</tr>
<tr>
<td>Total</td>
<td>87</td>
<td>1,491,423</td>
</tr>
</tbody>
</table>

Source: Junta de Andalucía, Consejería de medio ambiente, 1996

In order to further implement the policy of nature conservation in the Andalucian autonomy, the Andalucian government approved the Ley de Inventario de Espacios Naturales Protegidos de Andalucía (Andalucian act for the creation of protected natural areas, 2/1989). This act is of necessity compatible with the National 1989 Act, as described above. All designated areas in Andalucia have been brought under the Andalucian 1989 Act. In total the Andalucian government has designated twenty two Parques Naturales and twenty eight Reservas Naturales; categories formulated by the National government; but there are also three types of protected territory specific to Andalucia: ‘Parajes Naturales’, ‘Parques Periurbanos’ and ‘Reservas Naturales Concertadas’ (Table 3.8 and Figure 3.5). The only National Park of Andalucia, Doñana, had already been declared in 1978 by the National government. Protected areas cover 17% of the total surface of Andalucia, which is very high in comparison to most other autonomies in Spain; only the Baleares and Canarias have a higher proportion.

3.5 Nature and other activities in rural areas

This Section investigates the ways in which protected nature influences other activities in rural areas. The studies mentioned in Section 3.2 suggest that natural views and being surrounded by nature can be very beneficial for people’s physical wellbeing, fitness and self-esteem (e.g. Driver et al., 1987 and Levitt, 1988). The presence of
nature has also been found to have a positive influence on the healing process of patients, and on people’s contentment at work (Kaplan et al., 1988 and Ulrich, 1979 & 1981), as well as on residential satisfaction (Kaplan, 1983). Given these findings, it is assumed in this study that the presence of nature may attract residents, and new activities to an area. This attraction can have positive and negative effects for the local people, the rural economy and the ecological and cultural values of an area. In the following, the relationships between the presence of nature and the development of activities such as residence, tourism and other business activities will be discussed. Although the central relationship investigated in this study is between protected nature and residential development, relationships with economic and recreational activities are also discussed, because residential changes in rural areas cannot be understood without paying attention to other factors that influence behaviour regarding residential choice and satisfaction. In addition, the presence of protected natural areas may also influence residential activities in an indirect way through impacts on the economic and recreation activities.

3.5.1 Nature and residential activities
The attraction of a green living environments is not a new phenomenon. Two centuries ago, people had already started to build villas in ‘t’Gooi and along the river Vecht, Dutch regions with plentiful natural amenities not far from Amsterdam. In the UK there are several comparable cases of environmentally motivated population flows since the 18th century. However, what makes the recent situation different from former times is the great increase in the number of people who have become able to act on non-economic motivations to increase their quality of life. Also distances have become easier to manage by most people, making larger parts of the countryside attractive places to live. This change is not unnoticed by the British Government which in its report ‘This Common Inheritance’, phrases it as follows:

‘As people have enjoyed the benefits of economic growth, they have become increasingly preoccupied with the quality of their daily lives. This can be seen in aspirations for healthier living, in the desire for cleaner air, water and streets, in popular enthusiasm for protecting the best of our urban and rural surroundings.’

(Department of the Environment, 1990, p. 8).

The presence of nature or natural elements such as trees were reported to be responsible for higher residential...
satisfaction (Kaplan, 1983 & 1985; Frey, 1981 and Fried 1982). Fried’s study in the US indicated, for example, that ease of access to nature was the strongest predictor of residential satisfaction and this again was a very important component for life satisfaction. Also Kaplan and Kaplan (1989) showed that views of gardens, woods and trees added strongly to the residential satisfaction of people. They also found that nature that was most immediately available has the greatest impact.

An important field of research on the impact of protected nature on the residential choice of people comes from studies carried out in the environs of the Yellowstone National Park. Rasker (1993) discovered that the Greater Yellowstone Ecosystem (GYE) is in an unique position in comparison to many other rural areas because of the high occurrence of quality ‘locational assets’ like ‘vast expanses of wilderness, breathtaking scenery, clean air and abundant wildlife’ (Rasker, 1993, p 120). This is was also shown by Rudzitis and Johanson (1989) who found that ‘amenities and quality-of-life factors are increasingly important to people’s decisions about moving ...as incomes rise, allowing millions of urban people to act on their preference for more rural surroundings, areas with plentiful natural amenities may gain population at a proportionately higher rate than counties without environmentally desirable attributes’. Jobes (1993) put the findings of Rasker in relation to the GYE in a broader perspective. From one side, Jobes also agrees that areas with many natural amenities attract relatively more people and enterprises then areas lacking natural amenities. However, he also found that ‘many migrants move on so quickly in these areas that they are hardly distinguishable from tourists’. The economic effect of these new immigrants on the region is therefore less extensive than expected. Jobes also emphasises that the increased attraction of people and economic activity to the GYE may ‘pose the greatest potential threat to the area as a natural system’ (Jobes, 1993). So the high quality of life, which is the reason for many people and companies to settle down in the area, might be affected in a negative way.

Pacione (1984) also refers to similar residential choice considerations of ex-urbanites in the UK, who moved to dormitory settlements. Amongst other factors, particular importance was attached to a superior natural environment determined by characteristics such as peace, quiet, fresh air, space and recreational opportunities. Jones (1982) and Forsythe (1982) found, when searching for the migration motives of English and Welsh born people who moved to rural Scotland, that responses referring to scenic beauty, tranquillity, space, remoteness and outdoor recreation were very important. For The Netherlands in a study done by Wassenberg et al. (1994) it became clear that people find the nearness to nature in their residential environment very important (Table 3.9). The Dutch National Spatial Planning Agency (RPD) (see Ministry of Housing, Physical Planning and Environment, 1997) conducted a survey among a thousand Dutch citizens about the significance they attached to aspects of their residential environment. It turned out that a green neighbourhood and proximity to nature were the characteristics that were most appreciated, and came before aspects as presence of shopping facilities or nearby availability of public transport.

<table>
<thead>
<tr>
<th>Facilities</th>
<th>% of respondents that found it very important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proximity to shopping centre</td>
<td>59</td>
</tr>
<tr>
<td>Proximity to natural area</td>
<td>50</td>
</tr>
<tr>
<td>Proximity to motorways</td>
<td>32</td>
</tr>
<tr>
<td>Proximity to big urban centres</td>
<td>30</td>
</tr>
<tr>
<td>Proximity to work</td>
<td>26</td>
</tr>
</tbody>
</table>

Source: Wassenberg et al., 1994

(1) VINEX locations are the greenfield locations as specified in the Fourth National Spatial Planning Memorandum Extra (VINEX).
The appreciation of nature in the nearby residential environment is also reflected in prices of real estate. In The Netherlands, Fennema et al. (1996), showed that the value of houses were 6% to 15% higher when located near a park. In a study of Van Leeuwen (1997), in which real estate agents were interviewed, the value of houses with nearby green amenities was higher than that of houses without. For an average semi-detached house with garage the value was 7% higher if it was located directly beside green amenities. If this same house was located in a region with many green amenities, the value was 6% higher. If this house was located directly beside green amenities in a region with many green amenities the value was even 14% higher. In another piece of Dutch research by Luttik & Zijlstra (1997) the prices of houses with nearby green amenities, or near water, and of houses without these features were compared. It was proven that the value of houses with a green view was 5% to 8% higher. The presence of water beside the house increased the value even further, by 28%. Powe et al. (1995) and Willis and Garrod (1992) calculated an increase of about 5% for dwellings near forests in England.

Higher prices increase the pressure on the local housing market in rural areas with natural amenities. The pressure in several English National Parks is well-known (Shucksmith, 1987 and 1990). The negative externalities of the presence of natural amenities have become clear in the case of the English Lake District National Park. In the 1980s the Lake District Special Planning Board came into conflict with central government when attempting to solve the difficulties local people have obtaining housing. In this region there is great demand for permanent housing and second homes, usually from higher income groups from outside the local area. Shucksmith (1981, 1987 and 1990), studied the consequences of this pressure on the local housing market. He showed that there is strong competition for housing between local buyers and holiday and retirement home buyers at both ends of the housing market, especially within the bigger settlements and the most attractive parts in the Lake District. Because it concerns competition in all types of housing categories, it is very difficult to intervene in this process. Entry to the housing market for the local low-income and even middle-income groups is very difficult in this area. Waiting lists for council housing are also long, since few existing council houses become vacant and there is hardly any possibility of enlarging the public housing stock, because of the strict building regulations within NPs. Also in several natural amenity rich areas in The Netherlands, municipal councils have felt obliged to take measures to secure the entry of local groups to the housing markets.

It is clear that the higher housing value may lead to an automatic selection of newly settling households on the basis of income. Several studies have also showed selectivity in the group of people that have moved to amenity rich rural areas. This selectivity is not only related to socio-economic status, but also to preferences and to the lack of constraints that certain groups have in selecting a place to live, i.e., no children and no ties to a work location. In many counter-urbanisation studies in the UK the domination of the working middle class in the migration population is emphasised (Cloke and Thrift, 1987; Phillips, 1993; Lewis, 1998 and Fielding, 1996 & 1998). This dominance is explained by the higher flexibility of middle class households in choosing a place to live. A similar observation is shown in a study of Schutjens et al. (1998, p. 85), in which the flexibility of high income and education groups becomes clear from their ability to move over longer distances than those with lower standards of income and education. In the case of US research, for example, Frey and Johnson (1998) observed in the urban to rural migration process that rural areas with many natural and recreational amenities have a higher chance of attracting middle-class workers. In addition, research done by Jobes (1993) indicates that people in the GYE can be characterised as well-educated and wealthy. However, the opposite was shown in a study done in Australia by Hugo and Bell (1998). It was more often the lower income groups that dominated the population flow towards amenity rich rural areas. The explanation for this is, however, the same as in the former studies mentioned: lower income groups may be more flexible in choosing a place to live because among them there is an over-representation of early retirees and unemployed who are not caught in the urban labour market. For these people the lower living costs, the availability of housing, together with the presence of natural and rural amenities in which they could spend their large reservoir of spare time, were reasons to move to these areas. Research done by Fielding (1992), Fuguit and Heaton (1995), Shucksmith (1991), Warnes (1992), and Champion (1998) showed that people approaching retirement age are more likely to move into amenity rich rural areas. Again this is not surprising, as the residential choice of this group of people is more often motivated by the quality of the living environment than by employment reasons (see Fielding, 1992; Filius, 1993 Mulder, 1993; Boyle et al., 1995; van Kempen et al., 1995).
Finally, it has also been shown that there is a higher concentration of second homes in amenity rich areas. From the Social and Economic Atlas of Britain by Champion et al. (1996) it becomes clear that most of the second homes and holiday cottages are found in or near designated areas with statuses like National Park, Area of Outstanding Natural Beauty or Heritage Coast. In The Netherlands most of the holiday cottages and second homes are found in the coastal areas, especially the province of Zeeland in the south of the country, and in rural areas with many natural amenities and/or the attraction of recreational water, such as Friesland, Overijssel, Drenthe and Limburg (see Thissen, 1978; CBS, 1994 and Ypma, 1997). In Spain this pattern is also recognisable; coastal areas have a high proportion of second homes, but also rural areas show a high concentration: more than 30% of the second homes are found in the smallest rural settlements (<2000 inh.) (Camarero, 1993).

3.5.2 Nature and economic activities
The presence of protected natural areas may lead to the creation of extra labour opportunities, but it may also be an employment constraint. However, this depends on several aspects, such as the management regime of the protected territory and the planning and legislative restrictions in place. Exploitation of natural resources is usually restrained in protected territories, but many still allow extensive economic activities. For example, in the case of Northumberland National Park, almost the whole territory is used by farmers for extensive livestock farming and by forestry companies for timber production. In the National Park area of Doñana, no economic activity is allowed at all, although some concessions are given to a few people to continue their traditional activities in the area. Estimating the precise effect of the presence of a protected area on the labour opportunities is therefore very difficult. Another phenomenon, which should also be taken into account, is the indirect labour effect of economic activities that are attracted by the presence of natural amenities. These may be touristic and recreational activities, but they can also be economic activities that are started by people that want to live and work in an attractive natural environment. These entrepreneurs are attracted to the area by what Wever (1993) calls the ‘soft’ locational considerations. These are the attractive living conditions, which amenity rich rural areas can offer to attract new entrepreneurs to rural locations. These considerations have become more determinant because businesses like many households are now less rooted in a particular place, i.e. ‘footloose’. North and Smallbone (1993) also reported that ‘most new firm founders in the rural areas were not born locally; they had usually moved to the countryside prior to the setting up of the firm’. They created jobs for themselves at the place where they wanted to live. Rasker (1993) has studied the changes and developments in the economy of the Greater Yellowstone Ecosystem (GYE). He came to the conclusion that ‘the scenery, wildlife and wild features of the ecosystem are largely responsible for the region’s growing economic diversification’. In the last 20 years the economy of the GYE has diversified and shows an increase in entrepreneurial activity. In particular, small businesses and service industries have grown. Rasker explains the typical growth trend by two phenomena. Firstly, more and more managers/owners of place-independent, i.e. ‘footloose’, businesses decide to move to rural areas which provide desirable residential conditions. There is no longer any need for them to be situated in central locations like big cities because of advances in telecommunications and the rise of the knowledge-based service economy. Secondly, there are more and more people who prefer to live and work in rural surroundings with many natural amenities. These phenomena are confirmed by others, such as Birch (1989) who wrote that ‘the successful, innovation based company will, in general settle in an environment that bright creative people find attractive’ and in order to keep workers content, must provide a setting with a high ‘quality of life’. Finally, there are Whitelaw and Niemy (1989) who state that ‘the economic development process is increasingly characterised, not by jobs-first-then-migration, but by the reverse’.

3.5.3 Nature and tourism
The relationship between the presence of protected nature and the attraction of tourists to an area is one of the issues most discussed in the literature on this subject; which usually refers to such activity as eco-tourism, because it involves visiting a natural area with the specific objective of enjoying the ecological and cultural values. Tourism can have positive and negative effects on the nature area itself, and on the socio-economic development of the regions in which the designated area is situated (see Box 3.2). Mathieson and Wall (1982) divided the impacts of tourism into economic, social and physical. Many others chose the division between positive and
negative impacts (see Williams, 1998 and Hall & Page, 1999). The negative and positive effects of tourism, especially related to the presence of protected nature in rural areas, can be illustrated by the results of several examples of research done in this field.

Wescott and Williams (1994) examined the economic impact of the declaration of a new Australian National Park, the Grampians National Park, on the surrounding community. An important outcome of their study was that there was a detectable increase in high quality accommodation in the surrounding region of the newly declared park, while in an older park, which they used as a reference area, no increase was detected. The main conclusion was therefore that a declaration of a designated area stimulates and diversifies economic activity in rural areas. Examples of positive economic impacts, as opposed to negative social and environmental effects, were found in the case of a tourist development project in the US Havasupai Reserve. The relationship between the Havasupai tribe and tourism is quite complex because, although the tribe is economically dependent on the tourist industry, they in fact have no other choice. When the Grand Canyon National Park was established the Havasupai Tribe, which had led a nomadic existence, was suddenly confined to the village of Supai. As a result, in due course, the tribe had to abandon many of its traditional activities and tourism, was a good alternative. White (1993) investigated the economic feasibility of new tourist services for this tribe. The main conclusions from his research were that, at present visitor levels, the tourism facilities provided were only marginally economically feasible. If the Havasupai tribe wanted to earn more money from the tourist industry they needed to attract more tourists. This would, however, have negative effects on the ecological and cultural assets of the area, and would disrupt the Havasupai’s traditional way of life.

The positive and negative impacts produced by tourism on rural regions, and the difficulty of determining what the maximum permitted number of tourists should be, before it becomes a self-destructive activity, is well illustrated by the so-called ‘tourism life cycle’ (see Figure 3.5). This concept originates from the micro economics theory and gives an ideal typical development of the growth and decline of consumption of goods. The geographer Butler (1980) suggested applying it to the development of tourism in regions. In several studies this life-cycle approach was applied to the development of tourism (e.g. Cooper, 1992; Gordon & Goodall, 1992 and Johnson & Snapenger, 1993). According to this concept, well-established tourist areas pass through several stages (see Figure 3.5):

• The earliest stage is the ‘exploration stage’. In this stage some tourists of non-local origin visit the area because they are attracted by natural and cultural amenities, but their numbers are still small. Tourist numbers hardly affect the social and cultural environment of the area.

**Figure 3.5 The tourism life cycle**
Box 3.2: Benefits and negative impacts from tourism
(after Jacobson & Robles, 1992; Dietvorst, 1993; Williams, 1998 and Hall & Page, 1999)

Positive
A. Economic impacts:
• Creation of employment
• Local expenditure
• Diversification and stimulation of local economy especially in isolated rural areas.
• Increased awareness of the region as tourism destination or place to live and/or work
• Creation, maintenance or improvement of new facilities, services or infrastructure
• Increase in real estate value

B. Socio-cultural impacts:
• Strengthening of local cultural values
• Stimulation of endogenous development
• Increased awareness of non-local perceptions and values
• Increased national and international awareness of the region
• Maintenance of the service level and better accessibility

C. Environmental impacts:
• Improved conservation of ecological and cultural values (planning security)
• Improved visitor management strategies
• Increase in resources for environmental conservation

Negative
A. Economic impacts:
• Provides an unstable source of income;
• Creation of low paid and low skilled employment
• Too many tourists coming to a region may destroy the tourist industry
  (tourism can be a self-destructive activity);
• Investments to attract tourists to a region may be high and success is uncertain
• Real estate speculation

B. Socio-cultural impacts:
• Loss of cultural identity and local values
• Segregation of local residents
• Increased real estate value leading to scarcity on the local housing market for local people and
  low income groups
• Too many second homes may stimulate breakdown of the local community
• Increase in crime

C. Environmental impacts
• Air and water pollution
• Architectural adulteration
• Scarcity of resources such as water and electricity
• Damage to ecosystems and disturbance of wildlife
• Damage to heritage
• Overcrowding, traffic congestion
• In the second stage, the ‘involvement stage’, the number of visitors to the area starts to increase. The local community begins to adapt to the tourist trade, though with minimal planning and provision of facilities. A tourist season can be identified.
• In the ‘development stage’ there is a well-defined tourist market and a peak season for visitors. Large numbers are attracted. More control from outside the region comes in to coordinate and staff the tourist facilities. Regional and national planning authorities get more influence. It is at this stage that a further increase in visitor numbers will lead to negative impacts on the local economy, socio-cultural structure, and the environment. At this point the need for sustainable management strategies is highest, which may prevent that the situation from shifting to the next stage.
• If the area declines in popularity, and the rate of increase of visitors starts to fall, the tourist area enters into the ‘consolidation stage’. At this stage tourist spending is a major part of the local/regional economy and some negative effects of tourism are perceived in the area. Often speculators are attracted to the region to earn money from short-term investment.
• In the ‘stagnation stage’ visitor numbers level off. This can happen if the area is no longer fashionable to visit, and significant negative social, environmental, and economic impacts on the local community will be the result.
• In the ‘declining stage’ visitors are lost to other tourist areas. There is a high property turnover and tourist facilities are replaced with non-tourist facilities. Day trips start to dominate.

Johnson and Snapenger (1993) investigated whether the Greater Yellowstone Ecosystem (GYE) was in the ‘stagnation stage’ or the ‘declining stage’. Their findings were that the tourist service business sector continued to be in a growth phase, and as a result the local economy in general was also growing. Overall local attitudes towards tourism were favourable because it encourages cultural activities and cultural exchange. Other positive effects were that tourism had stimulated the declaration of new protected territories, and it encouraged the maintenance of high standard local facilities. Negative effects were related to over-crowding, which caused traffic problems and stress to wildlife. Johnson and Snapenger concluded that “the tourism market forces may continue to seek growth, whereas the ecological components will struggle to maintain integrity”. They advised that problems associated with increased visitors should be addressed before the economic, social and environmental forces entered the critical ‘stagnation stage’.

3.6 Summary and conclusion

Central to this chapter is the function of protected nature in rural areas within the context of the post-1945 rural restructuring process. The answer to the second research question of this study is investigated:

1b. How did the post-1945 rural restructuring process in The Netherlands, the UK and Spain affect the nature conservation activities in rural areas?

Overall, it has been shown that nature conservation has become increasingly important in the post-1945 period and that the presence of protected natural areas can be perceived as an important endogenous quality of rural areas, supporting regions to attract new consumption orientated activities. It also implies that nature conservation plays an important role in the rural differentiation process. Although these general conclusions apply to all three countries studied, important differences and similarities have been found in the way the function of protected nature developed in the post war period in The Netherlands, the UK and Spain (see also Annex 3).

Attitudes towards nature and public involvement in nature conservation

Overall, attitudes towards nature have changed through the centuries and went together with an increased human intervention in natural processes. As a result, untouched natural areas in western European countries hardly exist anymore. However, the shift towards an overall positive valuation of nature, and increased concern about the disappearance of natural, cultural and landscape qualities in past centuries have mobilised public, scientific and government interest to take measures to conserve the natural environment. In recent decades this
process has become particularly clear, through increased public participation in nature conservation and an increase in nature conservation organisations and their institutionalisation. Although this process was fairly uniform in all three research countries, Spain lagged behind (see also Annex 3). In The Netherlands 35% of the population are members of or donators to a nature conservation organisation; which is more than twice that in the UK and three times the proportion in Spain. Although the causes of these differences are various, and can be sought in specific socio-economic, historical, cultural, political and environmental characteristics, there are three plausible reasons that partly explain them. These are differences in income levels, in the urbanisation process, and in relative scarcity of undisturbed natural lands. Higher income countries showed a higher public participation in environmental organisations and, since Spain has a lower gross domestic income per head than the other two countries, this may be one reason. The second reason pertains to less and relatively recent urbanisation. Spain therefore still contains more rural population groups, and people who have only recently exchanged their rural life for one in the city. It is expected that rural populations are less inclined to be involved in environmental organisations than urban people. The third reason could be that Spain still contains more relatively undisturbed natural areas, while in The Netherlands and the UK these lands have virtually disappeared; which makes natural attributes more scarce and therefore more sought after. Although public involvement in nature conservation organisations is much lower in Spain, one does see that the proportion of people participating in environmental demonstrations is higher in Spain than in The Netherlands and the UK. This implies that the people who are involved are more active in pursuing their goals, because their organisations are still young, less institutionalised and therefore still have a long way to go to build up their position as power groups.

Conservation and management of protected natural areas
There was a considerable increase in the number of categories and also in the total area of designated land, as well as an increased government involvement in nature conservation, especially as part of rural policy. Overall, since the war, there has been a gradual shift in attitude towards rural areas, from a situation where no attention was paid to nature conservation to its current central role in the development of area specific, integrated, rural policies. Although the developments described above are fairly consistent in the three countries studied, important differences have occurred, which led to variations in the context within which the relationship between nature and residential function was investigated. Firstly, there are clear differences in approaches to nature conservation, area designation and area management. Secondly, there are differences in the way in which nature conservation has been integrated into rural policy.

In Spain nature conservation ideas were taken up relatively early by the government as it was the first European country to establish a regime for the protection of the natural environment, far before the Dutch and British did. In spite of this, concern for the natural environment in Spain is not so widely spread among the public and integrated approaches towards nature conservation have not been developed as far as in the UK and The Netherlands, both in relation to combining functions and to involvement of local population groups. At this moment the UK has the highest proportion of designated land, Spain has the lowest and The Netherlands is intermediate. In comparison with the other two countries, the designated areas in Britain are not subject to a very strict protection regime; in the sense that exploitation and habitation are still allowed in these areas and human interaction with nature is still very intensive. In Spain the proportion of designated land is relatively small, but in absolute terms Spain still contains the biggest area of relatively undisturbed land, of high ecological quality, where no human occupation or intervention is allowed. The Netherlands have a relatively large number of designated areas of small average size, whereas in the UK and Spain the average size is much bigger, which adds to the survival possibilities of species.

The ability to concentrate management on the conservation of natural resources of designated areas is easier in The Netherlands than is usually the case in the UK and Spain, because the proportion of land in the hands of both private and public conservation organisations is higher. This is not surprising because the relatively smaller size of natural areas makes acquisition a more rational option than in the UK and Spain. The Netherlands are a densely populated country with strong competition between different land use functions which, in conjunction with the motivation behind the acquisition of land for conservation purposes, at the beginning of this century,
explains the relatively small size of natural areas. In The Netherlands, until the beginning of the 1960s, conservation was mainly arranged through acquisition of land and legislation, since planning arrangements did not have much influence on the countryside at this time (see also chapter 2). However, from the 1960s planning policy became more influential in Dutch rural areas, and this enabled both government authorities and nature conservation organisations to exert more influence on policy development in favour of environmental and nature conservation. In the beginning of this period there was still a tendency to separate nature from other functions, but this has diminished. In the 1980s especially, several plans appeared in which new instruments were created to further stimulate the integration of nature and landscape into wider rural policy and to better protect the quality of the natural environment. The introduction of the Relatienota approach, through which parts of agricultural land are designated as nature development areas or as reserve areas in order to acquire these as nature reserves in the long term, and the creation of the Ecologische Hoofdstructuur, an ecological network, was a logical step in this process. In practice it means that a lot of effort needs to be invested to connect the existing natural areas with each other. The restoration and creation of nature is therefore one of the key priorities in the Dutch approach. In the 1990s the integration of policy for different functions in rural areas reached its climax, through the Area Specific Policy (Gebiedsgerichtbeleid). Several initiatives were taken and these were also improved with recently available knowledge. This policy saw a shift towards a bottom-up approach, in which increasingly more attention was paid to the specific circumstances within areas and to the involvement of local population groups in policy implementation and decisions on distribution of resources.

Wilderness areas had already disappeared from the UK by the beginning of the industrial revolution. The conservation philosophy was very different from the Dutch and Spanish approaches. In the UK both public and government involvement in nature conservation was very much steered by nostalgic feelings for the disappearance of the pre-industrial, rural landscapes, and the recreational use of rural areas. The acquisition of land for conservation purposes, especially if these were ecologically motivated, did not receive much support from either government or landowners. Therefore, when the government needed to incorporate the concept of conservation in its rural policy, the emphasis was much more on the preservation of rural, aesthetic, cultural, and recreation aspects and less on ecological values. Designated areas could therefore be of a much bigger size, because the location of them was determined by cultural and aesthetic merit, not by ecological values. Almost all designated areas in the UK are cultural landscapes, where most of the land is owned by the users and where conservation is combined with other land-use activities, such as agriculture, forestry, residence and recreation. Therefore there is less emphasis on the acquisition of land for conservation purposes, but conduct of these areas is controlled through planning regulations, management agreements and consultation. This also implies that the management of the ecological, cultural and aesthetic resources in these areas is dependent on the willingness of the landowners and managers to co-operate in the conservation programmes.

In Spain the situation was very different at the beginning of the 19th century, because it still contained relatively more wilderness areas, which were often concentrated in the hands of a few people who used them as hunting grounds. The establishment of National Parks on these lands was therefore an obvious and relatively easy step for the national government. The philosophy behind conservation in Spain was different again from that in The Netherlands and the UK. The early Spanish inclination to conserve natural lands was more the result of ecological concerns relating to deforestation, the increasing disappearance of virgin land, and also the fashion for idolisation of nature and landscape. It is not surprising that the American National Park concept, in which the emphasis is on wilderness, influenced the Spanish approach, given the much higher proportion of open, untouched, natural lands. Designation of areas was therefore not a complicated process in Spain, however, the implementation of a conservation regime was much more complex. Firstly, government involvement in these areas is often limited, because most parts of the designated areas in Spain are in private hands; which makes control of developments and ecological management more difficult. Acquisition of land is not often an option, since it usually concerns huge territories and the conservation budget is limited. Conservation measures and access need to be negotiated. In Spain the protection is first arranged by legislation, which needs to be translated into planning, land-use regulations. However, this process has been very slow, because of the late introduction of rural planning policy, and the decentralisation of planning capabilities to the autonomous governments. The present division of national and regional competencies for different types of designated areas further...
complicates the situation. It is also a reason why the integrated approach towards nature conservation in Spain have not been developed as far as in the UK and The Netherlands, not only with regard to combining functions, but also in relation to the involvement of local population groups.

**Nature and other activities in rural areas**

Although the influence of protected nature is highly dependent on the way the areas are managed, the regime in place, the characteristics of the natural area itself, and the local and national circumstances under which such a provision exists, there are some general assumptions that can be made about the relationship between protected nature and other activities in rural areas. Overall, it has become clear that natural areas are able to exert positive and negative influences on individuals, and on the development of rural areas, through the relationship that exists between nature and residential, economic, and recreation activities.

It has been shown that nature provides recreational opportunities and has a positive influence on people’s physical wellbeing, fitness, self-esteem, healing processes, contentment with work, and residential satisfaction. Beside these aspects, protected nature may also give planning security, because within and near protected natural areas specific measures are usually applied that help to maintain the ecological, cultural, landscape, and aesthetic qualities of an area. This suggests that, as a result of planning measures, the quality of the living environment of people who live within or near a protected territory will be more secure than in other rural areas.

The positive appreciation of nature in the residential environment has also been made clear by the higher prices of real estate located near natural amenities. From these findings it is clear that nature adds to the quality of life, which has become an increasingly important factor governing people’s decisions on where to live, work and spend their leisure time; it is also likely to have an important influence on people’s behaviour. Therefore rural areas that contain many natural amenities may be able to attract more activities than similar places which lack such qualities.

Several studies also showed that certain population groups are more likely to move towards natural amenities than others, which leads to a selective migration process. The main reason for this is that households with the greatest flexibility in choosing their place of residence are also best able to consider quality of life when making their choice. These people will therefore also be most inclined to move towards protected natural areas in rural places, and four specific household groups, which can be expected to be relatively over-represented in the migration flow, can be derived from the literature: early-retirees, ‘footloose’ households, middle-class households, and those seeking lower living costs.

Natural areas may also influence the development of rural communities. There are several potentially positive effects. If these areas attract tourists, new residents, and economic activities it will help to create new employment opportunities for the population and help to diversify the local economy. The attraction of new activities to an area may also have positive effects on the cultural development of local population groups, since it might enhance the strength of their cultural values, and stimulate developments based on endogenous qualities.

Increased attraction of tourists, residents and businesses to an area may also help to maintain the service level and improve the accessibility of an area. All these developments are positive, but these may shift towards negative externalities if the attraction of new activities becomes too great. In tourism research this has already been extensively studied by applying the life cycle approach to the tourist development in an area. The advantages of attracting visitors to the area are positive as long as they do not exceed a maximum number. When this happens this will have negative consequences for the local economy, socio-cultural development of local population groups, and for the quality of the natural environment itself.

In chapters 2 and 3 the general context of this study in relation to the rural restructuring process and the residential and nature conservation activities in rural areas of the three case study countries was discussed. In the empirical part of this research the aim is to create a better understanding of the relationship between the presence of nature and the development of residential activities in rural areas by focussing on the situation in five different case study areas in Europe. In the next chapter the selection of these areas is further explained and a description is given of the specific regional context within which the relationship between protected nature and residential activities is investigated.
Notes
1. ‘si un día glorioso la Reconquista contra los árabes comenzó en Covandonga, es de allí de donde arrancará la Reconquista contra la desertización’
2. Founded in 1876 as Sociedad Geográfica de Madrid
3. e.g. Associació Catalanista d’Excursions Científiques, 1876 and the Centre Excursionista de Cataluña, 1891, the Guadarramistas’, Real Sociedad Española de Alpinismo Peñalara
4. Zone a: areas with agriculture as the main function/Zone B: areas with an alternation of agriculture, nature and other functions in bigger spatial entities/Zone C: areas with an alternation of agriculture, nature and other functions in smaller spatial entities/Zone D: areas with the main function of nature.
5. The landscape quality is determined by the three ‘E’s: aesthetic, ecology and economy.
4 The case study areas

4.1 Introduction

In this study the focus is especially on the relationship between protected nature and residential activities. The former chapters showed strong indications of the role that the presence of protected nature plays in attracting residents to rural areas and their satisfaction with their living environment. It is expected that the luring ability of protected nature will be related to the general appreciation of natural amenities, and the positive way that these amenities may influence the quality of life; which is of importance for an increasing number of people when deciding where to live, work, and take their leisure. In the empirical part of this research the aim is to create a better understanding of the relationship between the presence of nature and the development of residential activities in rural areas, by focussing on the situation in five different case study areas in Europe. In Section 4.2 the selection of these areas is further clarified. In Section 4.3 an understanding is created of the specific regional context of the study areas, within which the relationship between protected nature and residential activities is investigated. In Section 4.4 a description is given of the characteristics of the protected natural areas that part of the case study areas, in relation to their genesis, planning, conservation and management regimes, aesthetic, cultural and natural values, and recreational use.

4.2 Selection of the case study areas

When investigating the relationship between the presence of protected nature and residential activities in rural areas, two aspects have to be considered. Firstly, residential choice is a complicated process in which several pull and push factors are involved; the selection of a new house is therefore based on a number of considerations, of which the presence of natural amenities may only be one of many. Secondly, it also became clear from the former that the impact of protected natural areas on other activities depends on the specific characteristics of the natural area itself, and on the particular local and national circumstances of such an area. Given these two aspects, it is plausible to assume that one can only get a good understanding of the general impact of protected natural areas on residential activities, if this is empirically tested in several appropriate locations, with dissimilar characteristics, which are situated in different rural regions. Comparison of the research results derived in different study areas will then make it possible to identify how specific the function of nature is for the country and region within which it is situated; and also whether and which specific characteristics of a protected natural area lead to differences in the relationship with residential activities.

Selection of the case study areas was in three stages and was driven by both theoretical and practical considerations. The first step was to select the countries to be studied. For practical reasons, it was decided that only three countries could be covered, given the time and money available. These countries had to represent the European diversity in natural and physical environment, landscapes, socio-economic development, cultural characteristics, and rural development and policies. These features have already been discussed extensively in Chapters 2 and 3.

The second step was to decide on the number of case studies that could be covered, and the distribution of these over the three countries. This decision was driven by practical considerations, but it was also regarded as important that secondary research results, between different study areas in at least one country, should be compared, so that more general conclusions about the function of nature could be drawn, in relation to the specific situation within that country. Three research areas were therefore selected in the Netherlands, while the UK and Spain each had only one. The third step was the selection of the study areas within the three countries. There were five selection criteria applied, of which there was general discussion in Chapter 1:

1. As was expected, there is a relationship between the size of a protected natural area and the impact that it can impose on the surrounding region, therefore the first criterion was that the protected territories in the study
areas needed to meet a minimum size. It was decided to adopt the minimum of 1000 hectares, which the IUCN applies for inclusion in the United Nations List of Protected Areas. In addition, as the average size of Dutch protected areas is considerably smaller than those of the UK and Spain (see Chapter 3), only such areas above the national average size were considered for the Netherlands.

2. One of the aims of this research was to investigate whether a protected natural area may positively contribute to the development of a remote rural region. For the determination of remote and rural the geographical principle of peripherality was followed; which refers to rural areas which are located outside national and international concentration areas. Land use intensity and population density decreases with distance from these concentration areas. Compared to rural areas that are more centrally located, remote rural areas are characterised by a low population density; often in combination with a more dispersed settlement form; lower intensity of land-use and relatively limited accessibility (see Van Bemmel, 1984; King, 1991 and Hoggart et al., 1995). This means that the second selection criterion was that the study sites needed to be located away from areas of greater national and regional, urban and economic concentration, and the population density in the study areas had to be below the national and regional average.

3. The third selection criterion was the type of protection regime. It was necessary for this regime to have been arranged through legislation and planning arrangements, and to be aimed at the conservation of natural resources. It was therefore decided that all protected territories chosen had to be included in the United Nations List of Protected Areas, so that they met the IUCN definition. According to this definition, protected areas ‘must be dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means’ (IUCN, 2000). In addition, the UN list of protected areas provides a common ground, on which basis their management can be compared (the IUCN protected area classification, see Section 3.3.1).

4. The fourth criterion is the period of existence of the protected area. The protected territories in the study areas needed to have existed for at least ten years. This requirement was applied, because it was expected that effects of the presence of protected areas on residential choice and population composition could only be measured after some years.

5. The final choice of the study areas aimed at selecting protected territories with dissimilar characteristics in relation to landscape types, natural and physical environment, cultural features, and types of management; they also needed to be located in regions with different socio-economic characteristics. This variation was especially important for the definite selection of the three Dutch study areas.

The result of the selection has already been discussed in Chapter 1. In the next section the specific features of the regional context and of the protected territory in the five study areas are described.

4.3 Location and regional characteristics of the case study areas

In this Section some basic characteristics of the study areas will receive attention, following criteria for their selection and their specific regional context. The national context of the case study areas have already been discussed extensively in Chapters 2 and 3.

4.3.1 Location

The national perspective

All five study areas are located in a relatively rural and decentralised location within their national territories. The three Dutch study areas are all situated in the four most northern provinces. These are located furthest away from the urban and economic centre of the country; the Randstad (see Figure 4.1). In the provinces where the three Dutch study areas are located there are few big urban centres; the only cities of more than 100,000 inhabitants are Groningen, Zwolle and Enschede, and population density is far below the national average. The Northumberland National Park is the most remote in England and Wales, situated on the border with Scotland, entirely within the county of Northumberland (see Figure 4.5). This county has the lowest population density in England and the proportion of people employed in agriculture is relatively high. The final study site, the
protected area of Doñana, is situated in the south west of the most southern Spanish autonomous region, Andalucía, on the border with Portugal (see Figure 4.6). It is located far away from the main economic and political centres of the country, which are the Madrid and Barcelona conurbations and the industrial nuclei in the Basque country. The region of Andalucía, is one of the most depressed autonomies in Spain in terms of per capita income and unemployment rate. The proportion of the active population still working in agriculture is also relatively high.

Figure 4.1 Location of the three case study areas in the Netherlands
The regional perspective

The first Dutch case study area of the Dwingelderveld is situated in the south west of the province of Drenthe, in the triangle of the smaller towns of Beilen, Meppel and Hoogeveen, within the municipalities of Dwingeloo, Beilen and Ruinen (see Figure 4.1 and 4.2). The Weerribben National Park is located in the north west of the province of Overijssel. The National Park is in, or borders, the territory of the municipalities of IJsselham, Brederwiede and Steenwijk. By Dutch standards, the area is situated relatively far away from bigger urban centres. The nearest town of more than 50,000 inhabitants, Zwolle, is at 40 kilometres from the National Park (see Figure 4.1 and 4.3). The third study area, the Lauwersmeer, is situated on the border of the two most northern provinces, Groningen and Friesland, within or bordering the territory of four municipalities; Dongeradeel, Kollumerland, De Marne and Zuidhorn (see Figure 4.1 and 4.4).

Figure 4.2 Dwingelderveld National Park
Figure 4.3 Weerribben National Park
Figure 4.4 Lauwersmeer protected natural area
Northumberland National Park was named after the county in which it is situated (see Figure 4.5), and its entire territory lies in this county; divided among the districts of Berwick upon Tweed, Alnwick and Tynedale. Northumberland is one of the least populated and most rural counties of England, and is very comparable with most parts of rural Scotland. There are no towns within the National Park, but there are a number of small market towns; Wooler, Bellingham, Otterburn, Hayden Bridge and Haltwistle, located directly on its border. There are no towns of more than 15,000 inhabitants within 50 kilometers of the National Park. The conurbation of Tyne and Wear, with 1.1 million inhabitants in 1995, of which the main central city is Newcastle, is about 60 kilometers from the nearest border of the National Park.
The protected natural area of Doñana forms part of the estuary of the river Guadalquivir, which is situated within the triangle of the cities of Cádiz, Huelva and Sevilla with 160,000; 150,000 and 700,000 inhabitants respectively in 1995 (see Figure 4.6). The protected territory of Doñana comprises the National Park of Doñana and the Entorno Park of Doñana. Differences in the protection regime and management of these two territories will be discussed later in this chapter. The protected territories are part of the three provinces of Sevilla, Huelva and Cádiz and cover or border nine municipalities. Distances from the border of the protected territory to the nearest bigger towns is 40 kilometres to Huelva and more than 100 kilometres to Sevilla.

**Figure 4.6 Doñana National Park and Entorno Park**
4.3.2 The regional context

An overview of the characteristics of the region in which the study areas are located is given in Table 4.1. In the following the different items in Table 4.1 will be systematically explained. The decentralised locations have previously been made clear, and the information in Table 4.1 further confirms the relatively low population densities by national standards. Even though the population density in the Dutch study regions is low in a national perspective, it is still far above the average in the British and Spanish case study regions (see also Table 2.1). It illustrates the strong differences in population distribution between rural areas within the European countryside.

Table 4.1 Main characteristics of the regional context of the five case study areas

<table>
<thead>
<tr>
<th>Area</th>
<th>Dwingelerveld</th>
<th>Weerribben</th>
<th>Lauwersmeer</th>
<th>Northumberland</th>
<th>Doñana</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population density (inh/km²)</td>
<td>75</td>
<td>131</td>
<td>115</td>
<td>27</td>
<td>26</td>
</tr>
<tr>
<td>% active population in agriculture/forestry</td>
<td>19</td>
<td>15</td>
<td>15</td>
<td>20</td>
<td>37</td>
</tr>
<tr>
<td>Main farm types</td>
<td>Dairy</td>
<td>Dairy/Reed</td>
<td>Dairy/arable</td>
<td>Sheep/cattle</td>
<td>Horticulture/cattle</td>
</tr>
<tr>
<td>EU structural fund</td>
<td>-</td>
<td>-</td>
<td>Objective 5b</td>
<td>Objective 5b</td>
<td>Objective 1</td>
</tr>
</tbody>
</table>

* Every region consists of the municipalities/wards in which protected area is situated or which border with the protected area: Region of Dwingelerveld: municipalities of Beilen, Dwingeloo and Ruinen
Region of Weerribben: municipalities of Brederwiede, IJsselham and Steenwijk
Region of Lauwersmeer: municipalities of Dongeradeel, Kollumerland, De Marne and Zuidhorn
Region of Northumberland: wards within or bordering the National Park. All wards are part of districts of Berwick, Alnwick and Tynedale
Region of Doñana: municipalities of Palos de la Frontera, Moguer, Lucena del Puerto, Almonte, Hinojos, Villamanrique de la Condesa, Aznalcázar, Puebla del Río and Villafranco (since 1994).

Sources:

Employment and land use

In all case study regions, the proportion of active population employed in agriculture is very high, both in a national and in an EU perspective (compared with Table 2.1). In the three Dutch case study areas the proportion of agricultural employment is far above the national average of 4%. When the Lauwersmeer area was reclaimed, 4,700 hectares of land went to nature conservation, the present protected territory, and another 2,000 hectares were given to private landowners for agricultural use. The soil in this area is heavy sea-clay, making this land suitable only for arable farming. In the rest of the region of the Lauwersmeer both arable and dairy farming are common practice. This is also the case in the regions of the other two Dutch study areas. In these regions, more than in the Lauwersmeer area, farm sizes are relatively small and land use is not usually very intensive, especially in comparison with the rest of the Netherlands. Other important sectors of employment in the three Dutch study regions are the public services, the retail, hotel, and catering trades, and some manufacturing. The high proportion of agricultural employment in the Northumberland region is also an exception in the UK, where only 2% are employed in this sector. In the Northumberland National Park, 80% of the total surface is...
farmed and the rest forested. The main farming activity in this area is extensive sheep and cattle grazing; 80% of the farmland is under rough grazing. This activity helps to maintain the typical open hill and moorland landscape of the area. The forested parts mainly consist of coniferous plantations, of which 84% is managed by the Forestry Commission and the rest is in private hands. Of the Kielder Forest, the largest estate of the Forestry Commission in Britain covering a total area of 62,000 hectares, 25% lies within the National Park border. The forestry activity creates a great deal of employment in the area, not only in the forestry sector itself, but also in the transport sector. The Ministry of Defence (MoD) is another important employer in the Northumberland area. The Otterburn Training Area (OTA) is the largest single military training area in the UK and covers 23% of the Northumberland National Park (see Figure 4.5). Most of the OTA is farmed by tenanted hill farms (31 farmers) supporting around 120 (Doxford & Savege, 1995). The MoD controls stocking rates, but compensates the farmers by charging low rents (Northumberland National Park, 1992). The army also compensates for losses of stock through firing activity. The contribution of the military training area to the local economy is important, as it provides around 90 civilian jobs (Doxford and Savege, 1995). This is not insignificant given the fact that well paid permanent sources of employment are relatively scarce in a remote rural area like Northumberland. This has become even more apparent in recent years, as sheep and cattle farming has suffered severely from the low meat prices and the effects of the BSE crisis. The strong overrepresentation of agricultural employment in the regional labour force, makes the local economy relatively vulnerable. Other income sources outside agriculture are therefore increasingly important and sought after.

In the whole of Andalucía 17% of the active population is employed in agriculture, but in the Doñana region the proportion is an even higher 37%. Since the late twenties, several projects have been initiated to transform the soils of the Doñana marshes; until then considered worthless. Technical innovations made it possible to convert these soils into very productive agricultural land. Waterways were created and straightened and marshes reclaimed. These initiatives were supported by national governments and international organisations and were aimed at creating extra employment opportunities in this deprived region. The creation of agricultural employment also became a way to compensate the local population for restricted admission to the Doñana protected territory, which limited the economic use of the region. Since the 1970s the so-called ‘New Agricultural’ activities were introduced in the western zone of the Doñana region. These were characterised by the use of modern irrigation techniques, chemicals and new crops. In particular, the cultivation of strawberries became a big success. Because of the temperate winters, the strawberries from this area are the first to be harvested in Europe. The labour intensive nature of this cultivation is also very welcome in a region with such a high unemployment rate. In the central zone of the Doñana area the Almonte-Marisma project was initiated. This project goes back to 1964 when the Food and Health Organisation (FAO) of the United Nations (UN), in collaboration with the Spanish government, started an investigation into the availability of subterranean water. This led to the declaration of the area as ‘Zona de interés Nacional’ in 1971, which implied that a planned 46,000 hectares of land were available to be brought under irrigation, for horticultural cultivation and industrial and forestry crops. The project was not executed as planned, because only half of the 46,000 hectares have been irrigated. The eastern part of the Doñana region is entirely dedicated to intensive rice production. The large-scale mechanisation since the 1970s has increased rice production considerably, resulting in one of the highest yielding rice growing areas in Europe. Traditional agricultural activities are also still found in the Entorno Park Doñana. Most of this territory is in hands of big landowners, who use the land for extensive livestock farming, forestry and fishing. The breeding of bulls for bullfighting is an important business, because of the availability of huge areas of rough grazing land where humans are excluded. Overall, one can see that the different exploitation projects have created many labour opportunities in the agricultural sector, but they have also brought many environmental problems. The enormous consumption of water for irrigation purposes is an especially serious threat to the vulnerable ecosystems in the protected territory of Doñana, which entirely depends on the availability of clean, sweet water. The water consumption has further been stimulated by the construction of tourist resorts on the coast. This started at the beginning of the 1960s, when the plan ‘Promoción Turística de la Costa de Huelva’ was approved, which led to the construction of two tourist resorts on the coastal side of the Doñana area; Matalascañas and Mazagón (see Figure 4.6). In these two nuclei at least 50% of the housing stock consists of second homes for people
whose permanent dwellings are usually in Huelva and Sevilla. Especially in the period between 1981 and 1991 the second home housing stock almost doubled. Doñana is a typical example of an area to which the urban residents of the crowded Andalusian cities can flee during the scorching hot summers. In local vocabulary this seasonal population flow out of urban areas is called ‘veranear’ which means ‘getting through the summer’. It is comparable with the Dutch word ‘overwinteren’, which refers to the seasonal migration of Northern European retirees to warmer places in Europe during the colder winter period. Finally, it should also be mentioned that the Doñana area is very famous within Spain because of the annual pilgrimage to El Rocio. This village is situated within the Doñana study area, directly on the border with the National Park. It attracts millions of people during this weeklong pilgrimage. Large groups of pilgrims with horses and wagons slowly ramble to the village of El Rocio from places all over Andalucía, passing through parts of the protected territory of Doñana. Special permission is given for these groups to pass through the National Park area. Because of the large number of people attracted to this event it is a very important source of income for local population groups, but the environmental costs involved are also considerable. The increased use of the area for intensive agricultural activities, for first and second home residence, and the annual pilgrimage has created jobs in the tourist and service sectors, but is has also further exacerbated the competition for water within the natural area of Doñana. In Chapter 7, where conflicts between the protected territory of Doñana and other land use activities is discussed, more attention is paid to this issue.

Rural development and government involvement in the case study regions
Areas with Objectives 1 and 5b status are structurally backward regions with an average Gross Regional Product (GRP) per head of not more than 75% of the EU average. Objective 5b areas have been defined more precisely than the Objective 1 areas in order to target better the EU assistance for problems specific to rural areas. Therefore, in addition to the lower GRP, areas qualifying for Objective 5b status should also have employment dominated by the agricultural sector and low levels of agricultural income, problems with depopulation, ageing, and susceptibility to economic pressures resulting from further CAP reforms. All these characteristics certainly apply, to a greater or to a lesser extent, to the situations in the Lauwersmeer, Northumberland and Doñana study regions, and this explains why European Commission designated these areas as Objective 5b and Objective 1 regions. Since the Dwingelderveld and Weerribben areas perform better in terms of economic development and population dynamics, they cannot be seen as structurally backward regions. First a description will be given of the three study regions that have officially received Objective 1 and 5b status. It is not surprising that the whole of Andalucía, including the area of Doñana, has Objective 1 status, since the GRP for the whole autonomy does not even amount to 50% of the EU average (Eurostat, 1994), and the area of Doñana has an even lower GRP. For the Northumberland and Lauwersmeer areas this proportion is just under the 75% of the average EU GRP. All three can also be characterised as rural problem regions, according to the Objective 5b specifications. The first already shows the strong over-representation of agricultural employment. The level of agricultural incomes in these regions is also relatively low, especially in the Doñana region, while the proportion of people still dependent of this sector is very large. However, one advantage is that in the Doñana region the CAP reforms are less threatening than in the other study areas, since most of the products produced, with the exception of rice, are not subject to the EU price and income support regime. Other signs of the relative under-performance of the rural economy in these regions are problems with employment and depopulation. As in most parts of Andalucia, the Doñana region is coping with an extremely high unemployment rate, in excess of 30%. Although in the Northern Uplands, of which the Northumberland study area is part, unemployment is a big problem, it is not higher than in other parts of the country. It is more the limited availability of jobs that is the specific problem of the Northumberland region, which forces younger people to leave the area to look for work elsewhere. Population loss and ageing, and loss of services have been a severe problem in the Northumberland region, for several decades. The most striking population feature of the Northumberland study region is the high proportion of people in the 65+ age group, as will become clear in Chapter 5. Although the unemployment rate in the Lauwersmeer study area is considerably lower than in the Doñana region, this area has also been suffering from a significantly higher unemployment rate than in the rest of the
province and the country. This has forced many young people to leave the area and it has stimulated a high level of commuting between the Lauwersmeer region and bigger nearby cities, such as Groningen and Leeuwarden. Especially during the 1970s and 1980s the Lauwersmeer region had limited population growth, certainly in comparison to more centrally located rural areas, and an associated loss of services (Burie, 1991). However, Chapter 5 will show that from 1990 onwards the population seems to have stabilised.

The advantage of Objective 1 and 5b status is that rural development initiatives that qualify for funding from the EU structural funds (e.g., ESF, ERDF, EAGGF) and the European Investment Bank (EIB) can be set up in these areas. Their function is to stimulate activities such as the promotion of local products and rural tourism, setting up of small and medium sized enterprises, training of the labour force, improving infrastructure, and conserving natural resources and the environment (Clout, 1993, p. 25). In Objective 1 and 5b areas plans for local development under the LEADER (I and II) programmes (Liaison Entre Actions de Développement de l’Économie Rurale) can also be initiated. Through these programmes more scope is given to local initiatives to exploit better the endogenous resources of the rural areas. Within the three study areas several local initiatives have been set up to apply for the reserved European structural resources and to combine these with national support.

In the case of the Lauwersmeer area, the acquisition of EU funding has been facilitated by the declaration of the northwest Groningen-northeast Friesland area as a so-called ‘VINEX Aandachtsgebied’ (see Section 2.4.1). For these areas special funds were created for the development and execution of rural development plans, with an integrated character. These areas are comparable with the ‘Rural Development Areas’ (RDA) in England, which have existed since 1984 (see Chapter 2). All the Northern Uplands, including the Northumberland National Park, have the status of ‘Rural Development Area’. Also, in these areas, the Rural Development Commission is responsible for the design and execution of development plans, in which unemployment programmes, and problems relating to the lack of provision of basic service in rural areas, are dealt with in an integrated manner. In Doñana a structure for the integrated development of the region was facilitated in 1989 by the autonomous government of Andalucía, which approved the Andalusian Law for the Creation of Protected Natural Areas (‘Ley de Inventario de Espacios Naturales Protegidos de Andalucía’, Ley 2/1989). With this law the Entorno Park of Doñana (‘Parque Natural del Entorno de Doñana’) was created, but the Andalusian parliament also committed itself to respect the conclusions of a plan for the sustainable socio-economic development of the surroundings of Doñana (‘Dictamen sobre el Desarrollo Socioeconómico Sostenible del Entorno de Doñana’) in its future planning and development of the area. This ‘Dictamen’ was worked out by a Commission of International Experts in 1992, and its prime reasoning is that: ‘the economic use of the park should give the surrounding area a big advantage in a world where ecological and nature-tourism is the fastest growing and most lucrative segment of the tourist market, and where agricultural products, with the label of high natural quality and with the denomination ‘Doñana’, could conquer the high income groups of the European market’ (Ojeda Rivero, 1993, p. 65). It marks the transition to a phase in which Doñana becomes the fundamental resource for the sustainable development of the area. The ‘Plan de Desarrollo Sostenible del Entorno de Doñana’ (PDSD) was then prepared, which is supposed to transform the guidelines of the ‘Dictamen’ into governmental policy and a program for public funding, including a proposal to obtain EU-structural funds. Contrary to the Dutch and English approach to rural development planning, the plan has never been discussed with the local community, nor with any non-governmental organisation in the area, and can therefore be considered as a typical example of top-down administration from the regional authority (Atienza, 1997).

Finally, the situation regarding rural development and government involvement in the last two case studies, the Dwingelderveld and Weerribben areas, needs some explanation. Although these do not qualify for Objective 1 or 5b status, they still have specific characteristics of remote rural areas and the Weerribben area is also confronted with similar residential problems as the Lauwersmeer region. There are important differences between the Dwingelderveld and Weerribben areas in relation to population and economic development.

The Dwingelderveld area can be characterised as having more land-use pressure than the other study areas. Because Dwingelderveld is relatively better connected to the main transport and train routes, in combination with the high aesthetic and cultural value of the landscape in the whole region, it has been an attractive settlement area for a long time. This also stems from the population development, which is especially high in comparison with other rural areas of the Netherlands, as will be discussed in Chapter 5. Because of this, regional
government involvement in the area is not so much focused on stimulating further development, as in the Lauwersmeer area, but much more on restraining and steering the population development. Within the Dutch planning system provincial and municipal governments also have the instruments to guide the development of the housing stock and therefore also the population development. After all, in a plan-led system, which was especially characteristic of the Dutch planning systems until the 1980s, the contents of land-use plans, which are made by the municipalities, are legally binding both for the individual and for the municipality itself. This means that in principle all building permits and other developments cannot be contrary to these plans. The municipal land use plans should be based on the regional plans (see also Annex 1). For the area around the Dwingelderveld, the contents of the regional plan prescribe that the population growth should be concentrated in the larger centres. For this research area, this implies that Beilen has been allowed and still is allowed to grow faster than the provincial average. This is related to the fact that it necessary to be able to accommodate workers in the new business activities it is hoped to attract to this local economic centre. In contrast, the population growth in the smaller villages of the Dwingelderveld region, Dwingeloo and Ruinen, should not exceed the provincial average population growth. In the smallest villages, growth is not even allowed, unless induced by a birth surplus. To control the population distribution over these nuclei local people, people who were born or work or who have been living for a long period in the municipality, get a preferential treatment in the assignment of community housing. Residential activities outside villages are not stimulated in the regional plans. Therefore construction activities outside built-up areas and expansion of smaller villages is not allowed. However, this is not different from the UK and Spanish planning arrangements. Second home residential activities are also restrained in the Dwingelderveld region.

Like the Dwingelderveld, the landscape in the Northwest of Overijssel is diverse and has a high natural, aesthetic, and cultural quality. Since the Second World War the area of north west Overijssel has been a touristically attractive area. In spite of this, its socio-economic development was relatively problematic until the 1990s, especially in comparison with the region of the Dwingelderveld. North west Overijssel is an example of a Dutch rural area in which the suitability for residence has been under threat for a long period, and several government measures have been taken over a period of time to turn this development around. The level of the GRP per capita was, however, not as low as in the Lauwersmeer region, which made it impossible to apply for the Objective 5b status. The relative under-performance of this area is related to the lack of economic opportunities, in combination with a relatively remote location. Like the Lauwersmeer area, for a long time the Weerribben region has been suffering from a population loss, because of the emigration of young people in particular. This also resulted in the loss of many local services and an ageing of the population. Since the beginning of the 1990s however, this population drain has turned into a population gain (see Chapter 5).

As the population development and the socio-economic performance of north west Overijssel is more problematic than in the area of the Dwingelderveld, the local and regional policies are more focussed on strengthening the residential function and stimulating the economic development. The regional and local plans leave more scope for smaller villages to increase the housing stock, in order to fulfill the local and also extra-local demand for housing, than in the regional plans of south west Drenthe. In the regional plans of north west Overijssel, Steenwijk is seen as a sub-regional centre with an extra-local service and employment function and the smaller villages of Oldemarkt, Vollenhove and Zwartsluis should also add to this function (see Figure 4.3). In these nuclei the population and housing stock is allowed to grow in accordance with local and extra-local demand for housing. There is no coupling of local population growth to the provincial average population growth. Other important central aims in the regional plans are strengthening of the socio-economic structure and the improvement and/or maintenance of the natural quality of the area. To enable these initiatives to be carried out, extra money was made available by the national government. An important contribution has been the setting up of a special integrated area-specific policy programme for north west Overijssel. In this programme several measures have been proposed to improve the situation in the area:

1. To increase the total area of protected natural territory in order to create an ecological connection between the protected area the Weerribben and another nearby protected area of the Wieden; in addition the territory should be increased by the purchase of land from farmers, which would be subject to the Relatienota instrument (see Chapter 3).
2. To improve the economic structure of the area and create alternative or improve existing sources of income; especially for farmers who are giving up their farms; e.g. marketing of local agricultural, retraining programmes for farmers, and enlargement of the area under reeds.

3. To take measures to improve the residential liveability of the area; which would focus on increasing the possibilities for the attraction of new inhabitants, including retirees, and new businesses, and at the same time discourage the emigration of people. In order to do this, enough scope should be allowed for new construction activities in attractive surroundings. The construction of new houses near nature areas would therefore be allowed under certain restrictions. The farmhouses of the agricultural enterprises whose land was sold could be converted into new dwellings. Also new local employment opportunities are expected to grow through the stimulation of the tourist sector, the planned increase of the protected natural territory, treatment facilities for the provision of drinking water, and the attraction of new economic activities.

4.4 Characteristics of the protected natural areas within the case study areas

This section discusses the specific characteristics of the protected territories that are centrally located in the case study areas. In the following, all items in Table 4.2 will be clarified systematically for the five areas. The first differences appear in the size and the ownership situations. The Dutch protected territories are considerably smaller than those in the UK and Spain, and most of the land is in hands of the two main conservation organisations; while in the Northumberland National Park and the Entorno Park of Doñana, most land belongs to a variety of private landowners. Management of the Northumberland and Doñana areas is therefore more complicated, as conservation and recreational aims can only be realised through a process of compromise and negotiation with all land owners. Compensatory payments are an important instrument in such situations.

Planning, conservation and management regimes

The Dwingelderveld area was brought under protection at a relatively early stage. Driven by concern about the disappearance of heathlands in the Netherlands, already from the 1930s onwards the nature conservation organisation of Natuurmonumenten, started to buy land in the present area of the Dwingelderveld. By 1975 about 1,600 hectares of heathland had been brought under the conservation of Natuurmonumenten or Staatsbosbeheer. In the 1975 Nota Nationale Parken the creation of the Dwingelderveld National Park was announced and it was suggested that the 1,600 hectares of heathland should be combined with the 1,446 hectares of forest in hands of Staatsbosbeheer. From that moment on, the preparations started for the creation of the National Park. In 1982 a commission was set up, through an initiative of the provincial government, which obtained the responsibility for designing a plan for delimitation, management and construction of the National Park. After public consultation this plan was approved and in 1986 the Minister of Agriculture and Fisheries officially declared the ‘Dwingelderveld National Park in Foundation’. In 1991 this resulted in the definite declaration of the National Park.

In the Dwingelderveld, Natuurmonumenten owns 1,320 hectares and Staatsbosbeheer 1,400 hectares, of which the greatest part is woodland. The other 700 hectares in the National Park are in hands of private landowners, who mainly use this land for recreation, agriculture and forestry. In the Park also 180 hectares are in agricultural use, of which 100 hectares are extensively farmed by the two nature conservation organisations and 80 hectares by farmers. All farming activities take place in the enclave ‘Noorderveld’ (see Figure 4.2). Eventually the remaining 80 hectares of private farmland will be acquired for nature conservation purposes. Half of the area of the Dwingelderveld National Park is woodland and a very small part of this is still productive forestry. In the woodland area that is in the hands of Staatsbosbeheer, the management is no longer aimed at economic exploitation but more at returning the forest to a natural state, especially through the planting of broad-leaved trees. Residential activities do not appear within the boundaries of the National Park, although several villages are located just on its border (see Figure 4.2).

The genesis of the National Park of the Weerribben is rather similar to that of the Dwingelderveld. Especially since the 1940s, drainage activities started increasingly to threaten the natural quality of the wetland areas in the region of north west Overijssel. As a reaction both Natuurmonumenten and Staatsbosbeheer began buying land to
<table>
<thead>
<tr>
<th></th>
<th>Dwingelder-</th>
<th>Weerribben</th>
<th>Lauwersmeer</th>
<th>Northumberland</th>
<th>Doñana (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size (ha)</strong></td>
<td>3500</td>
<td>3500</td>
<td>5696</td>
<td>104,947</td>
<td>104,920</td>
</tr>
<tr>
<td><strong>Year of establishment</strong></td>
<td>1930</td>
<td>1956</td>
<td>1956</td>
<td>1956</td>
<td>1963</td>
</tr>
<tr>
<td><strong>National status</strong></td>
<td>National Park</td>
<td>National Park</td>
<td>National Park</td>
<td>National Park</td>
<td>National Park/Entorno</td>
</tr>
<tr>
<td><strong>IUCN-status</strong> (see section 3.3.1)</td>
<td>II. National Park</td>
<td>II. National Park</td>
<td>IV. Habitat-Species Management area</td>
<td>V. Protected Landscape</td>
<td>II. National Park/ V. Protected Landscape</td>
</tr>
<tr>
<td><strong>Agricultural activity</strong></td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No/Yes</td>
</tr>
<tr>
<td><strong>Main land owners</strong></td>
<td>Staatsbosbeheer/ Staatsbosbeheer Staatsbosbeheer Ministry of State/ Defence/ Forestry Commission/ private</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>natuurmonumenten</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dominant land use activities</strong></td>
<td>Conservation/ forestry/ recreation</td>
<td>Conservation/ (reed) farming/fishing/ recreation</td>
<td>Conservation/ recreation</td>
<td>Farming/ forestry/ military training/ recreation</td>
<td>Conservation/ recreation/ farming/ fishing</td>
</tr>
<tr>
<td><strong>Visits/year (<strong>1000</strong>) (2)</strong></td>
<td>1,800</td>
<td>550</td>
<td>600</td>
<td>1,000</td>
<td>500</td>
</tr>
<tr>
<td><strong>Dominant habitats</strong></td>
<td>Moorland/forest Bogs/reed/ forest/lakes/ fens</td>
<td>Grassland/ lakes/fens</td>
<td>Moorland/ grassland/ forest/ bags/fens</td>
<td>Sanddunes/ scrub/forest/ fens/grassland</td>
<td></td>
</tr>
<tr>
<td><strong>Landscape type</strong></td>
<td>Natural and cultural</td>
<td>Natural and cultural</td>
<td>Natural</td>
<td>Cultural</td>
<td>Natural and cultural</td>
</tr>
<tr>
<td><strong>Landscape character</strong></td>
<td>Open and close</td>
<td>Open</td>
<td>Open</td>
<td>Open and close</td>
<td>Open and close</td>
</tr>
<tr>
<td><strong>Relief</strong></td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Restricted accessibility</strong></td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Accessibility limited by natural handicaps</strong></td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

(1) The Doñana protected territory consists of the National Park (50,720 ha.) and the Entorno de Doñana (54,200 ha.) (see also figure 4.6).
(2) These are just rough indications, derived through consultation of the management authorities of the protected areas. It should be realised that many of these visits were paid to the area by the same people who regularly visit the areas.
Photo 4.1 Typical landscape in Dwingelderveld; open moorland

Photo 4.2 Typical farmhouse in Dwingelderveld converted into residential dwelling
bring under conservation. Staatsbosbeheer concentrated most of its land purchases in the present area of the Weerribben. The Weerribben area was pronounced a ‘National Park in Foundation’ in 1986 and this resulted in the definite declaration of the National Park in 1992. In addition to the National Park status, the Weerribben was given a Wetland status under the Ramsar Convention and it also forms part of the much bigger protected area category Nationaal Landschap of Northeast Overijssel (see Section 3.4.1). The area has been awarded this status because of the very diverse landscape, its high natural and aesthetic quality, and the presence of many cultural attributes such as old, traditional villages, estates, crofts and farmhouses. In 1996 Staatsbosbeheer was awarded the European Diploma by the Council of Europe for its excellent performance in the management of the Weerribben. This decoration and the different protection statuses, make the Weerribben area one of the best looked after natural territories of the Netherlands. Within the boundaries of the National Park there are some small hamlets but the residential use of this area is very limited. The main landowner in the Weerribben is Staatsbosbeheer, the other smaller part is in the hands of private owners, usually farmers.

The National Park status of the Dwingelderveld and Weerribben means that in both areas the Wet Geluidshinder (Noise Pollution Act) is applicable and both are designated as Kerngebieden in the Ecologische Hoofdstructuur (see Section 3.4.1). In practice it means that noisy activities are banned from their territories and a restrictive policy is implemented to prevent any planned infrastructural, urban or economic activity. A restrictive policy is also applied to the territory immediately bordering the National Parks. Although the National Park status dictates that these areas should be open to the public, it does not imply that the whole territory is made accessible. To favour the ecological values, in both the Dwingelderveld and the Weerribben there are parts that are closed to the public or only periodically accessible.

The Lauwersmeer is a typical example of a newly created natural area of very recent origin. In 1969 the Lauwerszee was completely separated from the Waddenzee by a dyke, and 7,000 hectares of new land and a fresh-water lake of 2,000 hectares were created. Of this area, 4,700 hectares were made protected territory and the rest a military training area and agricultural land. At the beginning of the 1980s the Lauwersmeer area was declared a Grote Eemhied Natuur (GEN) which means that protection of this area is realised through the application of existing legislation, such as the Wet Ruimtelijke Ordening (Spatial Planning Act, see Annex 1), Natuurbeschermingswet and the Wet op de Bodembescherming (Soil Conservation Act) (see also Section 3.4.1). This is not such a complicated process as this area is already in government hands. In the first decades after reclamation the area was managed by the Ministry of Waterworks, which was the authority that had the responsibility for reclamation and development of new lands. In 1993, the area was given to Staatsbosbeheer. In 1999 the GEN status of the area was exchanged for the status of ‘National Park in Foundation’. It is anticipated that it will obtain the definite National Park status within a couple of years. Beside this, as the Lauwersmeer is a wetland of international importance, it is expected that it will also become a Wetland area under the Ramsar Convention soon (see Chapter 3). Most parts are open to the public.

Northumberland was declared a National Park in 1956, after an intensive debate about what areas should be included within its boundaries: the Cheviots, the coastal area, Hadrians Wall, Kielder Forest were all considered (see Figure 4.5). Eventually it was decided not to include the coast, though this later achieved designation as an Area of Outstanding Natural Beauty (AONB), or any of Kielder Forest. The boundary was drawn in such a way that most of the larger villages (e.g., Otterburn, Bellingham, Rothbury) fell just outside the park. The land in the National Park is in the hands of different groups: 54% privately owned, 23% MoD, 19% forest enterprise (Forestry Commission and private companies), 2% Water Companies, 1% National Trust and 1% in hands of the National Park Authority (NPA). Although the NPA is a planning authority for the National Park, and there is a National Park management plan, recreational use and the conservation of nature and landscape still has to be arranged through negotiation and the implementation of existing land-use arrangements and legislation. The NPA also has little control over so called permitted developments by statutory bodies, such as electricity and water companies, and the MoD. This implies that activities adversely affecting the natural environment cannot easily be banned from the National Park. In general, the rule is that major developments are only allowed if the developer can prove that the undertaking is in the national interest, and that there is no possible alternative location elsewhere. Given this general rule, and the planning exceptions made for forestry, agriculture and statutory bodies, one can conclude that the planning powers of the NPA are limited.
4 The case study areas

Photo 4.3 Bridle and biking paths over the moorland in the Dwingelderveld

Photo 4.4 View of reed land in Weerribben
Both conservation and access aims are mainly realised through consultation, negotiation and grant-aid. Most access for recreational use in the Northumberland Park has to be arranged by Rights of Way or through Access Agreements. Conservation of the area’s ecological, landscape and cultural assets has to be done in close cooperation with all the other parties that have rights in the Park and through the application of different protection schemes. An important instrument is the designation of Sites of Special Scientific Interest (SSSIs). At this moment 9.5% of the Park is covered by SSSIs and land within these areas is protected by law (see Section 3.4.2). In addition, formal and informal management agreements between the NPA and relevant parties are also realised in areas outside SSSIs. Management agreements without legal backing also occur, with parties like forest enterprises and the MoD. There are other nature conservation organisations active in the National Park that own and/or manage land that has the status of National or Local Reserve; e.g., English Nature, The National Trust, Northumberland Wildlife Trust and The Woodland Trust; and their management objectives are determined in close collaboration with the NPA. As already mentioned, the bigger villages have been kept outside the border of Northumberland National Park and therefore population density within the Park is the lowest of all National Parks in England. In 1992 it was estimated that there were about 2,000 people still living within the borders of the Park.

The Otterburn Training Area (OTA), which comprises 24,000 hectares of land, was created forty years before Northumberland became a National Park. A fact which is often used by the army and by population groups as an argument to emphasise that the army has first rights in the area and that continuation of army training activities should be acknowledged. The OTA contains ten SSSIs, eleven sites of Special Nature Conservation Interest (SNCI), three hundred important archaeological sites and many important habitats for rare species of both flora and fauna. From the 1970s onwards the presence of military training activities was critically assessed (see Sandford, 1973 and Edwards, 1991). The Edwards report recommended the eventual cessation of military training in National Parks. The main reasons for this were that the recreational and conservation aims of a National Park cannot be combined with military training, because it restricts public access and adversely affects the quality of the natural environment. Until recently, the co-existence of the OTA and the NPA went relatively smoothly. According to Doxford and Sarge (1995), in the 37 years of the combined presence of the National Park and the OTA, 97.9% of the military planning applications had been approved. However, disagreements between the two parties resulted in a public inquiry in May 1995, about the extension of military training activities, which had still not come to a definite conclusion in the period when the survey for this study was carried out.

The MoD also works actively towards conservation, launching a rolling programme of conservation measures for landscape, ecological and cultural elements, as worked out in the OTA Management Conservation Plan. It is claimed by the MoD that the quality of the environment is very high in the training area, and that it often exceeds that in the rest of the Northumberland National Park (Ministry of Defence, Options for Change proposal, 22 April, 1997). In the past decade; with reduced opportunities for army training overseas, and the increasing introduction of more sophisticated longer-range weaponry; there is a greater need for larger training areas within Britain. As the OTA is the largest single military training area in the UK, it is best fitted for training in new weaponry, and the pressure to intensify its role has increased. Recreational use of this area is more limited than in the rest of the Park and is subject to constant negotiation between the NPA and the army. Live-firing takes place in the training area for up to 300 days a year, during which no entrance to the range is allowed (Northumberland National Park, 1992). No firing occurs during the lambing season and on public holidays. In practice it means that the army range is open to the public for about 65 days a year. The NPA considers that this too little and aims at increasing this number to 85 days. However this is a continual source of conflict.

The genesis of the protection regime in the territory of Doñana is illustrative of the way national and autonomous competencies are arranged in relation to nature conservation. The first arguments for conservation of the ecosystems of Doñana began in the 1950s; originally from the landowners who used them as a defence against various plans of the authorities to use their properties for productive purposes. They were supported in their desire to conserve the area by different international organisations. At the Man and Biosphere conference of 1962, the IUCN had already qualified the region of Doñana as a wetland of exceptional importance. In 1963 the WWF bought 6,794 hectares, which were donated to the Spanish government, who established the 'Estación
PHOTO 4.5 Reed harvesting in Weerribben

PHOTO 4.6 Typical wetland landscape in Lauwersmeer
In 1969, the WWF undertook a second action of this kind, when they bought another 3,214 hectares. This land was also transferred to the Spanish government, and a second reserve was established, named the Reserva del Guadiamar. This second acquisition of land was a reaction to the plan of the ‘Instituto Nacional de Colonización’ (INC) to bring part of the Doñana marshes (Marismas) into cultivation. In 1969 the intention to create the National Park Doñana was finally announced by decree. The creation of the National Park of Doñana was officially arranged by law in 1978 with the approval of the Ley de Doñana (Doñana Act), which established the limits of the National Park. With the passing of this Act the utilisation of the territory of the National Park was officially prohibited. From that point, because of the fear of some senators from Huelva that the National Park would restrain economic development in the area, the preparation of a territorial coordination plan (Plan Director Territorial de Coordinación, PDTC) was started. The PDTC was approved in 1988, but was annulled by the Andalusian High Court four years later, because it was proven that personal interests had been involved during the formulation of the plan, a revision of which became necessary. The PDTC arranged for a planning and policy strategy in which aspects of regional development and nature conservation were integrated. The plan dictates that problems with socio-economic development should be solved through mechanisms of compensation.

In 1989 the Andalusian government also approved the Ley de Inventario de Espacios Naturales Protegidos de Andalucía. With this act the Andalusian parliament created an extra protection zone around the National Park, the Entorno Park of Doñana. The protected area of Doñana now consists of the National Park and a Natural Park, Parque Natural del Entorno de Doñana. With the creation of the Entorno Park; the original protected area, which consisted of the 50,000 hectares of National Park, were increased with another 50,000 hectares. The National Park of Doñana and the Entorno Park fall under different competencies, but their institutional framework is comparable. ICONA, a national body, is responsible for the management of the National Park, while the responsibility for the management of the Entorno Park lies in the hands of the Agencia del Medio Ambiente de Andalucía (AMA), an agency of the regional government of Andalucía. Although the mutual co-ordination between the National Park and the Entorno Park is still very unsuccessful, creating problems for the integration of conservation objectives and socio-economic development, the protection of the natural resources in the National Park is very strict and efficient. This was also acknowledged by the Council of Europe, which like the Weerribben, also awarded the Doñana National Park with a European Diploma.

The type of management and land use activities, within the five protected territories studied, are also determinants for the IUCN status the areas have received (see also Section 3.3.1). As became clear from Table 4.2, only the Dwingelderveld, the Weerribben and the National Park of Doñana have National Park status II, because the first and main management objective of these areas is conservation of ecological qualities and nature related recreation. Exploitation and occupation of these areas does not happen or is insignificant. The Lauwersmeer area, the Northumberland National Park and the Entorno Park of Doñana have IUCN status IV and V respectively, because human intervention in natural processes in these areas is still greater (see Section 3.1.1). Although the Dwingelderveld area has IUCN status II, there is still some extensive sheep grazing, but this is entirely aimed at conserving the traditional landscape and ecological resources of the area, as it helps to prevent the heather from being overgrown by grass. The herding activity is not done by farmers, as in Northumberland, but is in the hands of a conservation foundation (Stichting Drents Heideschaap) that is not driven by commercial considerations. Also most of the forested areas are no longer managed as forest plantation, but their management is almost entirely aimed at bringing back and maintaining natural or semi-natural forests or restoring the heather. On the few agricultural fields in the Noorderveld enclave, Natuurmonumenten applies traditional agricultural practices aimed at stimulating the development of herb and flower rich grasslands and arable fields.

In the Weerribben, conservation of ecological resources and recreation is also the main management objective. In some parts of the area no interference is seen, in order to let natural processes thrive as much as possible, but in general active human involvement is needed to maintain the ecological variation of the area. Management through grass and reed cutting, and dredging of waterways is necessary to prevent forests from taking over the whole area and the silting up of the narrow waterways. Reed-exploitation is one of the most important forms of human interference in the area. There are 1,200 hectares of reed land in this park, of which most is regularly
The case study areas

Photo 4.7 Recreational houses and sailing in Lauwersmeer

Photo 4.8 Extensive grazing by horses in wetlands of Lauwersmeer
harvested. The quality of the ecology and landscape depends strongly on the maintenance of this activity, but at the same time it provides an important income resource to the local population. Reed from Kalenberg, a small village in the National Park, has international fame. Staatsbosbeheer, involves local population groups in the reed production by leasing out land in the park to farmers.

That the Lauwersmeer area is classified by the IUCN as a category IV area, a habitats/species management area, is related to two factors. Firstly, management is less focussed on recreation than in the category II areas, and secondly, the genesis of the area is still recent. At this moment the human influence on the natural processes in the area is still considered to be relatively high, even though management is purely aimed at stimulating and facilitating the natural processes in the area. Even though the ecosystems in this area have a more natural origin, one cannot deny that its creation was artificial. In the long run, however, it is expected that the area will obtain a category II status, as the management will be increasingly similar to that of Weerribben and Dwingelderveld: less human interference will be needed in the natural processes, and recreational facilities and activities in the area are increasing.

The category V status for the Northumberland is obvious, since these areas consist entirely of cultural landscape, and all the land is used for agriculture or plantation forest. The main management objective in this area is conservation of the cultural and ecological values, which depends entirely upon the continuation of traditional land-use activities. In comparison with the Dutch and Spanish study areas, that in Northumberland contains more information centres and other tourist facilities. This is related to the large size of the park and to its great number of historical and archaeological assets, but there is also a strong management emphasis on recreation and education.

The Doñana National Park is the most natural of the five study areas. Human interference in the area is virtually absent, and human influence on the landscape is considerably less than is the case in the Dutch and certainly the UK studies. There is hardly any active involvement in the natural processes of the area. No people live in the National Park and exploitation of natural resources in this area is very limited and is only allowed to a very small group of local people, who have gained traditional rights of entry to the territory at some time in the past. In the Entorno Park, with IUCN category V status, most land is used for extensive farming, fishing and forestry. Access rules are different for the National Park and the Entorno Park of Doñana. Both territories are only partly accessible. The National Park can only be visited on guided tours for which a fee has to be paid and a reservation made with the National Park Visitor Centre. In addition, a few footpaths have been constructed in a limited part of the Park with public access. The Entorno Park is only partially accessible, since the majority of the land is in private ownership and no right of way is given without the permission of the landowners.

### Natural, cultural and aesthetic values and recreational use

The Dwingelderveld National Park is characterised by the alternation of open and closed landscapes, which gives it a high aesthetic value. The Dwingelderveld area still consists of the historical landscape typical of 18th and 19th century Drenthe. The deforestation process had already started two thousand years ago in this area, and on the open spaces heather started to grow. These extensive heathlands gained an important function within the traditional agricultural systems as grazing land, mainly for sheep. The sheep dung was removed together with the turf and top-soil, to use as fertiliser on the arable fields, to cover stable floors and as fuel. The constant removal of the turf from the moorlands and the grazing by sheep kept the soil nutrient poor and maintained the heather. However, when artificial fertilisers were introduced by the beginning of the twentieth century, the function of heathlands for grazing became less crucial, and these lands started to be reforested and brought into cultivation. To prevent the total disappearance of this typical landscape, Natuurmonumenten started to buy land.

The specific ecological quality of the Dwingelderveld area comes from the variety of dry and wet heathland. Wet heathland in particular is rare in Europe as is the flora, which typically includes orchids, sundew, and gentian. Beside this, a wide variety of birds use the area for breeding, resting and/or overwintering. The density of footpaths, cycle routes and bridle ways is very high, and is well spread over all parts of the protected territory of the Dwingelderveld. The area is therefore accessible all year round. Also in wintertime it is an attractive area for biking and walking. The number of visits per year is high, especially in comparison to the Weerribben and Lauwersmeer areas (see Table 4.2).
PHOTO 4.9 View on Hadrian’s Wall, southern part of Northumberland National Park

PHOTO 4.10 The Cheviots in Northumberland National Park
The type of landscape in the Weerribben is very different from that in the Dwingelderveld area. Peatland dominates the region of north west Overijssel, of which the Weerribben is part. For a long time, habitation on these marshy lands was hardly possible, and it was not until the 12th century that the area became colonised. In order to use the land for agricultural purposes some parts of the peaty lands were drained. At the beginning of the Middle Ages there was a lack of wood and, as a result, the exploitation of peat for fuel became a very lucrative business and a welcome supplementary source of income. For the exploitation of peat, large expanses were excavated and lakes developed. First the area around the Wieden; another protected natural area in the Northwest of Overijssel, 10 km southeast of the Weerribben; was exploited (see Figure 4.3). The extraction of peat in the Weerribben started around 1700. By the beginning of this century the peat cutting was almost abandoned, leaving behind large areas poorly suited for agriculture. In the area around the Weerribben poverty arose and new sources of income had to be found. Fishing and the exploitation of reeds, that grew luxuriantly in the excavated peatlands, brought in welcome revenue. Several plant and animal species which are very rare in the rest of north western Europe are found in the Weerribben, which makes it one of the most important swamp areas. There is a wide variety of habitats, ranging through deep water, shallow water, water margins, swampy ground, reed beds, and dry land, which allows many different plant species to flourish. This is an important breeding and hibernation area for many bird species such as different types of herons, birds of prey, owls, ducks, and other water birds. Other typical fauna are deer and various species of reptiles, amphibians and insects. In addition to the high ecological and landscape values, the wider region also commands many cultural attributes and provides ample opportunities for water recreation.

While the landscape in the Wieden is characterised by wide lakes, well suited for water sports, the Weerribben, because of smaller scale exploitation, is characterised by narrow watercourses connected to each other by swampy land. It is therefore less accessible and less suitable for water sports than the Wieden. The presence of marshes and lakes make the Weerribben less accessible, especially in winter. The greatest part can only be visited by boat, and sailing is usually a summer time activity. Only silent boats are allowed. There are also footpaths and cycle routes, but these are limited to the drier land. The only period when it can be busy in the winter is when there is ice, as the area is very suitable for skating. It is an area par excellence for people in search of relaxation and who want to enjoy nature. Overall, the number of visitors is also much lower than in the Dwingelderveld where tourist numbers are more stable all year round.

Before the reclamation of the Lauwersmeer in 1969, the area was part of the Waddensea and was subject to tides and had a salt water environment. In 1969 the Lauwersmeer area was completely separated from the sea and became a fresh water environment, with large parts permanently dry. At this moment its 4,700 hectares consist of grasslands (2,180 hectares), sand and clay bars with natural vegetation (1,150 hectares), shallow water (1,000 hectares), young broad-leaved forests (260 hectares) and recreation areas (110 hectares). Overall the landscape has a very open character and there are excellent opportunities for water sports. In the short period of its existence, the Lauwersmeer has already developed into an ecologically rich natural area. Almost all the mammals that are present in the Weerribben and Dwingelderveld are also found here. For many birds it is a very important site for breeding or overwintering; in particular, for a wide variety of ducks and geese.

The number of visitors is about the same as in the Weerribben area. Although the summer is the most popular time, because it is less swampy and wet than Weerribben, it is also readily accessible by foot or bicycle at other times. Walking and cycling are also the most common visitor activities. Historical and cultural attributes in the rest of the surrounding region are not as numerous as around the Weerribben and Dwingelderveld areas, but it does attract many tourists who come to sail in the Waddensee and/or visit the Wadden islands.

As well as its far greater size, the Northumberland area differs markedly from the Dutch case studies because of its openness, the topography and its remoteness, and although it entirely consists of a man-made landscape, peace and quiet are its main characteristics. Northumberland is the least visited National Park in England, with only one million visitors a year, compared with twenty million for the Lake District National Park. The reason for this should be sought in the remote location of the park. As in the Dwingelderveld area, about three thousand years ago moorlands started to develop on the lands that were formally forested. These moorlands became part
Photo 4.11 Entry to Otterburn military training area in Northumberland National Park

Photo 4.12 View on flamingos from El Rocio, Doñana
of a traditional agricultural system in which sheep grazing played a central role, in addition to which they were also maintained for hunting grouse. Many were, and still are, managed through burning. The Park consists for 71% of moorland, 19% of woodland, 10% of improved farmland, mainly meadows. It has the highest proportion of moorland of any National Park in England.

Northumberland National Park can be divided into southern, central and northern parts on the basis of landscape type, ecological and historical assets, level of openness, and recreational use. The most popular recreational part is around Hadrian’s Wall, in the south (see Figure 4.5). This wall was constructed by the Romans on the orders of the Emperor Hadrian. It was built across the narrowest part of England, is almost 120 km long and was intended to defend the Roman part of England against the constant raids of the Scots. The wall was designated a UNESCO World Heritage Site for its international cultural significance. Around the wall several Roman forts were built of which the archaeological remains can be visited. The Wall was built on the natural barrier, Whin Sill, a very steep ridge of dolerite. It is characterised by steep crags from where one has spectacular views over the rest of Hadrian’s Wall and the Northumberland hills. Around the Wall there are some shallow lakes and some wet peatland bogs, both remnants of the glacial periods. The lakes attract a large number of birds, such as ducks and swans. The lakes are of international importance, but are much under threat because agricultural and forestry activities have caused a fall in the water table. As well as Roman artefacts, in the whole area of the Park other historical assets are found, such as prehistoric hillforts and castles, pele towers and battlefields. There are also several old farmsteads, cottages, and country houses dating from later periods.

The central part of the National Park has the most diverse landscape, as it is alternated by forest plantation, open moorland and river valleys surrounded by walled meadows. Directly north of Hadrian’s Wall the Kielder-Wark forest complex starts, and stretches over an area of 13,000 hectares within the National Park, continuing outside the Park in the Kielder Forest plantation, which ends in Kielder Water. This is a very large man-made lake, which was meant to serve as a reservoir for the Tyne and Wear conurbation, but has now developed into a recreational area which provides opportunities for sailing, canoeing and fishing. Another much smaller forest plantation, of 5,000 hectares, managed by the Forestry Commission, is situated in the more northern part in the Rothbury area. In the rest of the park there are several smaller patches of planted woodland in the hands of private enterprises. Overall the forests are composed of coniferous species such as Sitka Spruce and several types of pines. However, at this moment, the aim is to diversify the forest during the replanting process and pay more attention to landscape and wildlife conservation and recreation. The planting of deciduous trees will now be increased to 8% of the Forestry Commission plantations, and some diversification will also be achieved through bringing more variation in the age structure of the trees. In the central part of the National Park the patches of forest plantation are surrounded by open moor and rough grassland, alternating with the river valleys of the North Tyne, the Reed and the Coquet. In these valleys there are meadows and rough grassland which are enclosed by walls and where sheep and cattle graze. The 24,000 hectares of the OTA are also in the central part of the Park. The landscape in this range is very tough and open.

The northern part of the Park can be characterised as the most desolate and wild countryside; it consists of the Cheviot Hills. The highest top, the Cheviot, is 815 meters high. This area was formed long ago by volcanic activity and, in a more recent period, Ice Age glaciation shaped the rounded tops and the wide valleys. It is the wettest part of the Park and most hills are covered by a very thick layer of boggy peat. The whole area is used for sheep and cattle farming. Because of the extreme weather conditions stocking rates are very low and only very hardy breeds are used: sheep such as Scottish Blackface and Swaledales, and cross bred Aberdeen Angus, Hereford and Scottish Highland cattle. The Cheviots offer opportunities for hiking, but this area is most visited in the summer because of the wet and cold climate and its open character. In comparison with the southern and central parts of the National Park the Cheviots attract fewer tourists, not only because of their tough character but also because of their remote location. The other parts have visitors all year round, although they also show a peak in the summer period.

The Doñana area has a very recent geological history. It was formed about 3000 years ago in the Estuary of the river Guadalquivir, when it was gradually separated from the sea by a Pleistocene sandbank. During this natural reclamation process the Guadalquivir together with two other main rivers deposited their sediments. In the
PHOTO 4.13 Guided visit to Doñana National Park

PHOTO 4.14 Typical pine tree park landscape in Doñana Entorno Park
present area several main habitat types can be distinguished, of which five important ones are found within the National Park border. The youngest ecosystem of the area, the marshes, Marismas, are situated in the central part of the Park. They occupy around 26,000 hectares and are an extremely important fresh water reservoir for birds and animals. The second habitat consists of fixed dunes, the so-called Cotos, whose vegetation is trees and heather shrubs. They are important as shelter for the bigger animals, such as deer, lynx, fox and wild boar. Between the Marismas and the Cotos, the third habitat is found, which is La Vera. This is a transition zone, with high biodiversity. It is an important shelter area for mammals and birds. The fourth habitat consists of the dynamic dunes, that are located parallel to the coast. This is an ecosystem with a constantly shifting form. There are dunes of up to 40 metres. In the lower parts, between the dunes, trees grow that occasionally get covered by sand. The fifth habitat is the beach, which is wide sandy. On the border of the park is the resort of Matalascañas, where the beaches are intensively used by holiday makers. The rest of the beach is accessible by foot only.

The Entorno Park of Doñana can be divided in four areas, located around the borders of the National Park (see Figure 4.6). In the east on the other side of the Guadalquivir, there is a section which is completely separated from the rest of Doñana by the river. The area consists of salt marshes, and to the west there is a small group of native pine trees. Since Roman times salt has been produced here, and it is still a significant activity. This zone is very important for water birds that come to feed in the marshes, which are an excellent habitat for fish and shellfish. Public entrance to the area is limited. Access is by foot only, and permission has to be obtained from the local government or the private owner of the land. The second part of the Entorno park is located between the rivers Guadalquivir in the east and the Guadiamar in the west, and it continues to the north and west along the Guadiamar (see Figure 4.6). This area is also marshy. Some of it has been reclaimed and is used for the production of rice, but the greater part still remains undrained and is used for extensive grazing at drier times of year. There are also some aquaculture enterprises that concentrate on the breeding of salt water fish and shellfish. These fishponds also serve as a larder for the birds of Doñana, certainly at dry periods when there is a shortage of water in the National Park. Special concessions have been agreed with the private companies to allow birds to eat from parts of the fish ponds. This sector of the Entorno Park is also inaccessible to the public if permission has not been granted. The third part borders the National Park in the north. It is characterised by a park landscape consisting of pine trees and some deciduous species, such as cork oak, or the introduced eucalyptus, alternating with grassland. It is mainly used for extensive cattle grazing, and hunting, and the pine seeds are also regularly harvested. The area is gently undulating, and it has very rich fauna and flora. Public access to this area is only permitted on public paths; people are not allowed off the paths without permission. The final section of the Entorno Park is located to the west of the National Park, along the coast between Matalascañas and Mazagon. It is about 25 km long and 10 km wide. The coastal part consists of beach and mobile dunes, similar to the ones in the National Park, and inland there is a park landscape with pine trees and eucalyptus. Replacing the eucalyptus trees with pines is one of the schemes that aim to restore the natural balance to the area. There are some public footpaths, but elsewhere entrance is limited; which is the overall, case in the Doñana National Park and the Entorno, although there are several visitor centres, tours, and public paths. Within the Entorno Park the entrance regulations are unclear, because some private landowners are not concerned about people freely wandering, while others are very strict and have fenced all their land. A system of rights of way as, applied in the UK, does not exist in Spain.

4.5 Summary and conclusion

In this chapter the selection and characteristics of the case study areas was discussed. The main aim of this research is to further investigate the relationship between the presence of protected nature and residential activities in remote rural areas of western urbanised countries. Five study areas were selected for the collection of survey data. Three of these areas are located within the same research country, to enable national comparisons, and the others are situated within two other European countries, to enable European comparisons. The selection of the study areas was also made on the bases of relative location, socio-economic development level, and specific characteristics of the protected areas themselves. The aim was to select five areas with dissimilar characteristics.
All five study areas are located far away, in a national perspective, from the main urban and economic concentrations of the country, and have a relatively low population density. Dependence on the agricultural sector for employment is still relatively high, making all of the areas comparatively vulnerable to changes in the CAP, which lead to price and income drops in this sector. There is a clear need for diversification of the local economy, especially in the three areas of Lauwersmeer, Northumberland and Doñana, that are qualified as Objective 1 and 5b by the EU.

The characteristics of the protected territories in the five study areas vary greatly. The most important differences occur in the average size and the ownership situation. The Dutch areas are very small in comparison with those of the UK and Spain. In the three Dutch examples, most of the territory is in the hands of nature conservation organisations, whereas in Northumberland and the Entorno part of Doñana most land is in private ownership. This has important consequences for the way the areas are managed, the way the ecological and landscape attributes are conserved, and how land-use and accessibility for the public is arranged. Visitor numbers vary considerably between the areas, which is mainly governed by relative location, size and seasonal variation in visitor numbers. The ecological, landscape and cultural values differ greatly between the five areas, all of which have specific attributes, making them unique and worth visiting.
5 Effects of protected nature on population development and composition

5.1 Introduction

In this chapter answers to the following research questions are investigated:

2. Is population development in and around protected natural areas different from other rural areas?

3. What are the characteristics of households moving towards protected natural areas?

4. In what way have recent migration flows affected the population composition in and around protected natural areas?

The first question is answered on the basis of secondary statistical data. To answer the second and third questions, survey data collected through the questionnaire are used (see Annex 5), as will be discussed in Section 5.3 and Annex 4.

The structure of this chapter is as follows. In Section 5.2 the first question central to this Chapter is answered by describing the population development in the five study areas and comparing it with figures in other remote rural areas, in order to determine whether population dynamics are specific to the presence of protected nature. In Section 5.3 the second and third research questions are answered. This is done by describing the specific population composition in the five study areas of the locals and the incomers. Locals have lived in an area for at least six years and incomers moved in during the last five years. The characteristics that receive specific attention are age and household composition, levels of earnings and education, and work and income situation. All subsections have the same structure. In Sections 5.2 and 5.3 there is first of all a description of the main assumptions for the relationships under investigation in given together with the choice for data and methods used. Per case study area, in Section 5.2 the characteristics of the population development are given, and in Section 5.3 the population characteristics, and dynamics in population composition, are presented and discussed. In this last section the characteristics of incomers are described and compared with other migrant groups in the country or region, in order to determine the specificity of the migration flows towards the protected natural areas. To determine the influence of migration on the local population composition, a comparison is made between local and incomer household groups. The conclusions are presented in the last Section (5.4).

5.2 Population development

In this section the population development in the five case study areas is described and compared with the development in other rural areas. It is assumed that the study areas, which are representative of natural, amenity-rich, rural areas, attract more residential activities than similar areas which lack such natural amenities. The main assumptions for the relationship between population development and the presence of protected nature are given, together with a description of the data and methods used. This is followed by an analysis per study area. In the last part of this section the results of the analysis will be integrated and the main conclusions drawn.

5.2.1 Assumptions, data and method

The analysis in this chapter is governed by the main observations in Chapters 2 and 3 in relation to rural change and the increased use of specific rural areas for residential activities. In Chapter 2 it became clear that the differentiation process in rural areas took the form of a stronger concentration of consumption-orientated
activities; such as residence and recreation; in those areas that were characterised by the presence of specific rural amenities (e.g. Clark, 1989; Cloke & Goodwin, 1992; Huigen, 1992; Clout, 1993 and Hoggart, et al., 1995). In Chapter 3 several reviewed literature sources suggest that the presence of protected nature is one of these specific rural amenities that makes a region more attractive to consumption-orientated activities such as residence (e.g. Rudzitis & Johanson, 1989; Marsden et al., 1990; Rasker, 1993; Jobes, 1993 and Driessen et al., 1995). The higher value of real estate located near green amenities supported the assumed, increased interest in living in such neighbourhoods (e.g. Willis & Garrod, 1992; Garrod, 1994; van Leeuwen, 1997 and Luttik & Zijlstra). Also, in the countries studied, the population movements of recent decades towards rural areas further indicate the increasing preference for living in a greener environment. In Chapters 2 and 3 social changes; such as increased personal mobility, more people with extra leisure time and higher disposable incomes, and rising interest in the quality of life; were mentioned as the main explanatory factors for the growing interest and ability to live in natural amenity rich rural areas (e.g.Cloke & Goodwin, 1993; Camarero, 1993; Halfacree, 1994 and Huigen, 1996).

In this section, therefore, the initial investigation considers whether an increase in residential activities also applies in the five study areas, as these are particularly characterised by the presence of plentiful natural amenities. It will be determined whether these areas have attracted relatively more households than have comparable ones lacking such amenities. To determine the relative population development, a comparison is made with adjacent rural areas in the rest of the region in which the study areas are situated. In this comparison, figures on population and household development together with data on development of the housing stock, migration and natural change figures are involved.

5.2.2 Population development in the three Dutch case study areas

Between 1985 and 1995 the Dutch population increased by almost 7%. In the same period the population increase in the Dwingelderveld area corresponded with the national figure, and the expansion in the number of households and housing stock even exceeded the national and regional averages (see Figures 5.1 and Tables 5.1 and 5.2). In the Weerribben and the Lauwersmeer areas an opposite trend was apparent (see Figures 5.2 and 5.3). In the Weerribben, growth in the number of people, households and housing stock was relatively limited, not only in comparison with national standards but also with the adjacent rural region (see Figure 5.2 and Tables 5.4 and 5.5). Out of all three study areas it was Lauwersmeer that showed the strongest negative development (see Figure 5.3). Comparisons between the three areas illustrate how diverse population development within the Dutch rural areas has been.

The population increase in Dwingelderveld was mainly caused by migration, while in the rest of the adjacent rural area it was predominantly natural change that determined this development and a migration surplus was of minor influence (see Table 5.3). This clear regional difference in causes for population development indicates that the Dwingelderveld case study contains a relatively older population, resulting in both low birth and high death rates. Furthermore, low natural growth figures in combination with a medium net population growth, also implies that the Dwingelderveld area attracted relatively more new migrants than the adjacent rural area did. It was also noticed in this area that the high population increase, together with the growth of the local housing stock, was mainly caused by intensive construction activity in the municipality of Beilen, which just borders on Dwingelderveld, although the greater part of the protected area is situated in the two other municipalities, Dwingeloo and Ruinen (see Figure 4.2). In Beilen the population grew by 9 % in the 1985-1995 period, whereas the figures were 5.6% and 7.9% respectively, in Ruinen and Dwingeloo. According to local planning regulations, Beilen is allowed to increase its housing stock more than other centres in the region, because it has been designated a so called growth nucleus (‘groeikern’) (see Section 4.3.2). While the housing stock grew by 16% and 20.5% in the municipalities of Dwingeloo and Ruinen respectively, in Beilen the increase was 26% between 1985 and 1995. One can therefore conclude that it is because of the inclusion of the nucleus of Beilen, that the Dwingelderveld study area showed higher growth than the regional and national averages over the whole 1985-1995 period. If Beilen had been excluded, both population growth and the increase of housing stock would have lagged behind the regional average.

In the Weerribben area the reasons for the limited growth can be traced to low natural change figures and a
Effects of protected nature on population development and composition

Figure 5.1 Population development in Dwingelerveld and reference areas

Table 5.1 Development of number of households in Dwingelerveld and reference areas

<table>
<thead>
<tr>
<th></th>
<th>Households 1985</th>
<th>Index (1985=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dwingelerveld area*</td>
<td>8570</td>
<td>115.7</td>
</tr>
<tr>
<td>Adjacent rural area DV**</td>
<td>14498</td>
<td>114.3</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>5613000</td>
<td>108.9</td>
</tr>
</tbody>
</table>

Table 5.2 Development of housing stock in Dwingelerveld and reference areas

<table>
<thead>
<tr>
<th></th>
<th>Dwellings 1985</th>
<th>Index (1985=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dwingelerveld area*</td>
<td>3356</td>
<td>114.2</td>
</tr>
<tr>
<td>Adjacent rural area DV**</td>
<td>18507</td>
<td>109.1</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>5178058</td>
<td>112.1</td>
</tr>
</tbody>
</table>

Table 5.3 Migration and natural change in Dwingelerveld and reference areas

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(%) of population 1985</td>
<td>Net Migration</td>
<td>(%) of population 1990</td>
<td>Net Migration</td>
</tr>
<tr>
<td>Dwingelerveld area*</td>
<td>0.7</td>
<td>2.0</td>
<td>2.7</td>
<td>0.9</td>
</tr>
<tr>
<td>Adjacent rural area DV**</td>
<td>1.9</td>
<td>0.2</td>
<td>2.1</td>
<td>2.2</td>
</tr>
</tbody>
</table>

* Data refer to municipalities of Dwingeloo, Ruinen and Beilen
** Consists of all rural municipalities in the corop of Southwest Drenthe (rural means address density<500 addresses/km²), municipalities in the Dwingelerveld case study area have been excluded.
*** Consists of all Dutch rural municipalities (rural means Address density<500 addresses/ km²), however some municipalities that experienced important administrative changes in the last 15 years, have been left out.
Source for figure 5.1 and tables 5.1, 5.2 and 5.3: CBS, 1997
Effects of protected nature on population development and composition

Figure 5.2 Population development in Weerribben and reference areas

<table>
<thead>
<tr>
<th></th>
<th>1985</th>
<th>1990</th>
<th>1995</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weerribben</td>
<td>98</td>
<td>100</td>
<td>102</td>
</tr>
<tr>
<td>Adjacent rural area WR</td>
<td>96</td>
<td>100</td>
<td>102</td>
</tr>
<tr>
<td>All Dutch rural areas</td>
<td>96</td>
<td>100</td>
<td>102</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>96</td>
<td>100</td>
<td>102</td>
</tr>
</tbody>
</table>

Table 5.4 Development of number of households in Weerribben and reference areas

<table>
<thead>
<tr>
<th></th>
<th>1985</th>
<th>Absolute</th>
<th>Index (1985=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weerribben area*</td>
<td>1899</td>
<td>107.0</td>
<td>109.0</td>
</tr>
<tr>
<td>Adjacent rural area WR**</td>
<td>43094</td>
<td>112.1</td>
<td>115.1</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>5613000</td>
<td>108.9</td>
<td>115.0</td>
</tr>
</tbody>
</table>

Table 5.5 Development of housing stock Weerribben and reference areas

<table>
<thead>
<tr>
<th></th>
<th>1985</th>
<th>Absolute</th>
<th>Index (1985=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weerribben area*</td>
<td>1687</td>
<td>105.0</td>
<td>114.8</td>
</tr>
<tr>
<td>Adjacent rural area WR**</td>
<td>45720</td>
<td>110.6</td>
<td>119.5</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>5178058</td>
<td>112.1</td>
<td>119.6</td>
</tr>
</tbody>
</table>

Table 5.6 Migration and natural change Weerribben and reference areas

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Migration Change</td>
<td>Net growth</td>
<td>Natural Migration Change</td>
<td>Net growth</td>
</tr>
<tr>
<td>Weerribben area*</td>
<td>2.4</td>
<td>-5.0</td>
<td>-2.6</td>
</tr>
<tr>
<td>Adjacent rural area WR**</td>
<td>3.9</td>
<td>-0.8</td>
<td>3.1</td>
</tr>
</tbody>
</table>

* Data refer to municipality of Brederwiede
** Consists of all rural municipalities in the corop of Northwest Overijssel (rural means address density<500 addresses/km²), municipalities in the Weerribben case study area have been excluded.
*** Consists of all Dutch rural municipalities (rural means Address density<500 addresses/km²), however some municipalities that experienced important administrative changes in the last 15 years, have been left out.
Source for figure 5.2 and tables 5.4, 5.5 and 5.6: CBS, 1997

Effects of protected nature on population development and composition
Effects of protected nature on population development and composition

Figure 5.3 Population development in Lauwersmeer and reference areas

Table 5.7 Development of number of households in Lauwersmeer and reference areas

<table>
<thead>
<tr>
<th></th>
<th>Households 1985</th>
<th>Index (1985=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lauwersmeer area*</td>
<td>26504</td>
<td>107.3</td>
</tr>
<tr>
<td>Adjacent rural area LM**</td>
<td>94525</td>
<td>109.2</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>561300</td>
<td>108.9</td>
</tr>
</tbody>
</table>

Table 5.8 Development of housing stock in Lauwersmeer and reference areas

<table>
<thead>
<tr>
<th></th>
<th>Dwellings 1985</th>
<th>Index (1985=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lauwersmeer area*</td>
<td>6561</td>
<td>104.4</td>
</tr>
<tr>
<td>Adjacent rural area LM**</td>
<td>91211</td>
<td>105.3</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>5178098</td>
<td>112.1</td>
</tr>
</tbody>
</table>

Table 5.9 Migration and natural change in Lauwersmeer and reference areas

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Natural Migration</td>
<td>Net Growth</td>
<td>Natural Migration</td>
</tr>
<tr>
<td>Lauwersmeer area*</td>
<td>2.5</td>
<td>-3.6</td>
<td>-1.1</td>
</tr>
<tr>
<td>Adjacent rural area LM**</td>
<td>2.5</td>
<td>-3.5</td>
<td>-1.0</td>
</tr>
</tbody>
</table>

* Data refer to municipality of De Marne, Zuidhorn, Dongeradeel and Kollumerland
** Consists of all rural municipalities in the corops of Northwest Groningen and Northeast Friesland (rural means Address density<500 addresses/km2), municipalities belonging to the Lauwersmeer case study area are excluded.
*** Consists of all Dutch rural municipalities (rural means Address density<500 addresses/km2), however some municipalities that experienced important administrative changes in the last 15 years, have been left out.

Source for figure 5.3 and tables 5.7, 5.8 and 5.9: CBS, 1997
negative migration balance, especially in the pre-1990 period. From 1990 onwards, population loss shifted into population gain (see Figure 5.2). With this shift the population development in the 1990s started to show more correspondence with that in Dwingelderveld. Migration suddenly began to contribute to the population increase, while in the rest of the adjacent rural area hardly any migration surplus is detectable and population growth appears to be only a product of positive natural change (see Table 5.6). The lower natural change in the Weerribben indicates that the population of this area is older than in the adjacent region.

As in the Weerribben area, in Lauwersmeer the reasons for population loss can be sought in low natural change figures, negative migration balances, and limited development of the housing stock (see Figure 5.3 and Tables 5.7, 5.8 and 5.9). An important difference with the Weerribben area, is that also after 1990 the population development in the Lauwersmeer area does not come above the 1985 population figure. However, from 1991 onwards, there is a relative decrease in emigration which, in combination with the positive natural increase, leads to a slight population growth (see Table 5.9).

Overall, it is clear that differences in population development between the three Dutch study areas have been very big, but during the 1990s these processes began to converge, especially in Weerribben and Dwingelderveld. In the Lauwersmeer area the situation was different. There was a population loss until quite recently, and it is only in the last few years that population numbers seem to have stabilised. If this development is expressed in household numbers, then all three areas showed a clear population increase over the whole period since 1985 (see Tables 5.1, 5.4 and 5.7). The Dwingelderveld area in particular showed considerable growth in household numbers, exceeding all regional and national averages. The speed at which households increased in the Weerribben and the Lauwersmeer areas did not differ noticeably from the adjacent region however.

5.2.3 Population development in the Northumberland case study area

While the population of the remoter rural parts of England increased by almost 8% in the period between 1981 and 1991, the population of the Northumberland National Park area decreased by more than 7% (Figure 5.4). This was also different from the population development in the rest of the County of Northumberland, where the increase was 3% for the same period. However, from 1991 onwards the population loss in the Northumberland National Park turned into an increase, while at the same time the population of the rest of the County of Northumberland started to stabilise. Clearly, the Northumberland case illustrates how carefully generalisations about population growth in remote rural areas have to be interpreted, given the diversity in the development process within these rural areas.

Data about the number of households show a marked increase in numbers all over England (see Table 5.10). However, the relative increase of household numbers in the Northumberland National Park is exceptionally large; both in relation to other rural areas and to the rest of the regional and the national averages; and indicates that this is clearly a settlement area for smaller household groups. The great increase in the number of households implies that the housing stock must also have increased substantially in the last 15 years. Figures about this increase were only available from 1991 to 1995 and indicate that growth in rural Northumberland was indeed bigger in and around the National Park (see Table 5.11). This growth was however not as big as one would expect from the household increase in this period.

Unfortunately, as data on migration surplus and natural growth are only available on the level of the whole County of Northumberland, no distinction could be made between this in the Northumberland National Park area and the adjacent rural area. When looking at the data on the county level (Table 5.12), it becomes clear that in both the periods between 1981-1991 and 1991-1995, the population increase in the whole county of Northumberland was caused by a migration surplus, whereas natural change is negative in both periods. Indirectly one can however estimate the relative contribution of the Northumberland National Park area to the population development in the whole county. After all it is known that both the proportion of the elderly (see Section 5.3) and the relative increase in number of households (see Table 5.10) was much larger for the Northumberland National Park than for the rest of Northumberland (see Table 5.10). This implies that the Northumberland National Park can be expected to be the main contributor to the migration surplus that caused population growth in the whole county of Northumberland (see Table 5.12). In the next section it will become clear that the National Park area of Northumberland shows a considerable over-representation of the elderly,
Effects of protected nature on population development and composition

Figure 5.4 Population development in Northumberland and reference areas

Table 5.10 Development of number of households in Northumberland and reference areas

<table>
<thead>
<tr>
<th>Parishes</th>
<th>Households 1981</th>
<th>Index (1981=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NP Northumberland*</td>
<td>5411</td>
<td>126.8</td>
</tr>
<tr>
<td>Rest rural Northumberland**</td>
<td>113816</td>
<td>100.9</td>
</tr>
<tr>
<td>Remote rural England***</td>
<td>1902630</td>
<td>116.6</td>
</tr>
<tr>
<td>England</td>
<td>18131247</td>
<td>103.5</td>
</tr>
</tbody>
</table>

Table 5.11 Development of housing stock in Northumberland and reference areas

<table>
<thead>
<tr>
<th>Parishes</th>
<th>Dwellings 1985</th>
<th>Index (1991=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NP Northumberland*</td>
<td>6725</td>
<td>103.3</td>
</tr>
<tr>
<td>Rest rural Northumberland**</td>
<td>69192</td>
<td>102.1</td>
</tr>
</tbody>
</table>

Table 5.12 Migration and natural change in Northumberland and reference areas

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% Natural</td>
<td>% Migration</td>
</tr>
<tr>
<td>County Northumberland</td>
<td>-1.1</td>
<td>3.5</td>
</tr>
<tr>
<td>Remote rural England</td>
<td>-0.6</td>
<td>7.9</td>
</tr>
<tr>
<td>Rest of Northeast England</td>
<td>0.9</td>
<td>-2.1</td>
</tr>
</tbody>
</table>

* Consists of all parishes with territory in the National Park Northumberland
** Consists of all parishes in Districts of Tynedale, Berwick and Alnwick, Parishes with territory in Northumberland NP area have been excluded.
*** Remote rural England according to ONS, Key population and vital statistics, 1998
(1) For 1995 no data on household numbers were available, therefore an estimation was made of number of households by dividing total number of inhabitants by 2.1 (average household size in England in 1995)
Source for figure 5.4 and tables 5.10, 5.11 and 5.12: Office for National Statistics (ONS), 1998
which implies that population growth in the Northumberland National Park area is mainly caused by a positive migration balance and not by natural growth.

Apart from that, the situation in Northumberland is not an exception, as all remote rural areas of England have a migration surplus and a negative natural change in both the 1981-1991 and the 1991-1995 periods. However, what is special is that Northumberland was gaining population in the 1981-1995 period, while the rest of the Northeast lost population, especially through migration.

5.2.4 Population development in the Doñana case study area

Between 1981 and 1996 the population of the study area of Doñana increased greatly in comparison with the adjacent rural area, the whole of Andalucía and the national average (see Figure 5.5). This is not surprising given the fact that large parts of Doñana were only urbanised recently, as housing stock figures in Table 5.13 also confirm. The recent reclamation and urbanisation of the Doñana area, together with the recent development of new labour intensive agricultural activities, the tourist industry and the greatly increased construction of second homes during the last 30 years make the demographic development of this area very different from other Andalusian rural regions.

From Table 5.13 it becomes clear that second homes are a very important and common feature in Andalucía and Spain but that nevertheless the Doñana still contains an exceptionally high percentage. The construction of new second houses was mainly concentrated in the nuclei of Matalascañas, Mazagón and El Rocío, while in the rest of the area little building now took place. The conversion of first houses into second homes was a more common feature in the older centres of the Doñana area, e.g., Villamanrique, where many people have moved to the bigger cities of Sevilla and Huelva but have kept their old houses to use as a second homes.

The stabilisation of the population growth in the area in the 1990s also becomes apparent from Table 5.15 where a distinction is made between population growth caused by natural increase and by migration. Between 1986 and 1991 the population growth was still relatively large in the Doñana area and migration was an important addition to it. From the beginning of the 1990s this population growth started to stabilise, as extra agricultural land was no longer taken into production and the construction of new houses gradually decreased. Whereas before 1990 population increase was still above the regional and Andalusian average, after 1990 the Doñana population actually increased less than the rest of the adjacent region. The relatively high natural change figure in the area of Doñana in the 1986-1991 period was caused by the comparatively large number of young people that moved into the area (see also Section 5.4.5).

5.2.5 Main conclusions on population development in the five case study areas

From the above it is clear that population development in the five case study areas was indeed different from the developments in other nearby rural areas. At the same time, the population development in the five study areas was very varied, which complicates the identification of common features that could be attributed to the presence of protected nature.

In two study areas, Dwingelderveld and Doñana, the population increase was above regional and national levels, while in the other three areas population increase was limited and often below the regional average. In Dwingelderveld the municipality of Beilen was responsible for most of this increase, having been designated a growth nucleus under planning regulations. In the Doñana area there were specific circumstances arising from the relatively recent genesis of this area and the establishment of new agricultural activities that were the main driving force behind this population expansion and the development of the housing stock. In particular the great demand for second homes stimulated house building in this area. In the Lauwersmeer area, the natural growth figure was the only contributor to expansion, while the migration figure remained negative over the whole 1985-1995 period. However, after 1990 the negative migration balance in this area started to decrease and it even became positive from 1993 onwards. Until 1990 the population loss in Weerribben was only compensated for by positive natural growth figures. When the negative migration figure shifted to positive, from 1990 onwards, this also contributed to the growth. In Doñana, the natural growth figures and the migration figures were both positive, so both added to growth. In the areas with the older population composition, Dwingelderveld and Northumberland, positive migration figures were the only contributors to population growth. This increase also
Effects of protected nature on population development and composition

**Figure 5.5** Population development in Doñana and reference areas

![Population development graph](image)

**Table 5.13** Development of housing stock in Doñana and reference areas

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute</td>
<td>First+second</td>
</tr>
<tr>
<td>Doñana area*</td>
<td>16874</td>
</tr>
<tr>
<td>Adjacent rural area**</td>
<td>432137</td>
</tr>
<tr>
<td>Andalucía</td>
<td>2315507</td>
</tr>
</tbody>
</table>

**Table 5.14** Relative distribution of housing stock (first and second houses) in Doñana and reference areas

<table>
<thead>
<tr>
<th>Housing stock 1981</th>
<th>Housing stock 1991</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute</td>
<td>% first</td>
</tr>
<tr>
<td>Doñana area*</td>
<td>16874</td>
</tr>
<tr>
<td>Adjacent rural area**</td>
<td>432137</td>
</tr>
<tr>
<td>Andalucía</td>
<td>2315507</td>
</tr>
</tbody>
</table>

**Table 5.15** Migration and natural change in Doñana and reference areas

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Change</td>
<td>% of population 1986</td>
<td>% of population 1991</td>
<td>% of population 1986</td>
</tr>
<tr>
<td>Doñana area*</td>
<td>3.6</td>
<td>3.5</td>
<td>7.1</td>
</tr>
<tr>
<td>Adjacent rural area WR**</td>
<td>2.6</td>
<td>0.4</td>
<td>3.1</td>
</tr>
<tr>
<td>Andalucía</td>
<td>2.8</td>
<td>-0.6</td>
<td>2.2</td>
</tr>
</tbody>
</table>

* Consists of all municipalities with territory in the National Park and Entorno Park of Doñana
** Consists of all municipalities in the provinces of Sevilla and Huelva with less than 25,000 inhabitants (1996), Doñana case study area has been excluded

Source of figure 5.5 and tables 5.13, 5.14 and 5.15: Instituto de Estadística Andalucía (IEA), 1998
only starts after 1990 and is not so much in population numbers but much more in numbers of households. In other case study areas the picture is also very different when looking at the development in the number of households. Their number increased strongly in all Dutch and British case study areas between 1985 and 1995. However in two case study areas, the Dwingelderveld and Northumberland area, this increase was exceptionally large as it was far above the regional and even national average. In the two other Dutch case study areas the Weerribben and the Lauwersmeer area the increase was also strong but no real difference with household development in the rest of the adjacent rural regions was detected.

Overall, the expectation at the beginning of this section, that protected natural areas have become more popular as places, to live seems to be partially confirmed. If this is determined on the basis of population increase, the assumption can be confirmed for Dwingelderveld, Weerribben, Northumberland and Doñana, as all four areas have been attracting an increasing number of migrants. However, in the Dwingelderveld and Doñana areas, the attraction was already strong at the beginning of the 1980s, while in the other three areas this increase has only started to manifest itself since the beginning of the 1990s. If population development is also measured on the basis of household numbers, one can conclude that all five areas have shown a clear increase since the 1980s, though more difficult to answer is whether the population development in them has been different from the situation in other rural areas, and is therefore attributable to the presence of nature. In the Dwingelderveld, Northumberland and Doñana areas migration surplus was indeed larger than in most adjacent regions over the whole period investigated, and in Weerribben this was only the case after 1990. The Lauwersmeer area was an exception, as no population increase was detected. To conclude, in every case study area population development is strongly governed by specific circumstances, of which the presence of protected nature is only one.

5.3 Population characteristics and selective migration

This section discusses the specific population characteristics of the incomer households in the five case study areas, and the effect of their integration on the local population composition. First the main assumptions in relation to the selective migration towards protected natural amenities are given, together with a description of the primary data collection and methods used (5.3.1). A regional approach is followed in the next sections (5.3.2-5.3.6), which means that the assumptions about population composition as described in Section 5.3.1 will be investigated for the population groups per research area. Per case study area the population composition of the recent and locals will be described, following an identical format. This means that firstly demographic characteristics like age and household composition are described, followed by educational and income levels, and income and work. organisation Each time these characteristics are described for new arrivals and compared with a control group Subsequently, the impact of the migration flow on the local population composition is determined by comparing the characteristics of the incomers and the local population. A complete overview of all investigated population characteristics for all population groups can be found in Annex 6. In the last Subsection (5.3.7) the findings per case study area are compared and similarities and differences identified. This is done in order to determine whether protected natural areas do indeed attract household groups with specific demographic and socio-economic characteristics, and whether this may affect the population composition of rural areas rich in natural amenities.

5.3.1 Assumptions, methods and primary data collection

Assumptions and methods

In this Section the assumption that societal changes have made certain household groups with specific characteristics more inclined to move to amenity rich rural areas is investigated (see Table 5.16). This may become apparent through a selective migration process towards the five case study areas and this will also affect the population composition of these areas.

The way people evaluate their present and future living place can vary greatly per household and depends on personal characteristics, constraints and preferences. Personal characteristics are critical for both stress and
satisfaction arising from an existing place of residence, which can then form the basis for the decision to move, and for the choice process that determines the eventual migrational behaviour (see Lewis, 1982 and Mulder, 1993). In Chapters 2 and 3 it was shown that many households have a preference for living in natural amenity rich rural areas, but only a limited number of households have sufficient flexibility in their choice of abode to be able to give priority in their final decision to quality of life issues such as the presence of natural amenities (see Cloke and Thrift, 1987; Phillips 1993; Fielding , 1998; Champion et al., 1998 and Lewis, 1998). Five specific household groups can be expected to be relatively over-represented in the migration flow towards protected natural areas: early-retirees, empty-nesters, footloose households, middle-class-households, and lower-cost-of-living-seekers. These groups were derived from the research reviewed in Chapters 2 and 3. It should be realised that there is considerable overlap, as will become clear from the following. In this chapter the presence of these groups as recent settlers will only be investigated on the basis of their characteristics, while in Chapter 6 their residential choice considerations of these groups will also be examined.

The first groups expected to be over-represented in the migration flow towards protected natural areas are the early-retirees and the empty-nesters. In recent decades the proportion of people over fifty has increased significantly in most western European countries (see Filius, 1993; Eurostat, 1998 and De Boer, 1999). When people stop

<table>
<thead>
<tr>
<th>Characteristics of recent settler population</th>
<th>Dynamics in population composition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age composition</td>
<td>Further increase of people in 50+ age group, especially many early retirees</td>
</tr>
<tr>
<td>Household composition</td>
<td>Further decrease in family households with children, especially increase of empty-nesters</td>
</tr>
<tr>
<td>Income composition</td>
<td>Shift towards more middle class households with middle to high income</td>
</tr>
<tr>
<td>Education level</td>
<td>Shift towards more lower cost of living seekers with low income</td>
</tr>
<tr>
<td>Class</td>
<td>Shift towards more middle class households, more white-collar jobs</td>
</tr>
<tr>
<td>Income and work organisation</td>
<td>Further increase in footloose households which implies further increase of:</td>
</tr>
<tr>
<td></td>
<td>Households that are no longer tied to a working place like early retirees, unemployed and other people with a regular income base</td>
</tr>
<tr>
<td></td>
<td>Further increase of working households that are self-employed, commuting and/or work from home</td>
</tr>
</tbody>
</table>
work they are no longer tied to the work place. This is an important life-course event which may often lead to a residential move (see Kempers Warmerdam, 1988; Fielding, 1992 and Filius, 1993). As fifty is also the most common age at which parents experience children leaving or having left home, early-retires often include couples who are also empty-nesters. This life-course event is also an important reason to trigger a decision to move (see Clark & Dieleman, 1996 and Filius, 1993). In the residential choice process which then follows, considerations other than those related to job, care of children, or the size of the house can be involved. Reasons to move under these circumstances are therefore more often governed by considerations of quality of life (see Filius, 1993; Mulder, 1994; Boyle et al., 1998; Van Kempen et al., 1995). Several studies have confirmed that people who are coming nearer to retirement age are more likely to move into amenity rich rural areas (Warnes, 1992; Fielding, 1992; Fuguit & Heaton, 1995 and Champion 1998).

The second group, the footloose households, have also become more numerous in recent years. The word footloose refers to people who are flexible in choosing a place to live. Like the early-retires, because of their weaker or non-existent ties to a work place, footloose households are also able to give more priority to quality of life in their residential choice. Protected natural areas are therefore popular locations for this group. Examples of this situation were reported by Rasker (1993), North and Smallbone (1993) and Jobes (1993), who showed that many self-employed, or founders of new firms, choose to work in amenity rich rural areas: the places where they wished to live. Advances in telecommunications, the rise of the knowledge-based service economy, and the general increase in personal mobility have been factors facilitating this situation. Finally, the increase in personal mobility has also enabled many people to live further away from their work place and become a commuter (see Pacione, 1984 and Cloke & Goodwin, 1992).

The third group, middle-class households, are similar to footloose households in being more attracted than average to amenity rich rural areas. In Chapters 2 and 3, studies were discussed in which it became apparent that the people with the greatest flexibility in choosing a place to live are from the middle class, especially when still working, They usually have higher educational and income levels and are often employed in white collar jobs. In many studies in the UK the domination of the working middle class in the migration towards amenity rich rural areas is emphasised (Cloke and Thrift, 1987; Phillips 1993; Fielding, 1992 and 1998 and Lewis, 1998). Research in the Netherlands (Schutjens, et al., 1998) also confirmed that high income and high education groups are more liable to move over longer distances than the lower income and education groups. They have greater freedom of action, enabling them to give more priority to quality of life when making a residential choice.

The last group expected to be more than averagely attracted to protected natural areas are those in search of cheaper but high quality places to live, the so-called lower-cost-of-living-seekers. Rural areas, especially remote rural areas, are usually characterised by lower living costs than urban areas, especially in comparison with metropolitan areas. At the same time rural areas also provide a higher quality-of-life with respect to access to rural amenities and outdoor activities. For certain population groups with low incomes but a lot of spare time, this is a reason to move to natural amenity rich rural areas (Hugo and Bell, 1998).

Because early-retires, empty-nesters, footloose households, middle-class households and the lower-cost-of-living-seekers can be expected to give considerations of quality of life higher priority in their residential choice, the investigation considers whether these groups will be over-represented in the migration towards natural amenity rich rural areas like the case study areas. It will also be examined whether the preference for such areas among certain household groups will affect the population composition in the study areas. To verify this, the migration flow towards the study areas must show a certain selectivity in relation to specific demographic and socio-economic characteristics that characterise the five defined groups (see Table 5.1). The presence of the first two household groups will be detected on the basis of an over-representation of people over the age of fifty, and households with no children. Footloose households will be detected through an over-representation of groups that have no ties to a work place. The middle class households may be found on the basis of an over-representation of higher income and education groups and people with white-collar jobs, such as professionals, managers, administrators and scientists. And the lower-cost-of-living seekers can be identified on the basis of income, in combination with an expressed preference for having low living costs. This last motivation will be considered in Chapter 6 where the residential choice considerations are investigated.

For the investigation of the selective migration process towards the five case study areas and its effect on the
population composition, both survey data collected in this study and secondary data from existing national data sources are used. In the next part, first an explanation is given of the primary data collection. To determine the specificity of the characteristics of people moving towards the five study areas, a comparison is made with control groups who have recently moved to other Dutch, English and Spanish rural areas. Because of deficiencies and inconsistencies in the way statistical data are collected in the different case study countries, it was not always possible to find identical data for control groups. For the Netherlands more and better reference data were available from the national housing need survey (WBO, 1993) making it possible to compare the survey data with data collected for rural areas in the Netherlands on a household level. For England and Spain only aggregated statistical data were available which could be used as reference material.

The way the recent migration has affected the local population composition is determined by comparing the characteristics of the incomer households with those of the so-called local households. The incomers had settled in the case study areas in the last 5 years before this survey was conducted. All had moved into the study areas from at least 15 km away. In the Spanish study a distinction is made not only between local and permanent incomers, but also a third population group, the second-home-residents. From comparisons between incomers and locals and, in the case of Doñana, the second-home-residents as well, it should be possible to determine how the local population composition may change under the influence of immigration. However, to determine the net overall effect of migration on the population composition, similar information on characteristics of out-going migrants is also needed. Unfortunately, this information was not available for the case study areas and therefore definite statements on change in population composition as a result of migration cannot be given in this study; the analysis only concentrates on the effect of immigration on population composition.

Because of the relatively small population sizes surveyed in some of the case study areas, it is sometimes difficult to ensure minimal cell sizes. To overcome this problem, classifications have at times been amalgamated. In other cases amalgamation led to too much information loss and the attempt at quantitative assessment had to be dropped. Small cell content most often occurs with the incomer population group in Doñana, where the total number of completed surveys was much smaller than in the other study areas (see Annex 4). The conclusions to be drawn from the survey data will therefore not always be statistically reliable for all areas, but this will then be indicated. It means that sometimes research results are only indicative of the situation around protected natural areas.

Primary data collection, the sample population and response
To answer the research questions of this study, information was collected through a survey of a target population of residents living in and near the protected natural territories in the five areas studied. For practical reasons, but also because of the assumption that individuals make their behavioural decisions within the context of the household to which they belong, the research unit was the household and not the individual. ‘Households that live in and near’ means all households living within 3 kilometre of the border of one of the five protected natural territories. The choice of this distance is based on the assumption that 3 km would be a walk of about half an hour, which is an acceptable walking distance for most people. It is also assumed that everything within walking distance of someone’s house can be considered to be part of his living environment. Therefore, all respondents living within this 3 kilometre zone are presumed to have the protected natural territory within their living environment. The households that live within the research areas may be either permanent or temporary residents, as long as they are using a dwelling in the study area in a frequent and recurrent way for at least 2 months a year.

A stratified sample was taken of the total population in all five case-study areas. For the selection of the sample population, it was necessary to know the exact size of the population and their dispersion over the research area. However, this was complicated since statistical data only refer to whole administrative entities, and the study areas do not coincide with whole administrative entities. After all, the research areas consist of the total protected natural areas, including all territory that is situated within 3 km from the boundaries and this usually implies that it cuts through administrative borders. Only a rough estimate could therefore be made of the total size and geographical dispersion of the population in the study areas. This was done on the basis of population statistics that were available on the lowest possible level; the nucleus, in the Dutch and Spanish cases, or the
parish, in the case of the UK. It should therefore be realised that the distance of 3 kilometre from the border of
the protected territory is only a rough indication as all household groups of all nuclei or parishes located within
this distance will be included, even though only part of these nuclei or parishes are situated within this distance.
The estimation of the size of the population was least complicated in Doñana, as there are only four nuclei
situated within the 3 kilometre boundary of the National and Entorno Parks, which are Villamanrique, El Rocío,
Matalascañas and Mazagón (see Figure 4.6). In Northumberland there were thirty five parishes that needed to be
included. In the Dutch study areas the situation varied from six small nuclei in Dwingelderveld (see Figure 4.2),
five in Weerribben (see Figure 4.3) and eight in the Lauwersmeer area (see Figure 4.4).
In the survey populations a distinction was made between households of longstanding residence, the locals,
and the incomers. The theory behind this decision was that a comparison of characteristics of these two groups would
reveal whether the population composition is changing under the influence of recent immigration. Furthermore,
incomers are best able to supply information about the way the presence of a protected natural territory was
involved in their decision to move to the study area. After all, this group made this choice a short time earlier,
while many locals have never made this decision, because they have never moved, and others moved such a long
time ago that a reliable account of their former residential choices cannot be expected. However, this does not
imply that locals have not been asked about their choice of habitation in this study. After all, not moving is also a
residential choice.
A minimum residence of five years was decided on to distinguish between incomers and locals. This had two
reasons. Firstly, it was assumed that five years was a period within which people can remember and are able to
reproduce their reasons for choice of residence. Secondly, one of the aims of this research was to get an
understanding of residential choice within the present societal context not that of several decades ago.
The result of this stratifying procedure on the eventual response is given in Annex 4, Table 1 and the proportion
of recent and local households in the response is given in Annex 4, Table 2. It becomes clear that the size of the
research population differs greatly between the case-study areas because of variations in size and population
density but also in data collection strategies. This also determined the size of the sample population and the
eventual response. The largest number of respondents both in absolute and relative terms, in comparison with
the total size of the population, is found in the three Dutch study areas. In all three areas, 7% of the total
population was questioned, while in the English and Spanish areas this was lower. Since it was important to
include enough incomers in the sample population to produce statistically reliable estimates when treating them
as a separate group, it was aimed at taking a relatively bigger sample of incomers than of the locals from the
population. However, this was only possible for the Dutch and British study areas, where local councils provided
information on the duration of residence of the inhabitants. In the Doñana region this information could not be
obtained. Therefore no separate samples could be drawn up of recent settlers and local households beforehand.
This separation had to be done afterwards on the basis of the answers given to the survey questions. The group
of recent settlers in the total response is therefore relatively small in comparison with the equivalent Dutch and
English groups (see Annex 4, Table 2). Another important difference exists in the composition of the survey
population between Doñana and the Dutch and British study areas, because the Doñana population also contains
second-home residents (see Annex 4, Table 2).
For the collection of the data a choice had to be made on the best way to approach the respondents. A written
survey sent by post was not an option, since the questionnaire was quite long and contained complicated
questions, so that it was foreseen that this would result in a very low response. A telephone approach was the
most efficient method, given the time and money available. However, this was only an option in the Netherlands,
because the proportion of households without a telephone is negligible, in comparison with the UK and Spain.
There was also ample information on the Dutch sample populations to approach them in this way, as most
municipal councils supplied the addresses and telephone numbers of their inhabitants. In the Northumberland
and Doñana study areas, an approach by telephone was not an option, because the proportion of people with a
telephone was far too low, and it would in any case have been impossible to trace all their telephone numbers.
Therefore in the Northumberland area people were visited at home. In Doñana a combination of systematic and
cluster sampling, with the help of a street map, was applied in two of the four nuclei and people were
approached on the street in the other two (see also Annex 4).
In Table 3 of Annex 4 the non-response rate is given. As becomes clear, the refusal rate in the Dutch case study areas is relatively high in comparison with the English case study, which is inherent in a telephone survey. The reason for the overall low response in the Doñana area relates to the shorter time period available for the survey. In addition, in Spain people are less used to being interviewed by pollsters than in the other two research countries.

It is complicated to determine whether the response population is representative for the population in the case study areas, because there are no statistical data available with which the characteristics of the response population can be compared. As mentioned before, this is caused by the lack of data for geographical entities that correspond with the study areas. Furthermore, the response in this study is separated into two groups; the recent settlers and the local households; and about these two separate groups no statistical data exist at all.

To control for representativeness, the geographical distribution of the response was matched as well as possible with the distribution of total population over the different geographical units. In the three Dutch study areas this distribution was controlled in the surveying phase, since a telephone survey provides information on the response rate per recent and local household per village during interviewing. In the Dutch areas, no correction needed to be applied afterwards, because the response rate corresponded well with the geographical distribution of the empirical population over the different nuclei in the research areas.

However, in Northumberland and Doñana, because of the different way the survey results were collected, the exact geographical distribution of the response could only be determined after the surveying phase. The result was that the geographical distribution of the response did not match with the distribution of the whole research population over the territories of Northumberland and Doñana. To avoid a geographical bias, it was therefore necessary to apply a weighting factor when analysing the survey results. From Table 5 in Annex 4 the difference between the distribution of the research population and the response is shown, together with the weighting factor determined on the basis of the difference between these two.

The questionnaire

The questionnaires used in the five separate study areas contained the same questions, although differences exist between the order in which the questions were put, and for every case study more specific questions were formulated, referring to the local and national circumstances (see Annex 5).

The questionnaire consisted of five parts: Firstly, general questions were asked about the characteristics of the respondents. Through these questions information was derived about the age, household situation, work situation, income, education, car ownership and hobbies of the respondents. Secondly, questions were asked about the residential history and the present residential situation. Thirdly, information was derived about the satisfaction of the respondents with their living environment. Fourthly, questions were asked about the use of services and the possible lack of these services because of the remote rural living situation. Fifthly, the most important aspect of the questionnaire for this research got attention: the way people experience the presence of protected nature in their living environment. For the incomers, specific questions were asked about their motivation for moving to the case-study area. Finally, in Doñana, there were also specific questions formulated for the residents of second homes; about the location of their first house, the frequency with which they visited their second home and the duration of their stays, and their motivation for taking a second home in the study area.

5.3.2 Migration and population composition in the Dwingelderveld area

To investigate whether the Dwingelderveld area attracted household groups with specific characteristics, and whether this selective migration flow affected the local population composition, the attributes of four different population groups were put together in Table 5.17. In the first column the characteristics of the incomers, households that settled in this area between 1992-1996, are given. The second column refers to the local population in the Dwingelderveld area. The last two columns give the household characteristics of the incomers and locals in rural areas in the four northern provinces of the Netherlands; the so-called control groups. To determine whether certain groups with specific characteristics are attracted relatively more to the Dwingelderveld area, the incomers are compared with the households that moved to all rural municipalities in
the northern provinces of the Netherlands. To determine what the effect of immigration on the population composition in the Dwingelderveld area may be, the characteristics of the incomers are compared with these of the local population group (see Table 5.17 and Annex 6).

The first thing that becomes apparent from Table 5.17 is that migration towards the Dwingelderveld area is clearly age-selective. The age of the incomers is relatively high in comparison with the age of migrants to other Dutch rural areas. Dwingelderveld received comparatively few migrants under the age of thirty five and a relatively large number over fifty five. There were many in the fifty five to sixty four age group, indicating that the migrant flow contains numerous early-retirees.

To determine the influence of immigration on the age-structure of the Dwingelderveld population, the age distributions of the incomers and local population groups were compared (see Annex 6, Table 1). Of all the Dutch study areas, the Dwingelderveld contains the oldest local population, as the relative number of people over 55 is very large. In comparison with all northern, Dutch, rural municipalities, the Dwingelderveld area also has a relatively old population. The group aged between 35 and 54 is relatively small; however, it is striking that the group of people under 35 years is larger than in other northern rural areas. Therefore, although most of the incomers are comparatively old, their arrival has still caused a relative rejuvenation in this area. At the same time, because of the large size of the 55-64 age group in the recent-resident population, immigration also helps to keep the number of early-retirees at a high level (see Annex 6, Table 1).

When focussing on the household composition of the incomers, it becomes clear that, relatively speaking, the Dwingelderveld area attracted many households with children, but few single person households in comparison with other northern, Dutch, rural areas (Table 5.17). The proportion of family households without children is, however, the same as in the incomer population of the rest of the northern provinces. Relative to other northern rural areas, Dwingelderveld contains many family households with children and also single person households. This last category contains many widowed people and its large size is probably related to the old age-structure of this population. The high proportion of family households with children seems to be maintained by the comparative over-representation of this group among the incomer households. Although the proportion of family households with children is high among the incomers, it does not exceed the percentage for locals. Overall, a higher proportion of empty-nesters was therefore not detected among the incomer population in this study area. In relation to single person households it was seen that their number is small among the incomer population. Their proportion is not that low however (see Annex 6, Table 2) that it can be expected that immigration will bring the proportion of single person households down. The opposite can instead be expected, as the relative old age of the recent settler population will only increase the number of people with a higher risk of losing his or her partner within a short period of time.

To determine the selectivity of the migration flow in relation to socio-economic characteristics, first of all the education and income of the incomers in the Dwingelderveld area were compared with migrants to other northern, Dutch, rural areas; then the proportion of white-collar jobs was investigated. As becomes clear (Table 5.17) the education level of migrants to the Dwingelderveld area is higher than for migrants to other northern, Dutch, rural areas. However, this is not the case for income, as there are also relatively many low income households in Dwingelderveld, compared to other northern, rural areas. In spite of this, in recent years the area has attracted relatively many lower-middle and higher income groups. The group in the lower-middle income class in particular is over-represented in the migration towards this study area. The relatively high proportion of low income groups in the local population of the Dwingelderveld area may be related to the high proportion of
older people in this area. These people usually have a low monthly income, because they no longer receive a working salary.

Comparison between local and incomer groups for education and income shows clearly that incomers have a higher education and income level (see Table 5.2). The difference in distribution over education categories between these two groups is not sufficient to make it significant (see Annex 6, Table 3), but it implies that immigration is maintaining the high education level in the area. In relation to income there is a large and significant difference between incomers and locals, which is caused by the difference in size of the highest

<table>
<thead>
<tr>
<th>Table 5.17 Demographic and socio-economic characteristics of incomers and local residents in Dwingelderveld and in reference areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incomers</td>
</tr>
<tr>
<td>(n=122)</td>
</tr>
<tr>
<td><strong>Age</strong> (age refers to oldest in hh)</td>
</tr>
<tr>
<td>% &lt; 35 years</td>
</tr>
<tr>
<td>% 35-54 years</td>
</tr>
<tr>
<td>% 55-64 years</td>
</tr>
<tr>
<td>% 65+ years</td>
</tr>
<tr>
<td><strong>Household composition</strong></td>
</tr>
<tr>
<td>% family hh with children</td>
</tr>
<tr>
<td>% family hh without children</td>
</tr>
<tr>
<td>% single person hh</td>
</tr>
<tr>
<td><strong>Education</strong> <em>(highest educated person in hh)</em></td>
</tr>
<tr>
<td>% no/lower education</td>
</tr>
<tr>
<td>% middle education</td>
</tr>
<tr>
<td>% higher education</td>
</tr>
<tr>
<td><strong>Income</strong> (guilders per month after tax)</td>
</tr>
<tr>
<td>% &lt;= 2000</td>
</tr>
<tr>
<td>% 2001-3000</td>
</tr>
<tr>
<td>% 3001-5000</td>
</tr>
<tr>
<td>% &gt; 5000</td>
</tr>
<tr>
<td><strong>Occupation</strong> (as % of all working hh)</td>
</tr>
<tr>
<td>% white collar jobs***</td>
</tr>
</tbody>
</table>

* All municipalities in provinces of Friesland, Groningen, Drenthe and Overijssel with address density < 500 addresses km2
** No/lower education: no education, primary school, lower vocational training (LBO)
Middle education: secondary school (MVO, HVO), Middle vocational training (MBO)
Higher education: higher vocational training (HBO), Degree (Universiteit)
*** White-collar jobs are jobs as scientist, professional, manager and administrator
hh = households
n = number of households
n.a. = no data available
Sources: (1) Own Survey, 1996 and (2) WBO, 1993/1994
income groups and of the lower-middle income group (see Annex 6, Table 4). This implies that within the Dwingelderveld area a shift seems to take place, as a result of immigration, towards an increase in medium and higher income groups.

Unfortunately, no secondary data were available for a relative comparison in white collar jobs between residents in the Dwingelderveld area and the control areas. It can therefore not be verified whether people in white collar jobs show a more than average interest in moving to the Dwingelderveld area. However, what could be determined was whether the population composition in relation to the number of households with white collar jobs was increasing under the influence of immigration, by comparing incomers and local households. From the last item in Table 5.17 it becomes clear that the incomers group does indeed contain relatively more households with white collar jobs. The difference between the two groups is, however, relatively small and therefore not significant (see Annex 6, Table 7). The impact on the population composition of this relatively higher proportion of households with white collar occupation can therefore not be expected to be very big.

Overall, it can be concluded for the Dwingelderveld area that there is a more than average attraction of middle class households. This becomes particularly clear from an over-representation of higher education groups and higher income groups. The over-representation of the lower-middle income group in the recent settler population in comparison with other northern rural areas also suggests that at the same time there are a more than average number of lower-cost-of-living-seekers moving to the Dwingelderveld area. The selectivity of the migration flow is also influencing the local population composition. In comparison with the local population group, the recent-resident group shows a combination of an over-representation of higher education, and middle and higher income groups and households with white-collar occupations. This may lead to a relative increase in middle-class households.

Information has also been put together on the income and work situation of the incomers and local population groups in the Dwingelderveld area and the control areas to investigate whether the research assumption is correct that protected natural areas attract relatively more so-called footloose households. In this study footloose refers to households that are either no longer tied to a work place or that are tied to a work place, but are self-employed, work from home, or commute.

Firstly, it was investigated whether the Dwingelderveld area has attracted a higher proportion than average of people under the age of 65, who are not tied to work because they have taken early retirement, or depend on a non-salary income, such as an unemployment or disability benefit or live off investments. As becomes clear, the Dwingelderveld area attracted relatively many households with no ties to a work place in comparison with other northern, Dutch, rural areas. This is especially caused by the substantially higher proportion of early-retirees.

A comparison of local population groups shows that little difference exists in the work organisation in Dwingelderveld and that in the control areas. Immigration seems to change this situation however. To determine the impact of immigration on the local population composition, the income organisation of incomers and local households are compared (see Table 5.18). It becomes clear that the relative number of incomers with ties to work is lower than for locals, and that the proportion of incomers with early retirement is higher (see Annex 6, Table 8). Overall, the three times higher proportion of early retirement groups among the recent-resident population; in comparison with their equivalents in other rural areas, does suggest that recent immigrants to Dwingelderveld are more often households that are not tied to a work place. The high proportion of early-retirees in the recent-resident group, in comparison with locals, makes it plausible that this will also lead to a change in the local population composition, even though this could not be verified statistically as the number of observations was too low.

To determine whether the working households that recently moved to Dwingelderveld more often show signs of being footloose than recently settled households in other rural areas, three indicators were considered: relative number of self-employed, households that work at home and commuters (see Table 5.18). It transpired that Dwingelderveld, already contained relatively many self-employed people and those who worked at home. Immigration further assists in maintaining this situation, as the area attracted considerably more of these groups than other rural areas in the north of the country. It therefore confirms the assumption that protected natural areas attract relatively more footloose households.

The proportion of self employed people in all northern, Dutch, rural areas is around 25% (Table 5.4), while this
was considerably higher among local households in Dwingelderveld. Although the number of self-employed is lower for incomers than for locals, this difference is so small that it is not significant (see Annex 5, Table 8). This means that although the relative number of self-employed among recent households is not really leading to a relative increase in the Dwingelderveld area, immigration will support the maintenance of the already high level of self-employed in the area. In relation to the proportion of households that work at home, one can again conclude that Dwingelderveld attracts more of these than do the control areas. As with the self-employed, immigration is also further maintaining the already high proportion of home workers in the Dwingelderveld area. For commuters the situation is different. One can see that in recent years Dwingelderveld has attracted a very high proportion of commuters. However, this is quite a new phenomenon, given the fact that the number of commuters among the locals in the Dwingelderveld area is rather low; below the regional rural average of 27% (see Table 5.3). Given the significantly higher proportion of commuters among incomers (see Annex 6, Table 9) it can be expected that the number of commuters in the local population is certainly increasing under the influence of recent immigration.

Overall, one can conclude that the expectation that protected natural areas attracts relatively many footloose households, with respect to both income and work organisation is confirmed by recent population dynamics in the Dwingelderveld area. The composition of the population in this area is also affected by this selective migration process. The number of households that have no ties to a work place is either increasing or maintained at an already high level as a consequence of immigration. The already high proportion of people who are self-employed and who work at home in the Dwingelderveld area is maintained at a high level as a result of the above regional average proportion of incomers with a similar work organisation. The most striking characteristic of the incomers group is the above average proportion of commuters, which will certainly increase the proportion in the study area, which traditionally was not a commuter area.

<table>
<thead>
<tr>
<th>Table 5.18 Work and income organisation characteristics for incomers and local residents in the Dwingelderveld area and in reference areas</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dwingelderveld</strong></td>
</tr>
<tr>
<td>****</td>
</tr>
<tr>
<td><strong>Income organisation</strong></td>
</tr>
<tr>
<td><strong>hh with oldest</strong></td>
</tr>
<tr>
<td><strong>% tied to work</strong></td>
</tr>
<tr>
<td><strong>Work organisation</strong></td>
</tr>
<tr>
<td>(% of working hh)</td>
</tr>
<tr>
<td><strong>% commuting</strong></td>
</tr>
</tbody>
</table>
| * All municipalities in provinces of Friesland, Groningen, Drenthe and Overijssel with address density < 500 addresses km
| **hh = households** |
| **n = number of households** |
| Sources: (1) Own Survey, 1996 and (2) WBO, 1993/1994 |
5.3.3 Migration and population composition in the Weerribben area

The age-structure of the population in the Weerribben is very different from the control areas. The proportion of people in the youngest, under 35 age group is relatively big, as is the group of people between 55 and 64, but other groups, including 65-plus, are relatively under represented (see Table 5.19). However, migration appears to have affected this situation, as few young and many elderly people have settled in the area. The high proportion of people in the 55-64 age group seems to be maintained by immigration. In this respect the situation is rather similar to the age-selective migration to the Dwingelderveld area.

When first comparing age distribution of incomers with their equivalents in the control areas, one can see that the Weerribben immigrants were also relatively old. However, relatively speaking, the group of migrants under 35 is small, and that in the 55-64 range is large, even in comparison with Dwingelderveld. Apparently early-retirees are attracted to this study area even more than to Dwingelderveld and people over 65 are also comparatively numerous.

When comparing the age composition of the local and recent populations one can see that there is little variation between the two groups, and therefore no significant differences were detected (see Annex 6, Table 1). In comparison with other northern, rural areas in the Netherlands, where the proportion of people in the 55-64 range is 18%, Weerribben contains many people in the early retirement group (Table 5.19). The influence of immigration also keeps their numbers high. However for people over 65 this is not the case, as the average for this age group in all Dutch, rural areas is clearly higher at 22%. However, given the over-representation of people above 55 in the migration flow towards Weerribben, one can only expect a further increase in average age in the future.

The proportion of family households with children is lower in Weerribben in comparison with Dwingelderveld, and also in comparison with other rural areas in the North of the country. Migration seems to change this situation slightly, as more family households with children seem to be attracted to Weerribben than to the control areas. There will also be a limited effect on the population composition, as their proportion is larger among incomers, than among local households. However, the difference between the households groups is not large enough to make it significant. The proportion of single person households living in the Weerribben is also large in comparison with other rural areas, but is not yet reaching the same level as in the Dwingelderveld area.

Immigration of this group is however larger than in the Dwingelderveld, but still very limited in comparison with other rural areas. But for the Weerribben probably the same development applies as for the Dwingelderveld area; even though single person households are relatively small in the incomers group their number will certainly increase, with the increased settlement of older population groups, who have a higher risk of loosing their partners within a short period of time. Overall, it can also be concluded for Weerribben that, as in Dwingelderveld, a relatively large number of households with children prefer to live in this area, which means that again no signs were detected of an over-representation of empty-nesters.

The distribution over education and income groups in Weerribben also shows the same features as in Dwingelderveld and, relative to the regional northern perspective, this area also contains many middle and higher educated but few higher educated. The number of high educated groups among the incomers is however significantly higher than in the local population group (see Annex 6, Table 3). It can therefore be assumed that immigration leads to an increase in the education level of the local population. The expectation that protected natural areas attract relatively more better educated people is therefore also confirmed in the Weerribben area. The attraction of better educated people is also concomitant with the strong attraction of lower-middle and higher-middle income groups.

Lower incomes are more dominant in the local household group of the Weerribben area than in Dwingelderveld. However, migration seems to change this situation. On the one hand, the lower-middle income groups are over-represented in the recent-resident population, which suggests that lower-cost-of-living-seekers have a higher than average interest in settling in Weerribben. On the other hand, higher-middle income groups are also more likely to settle. This affects the local population composition. When comparing local and incomer groups within Weerribben, there are relatively few lower income households and significantly more higher-middle income households moving into the area (see Annex 6, Table 4). In both the Dwingelderveld and the Weerribben areas, immigration seems to lead to a relative increase of medium and higher income groups. That immigration will
increase the number of white collar jobs also seems to be plausible, even though this could not be verified statistically as the number of observations was too low (see Annex 6, Table 7). In comparison with Dwingelderveld however, the proportion of white collar occupations is still relatively low.

In Table 5.20, indicators for income and work organisation have also been put together, to investigate the presence of footloose households in the migration flow towards Weerribben. Early-retirees were even more over-represented in the incomers population than in Dwingelderveld, but relatively few unemployed and people with other non-salary income sources were found. To determine the impact of immigration on the population composition, incomers and local households were compared (see Annex 6, Table 8). As the incomers group

<table>
<thead>
<tr>
<th>Table 5.19 Demographic and socio-economic characteristics for incomers and local residents in the Weerribben area and in reference areas</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Weerribben</strong></td>
</tr>
<tr>
<td>Incomers</td>
</tr>
<tr>
<td>Settled between 1992-1996</td>
</tr>
<tr>
<td><strong>Age</strong> (age refers to oldest in hh)</td>
</tr>
<tr>
<td>% &lt; 35 years</td>
</tr>
<tr>
<td>% 35-54 years</td>
</tr>
<tr>
<td>% 55-64 years</td>
</tr>
<tr>
<td>% 65+ years</td>
</tr>
<tr>
<td><strong>Household composition</strong></td>
</tr>
<tr>
<td>% family hh with children</td>
</tr>
<tr>
<td>% family hh without children</td>
</tr>
<tr>
<td>% single person hh</td>
</tr>
<tr>
<td><strong>Education</strong> (highest educated person in hh)</td>
</tr>
<tr>
<td>% no/lower education</td>
</tr>
<tr>
<td>% middle education</td>
</tr>
<tr>
<td>% higher education</td>
</tr>
<tr>
<td><strong>Income</strong> (gilders per month after tax)</td>
</tr>
<tr>
<td>% &lt;= 2000</td>
</tr>
<tr>
<td>% 2001-3000</td>
</tr>
<tr>
<td>% 3001-5000</td>
</tr>
<tr>
<td>% &gt; 5000</td>
</tr>
<tr>
<td><strong>Occupation</strong> (as % of all working hh)</td>
</tr>
<tr>
<td>% white collar jobs***</td>
</tr>
<tr>
<td><strong>Rural Northern Netherlands</strong></td>
</tr>
<tr>
<td>Incomers</td>
</tr>
<tr>
<td>Settled between 1990-1994</td>
</tr>
</tbody>
</table>

* All municipalities in provinces of Friesland, Groningen, Drenthe and Overijssel with address density < 500 addresses km²
** No/lower education: no education, primary school, lower vocational training (LBO)
Middle education: secondary school (MVO, HVO), Middle vocational training (MBO)
Higher education: higher vocational training (HBO), Degree (Universiteit)
*** White-collar jobs are jobs as scientist, professional, manager and administrator
hh = households
n = number of households
n.a. = no data available
Sources: (1) Own Survey, 1996 and (2) WBO, 1993/1994
contains significantly more early-retirees than the local group, one can conclude that immigration is certainly increasing their proportion in the total population.

With regard to work organisation the same developments as in Dwingelderveld are found. The data in Table 5.20 indicate that both local and incomer population groups in the Weerribben show an over-representation of footloose households in relation to the proportion of those self-employed and working at home. Immigration helps to maintain this number at a high level. Compared to the other Dutch study areas, Weerribben contains and also attracts the highest relative number of commuter households; particularly in recent years, and especially in comparison with the control areas. When comparing the proportion of commuters among incomers and local households, it becomes clear that the incomers group contained significantly more. This means that, as in Dwingelderveld, recent migration has led to an increase in the number of commuters in Weerribben. This means that the expectation that protected natural areas are increasingly attracting commuters can also be confirmed for the Weerribben area.

Table 5.20 Work and income organisation characteristics for incomers and local residents in Weerribben and in reference areas

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Income organisation</td>
<td>% early retired (hh with oldest &lt;65 years)</td>
<td>14.1</td>
<td>3.1</td>
<td>2.2</td>
</tr>
<tr>
<td></td>
<td>% unemployed/other non-salary income</td>
<td>4.2</td>
<td>8.3</td>
<td>6.2</td>
</tr>
<tr>
<td></td>
<td>% tied to work</td>
<td>81.7</td>
<td>88.5</td>
<td>91.5</td>
</tr>
<tr>
<td>Work organisation</td>
<td>% own business</td>
<td>28.8</td>
<td>27.9</td>
<td>17.1</td>
</tr>
<tr>
<td></td>
<td>% work at home</td>
<td>18.6</td>
<td>17.4</td>
<td>6.8</td>
</tr>
<tr>
<td></td>
<td>% commuting**</td>
<td>64.7</td>
<td>47.4</td>
<td>30.0</td>
</tr>
</tbody>
</table>

* All municipalities in provinces of Friesland, Groningen, Drenthe and Overijssel with address density < 500 addresses km²
** Work in other municipality then municipality of residence and home-work distance >=20 km

Overall, one can conclude that a clear over-representation of early-retirees, lower-cost-of-living-seekers, and footloose households was found in Weerribben. The over-representation of middle and higher education groups, together with a recent relative increase of higher middle income groups and households with white-collar occupations also indicate a recent increase in middle class households moving towards the Weerribben area.

5.3.4 Migration and population composition in the Lauwersmeer area

Although the population composition in Lauwersmeer is extremely different from the population composition in the two other Dutch study areas, the incomer-resident population seems to show some clear similarities with those of Weerribben and Dwingelderveld (see Table 5.21). In comparison with the other Dutch study areas, the Lauwersmeer area has the youngest population composition, which is mainly the result of the high proportion of people in the 35 to 54 age range. Compared to the control areas, Lauwersmeer also contains few people over the age of 55. The recent migration flow seems to
be changing this situation, however. Although Lauwersmeer still attracts relatively more households in the youngest age class than the two other Dutch study areas, the proportion of people over 55 is also higher than in the control areas. The impact of this age-selective migration on the local population is still largest in the youngest age range, as there is a significant difference in the size of this group between incomers and local households (see Annex 6, Table 1). It can therefore be expected that the main effect of immigration is a relative rejuvenation of the population. The 55-64 age group is slightly larger among incomers than in the local households, which makes it plausible that the size of this age group will be at least maintained under the influence of migration.

Table 5.21 Demographic and socio-economic characteristics for incomers and local residents in Lauwersmeer and in reference areas

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong> (age refers to oldest in hh)</td>
<td>% &lt; 35 years 31.4</td>
<td>18.5</td>
<td>41.4</td>
</tr>
<tr>
<td></td>
<td>% 35-54 years 39.2</td>
<td>49.1</td>
<td>40.3</td>
</tr>
<tr>
<td></td>
<td>% 55-64 years 14.7</td>
<td>13.9</td>
<td>9.3</td>
</tr>
<tr>
<td></td>
<td>% 65+ years 14.7</td>
<td>18.5</td>
<td>8.9</td>
</tr>
<tr>
<td><strong>Household composition</strong></td>
<td>% family hh with children 53.0</td>
<td>65.6</td>
<td>37.1</td>
</tr>
<tr>
<td></td>
<td>% family hh without children 24.5</td>
<td>8.4</td>
<td>37.5</td>
</tr>
<tr>
<td></td>
<td>% single person hh 22.5</td>
<td>25.4</td>
<td>6.2</td>
</tr>
<tr>
<td><strong>Education</strong> (highest educated person in hh)</td>
<td>% no/lower education 9.8</td>
<td>31.1</td>
<td>35.5</td>
</tr>
<tr>
<td></td>
<td>% middle education 53.2</td>
<td>49.0</td>
<td>39.8</td>
</tr>
<tr>
<td></td>
<td>% higher education 37.0</td>
<td>19.9</td>
<td>24.7</td>
</tr>
<tr>
<td><strong>Income</strong> (guilders per month after tax)</td>
<td>% &lt;= 2000 27.7</td>
<td>35.2</td>
<td>20.7</td>
</tr>
<tr>
<td></td>
<td>% 2001-3000 30.1</td>
<td>40.6</td>
<td>19.8</td>
</tr>
<tr>
<td></td>
<td>% 3001-5000 36.1</td>
<td>20.3</td>
<td>34.7</td>
</tr>
<tr>
<td></td>
<td>% &gt; 5000 6.0</td>
<td>3.9</td>
<td>24.8</td>
</tr>
<tr>
<td><strong>Occupation</strong> (as % of all working hh)</td>
<td>% white collar jobs*** 15.5</td>
<td>10.5</td>
<td>n.a.</td>
</tr>
<tr>
<td></td>
<td>n.a. = no data available</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* All municipalities in provinces of Friesland, Groningen, Drenthe and Overijssel with address density < 500 addresses km2
** No/lower education: no education, primary school (lagere school), lower vocational training (LBO)
Middle education: secondary school (MVO, HVO), Middle vocational training (MBO)
Higher education: higher vocational training (HBO), Degree (Universiteit)
*** White-collar jobs are jobs as scientist, professional, manager and administrator
hh = households
n = number of households
n.a. = no data available
Sources: (1) Own Survey, 1996 and (2) WBO, 1993/1994
The proportion of households with children is very high in Lauwersmeer, in comparison both with the other study areas, and also the controls. This also applies to the incomers group, as Lauwersmeer attracts considerably more families with children than the control areas. Contrary to the situation in the two other Dutch study areas, this goes together with a high proportion of single person households. In this respect, Lauwersmeer shows more similarity to the incomer population of other northern Dutch rural areas.

In Lauwersmeer, evidence was also found of a higher level of socio-economic development among incomers, in relation to both education level and income. The education level of the local population group was already high in comparison with other rural areas, but immigration is leading to an even larger increase. There is a clear over-representation of medium and highly educated households moving towards the Lauwersmeer area in comparison with other migrants to northern, Dutch, rural areas. Since the relative number of poorly educated incomers is significantly smaller, and the relative number of more highly educated incomers is significantly larger than for the locals, immigration is also leading to a further increase in the average educational level of the local population (see Annex 6, Table 3).

The situation regarding income is different. In comparison with other rural areas, Lauwersmeer has many households in the lower income groups. The lowest income group in particular is considerably larger than in the other Dutch study sites and also in the control areas, and this is also maintained through the relatively large proportion of incomers in this group. On the other side, this also goes together with a more than average attraction of higher middle income groups, but not of the highest income groups. The income selectivity of the migration flow may also affect the local population composition, as a comparison of incomers and local households shows that the in past few years there are significantly fewer households in the lower middle income group and significantly more in the higher middle income group. This implies that immigration is changing the income distribution of the local population in the Lauwersmeer area. On the one hand, it can be expected to support the already high proportion of lower income groups, as these groups are large in both incomers and local populations, and also the expected higher than average attraction of lower-cost-of-living-seekers to the area.

<table>
<thead>
<tr>
<th></th>
<th>Lauwersmeer</th>
<th>Rural Northern Netherlands*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n=87)</td>
<td></td>
</tr>
<tr>
<td><strong>Income organisation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% early retired (hh with oldest &lt;65 years)</td>
<td>8.8</td>
<td>3.3</td>
</tr>
<tr>
<td>% unemployed/other non-salary income</td>
<td>24.1</td>
<td>12.2</td>
</tr>
<tr>
<td>% tied to work</td>
<td>67.8</td>
<td>84.6</td>
</tr>
<tr>
<td><strong>Work organisation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of working hh</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% own business</td>
<td>22.4</td>
<td>27.9</td>
</tr>
<tr>
<td>% work at home</td>
<td>15.5</td>
<td>22.9</td>
</tr>
<tr>
<td>% commuting**</td>
<td>49.0</td>
<td>22.7</td>
</tr>
</tbody>
</table>

* All municipalities in provinces of Friesland, Groningen, Drenthe and Overijssel with address density < 500 addresses km²
** Work in other municipality then municipality of residence and home-work distance >20 km
hh = households
n = number of households
Sources: (1) Own Survey, 1996 and (2) WBO, 1993/1994
the other hand, a relative increase of the higher middle income group (see Annex 6, Table 4) can be expected, indicating the increased attraction of middle class households to this area at the same time. This is further confirmed by a relative high proportion of households in white collar occupations in the incomers group. Although the proportion of this category in both population groups does not differ significantly it is, however, clearly higher in the incomers group and this is also the case in the two other Dutch study areas.

In Table 5.22 the data reveal that footloose households are also an important proportion of the locals and incomers in the Lauwersmeer area. Although Lauwersmeer attracted fewer early-retirees than the Dwingelderveld and Weerribben areas did, their numbers still clearly exceed those of incomers in the other northern Dutch rural areas. The biggest difference between Lauwersmeer, the other Dutch study areas, and in particular, the control areas, is the relative number of unemployed people, and those with income sources other than salary among the locals and incomers. Almost 25% of all incomers in the Lauwersmeer came into this footloose group, which is more than three times as many as in the control areas. As a result, the relative number of incomers not tied to work is very high in the Lauwersmeer area. To determine the impact of immigration on the incomes of the local population, incomers and local households were compared (see Annex 6, Table 8). There turns out to be a significant difference in the number of households not tied to a work place and of households with non-salary sources. This implies that in recent years, immigration in Lauwersmeer must certainly have led to a relative increase of so-called footloose households, which helps to support the expectation that protected natural areas are attractive to these relatively free households.

When looking at the way incomers and local households have organised their work in the Lauwersmeer area, one can see that there are many similarities with the other two Dutch study areas (see Table 5.22). The proportion of self-employed people moving towards Lauwersmeer was higher than for the control areas. However, it did not exceed the number of self-employed already living in the Lauwersmeer area. Recent immigration can therefore not have led to a relative increase in the number of self employed, but it does help to keep the already high proportion above the regional average. The same pattern is found for households working at home. Their proportion is greater among incomers in Lauwersmeer than among incomers in other northern rural areas. This means that immigration has helped to keep the proportion of home workers in the area comparatively high. The proportion of commuters moving towards or already living in the Lauwersmeer area is lower than in the two other Dutch study areas. However, relative to the control areas, Lauwersmeer has attracted many commuters in recent years. Given the significant difference between incomers and local household groups in relation to this characteristic, this certainly led to an increase in their relative number in the total population (see Annex 6, Table 11). Overall, one can conclude that a clear over-representation of lower cost-of-living-seekers and footloose households was also found in Lauwersmeer. The number of early-retirees was under-represented in the local population, but their number seemed to increase under the influence of recent immigration, as their proportion was also over-represented in the recent migration flow. Groups that were much more dominant in the flow towards Lauwersmeer, were the under 35 year olds and families with children. The over-representation of middle and higher education groups, together with a relative increase of the higher-middle income group and households with white-collar occupations, also indicates a recent increase in middle class households moving towards the Lauwersmeer area.

5.3.5 Migration and population composition in the Northumberland area

Before looking at the population characteristics of the Northumberland study area, it is important to note that it was more difficult to find suitable reference data for this area. In most cases, the data used for the Northumberland park refer to all residents of either the rest of Northumberland County (the Northumberland research area was excluded) or the whole of England, and not incomers only.

The first characteristic to be discussed is age. Overall, the local population of the Northumberland National Park is relatively old. In comparison with the rest of the County of Northumberland, the National Park has very few people under the age of 35 and many over 65.

The distribution of the incomers of the Northumberland National Park area is also different from the age distribution of the incomers in the rest of Northumberland County. In the National Park area the strongest concentration of incomers is found in the 35-54 age range, while the under 35 age group is very small and the
over 55 group very large (see Table 5.23). With respect to the clear predominance of over 55 year olds among incomers, the situation in the Northumberland National Park is very similar to that in the Dutch study areas, which confirms that early-retirees are also more than averagely attracted to this area. The over-representation of incomers in the 35-54 age range in the Northumberland National Park is different from the Dutch study areas, where the incomers are more evenly distributed over the under 35 and the 35-54 age classes.

### Table 5.23: Demographic and socio-economic characteristics for incomers and local residents in Northumberland and in reference areas

<table>
<thead>
<tr>
<th></th>
<th>Northumberland Incomers (settled between 1992-1996) (1)</th>
<th>Locals (n=182) (2)</th>
<th>Reference areas</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% &lt; 35 years</td>
<td>13.0</td>
<td>6.0</td>
<td>58.8 @</td>
</tr>
<tr>
<td>% 35-54 years</td>
<td>50.0</td>
<td>36.3</td>
<td>26.8 @</td>
</tr>
<tr>
<td>% 55-64 years</td>
<td>18.5</td>
<td>16.5</td>
<td>6.4 @</td>
</tr>
<tr>
<td>% 65+ years</td>
<td>18.5</td>
<td>41.2</td>
<td>8.0 @</td>
</tr>
<tr>
<td><strong>Household composition</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% family hh with children</td>
<td>34.8</td>
<td>42.3</td>
<td>40.7 @@</td>
</tr>
<tr>
<td>% family hh without children</td>
<td>43.4</td>
<td>31.7</td>
<td>33.5 @@</td>
</tr>
<tr>
<td>% single person hh</td>
<td>21.8</td>
<td>26.0</td>
<td>25.8 @@</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% no or lower education</td>
<td>20.0</td>
<td>45.0</td>
<td>n.a.</td>
</tr>
<tr>
<td>% middle education</td>
<td>42.6</td>
<td>32.8</td>
<td>n.a.</td>
</tr>
<tr>
<td>% Higher education</td>
<td>37.0</td>
<td>22.2</td>
<td>n.a.</td>
</tr>
<tr>
<td><strong>Income</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% &lt;= 500</td>
<td>15.6</td>
<td>19.4</td>
<td>n.a.</td>
</tr>
<tr>
<td>% 501-1000</td>
<td>25.0</td>
<td>28.4</td>
<td>n.a.</td>
</tr>
<tr>
<td>% 1001-2000</td>
<td>46.9</td>
<td>38.8</td>
<td>n.a.</td>
</tr>
<tr>
<td>% &gt; 2000</td>
<td>12.5</td>
<td>13.4</td>
<td>n.a.</td>
</tr>
<tr>
<td><strong>Occupation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% working white collar jobs**</td>
<td>34.3</td>
<td>20.9</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

@ Situation for residents of the Northumberland County that moved between districts in last year before 1991 census
@@ Situation for the whole population of the County of Northumberland (wards in and bordering Northumberland National Park excluded), 1991 Census data
@@@ Total population of England, 1991 Census data

* - No/lower education: no education, Primary school, secondary school
  - Middle education: O-levels, A-levels, OND, C&G, Secretarial courses, Teaching diplomas, other courses
  - Higher education: HND, Degree

** White collar jobs are jobs as scientist, professional, manager and administrator

hh = households
n = number of households
n.a. = no data available

Sources: (1) Own Survey, 1997 and (2) HMSO, Census 1991
To determine the recent dynamics in age-structure in the Northumberland study area as a result of immigration, incomers and locals are compared. In spite of the relative strong over-representation of elderly among the incomer population in comparison with incomers to the rest of the county of Northumberland, this group is still much younger in composition than the local population group. More than 40% of the local population is in the 65+ age group. When comparing the age-structure with the age-structure in the rest of Northumberland, where only 22% of the population is 65 years or older, the old population structure in this study area is further confirmed (see Annex 6, Table 1). There is a significant difference in age distribution between the locals and incomers in the lowest and highest age classes, which is not surprising given the very old age-structure for the local population. It can therefore be expected that immigration still leads to a relative rejuvenation of the Northumberland National Park population, especially an increase in the 35-64 age class.

The household composition of the local population in the Northumberland National Park is not much different from the rest of Northumberland or the rest of England. The proportion of families with children is around 42% and the proportion of single person families is 26%. This is different from the situation in the Dutch study areas, where the proportion of households with children is higher and single person households lower. The data in Table 5.23 also indicate that there were relatively few families with children living at home, who were interested in moving into the Northumberland study area in recent years. This may be related to the relative absence of services, which deters households with children from moving to the area. It is also indicative of a higher than average attraction of empty-nesters to this study area. On the other hand, the proportion of local households with children living at home, is not lower than either the regional or national average. The relative number of single person households attracted to the Northumberland area is also relatively low, which was found in the three Dutch study areas as well. It suggests that single person households are less inclined to move towards a natural amenity rich rural area than people who are part of a two-person household. The number of single person households among the incomers is also less than the proportion of single person households in the local population group. It can therefore be concluded that the impact of immigration on the local household size is two-sided. On the one hand, the immigration of households without children, which may have caused a further decrease in average household size in recent years in the Northumberland National Park area. On the other hand, the incomer-resident population contains a lower proportion of single person households than the local population. This implies that immigration did not further decrease average household size in the Northumberland study area. However, as in two of the Dutch study areas, it can be expected that single person households will certainly increase as a result of increased settlement by older people who are at higher risk of loosing their partners within a short period of time.

Unfortunately, no reference data were available for England to put in a wider perspective the survey data on income, education level and white collar occupations in the Northumberland study area. It could therefore not be determined whether the Northumberland protected natural area attracted relatively more, well educated, higher income and higher class groups than other English rural areas. In comparison with the situation in the Dutch study areas, one can however see that the Northumberland area has a relatively high number of both well educated and poorly educated groups. Income seems to be most strongly concentrated in the lower and higher-middle income class. To determine the effect of immigration on the local population composition, a comparison between incomers and local population groups in the study area itself could be made. As becomes clear from Table 5.8, the incomers are more concentrated in the middle and higher education and income classes. However, this difference is more extreme for education than for income. The size of the lowest education class is significantly smaller than the size of this group among the locals, while the size of the highest education class is significantly larger (see Annex 6, Table 3). When looking at the distribution over income classes (Annex 6, Table 5), there is a significantly larger higher middle income group among incomers than the among the local population. The size of the lowest and highest income classes differ markedly. As in the Dutch study areas, the assumption that natural areas have indeed attracted more well educated groups in recent years is also confirmed in Northumberland; which has probably led to an increase of better educated households in this study area. For income, the medium income groups seem to have increased in size in recent years. Whether the Northumberland area attracted relatively more lower income groups than other rural areas, could not be confirmed because of lack of reference data. However, immigration is at least not increasing their share of the local population.
When looking at the proportion of households in white collar occupations, one can conclude that the Northumberland area contained and recently attracted more of these occupation groups than the Dutch case study areas did. Especially in recent years the households occupied in white collar occupations have increased significantly (see also annex 6, table 7). This must also have influenced the local population composition. On the basis of the high proportion of white collar occupations in combination with the higher proportion of higher educated and higher income groups among recent residents, the increased attraction of middle and higher-class households by protected natural areas is again confirmed for the situation in the Northumberland area.

When looking at the proportion of households in white collar occupations, one can conclude that the Northumberland area already had and has recently attracted more of these groups than the Dutch study areas. In recent years especially, the households in white collar occupations have increased significantly (see also Annex 6, Table 7). This must also have influenced the local population composition. On the basis of the high proportion of white collar workers combined with the higher proportion of better educated and higher income groups among incomers, the increased attraction of protected natural areas to middle and higher-class households is again confirmed for the Northumberland area.

In Table 5.24, the same indicators as for the Dutch study areas have been used to characterise the work and income organisation in the Northumberland study area. However, it should be noted that to make the survey data comparable with control data, commuting has been defined differently from the other study areas. In addition, only data on the local population groups could be used as reference material, because of the absence of comparable data for incomers. When focussing on the income organisation in the Northumberland study area, one can see that, both in a national and regional perspective, the relative number of early-retirees, the unemployed, and people with other non-salary income is relatively low. The households that have recently moved into the

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>% early retired (hh with oldest &lt;65 years)</td>
<td>9.1</td>
<td>11.3</td>
<td>10.5</td>
</tr>
<tr>
<td>% unemployed/other non-salary income</td>
<td>2.2</td>
<td>7.5</td>
<td>14.7</td>
</tr>
<tr>
<td>% tied to work</td>
<td>90.9</td>
<td>82.1</td>
<td>74.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Work organisation</th>
<th>Northumberland (n=44)</th>
<th>English reference areas Population Rest County* (1)</th>
<th>English reference areas Population England** (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>% self-employed</td>
<td>30.8</td>
<td>28.0</td>
<td>12.2</td>
</tr>
<tr>
<td>% work at home</td>
<td>15.4</td>
<td>22.9</td>
<td>5.9</td>
</tr>
<tr>
<td>% commuting***</td>
<td>48.8</td>
<td>29.8</td>
<td>36.2</td>
</tr>
</tbody>
</table>

* County of Northumberland (wards in and bordering Northumberland National Park excluded)
** England
*** Household of which one or more members of family work outside district of residence
hh= households
n= number of households
n.a.= data not available
Sources: (1) Own Survey, 1997 and (2) HMSO, Census 1991
Northumberland study area are more often tied to a work place than are the average English household, as well as in comparison with the Dutch study areas. The expected over-representation of households untied to work in the recent migration flow to protected natural areas does not apply to the situation in the Northumberland National Park.

To characterise the work organisation of households in the Northumberland study area, the proportion of self-employed, home workers and commuters have been put together in the second half of Table 5.24. When comparing the first two indicators with the regional and national averages, it becomes clear that the proportion of self-employed, and households that work at home is very high, for both incomers and locals. The proportion of self-employed among incomers is even higher than among locals, which means that recent immigration has led to a further relative increase of the number of households with their own businesses. However, this is not the case for households working at home, amongst whom incomers are outnumbered by locals; which is the reverse of the situation as regards commuting, with a relatively high proportion of commuters among the incomers group. This group was not very large until recently, as becomes apparent from a comparison of the locals with the control groups. However, as a result of immigration, their proportion seems to have increased considerably in recent years. Overall it means that the expected more than proportional attraction of footloose households to protected natural areas, can be confirmed also for the Northumberland case. This only applies to footloose households that are in work. The immigration of households not working was relatively low in the Northumberland study area.

5.3.6 Migration and population composition in the Doñana area

Before investigating the population characteristics of the incomers and local and second-home-residents, it should be mentioned that for the Spanish case it was most problematic to find reference data. A complete comparison with other areas in Andalucía was therefore not possible, especially in relation to the data on work and income organisation. It should also be noted that the size of the survey population was relatively small in this case study area. Statistically reliable conclusions on the basis of these data were difficult to make. Most observations in this section should therefore be interpreted as indicative for the situation in the Doñana region.

In Table 5.25, an overview is given of the demographic and socio-economic situation of the three population groups in the Doñana area. To make a comparison with control data possible, it was necessary to select age categories that were different from the other case study areas.

The local population in the Doñana area shows a clear over-representation of the people in the middle age group, while in comparison with other rural areas in the provinces of Sevilla and Huelva, there is a relatively small number of younger people under 40 and older people above 65. When incomers in Doñana and the control area are compared, it is shown that relatively many young people migrated to this study area (see also Annex 6, Table 1). They were also significantly younger than locals in the Doñana area, which implies that recent migration must have caused a relative rejuvenation. Retirement migration for permanent settlement in the Doñana area was not detected at all, as there was no evidence of the presence of retirees or early-retirees amongst the permanent incomers group. In the second home resident population these groups do appear clearly. It is striking that the incomers and local resident groups show little resemblance with the age composition of incomers and local groups in the Dutch and British case study areas, while the age-structure of the second-home-residents is much more comparable. Relatively many people over 54 and relatively few under 35 appear among second-home-residents, most of whom are above 35 and especially just around retirement age (see also Annex 6, Table 1). The strong over-representation of elderly people is to be expected, as young people are usually not yet able to afford a second home and the nearer people come to retirement the more time they can spend in their second home.

The household structure also differs markedly between the three population groups in the Doñana area. The proportion of families with children is very high for local and second-home households, while it is very low for the incomers. This difference is probably caused by the fact that people who have recently moved to Doñana have usually done so when they were still young and not yet of an age to marry and have children. The high proportion of families with children among the local and second-home-residents is probably related to the still common habit in Spain of continuing to live with one’s parents until marriage or even afterwards. The relative number of single person households also varies greatly between the three groups, which causes a significant difference in
Table 5.25 Demographic and socio-economic characteristics for incomers, locals and second home residents in Doñana and reference areas

<table>
<thead>
<tr>
<th></th>
<th>Doñana</th>
<th>Provinces of Sevilla and Huelva</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Incomers (settled 1992-1996) (n=34)</td>
<td>Locals (n=56)</td>
</tr>
<tr>
<td>Age*** (age refers to oldest in hh)</td>
<td>% &lt; 40 years</td>
<td>84.6</td>
</tr>
<tr>
<td></td>
<td>% 40-64 years</td>
<td>15.4</td>
</tr>
<tr>
<td></td>
<td>% 65+ years</td>
<td>0</td>
</tr>
<tr>
<td>Household composition</td>
<td>% family hh with children</td>
<td>40.0</td>
</tr>
<tr>
<td></td>
<td>% family hh without children</td>
<td>6.7</td>
</tr>
<tr>
<td></td>
<td>% single person hh</td>
<td>53.3</td>
</tr>
<tr>
<td>Education**** (highest educated person in hh)</td>
<td>% no or lower education</td>
<td>64.3</td>
</tr>
<tr>
<td></td>
<td>% middle education</td>
<td>28.6</td>
</tr>
<tr>
<td></td>
<td>% higher education</td>
<td>7.1</td>
</tr>
<tr>
<td>Income (pesetas per month after tax)</td>
<td>% &lt;=100000</td>
<td>18.2</td>
</tr>
<tr>
<td></td>
<td>% 100,001-200,000</td>
<td>81.8</td>
</tr>
<tr>
<td></td>
<td>% 200,001-300,000</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>% &gt; 300000</td>
<td>0</td>
</tr>
<tr>
<td>Occupation (as % of all working hh)</td>
<td>% white collar jobs****</td>
<td>0</td>
</tr>
</tbody>
</table>

* Migrants to other rural municipalities consists of municipalities in the rest of the provinces of Sevilla and Huelva (Doñana area excluded) with less than 25,000 inhabitants (1991-1995)

** Total population of rural municipalities (<25,000 inhabitants, 1995) in provinces of Sevilla and Huelva (Doñana area excluded)

*** Another age distribution was chosen than in the other case study areas to fit it to the available reference data for other rural areas in Andalucía.

**** No or lower education: no education, primary school, secondary school (graduado escolar)
Middle education: Bachilerato, Middle vocational training (Formación Profesional), Diplomatura
Higher education: Licenciatura, Doctorado

***** White-collar jobs are jobs as scientist, professional, manager and administrator

hh = households
n = number of households
n.a.= data not available

Sources: (1) Own survey, 1997 and (2) Instituto Estadística Andalucía, 1996
distribution (see Annex 6, Table 2). Apparently, there are many young single people moving to the Doñana area, to live there permanently. Their relatively young age is probably the best explanation for their still being single. Overall, one can conclude that early-retirees are not really attracted to the Doñana area for permanent residence, but among second-home-residents they are relatively numerous.

In comparison with the other Dutch and British case study areas, the overall education level in the Doñana area is low. This is not so much determined by the proportion of well educated people, but more by the large proportion of households where the educational standard is low. The incomers and local resident groups show the strongest concentration in the lower education level. The distribution of the second-home-residents over the education groups shows a stronger over-representation of the middle and higher education groups, which also corresponds better with the situation in the Northumberland local population. The education level of incomers is also relatively low in a regional context, as it is under the average of the adjacent rural areas. The same applies to the locals, who show a high over-representation of the low education category, but the proportion of well educated people is also larger than in the incomers group. However, in comparison with the Dutch and English case study areas, education levels are much lower in the Doñana area.

The income distribution and the proportion of people employed in white collar jobs also makes it apparent that the socio-economic level of incomers is lower than that of second home residents. Members of the former group are concentrated in the two lowest income classes and do not appear above the 200,000 pesetas level, whereas the local and second-home-residents show a concentration in both the lowest and the higher-middle income classes and they are more often employed in white collar jobs. There is a greater concentration of locals than of second-home-residents in the two lowest income classes, but there is also a group of locals with an income of more than 300,000 pesetas a month. This group is relatively larger than the second-home-residents group with a high salary level. Unlike the Dutch and English situations, immigration in Doñana is not leading to an increase

### Table 5.26 Work and income organisation characteristics for incomers, locals and second home residents in the Doñana and in reference areas

<table>
<thead>
<tr>
<th>Income organisation</th>
<th>Doñana</th>
<th>Andalusian reference areas*</th>
</tr>
</thead>
<tbody>
<tr>
<td>% own business</td>
<td>0</td>
<td>31.0</td>
</tr>
<tr>
<td>% commuting</td>
<td>7.7</td>
<td>27.6</td>
</tr>
<tr>
<td>% non-salary income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% tied to work</td>
<td>86.7</td>
<td>87.9</td>
</tr>
<tr>
<td>% unemployed/other</td>
<td>13.3</td>
<td>6.1</td>
</tr>
<tr>
<td>% early retired</td>
<td>0</td>
<td>6.1</td>
</tr>
</tbody>
</table>

* Total population of rural municipalities (<=25,000 inhabitants) in provinces of Sevilla and Huelva (Doñana area excluded), data refer to 1991

hh = households

n = number of households

n.a. = data not available

Sources: (1) Own survey, 1997 and (2) Instituto Estadistica Andalucía, 1996
of higher income groups. However, second-home-residents do bring extra purchasing power into the area. Whether the income situation in Doñana is different from other areas in Andalucía could not be verified as no reference data were available. However, given the strong concentration of permanent incomers in the lower education group and the absence of households in white collar occupations, the probability is that there is no recent increase in middle class households as a result of immigration. In this aspect, the situation in Doñana is very different from that of the other case study areas.

When looking at indicators for income and work organisation in Doñana in Table 5.26, it seems that the second-home-residents are the most footloose. Not even half of this group is tied to a work place. From the data on work organisation only, the local residents seem to be most footloose, as this group contains relatively many self-employed and commuters. Among the incomers group, no self-employment was found at all, which makes it plausible that an increase in the number of self-employed and commuters resulting from recent immigration cannot be expected.

Overall, it became clear that the population composition in Doñana is the most distinctive of all the five study areas, and that the dynamics of population composition are also very typical to this specific case. In the first place, just from the high proportion of second home owners in Doñana, it is apparent that the population composition is very different from the other study areas. However, it is also striking that overall the characteristics of the second home population in Doñana corresponded more closely to the incomer groups in the other Dutch and English study areas, than it did to its own incomers and local population groups. Retirees, early-retirees, and households with no ties to a work place were hardly found among the local population and were completely absent in the incomers-resident group, but they were quite numerous among the second-home-residents. The same applies to middle class households. The proportion of working households that are footloose, through self-employment and commuting, is quite high in the local household group, but again completely absent in the incomers-resident population.

5.4 Summary and conclusion

In this section the conclusions on population characteristics and the recent dynamics in these characteristics are given. These conclusions will be described through answering the three research questions central to this chapter.

Is population development in and around protected natural areas different from other rural areas?
On the basis of an analysis of data on population, household and housing stock development, together with migration and natural change figures, it could be concluded that population development in the five case study areas was indeed different from the developments in other nearby rural areas. At the same time, the population development in the five study areas was very varied; which complicates the detection of common features that could be attributed to the presence of protected nature. In spite of this, some common trends were discernible. Firstly, it was noticed that in the last ten to fifteen years population increased, or decline shifted towards population stabilisation or even increase, in all five study areas. In Dwingelderveld and Doñana, this had already been noticed before the 1990s, while in Weerribben, Lauwersmeer and Northumberland it started at the beginning of the 1990s. Secondly, another similarity was that in all five study areas variations in population development were caused by changes in migration surplus, while growth through natural increase remained relatively stable during the whole period. Thirdly, in all cases it was detected that household numbers increased during the whole period, even in those areas where population declined.

It became clear that the population development in the five study areas was different from other rural areas. However, one overriding, common characteristic that caused this difference could not be found. In Dwingelderveld and Doñana, population increase over the whole period between 1985 and 1995 was constant and far above the regional average. In both areas this increase was catalysed through housing construction, which was steered by government involvement. In Doñana population was further attracted through the creation of a labour market for agriculture, construction and the tourist industry. The other three study areas lost
population in the pre-1990 period, but all showed a shift towards a population increase after 1990. For Weerribben this was different from the adjacent rural areas, where population development did not change course at all. For Northumberland this was also different, as the adjacent rural area showed an opposite development and started to lose population again in this post 1990 period.

Overall, it can be concluded that in every study area population development is strongly steered by specific circumstances, of which the presence of protected nature is only one. It was seen that in and around the protected natural territories, population developed differently from other rural areas. Especially in recent years, these natural areas proved very attractive to immigrants.

What are the characteristics of households moving towards protected natural areas?

It has become clear in all five case studies that migrants with certain demographic and socio-economic characteristics, and modes of work and income organisation, show a more than average preference for living in or near protected natural areas. Evidence was found in all five areas of an over-representation in the incomers with characteristics of early-retirees, footloose and middle class households. The low-cost-of-living-seekers were more difficult to detect on the basis of household characteristics alone, but indications for their presence were found among the incomers of Lauwersmeer and possibly also in the Dwingelderveld and Weerribben areas.

Identification of these low-cost-of-living-seekers will continue in the next chapter, where motives for moving to the case study areas will be discussed.

From an over-representation in the incomers-resident population of people over 54 years, it became clear that people who are nearer to retirement seem more interested than average in living near protected natural areas, as do households with no ties to a work place. All three Dutch case study areas and the Northumberland area attracted a relatively large number of the over fifty fours. In the three Dutch study areas people with an early retirement payment were also over-represented. This was not the case in the Northumberland area, but this is probably related to the fact that the presence of early-retirees was neutralised by another household group, in the 35-54 years range, which was also strongly over-represented among incomers. The incomers in Doñana did not show any characteristics of the presence of early-retirees. However, the second home households, which are an important population group in Doñana, did contain relatively many households with characteristics of early-retirees. Overall, it means that early-retirees showed a more than average interest in living in the case study areas, either permanently or on a temporary basis as a second home resident.

Middle class households were traced on the basis of education, income level and employment in white collar occupations. It was noticed in all three Dutch study areas that incomers were concentrated in the middle and higher education classes to a greater degree than in other rural areas. In Doñana the clear over-representation of the higher education classes was only found for the second-home-residents, while the incomers of this area showed a relative concentration of the poorly educated. In Northumberland the relative education levels could not be verified because British reference data were lacking, but comparison with Dutch figures showed a similar distribution over the education classes with a clear concentration in higher education classes for the incomers. Relative income distribution was more difficult to determine, since reference data from other rural areas were only available for The Netherlands. In the Dutch situation it was noticed, that incomers showed a more than average concentration in the lower and higher-middle income groups. In the Dwingelderveld area this over-representation was also found for the highest income group, indicating that this area also attracted households that are in a better average income position than the other two study areas. In the Lauwersmeer area an over-representation in the lowest income group was also found, which can be seen as an indication of a higher than average attraction of lower-cost-of-living-seekers, beside the attraction of middle class households. For Northumberland and Doñana no reference data were available, but the relatively large size of the higher middle income groups among incomers in the former, and a preponderance of second-home-residents in the latter, also points to the presence of middle class households in these study areas when comparison is made with the Dutch areas.

The last indicator for the over-representation of middle class households comes from the proportion of households with white collar occupations. Whether the proportion was relatively high in the incomers population of the study areas could not be verified, as no reference data were available for other rural areas. What
did become clear was that in all the study areas, with the exception of Doñana, the proportion of households occupied in white collar occupations was considerably higher in the incomers-resident population than in the local population, indicating that in recent years their numbers have certainly been increasing. In Doñana it was the second-home-residents that were characterised by a very high proportion of white collar occupations, in comparison with the local residents and incomers.

It should be realised that the different household groups that have been identified as being over-represented in the recent migration flow towards protected natural areas cannot be seen as separate groups. Many of these groups will show a high level of overlap. The early-retirees are also included among the footloose and many of these will also be part of the middle-class households. In Figure 5.6 a diagrammatic overview is given of the way the identified household groups overlap in the study areas.

**Figure 5.6** Representation of way specific household groups overlap that are more than average attracted to protected natural areas

![Diagram showing overlap of household groups](image)

Overall, it could be concluded that all three Dutch study areas and the Northumberland area attracted relatively more middle-class households than other rural areas did. This was most strongly confirmed by the combination of a relatively high education level for incomers, together with a strong over-representation of middle income classes. In Doñana, it was the second-home-residents who bore a clear resemblance in education, income and occupation characteristics to the incomers in the Dutch and Northumbrian studies, while incomers in this Spanish area did not show any resemblance. In addition to the middle-class households, lower-cost-of-living-seekers were also clearly detected in Lauwersmeer, as this area attracted a higher than average proportion of people in the lowest income group, together with a disproportionate number of households living on unemployment payments and other non-salary incomes.

Several indicators for a higher than average attraction of the footloose were found in all five study areas. Footloose households can either be ones that are not tied to a work place, like early-retirees or the unemployed, or households that are working but have greater flexibility to organise their work in such a way that they can work from home, or do not necessarily need to live near to work, like the self-employed, home workers and commuters. In all three Dutch study areas the proportion of incomers that were tied to work was relatively low. In Dwingelderveld and Weerribben this was mainly the result of the high proportion of early-retirees among the incomers. In the Lauwersmeer area it was mainly because of the high proportion of households with unemployment benefit or other non-salary income. Footloose households who were working were also more than averagely attracted to the three Dutch study areas; as the relatively high proportion of self-employed, home-workers and commuters among the incomers population confirmed. In Northumberland, the greater than average attraction of the footloose was only related to the flexible work organisation of employed households in...
this area. No more than an average proportion of untied-households was found among the total recent-resident group in this area. However, among the recent working households a clear over-representation of self-employed, home workers and commuters was found. In Doñana there were no indicators of a higher than average attraction of footloose households. Again it was the second-home residents who had characteristics that qualified them as footloose, as the proportion of households that were not tied to a work place was very large in this group. Finally, besides the higher concentration of early-retirees, middle class, and footloose households and also lower-cost-of-living-seekers, it was also noticed that all three Dutch study areas had attracted relatively more family households with children, and relatively fewer with a single person, than was the case with other rural control areas in the Netherlands. Indicators for a more than average attraction of empty-nesters were therefore not found in the Dutch study areas, on the basis of household composition data. In Northumberland the opposite was noticed, as few households with children were found, which is an indication of a greater than average attraction of empty-nesters to this area.

In what way have recent migration flows affected the population composition in and around protected natural areas? This selective migration process, which was previously discussed, has inevitable implications for the local population composition. The way it affects this is dependent on the characteristics of the local population groups, and the way in which these differ from the characteristics of the incomers. It should also be realised that it is not possible to make definite statements on changes in population composition as a result of migration. This study only concentrates on the effect of immigration on population composition. Information on characteristics of the emigration were not involved in this case.

From earlier sections, it is apparent that migration is age-selective. In all the Dutch study areas an over-representation of the 54-plus age group was found in the recent migration flow, together with an over-representation of the under 35 years age group in Dwingelderveld and Lauwersmeer. Depending on the age composition of the local population, which was the product of a long history of migration to and from the areas, this led to either a relative rejuvenation or ageing. In the Dutch study areas both processes were found. In Dwingelderveld, whose local population was already comparatively old, immigration led to a relative rejuvenation. In Weerribben the population of incomers had an age distribution which was almost identical to the age composition of the local population. Immigration helped to maintain the relatively old age-structure in this area, especially the proportion of households in the pre-retirement age range of 55–64 years. In Lauwersmeer the under 35 age group is relatively small in the local household group. Immigration therefore led to an increase in this group and therefore to a relative rejuvenation. In the Northumberland area the incomers population was strongly concentrated in the 55-plus age group. In spite of this, because of the extremely old population composition of the local population, immigration still led to a relative rejuvenation in this area: in particular the group in the 35-54 age range increased markedly. In Doñana the immigration of permanent residents further added to the already young population structure in the area. The presence of many young households in this study area was, however, compensated for by the strong over-representation of people above the age of 55 in the second-home-resident group. Overall, the effect of this age-selective migration to the study areas is relative rejuvenation in areas with a very old age-structure and rejuvenation in the other areas.

Differences in household composition between incomers and locals in most study areas were limited, and no clear common tendencies in household composition between these areas could be detected. The more than average attraction of middle class households to the study areas goes with an education and income selective migration flow in England and The Netherlands. In all the study areas this leads to a decrease in less well educated and an increase in better educated households. In Dwingelderveld, because the education level is already relatively high, this does not lead to a large shift in population distribution over education classes. However, in Weerribben, Lauwersmeer and Northumberland, education differences between the incomers and local households are larger. In these areas immigration is causing a significant decrease in the lowest education class, together with a significant increase of the highest education class. In Doñana the incomers had the lowest education level, and second-home-residents the highest; the distribution of this population group over the different education classes was very similar to that of the incomers in the Northumberland area.

The effect of immigration on income distribution was also quite similar for all the Dutch and British study areas.
Overall, it led to a general shift towards more higher and middle income households. In Dwingelderveld this was made most apparent by a significant increase of the highest income class, and in the other three areas a significant increase took place in the higher-middle income class. Unlike the Dutch and English situation, immigration in Doñana is not leading to an increase of higher income groups; although the second-home-residents do bring extra purchasing power into the area. However, the strong concentration of incomers in the lower education group and the absence of households in white collar occupations, make it plausible that there is no recent increase in middle class households as a result of immigration. In this aspect, the situation in is very different from the situation in the other four study areas where, in addition to the shift towards higher income groups and better educated people, an increase of households in white collar occupations was also found. Overall, one can therefore conclude that immigration is causing an overall increase of middle class households in the Dutch and British study areas; whereas in Doñana the presence of middle class households only applies to second-home-residents.

Finally, there is a shift in income and working organisation in the study areas as a result of their higher than average attraction for footloose households. Comparison of incomers and local households shows that in the three Dutch study areas this selectivity was applicable to both income and to work organisation, while in Northumberland this applied only to work organisation. In Doñana it were again the second-home-residents that showed strong correspondence with the population groups in the other study areas. In all three Dutch cases the proportion of households of working age who were still tied to a work place was considerably smaller among incomers. In Dwingelderveld and Weerribben this was caused especially by the high proportion of early-retirees. Their number in the local population is therefore expected to increase as a result of immigration. In the Lauwersmeer area, it was more the result of the very high proportion of households receiving unemployment benefit or another form of non-salary income. Their numbers are also expected to increase as a result of recent immigration. In Doñana almost half of the second-home-residents had no ties to work, while among the local and permanent incomers this proportion was lower than in all other study areas.

In relation to work organisation the same phenomena were seen in all the study areas. The proportion of households that were self-employed, working at home and commuting was very high in all the Dutch and British study areas. Since the proportion of those self-employed and of households working at home was already very high among the local households in these areas, immigration did not lead to a further increase, but it only helped to maintain their already large share of the total working population. However, for commuters this was different, as their proportion was considerably higher among incomers. In all four areas, immigration led to a significant increase in the share of commuters in the local population. In Doñana the proportion of self-employed and commuters was relatively high among local households, but incomers contained hardly any footloose, working households.

Overall, one can conclude that household groups with specific characteristics have certainly proved to be more attracted to protected natural areas than other groups have been in recent years. The groups more than averagely attracted were early-retirees, middle class households, and footloose households and sometimes also lower-cost-of-living-seekers and empty-nesters. This led to a selective migration flow towards these areas in relation to age, education and income level, occupation and work and income organisation. Also changes in the local population composition are expected to result from this: for instance; an overall increase in age, or maintenance of higher age groups, a shift towards higher educated and middle and higher income groups, more households with no ties to a work place, many self-employed, households that work at home, and commuters.
6 Protected nature and residential choice

6.1 Introduction

This Chapter deals with the residential choice process in relation to the presence of protected nature through investigating the answer to the following question:

5. What importance does the presence of a protected natural area play in the decision to make a residential move?

This question is answered on the basis of the survey results in the five study areas (see Chapter 5 and Annex 5). This Chapter consists of five Sections. In the next Section the assumptions that structure the analysis, the data and methods used are further explained. In Section 6.3 attention is first paid to the former places of residence and residential history in order to clarify the context within which the residential choice process of the concerning households has taken place. It will also reveal regional and national differences in commitment to places. This is then followed by information on the moving distances and the urbanisation level of the former places of residence, while also paying attention to changes in this pattern in time. In the last part of this Section the revealed disadvantages of the former places of residence are discussed in order to get a better idea of the factors that triggered the decision to move. In Section 6.4 the revealed residential choice considerations of the incomers are discussed. The importance of the presence of the protected natural area in the residential choice process is analysed. In this Section it will not only be determined whether the presence of a protected natural area has influenced the residential choice, but also which specific characteristics of the protected natural areas were of influence in this process.

6.2 Assumptions, data and method

In Figure 6.1 an overview is given of the factors that need to be considered in order to derive an understanding of decisions on residential moves and the role the presence of nature plays in this process. The presence of protected nature is only one of the factors that influence the decision to move. This Figure represents the theoretical considerations as discussed in Chapter 1 in order to translate these into practical methods for the data analysis of this Chapter.

The possibility of living in or near a protected natural area can be seen as one of the opportunities an actor can respond to when going through a residential choice process. Whether an actor will act upon this opportunity depends on several other factors such as personal characteristics, constraints, preferences, societal changes and other perceived opportunities. These factors are all interrelated and come together in the residential choice process; for example constraints are influenced by the personal characteristics of an actor, but also by external factors and these are again influenced by societal changes. In the residential choice process three decision stages are distinguished which are not successive but are interrelated (see Figure 6.1). The definite decision to move is greatly dependent on whether one has a clear idea of the residential characteristics one regards as essential and whether these can be realised. Potential movers are shifting constantly between the three distinctive decision-making phases in which the pull factors of the available alternative places are considered in conjunction with the push factors related to the present place of residence.

In Chapter 5 the relation between personal characteristics and the presence of nature in the residential choice process was already investigated. Evidence was found of a more than average interest of early retirees, middle class households and footloose households for living in the five case study areas. Apparently these households had a preference for living in or near protected nature and their personal characteristics also enabled them to act upon this opportunity. In this Chapter it will be further investigated, whether and how the presence of nature had
played a role in this decision and what other aspects had influenced this residential choice process. Before this is done a couple of assumption can be formulated in relation to the role protected natural areas play in the residential choice process (see Table 6.1).

In the former Chapter only a limited number of personal characteristics was considered. The residential history of a person did not receive attention, although it is considered very important (see Atzema, 1991; Floor & Van Kempen, 1994; Clark & Dieleman, 1996 and Lewis, 1998). According to Lewis (1998, p. 147) the past migrational experiences influence the contemporary decisions to migrate. Also Clark and Dieleman (1996) show that the number of moves influences the probability of moving. Knowing the former places of residence and the number of moves in the past could therefore help to understand what information is used in the deliberation process and why people have certain preferences (see Figure 6.1). Residential choice consideration should therefore be analysed in the context of personal characteristics including the residential history of a person. In general it is assumed that the proportion of households that are more mobile, in that they have already moved many times in their lives, will be high among the incomers in the case study areas. More specifically it is also assumed that people will be more inclined to move to an area that they already know. Return-migration is therefore expected to be important in the five case study areas.

In Chapters 1 and 2 the societal changes that were considered relevant in the context of this study have already been discussed. In this Chapter it will be verified, whether these did indeed play a role in the deliberation process that led to the recent moves towards the case study areas. Changing values and life styles and increased interest in the quality of life and nature and nature conservation, were societal changes considered to be particularly relevant in the context of this study. These changes have affected an increasing number of households and were triggered by developments such as a rise of personal mobility, increased use of telecommunication facilities, increase in disposable incomes and spare time, a growing concern for the environment and the deterioration of it, increased urbanisation and integration of urban and rural spaces (see Marsden, 1990; Bowler, et al., 1992a; Cloke & Goodwin, 1992; Rasker, 1993; North & Smallbone, 1993 and Van Dam, 1995). It is expected in this study that all these developments affect the residential choice process. More specifically it is assumed that it stimulated the rise in number of households that can act on their preference for living near a protected natural area. Three underlying mechanisms are assumed to take place in this process.
The increased personal mobility and the use of telecommunication facilities has made households more mobile and ‘footloose’. Moving towards a protected natural area in a remote rural location also becomes an option for an increasing number of households. In Chapter 5, a recent increase in households that commute was already found in the case study areas and can be seen as a first confirmation of this expectation. In this Chapter it will be verified whether moving distances, as an expression of growing mobility, has indeed increased in recent years.

It is assumed that the increasing urbanisation and deterioration of urban environments led to an increased number of people that wishes to leave crowded urban areas and move to less crowded rural areas because of dissatisfaction with their residential environment. Halliday and Coombes (1995) refer to this urban exodus as ‘anti-metropolitan’ (see also Swanson, 1984 and Huigen, 1996). Many urban centres are suffering from pollution, noise, congestion and crime and are therefore becoming less attractive to live. The natural amenity rich rural areas are still characterised by the opposite of these crowded urban places and are therefore increasingly attracting the so-called \textit{urban drop-outs}. It is therefore expected in this study that the so-called ‘anti-urban’ feelings are also important in the residential choice process of people moving towards the case study areas. In many western urbanised countries an increasing concern is already developing about the growing interest of residential consumers to exchange their urban living environments for amenity rich rural environments (e.g. Champion, 1998 and Ministry of Housing, Physical Planning and Environment, 1997). To address this perceived problem, it is therefore useful to determine what specific motives urban migrants have to move to amenity rich rural areas. In this Chapter it is investigated whether the incomers originating from urban areas increased in recent years and whether the disadvantages as mentioned by them of their former places of residence were indeed related to anti-urban feelings.

The overall main assumption of this study is that the growing concern for the environment in combination with the growing interest of residential consumers to exchange their urban living environments for amenity rich rural environments is an important factor in the residential choice process of people moving towards the case study areas. In many western urbanised countries an increasing concern is already developing about the growing interest of residential consumers to exchange their urban living environments for amenity rich rural environments (e.g. Champion, 1998 and Ministry of Housing, Physical Planning and Environment, 1997). To address this perceived problem, it is therefore useful to determine what specific motives urban migrants have to move to amenity rich rural areas. In this Chapter it is investigated whether the incomers originating from urban areas increased in recent years and whether the disadvantages as mentioned by them of their former places of residence were indeed related to anti-urban feelings.

### Table 6.1 Assumptions on the residential choice process in the five case study areas

<table>
<thead>
<tr>
<th>Assumption</th>
<th>Implication for case study areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Residential history is important in the residential choice process as it</td>
<td>- Households that already experienced many moves are an important group in the incomers households</td>
</tr>
<tr>
<td>influence the knowledge and the preferences an actor has of alternative places to live</td>
<td>- ‘Return migrants’ are an important group in the incomers households</td>
</tr>
<tr>
<td>- Recent increase in personal mobility and use of telecommunication facilities make distance a decreasingly important constraint in the residential choice process</td>
<td>- Migration distances have increased in recent years</td>
</tr>
<tr>
<td>- Urbanisation in general and deterioration of urban environments has increased in recent years</td>
<td>- Incomers from urban places of origin have increased in recent years</td>
</tr>
<tr>
<td>- Overall societal changes such as a rise in personal mobility, disposable incomes and spare time and a growing concern for the environment has stimulated the involvement of quality of life considerations in the residential choice process</td>
<td>- Disturbing characteristics of urban environments, i.e. ‘anti-urban’ considerations, are important push factor in the residential choice process</td>
</tr>
<tr>
<td>- Characteristics of the physical environment, related to the presence of protected nature are important in the residential choice process and are increasingly decisive in choosing a place to live</td>
<td>- The residential environment is important in the residential choice process</td>
</tr>
</tbody>
</table>

1. The increased personal mobility and the use of telecommunication facilities has made households more mobile and ‘footloose’. Moving towards a protected natural area in a remote rural location also becomes an option for an increasing number of households. In Chapter 5, a recent increase in households that commute was already found in the case study areas and can be seen as a first confirmation of this expectation. In this Chapter it will be verified whether moving distances, as an expression of growing mobility, has indeed increased in recent years.

2. It is assumed that the increasing urbanisation and deterioration of urban environments led to an increased number of people that wishes to leave crowded urban areas and move to less crowded rural areas because of dissatisfaction with their residential environment. Halliday and Coombes (1995) refer to this urban exodus as ‘anti-metropolitan’ (see also Swanson, 1984 and Huigen, 1996). Many urban centres are suffering from pollution, noise, congestion and crime and are therefore becoming less attractive to live. The natural amenity rich rural areas are still characterised by the opposite of these crowded urban places and are therefore increasingly attracting the so-called \textit{urban drop-outs}. It is therefore expected in this study that the so-called ‘anti-urban’ feelings are also important in the residential choice process of people moving towards the case study areas. In many western urbanised countries an increasing concern is already developing about the growing interest of residential consumers to exchange their urban living environments for amenity rich rural environments (e.g. Champion, 1998 and Ministry of Housing, Physical Planning and Environment, 1997). To address this perceived problem, it is therefore useful to determine what specific motives urban migrants have to move to amenity rich rural areas. In this Chapter it is investigated whether the incomers originating from urban areas increased in recent years and whether the disadvantages as mentioned by them of their former places of residence were indeed related to anti-urban feelings.

3. The overall main assumption of this study is that the growing concern for the environment in combination with the growing interest of residential consumers to exchange their urban living environments for amenity rich rural environments is an important factor in the residential choice process of people moving towards the case study areas. In many western urbanised countries an increasing concern is already developing about the growing interest of residential consumers to exchange their urban living environments for amenity rich rural environments (e.g. Champion, 1998 and Ministry of Housing, Physical Planning and Environment, 1997). To address this perceived problem, it is therefore useful to determine what specific motives urban migrants have to move to amenity rich rural areas. In this Chapter it is investigated whether the incomers originating from urban areas increased in recent years and whether the disadvantages as mentioned by them of their former places of residence were indeed related to anti-urban feelings.
with all above mentioned societal changes, has led to an increased involvement of quality of life aspects in the residential choice. This growing interest in quality of life aspects refers to a process in which people’s behaviour is increasingly steered by aspects influencing one’s mental and physical wellbeing. As a result, people seem to be placing a greater value on the quality of the living environment, outdoor recreation and living in rural areas near natural amenities (see Bowler, 1992; Johnson & Rasker, 1995 and North & Smallbone, 1993). The quality of the living environment arising from the presence of a protected natural area is therefore suggested to be an increasingly important factor for attracting residents to rural and remote rural areas. This is the central issue in this Chapter, which will be researched by determining the relative importance of characteristics of the residential environment in the residential choice process of the incomers in the five case study areas. The importance of the involvement of the presence of protected nature in this process is measured on the basis of specific residential considerations related to characteristics associated with protected nature. These are not only the presence of nature and wildlife, but also factors such as tranquillity, scenic and cultural amenities, clean air and recreational opportunities. Finally, the above mentioned assumptions have been tested in different regions and in contrasting countries. In previous Chapters several differences and similarities were already described in rural development and functions of nature between the research countries and regions. It is expected that these differences will also be of influence on the relationship between the presence of nature and the residential choice process.

6.3 Residential history, social change and residential choice

In this Section the characteristics of the incomer households of the five case study areas are investigated in relation to residential history, location and urbanisation level of the former place of residence, migration distances and dissatisfaction with former place of residence. To determine whether migration distances and migration flows have changed in time, a comparison is made between incomers, who settled in the last 5 years, and local residents who settled in the last 6 to 20 years in the case study areas. To determine whether the assumed deterioration of the urban environment has influenced and increased the wish to move out of urbanised places towards natural amenity rich rural areas, the urbanisation level of the previous places of residence is taken into account.

6.3.1 Residential history

Residential history is one of the factors that influences the context in which residents develop their residential preferences and possibilities. A description of the residential history of a person reveals preferences, which would normally not come to the surface when asking people directly about their motives to move and to choose a new place to live. In this Section information is presented about mobility of households in general, involving the number of moves, and the ties to the present place of residence, by determining whether the incomers have previously lived in or near the present case study area.

The incomers in both the Dutch and English case study areas are significantly more mobile than the local population groups (see Annex 6, Table 12). It supports the expectation that the inclination to move is strongly influenced by the past experiences of former moves by the household. Of all Dutch case study areas, the incomers in the Weerribben have experienced the highest number of moves. It is also striking that mobility in the English case study area is much higher. For the Spanish case study this information was not collected, and therefore no comparisons could be made.

To determine the proportion ‘return-migrants’, in Figure 6.2 the incomers are divided over three groups:
- households that never lived before in or near the case study area;
- residents that lived before in or near the case study area but left and returned;
- residents that always lived near the case study area, but now moved into the case study area itself.

Figure 6.2 shows that in The Netherlands return-migration is more important than in the English and Spanish case study areas. In Northumberland and Doñana, less than 40% of the new settlers already lived in the region,
whilst in the Dutch case study areas the majority of the new settlers were return-migrants. In the Lauwersmeer area return migration is particularly important as more than 75% of the incomers have already lived in the local area at some stage. An explanation for the high proportion of return-migrants in the Dutch case study areas is probably due to the smaller scale of existence in The Netherlands as compared with the UK and Spain. It is therefore easier for most Dutch households to move to another region and than to still maintain the contacts with the former place of residence. For the Doñana case the low proportion of return migrants can be further explained by the fact that this area has a very young inhabitant history and therefore the households that have lived there before, are small in number and the chances for return migration are smaller. In the Northumberland

**Figure 6.2 Ties with present place of residence**

<table>
<thead>
<tr>
<th>Area</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doñana</td>
<td>11</td>
</tr>
<tr>
<td>Northumberland</td>
<td>20</td>
</tr>
<tr>
<td>Lauwersmeer</td>
<td>69</td>
</tr>
<tr>
<td>Weerribben</td>
<td></td>
</tr>
<tr>
<td>Dwingelderveld</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
</tr>
<tr>
<td>20</td>
</tr>
<tr>
<td>40</td>
</tr>
<tr>
<td>60</td>
</tr>
<tr>
<td>80</td>
</tr>
<tr>
<td>100</td>
</tr>
</tbody>
</table>

*Source: Own Survey, 1996/1997*

**Table 6.2 Ties of second home residents with area of Doñana**

<table>
<thead>
<tr>
<th>Second home household</th>
<th>%/total population (n=56)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Are still living/lived before in area of Doñana</td>
<td>11</td>
</tr>
<tr>
<td>2) Has/have family living in the area of Doñana</td>
<td>20</td>
</tr>
<tr>
<td>3) Have no (former) ties with area of Doñana</td>
<td>69</td>
</tr>
</tbody>
</table>

Area of Doñana: Same region consists of all municipalities which border with or have territory in either the National Park Doñana (Parque Nacional) or the Protected natural area of Doñana (Parque Entorno Natural)

n = number of households

*Sources: (1) Own Survey, 1996/1997*
area, where the proportion of return migrants is low, the average number of moves per incomers household is very high. The same applies to Weerribben, the Dutch case study area with the lowest proportion of return migrants that has also the highest average number of moves per incomer household. This suggests that there is a relationship between moving mobility, and the inclination to return to a former place of residence: the higher the moving mobility, the lower the inclination to return to a former place of residence. The residential choice motives of the second home residents in the Doñana area was examined by asking about the possible ties they had with the area of Doñana. In Table 6.2 there are three groups of ties distinguished. ‘Ties’ refers to possible former experiences with permanent or temporary residence in the area of Doñana or having relatives already living in the area. It turns out that:

In relation to the residential choice motives in the following Sections, it should be realised that there seems to be a national difference in mobility of households and the involvement of ties to former places of residence in the residential choice process. In the Dutch case study areas the mobility of households is lower than in the English case study area. Return migration is also more important in the Dutch than in the English and Spanish case study areas.

6.3.2 Former places of residence

The areas of origin of incomers are compared with those of local residents that settled in the case study areas in the 15 years before the incomers population did are shown in Figures 6.3-6.7. For the Dutch case study areas the majority of the incomers come from provinces in the north of the country and the Randstad areas of Noord- and Zuid-Holland. Between the two time periods there was limited population flow although the number of supplier areas increased. For the Dwingelderveld area there was a small relative decrease in the population flow from the local region (see Figure 6.3). The number of areas of origin also increased slightly. For the Weerribben and Lauwersmeer areas only an increase in the number of areas of origin in the last five years was observed and the importance of the local region did not decrease (see Figures 6.4 and 6.5).

In the Northumberland area the most settlers were from Northumberland, Tyne and Wear and the remaining north and south of England (see Figure 6.6). In the last five years an important change took place, as Tyne and Wear has become considerably more important as a migrant supplier area at the expense of the rest of the county of Northumberland and elsewhere in England. Apparently, the attraction of the countryside became more influential in the residential choice process of households from this northern English conurbation in recent years.

The most important places of origin in Doñana area are the wider area of Doñana and the cities and provinces of Sevilla and Huelva (see Figure 6.7). In the last five years the importance of the provinces of Sevilla and Huelva and the rest of Andalucía as places of origin has progressively increased. This shift suggests that the function of the cities as supplier areas, was replaced by rural areas. In a Spanish region such as Andalucía, the explanation for this shift is probably the high unemployment rate in combination with new agricultural employment opportunities in the area of Doñana.
Figure 6.3 Former places of residence of residents of the Dwingelderveld area

1976-1990

1991-1995

172

173

Protected nature and residential choice 6
Figure 6.4 Former places of residence of residents of the Weerribben area

1976-1990

1991-1995

Protected nature and residential choice
Figure 6.5 Former places of residence of residents of the Lauwersmeer area
Figure 6.6 Former places of residence of residents of the Northumberland area
Figure 6.7 Former places of residence of permanent residents of the Doñana area

Permanent residents moved in 1976-1990

Permanent residents moved in 1991-1995
In Figure 6.8 the second home residents have been distributed over the localities where they have their first homes. The cities of Huelva and Sevilla are the most important permanent residential area. In contrast to most Spanish coastal regions, the Doñana area, has few second home residents from other parts of Spain or from abroad. Doñana is a typical example of an area to where the residents of the crowded Andalucian cities escape from the hot summers. These second home residents are an important group in the population of Doñana, but many also spend relatively long periods in their second homes. From the survey it became clear that more than 70% of the second home residents spend 3 to 6 months on average in the Doñana area.

6.3.3 Migration distance
Under influence of the increased personal mobility of households in our western societies one would expect a relative increase in the longer distance moves. For the case study areas this was investigated by comparing the distribution over migration distance categories in the last 5 years with the distribution over these categories in the 6-20 year period previous to the survey (see Figure 6.9). For this comparison only migration moves from outside the border of the case study areas were involved.

The data in Figure 6.9 do not confirm the expectation that migration distances have increased in the last five years because in all case studies, except the Lauwersmeer area, the opposite was found. For all Dutch and English case study areas the only common feature is a small shift towards the intermediate distance category. The long distance categories decreased in the last five years, except for the Lauwersmeer area, which showed a
significant increase in average migration distances (see also Annex 6, Table 13). This was clearly related with the increased attraction of migrants from the centre and south of The Netherlands in the last five years as discussed in the former Section (see also Figure 6.5).

The areas that showed the strongest shifts in migration distance categories were the Dwingelderveld and Doñana area (see also Annex 6, Table 13). In the Dwingelderveld area, short distance migration increased most strongly, while long distance migration decreased. This was especially related to the recent increased attraction of residents from nearby provinces in the north of the country (see also Figure 6.3). In the Spanish case study area, the small distant migration increased together with the long distant migration at the expense of the intermediate distant category (see Annex 6, Table 13). Figure 6.7 shows that this is related with two factors: Firstly, the nearby rural areas became more important in the recent migration flow at the expense of the large cities. Secondly, other rural parts of Andalucía also started to become migration supplier areas in the last five years, while this did not happen in the period before. In the Northumberland study area hardly any difference was detected in distribution over migration distance categories; most moves were concentrated in the intermediate and long distance categories in both periods. The only change found was a small decrease in the long distance category, which is especially related with the recent growth of migrants from Tyne and Wear (see Figure 6.6).

**Figure 6.9 Distribution of residents over migration distance categories**

Dwingelderveld (1)= residents settled <= 5 years ago (n=51) (average migration distance=84 km)  
Dwingelderveld (2)= residents settled 6-20 years ago (n=22) (average migration distance=98 km)  
Weerribben (1)= residents settled <= 5 years ago (n=84) (average migration distance=73 km)  
Weerribben (2)= residents settled 6-20 years ago (n=22) (average migration distance=80 km)  
Lauwersmeer (1)= residents settled <= 5 years ago (n=102) (average migration distance=96 km)  
Lauwersmeer (2)= residents settled 6-20 years ago (n=36) (average migration distance=87 km)  
Northumberland (1)= residents settled <= 5 years ago (n=55) (average migration distance= n.a.)  
Northumberland (2)= residents settled 6-20 years ago (n=56) (average migration distance= n.a.)  
Doñana (1)= residents settled <= 5 years ago (n=15) (average migration distance= n.a.)  
Doñana (2)= residents settled 6-20 years ago (n=10) (average migration distance= n.a.)

n = number of households  
n.a. = no data available  
Source: Own survey, 1996/1997
Overall, one can conclude that in all case study areas the distribution over the distant groups changed relatively little in time. The Dwingelderveld and the Doñana area were the only that showed larger shifts over distance categories, which went together with a relative increase in the short distance categories. The expectation that migration distances increased in recent years could only be confirmed for one of the case study areas: the Lauwersmeer.

6.3.4 Urbanisation level of former place of residence

A frequently mentioned motivation to move, is dissatisfaction with the present place of residence. The causes for this dissatisfaction are often diverse and can be related with changes in the personal situation, but can also have external causes such as changes in the residential environment. In this study it is expected that with the deterioration of the urban environment the interest of urbanites to move to amenity rich rural areas has increased recently. To verify this, a time comparison is made by putting together the urbanisation level of the places of origin of the households that settled in the last 5 years and last 6 to 20 years in the case study areas. For the Dutch areas an urbanisation classification (CBS, 1995) was applied to areas people moved out of in the last 5 and in the last 6 to 20 years. In real, in the period between 1976-1990 and 1991-1995 the urbanisation level of many places of origin has changed. Most areas have become more urbanised in this period because of a general increase in population density, common to most western urbanised countries (see Chapter 2). This means that

**Figure 6.10 Urbanisation level of former place of residence for incomers and locals**

![Bar chart showing urbanisation levels of former place of residence for incomers and locals in Dutch rural municipalities.](chart)

*To characterise the former places of residence of the incomers in the 3 Dutch case study areas, the urbanisation classification system of the CBS (Central Bureau of Statistics, 1995) was used. The CBS relates the urbanisation level to the density of human activities which is expressed by the address density in Dutch municipalities (Den Dulk et al, 1992). In this Figure the 6 different urbanisation classes of the CBS have been brought back to 3 classes. The address densities are mentioned in brackets in the legend in addresses/km2.

**Data refer to all incomers (settled between 1990-1994) in Dutch rural municipalities (rural= address density< 500 addresses/km2.)

- Dwingelderveld (1) = residents settled <= 5 years ago (n=51)
- Dwingelderveld (2) = residents settled 6-20 years ago (n=22)
- Weerribben (1) = residents settled <= 5 years ago (n=84)
- Weerribben (2) = residents settled 6-20 years ago (n=22)
- Lauwersmeer (1) = residents settled <= 5 years ago (n=102)
- Lauwersmeer (2) = residents settled 6-20 years ago (n=36)

n = number of households

one should take into account that the proportion of households that originates from urban areas has probably been slightly overestimated for the residents that settled in the areas between 6 and 20 years ago in Figure 6.10. In comparison to other Dutch rural areas, the study areas received many immigrants from urban places in the 5 former recent years. When comparing the situation between the three case study areas, one can see that the proportion of incomers that came from urban places is almost identical. The share of households that came from moderately urban and rural areas varies more strongly.

To determine whether the migrants from urban origin increased in recent years, the distribution over urbanisation classes of migrants settled in the last 5 years is compared with migrants from the last 6-20 years period (see Figure 6.10 and Annex 6, Table 14). For the Dwingelderveld and Weerribben area one can see the same pattern of change. The proportion of incomers from urban origin increased strongly. This increase was strongest in the Weerribben area (see Annex 6, Table 14). At the same time the migrants coming from moderately urban areas and rural areas decreased. This means that, the assumption that in recent years the number of people that exchanged urbanised areas for rural living environments have increased, can be confirmed for the situation in the Weerribben area and, although less strongly, for the Dwingelderveld area. In the Lauwersmeer area the opposite picture was derived. The number of residents coming from urban areas decreased in the last 5 years, while the proportion of residents moving out of moderately urban and rural areas increased slightly. This change was not so large to make it significant however (see Annex 6, Table 14). Since no address density data were available for UK administrative entities it was decided to use the OPCS area

**Figure 6.11 OPCS categorisation* of former place of residence of incomers and locals in the Northumberland case study area**

- **Rural areas** in the classification are characterised by high values for agricultural work and low deprivation variables. The **prospering areas** score well above national average on conventional indicators of prosperity, like low proportion of unemployed, high availability of cars and high proportion of people with higher educational qualifications. The **maturer areas** score above the national average on variables like proportion of people in the retirement age, and indicators of relative prosperity. The **urban centres** score above national average on variables like proportions of households without cars, people who travel to work by public transport, people in manufacturing work and people in ethnic minorities. The **mining and industrial areas** are characterised by a tradition of mining and industry, by de-industrialisation and above national averages in deprivation (e.g. high percentage of unemployed and people with long-term illness). The **inner London areas** are entirely located within Greater London and are characterised by e.g. above national average proportion of people in ethnic minority groups, single persons households, and people who travel to work by public transport and most of the districts have above average values in deprivation variables.

* The categorisation used is the OPCS classification for England, Scotland and Wales. It is based on a cluster analysis on 37 different variables derived from the 1991 Census Small Area Statistics (SAS). The 37 variables concern demographic structure, household composition, socio-economic situation and employment situation. The allocation of the areas has been applied to local authority districts (for more information see Wallace, D. et al, 1995). Eventually seven different areas have been distinguished: Rural Areas, Prospering Areas, Maturer Areas, Urban areas and Inner London. For the purpose of this study the number of categories had to be reduced by adding up Maturer with Prospering areas and Urban with the Mining and Industrial areas and Inner London area.

classification for indicating the urbanisation level of areas of origin. In comparison to the Dutch urbanisation classification, the OPCS is a much more comprehensive classification not only produced on the basis of population density figures.

From Figure 6.11 it becomes clear that the most important recent migration supplier areas for Northumberland were other rural areas and the urban, mining and industrial areas. To determine whether any shifts took place in types of areas of origin in the last two decades the incomers group is compared with the resident group who moved in the last 6-20 years (see also Annex 6, Table 15). The share of households coming from urban, industrial and mining areas was increased in recent years at the expense of households coming from rural, mature and prosperous areas. The shift is particularly related to the increasing importance of the mining and industrial areas of the Tyne and Wear conurbation, as already discussed in Section 6.3.3 (see also Figure 6.6).

Since there was no classification system available to determine the urbanisation level of migration supplier areas for Spain, no similar analysis could be done for the Doñana area. However, in Figure 6.7, in Section 6.3.3, a shift is detected in migration flows from urban to more rural places of origin in recent years. This shift demonstrated that the smaller cities and rural areas in the provinces of Sevilla and Huelva had become more important as migrant supplier areas, at the expense of migration flows from the major cities of Sevilla and Huelva.

In conclusion the Dwingelerveld, the Weerribben and the Northumberland study areas showed an increase in migrants from urban origin indicating the expected increase in anti-urban motivated migration. However, the Lauwersmeer and Doñana case studies show the opposite pattern. In the next Section, attention is paid to the disadvantages of former living places those anti-urban motivations in the residential choice process studied.

### 6.3.5 Disadvantages of former residential environment

The respondents were asked about the disadvantages of their former place of residence, in order to understand the reasons that triggered the wish to move and the considerations that played a role in the deliberation of alternatives that resulted in the eventual move (see Figure 6.1). A distinction was also made between disadvantages mentioned by urban migrants and by non-urban migrants, to investigate to what extent anti-urban motivations to move had been of influence in the residential choice process. In the following Section the disadvantages mentioned by the Dutch and Northumberland case study populations are discussed. The situation in the Doñana case study will not receive attention as no information on disadvantages of the former places of residence was collected in this case study area.

Table 6.3 shows that the majority of the surveyed residents mentioned disadvantages for their former living environment probably because they always try to improve their residential situation when moving. A comparison of the opinion of residents that moved from urban and from rural areas, shows that more residents of urban origin mentioned disadvantages. Thus urban environments gave more reasons not to be satisfied than rural environments. This difference was found in both Dutch and Northumberland case studies. However, the Northumberland respondents mentioned relatively few disadvantages for their former places of residence.

An overview of the disadvantages of the former residential environment as mentioned by the Dutch case study populations is given in Table 6.4. It should be realised that these disadvantages were mentioned by households that had already moved away. The stated disadvantages of their former places of residence were related to the situation in the present place of residence. The answers most often given were related with disadvantages specific to urbanised areas due to high population density, pollution and noise. Motivations that emphasise the lack of natural and rural amenities in urban areas and social motivations are mentioned less frequently. As expected from the literature on motivations to move, the dissatisfaction with the former dwelling was also mentioned quite often.

When comparing the answers in the three Dutch case study areas, there are differences in distribution between the categories, which are related to the specific local situations. For Dwingelerveld the proportion of answers in the category related to social contacts is significantly higher than in Weerribben. In Weerribben but also to a lesser extent in Lauwersmeer, the proportion of answers in the category related to dissatisfaction with former house/garden is significantly higher than in the other areas, which indicates that newcomers to these areas were often moving because of changing needs. The reasons to become unsatisfied with ones house are often related to experiencing a new life event, such as getting children, children leaving the house or stopping work. In
### Table 6.3 Relative number of incomers that mentioned a disadvantage of their former place of residence

<table>
<thead>
<tr>
<th>Area</th>
<th>Mentioned disadvantage</th>
<th>P-Chi</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Dwingelderveld Urban (1)</td>
<td>92</td>
<td>8</td>
</tr>
<tr>
<td>Rural (2)</td>
<td>87</td>
<td>13</td>
</tr>
<tr>
<td>Weerribben   Urban (1)</td>
<td>82</td>
<td>18</td>
</tr>
<tr>
<td>Rural (2)</td>
<td>77</td>
<td>23</td>
</tr>
<tr>
<td>Lauwersmeer  Urban (1)</td>
<td>91</td>
<td>9</td>
</tr>
<tr>
<td>Rural (2)</td>
<td>71</td>
<td>29</td>
</tr>
<tr>
<td>Northumberland Urban (3)</td>
<td>73</td>
<td>27</td>
</tr>
<tr>
<td>Rural (4)</td>
<td>52</td>
<td>48</td>
</tr>
</tbody>
</table>

(1) Address density > 500 addresses/km2 according to CBS urbanisation classification system (see Figure 6.9)
(2) Address density <= 500 addresses/km2 according to CBS urbanisation classification system (see Figure 6.9)
(3) Urban areas consist of the OPCS classes: Urban areas, Mining and Industrial areas, Inner London and Maturer and Prosperous areas (see Figure 6.10)
(4) Rural areas consist of the OPCS class: Rural area (see Figure 6.10)
* Significant difference (at 0.05 significance) between incomers and local household groups
** Significant difference (at 0.1 significance) between incomers and local household groups
*** Number of cells with expected frequencies > 20% which implies that no Pearson Chi-square can be determined
n = number of households
P-Chi = Pearson Chi-square shows the differences in distribution over urban and rural population groups
Source: Own survey, 1996/1997

### Table 6.4 Stated disadvantages of the former place of residence in the Dutch case study areas

<table>
<thead>
<tr>
<th>Disadvantage</th>
<th>Dwingelderveld (n=90)</th>
<th>Weerribben (n=134)</th>
<th>Lauwersmeer (n=170)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Too urbanised (densely populated, too much traffic/noise/pollution)</td>
<td>49</td>
<td>40</td>
<td>41</td>
</tr>
<tr>
<td>2) Crime/drugs/unsafe</td>
<td>8</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>3) House/garden did not satisfy wishes</td>
<td>7*</td>
<td>22*</td>
<td>15</td>
</tr>
<tr>
<td>4) Social (no friends/not nice neighbours)</td>
<td>18*</td>
<td>8*</td>
<td>13</td>
</tr>
<tr>
<td>5) Lack of natural and outdoor amenities</td>
<td>3</td>
<td>9*</td>
<td>4*</td>
</tr>
<tr>
<td>6) Location (further away from work/services)</td>
<td>6</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>7) Don’t like city/prefer to live in countryside</td>
<td>3</td>
<td>1*</td>
<td>5*</td>
</tr>
<tr>
<td>8) Other</td>
<td>7</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

* case study areas scores significantly different (Z-score => or <= +/- 1.96, significance at 0.05) for this answer category in relation to at least one of the Dutch case study areas.
n = number of answers
Source: Own survey, 1996
In combination with the strong concentration of incomers in the 55-plus age group, it can therefore be concluded that many households that moved to the Weerribben area have experienced one of these life events. This therefore further confirms that the early retirees that were already found in Chapter 5 often coincide with empty nesters in the Weerribben area. In the Lauwersmeer area, where the proportion of younger people in the age of starting to form a family and the people in the 55+ age group are relatively overrepresented, both young family builders and empty nesters can be expected to be more than average attracted to this area. That young family builders probably search for a dwelling in the Lauwersmeer because housing prices are relatively low. For became apparent that the Weerribben area scores were higher on the answer category related to ‘lack of natural and outdoor amenities’. Apparently, the incomers in the Weerribben area value these amenities more than the in the Dwingelderveld and Lauwersmeer area, while in the Lauwersmeer area more incomers had a preference for rural amenities.

The disadvantages mentioned for the former residential environment in the Northumberland area are given in Table 6.5. In Northumberland the distribution between the answer categories is quite similar to the distribution in the Dutch case study areas. Anti-urban motivations related to high population density, Figures, traffic, noise and pollution, were most often mentioned. For two items significant different scores between Northumberland and the Dutch case study areas were detected. The Northumberland residents saw high crime rates as a major disadvantage of their former residential environment and mentioned this factor significantly more often than in the Netherlands. The Dutch residents mentioned the dissatisfaction with former house and garden and the lack of social contact in their former place of residents more often.

To determine whether migrants coming from urban and from rural areas have other residential choice considerations, the distribution of answers over disadvantage categories for these two groups is also given (see Annex 6, Table 16 and 17). In the Dwingelderveld and Northumberland area because of the relatively small sample, statistically reliable comparison between urban and rural migrants could only partially be made. The figures show differences between urban and rural migrants in distribution over answer categories. As expected, the urban migrants in all three Dutch case study areas score significantly higher on the anti-urban motivations related to population density, traffic, noise, pollution and crime. The rural residents mainly mentioned the lack of social contacts and services and/or the de-centralised location of the former place of residence and the disadvantages of the former house and garden. The lack of natural and rural amenities is not mentioned very frequently, and than by an urban rather than by a rural migrant.

**Table 6.5 Stated disadvantages of the former place of residence in Northumberland**

<table>
<thead>
<tr>
<th>Northumberland (n=64)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Too urbanised (too densely populated, too much traffic/noise, polluted)</td>
</tr>
<tr>
<td>2) Crime/drugs/unsafe</td>
</tr>
<tr>
<td>3) House/garden did not satisfy wishes</td>
</tr>
<tr>
<td>4) Social (no friends/not nice neighbours)</td>
</tr>
<tr>
<td>5) Lack of natural and outdoor amenities</td>
</tr>
<tr>
<td>6) Location (further away from work/services)</td>
</tr>
<tr>
<td>7) Don’t like city/prefer to live in countryside</td>
</tr>
<tr>
<td>8) Other</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

* case study areas scores significantly different (Z-score => or <= +/- 1.96, significance at 0.05) for this answer category in relation to at least two other Dutch case study areas.

n = number of answers
Source: Own survey, 1997
The urban migrants in the Northumberland area, scored highly on anti-urban reasons such as high crime rates, too much congestion and noise, high population density and the fact that people preferred to live in the countryside. It is striking that migrants originating from other rural areas also saw the high population density as an important disadvantage. The second most important disadvantage mentioned by these migrants was the lack of natural and outdoor amenities in the former place of residence. It is therefore concluded that incomers from urban areas were less satisfied with their former urban residential environment than those originating from rural areas. Considerations related to congested urban areas such as high population density, traffic, noise, pollution and high crime rates, were the main push factors for incomers not to be satisfied with their former place of residence. In the Northumberland case study the emphasis was more on high crime rates than in the Dutch case study areas. Whilst incomers originating from an urban area mentioned anti-urban disadvantages, the incomers originating from rural areas more often mentioned push factors such as dissatisfaction with their former house and/or garden and lack of or bad social relationships.

6.4 Revealed residential choice considerations

During the process of finding a new house, several choices have to be made. The area where the new home is to be located has to be determined. A picture has to be formed about the minimal requirements for the new dwelling and requirements for a residential environment have to be met. By asking questions in the survey about the different aspects of the decision process that preceded the eventual move to the case study areas, the influence of the presence of the protected natural area on this process could be determined. The motives referring to the residential environment are examined in more detail as these reveal motives that can be related to the presence of a protected natural area. In the next Section the residential choice considerations are described in each case study. Section 6.4.1 starts with an examination of the relative importance of the residential environment in the choice of house. Section 6.4.2 describes the most important reasons to select the wider residential environment. Finally in Section 6.4.3 the specific reasons in the choice of house are discussed.

6.4.1 Relative importance of the residential environment in the residential choice process

From Table 6.6 it becomes clear that there are clear differences between the case study areas in relation to the importance attached to the residential environment in the residential choice process. In the Dwingelerveld and Weerribben area the majority of the incomers stated that the characteristics of the residential environment had been equally or more decisive in their decision on the eventual move than the characteristics of the dwelling. In the Lauwersmeer however, the characteristics of the dwelling turned out to have been more important. In the Northumberland area the respondents seemed to have more problems with indicating the relative significance of both aspects. In the majority of the cases, either the environment was most important or the environment and the dwelling were equally important. The second home residents in the Doñana area were the group that were most outspoken in the significance attached to the residential environment. This was also to be expected, as second homes are usually used for spending one’s spare time and people prefer to do this in attractive surroundings that offer enough opportunities for outdoor activities. Overall it could be concluded that it was not possible to unravel what aspects obtained more priority in the residential choice process: the characteristics of the residential environment or the characteristics of the dwelling. It was observed that most households had difficulty with separating or prioritising the selection of both dwelling and living environment in the residential choice, as both have to meet minimal requirements. The assumption that the residential environment is important could be confirmed, but an overall picture of what was more decisive in the eventual decision to move could not be derived. The strong differences in distribution over answer categories between the case study areas, even between the Dutch case study areas also suggests that the importance of the residential environment in the residential choice depends strongly on the specific characteristics of the area in combination with the presence of desired housing within this area.
6.4.2 Motivations to choose the area of residence

The first question asked to incomers was to give the two main reasons to choose the case study area as new place of residence. For the analysis these answers have been grouped in twelve categories. In order to get a good understanding of the way aspects of the presence of protected nature were involved, the category that relates to characteristics of the physical environment has been further sub-divided into six categories. The results for the Dutch, British and Spanish case study areas are discussed separately.

**Dwingelderveld, Weerribben and Lauwersmeer**

As becomes clear from Table 6.7, the scores on the different motivations to choose the area are rather identical for the Dwingelderveld and Weerribben, while the Lauwersmeer area diverges more often. In all three areas the largest proportion of motives, relate to characteristics of the physical environment. The ‘job’ and ‘back to the roots’ categories also received a high score. The importance of the ‘job’ motivation is not surprising as this is still a very important reason for households to move. The proportion of incomers that mentioned this motivation matches well with the 21% of incomers that moved towards all Dutch rural areas for job related reasons (WBO, 1993/1994). The proportion of incomers that mentioned ‘back to the roots’ is still relatively small, given the fact that in Section 6.3.2 it became clear that in all Dutch study areas at least 40% of the incomers had already lived in the same region before.

The high score on characteristics of the physical environment is striking and consistent for all three case study areas, although it is significantly higher in the Weerribben in comparison to the Lauwersmeer. The physical environment category is still the highest scoring motivation for the Lauwersmeer, but the proportion of answers in this category is even larger for the Dwingelderveld and especially the Weerribben. This difference can be most clearly attributed to the significantly higher score on ‘the presence of nature and wildlife’ in the Dwingelderveld and Weerribben. The Weerribben area also scores high ‘on presence of water’. Apparently, the type of natural amenities present in the Lauwersmeer have less influence on the residential choice than the type in Dwingelderveld and Weerribben. This may be related to characteristics of the Lauwersmeer natural area, but it may also be attributed to differences in preference by the incomers in the study areas. In Chapter 7, where more information is given about the way local residents perceive and use the near to home nature, this is further clarified. Other aspects of the physical environment that were often mentioned as a residential choice

<table>
<thead>
<tr>
<th></th>
<th>dwelling most important</th>
<th>residential environment most important</th>
<th>equally important or no clear preference</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dwingelderveld</strong> (n=51)</td>
<td>22</td>
<td>49</td>
<td>29</td>
<td>100</td>
</tr>
<tr>
<td><strong>Weerribben</strong> (n=82)</td>
<td>34</td>
<td>39</td>
<td>27</td>
<td>100</td>
</tr>
<tr>
<td><strong>Lauwersmeer</strong> (n=98)</td>
<td>54</td>
<td>19</td>
<td>27</td>
<td>100</td>
</tr>
<tr>
<td><strong>Northumberland</strong> (n=55)</td>
<td>37</td>
<td>23</td>
<td>40</td>
<td>100</td>
</tr>
<tr>
<td><strong>Doñana incomers</strong> (n=10)</td>
<td>50</td>
<td>40</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td><strong>Doñana second home residents</strong> (n=53)</td>
<td>25</td>
<td>70</td>
<td>5</td>
<td>100</td>
</tr>
</tbody>
</table>

n = number of answers
Source: Own survey, 1996/1997

### Table 6.6 Ranking of the importance of the characteristics of the dwelling and the residential environment in the residential choice process
consideration in all three areas were of a more general character and relate to the aesthetic assets and the peace and quiet in the areas.

In the beginning of this Section it was already shown that for the incomers in the Lauwersmeer the wider residential environment had been less important in the residential choice than for those in the other two Dutch study areas. This is supported by the relatively lower involvement of the characteristics of the physical environment in the residential choice. Instead of this, the Lauwersmeer area scores significantly higher on motivations related to personal characteristics and constraints, such as income situation, work and income organisation and residential history. The higher score on the motivation related to house price further support the in Chapter 5 already investigated expectation that lower-cost-of-living-seekers are an important migration group in this area. The housing prices in the Lauwersmeer area are indeed amongst the lowest of The Netherlands (NVM, 1997). Other motivations often mentioned by incomers in the Lauwersmeer were social relations and anti urban considerations. Finally, it is striking that the ‘presence of water’ in the Lauwersmeer was not mentioned as often as in the Weerribben, even though there is a large lake present in this area. This may be related with the fact that in the Weerribben houses and villages are more often located within the natural area nearer to the waterside, whilst in the Lauwersmeer this is not the case.

Table 6.7 The two most important reasons(1) to choose the case study area as a new place of residence

<table>
<thead>
<tr>
<th></th>
<th>Dwingelderveld (n=82)</th>
<th>Weerribben (n=130)</th>
<th>Lauwersmeer (n=158)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Job related</td>
<td>18</td>
<td>19</td>
<td>21</td>
</tr>
<tr>
<td>2) Characteristics (physical) environment:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Beautiful/landscape/remote</td>
<td>15</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>b. tranquility</td>
<td>11</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>c. clean/healthy air/no pollution</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>d. presence nature/wildlife</td>
<td>16*</td>
<td>18*</td>
<td>7*</td>
</tr>
<tr>
<td>e. presence water/beach</td>
<td>0*</td>
<td>10*</td>
<td>2*</td>
</tr>
<tr>
<td>f. rural/countryside</td>
<td>1</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>3) Characteristics house/garden</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>4) Price of house</td>
<td>2*</td>
<td>2*</td>
<td>13*</td>
</tr>
<tr>
<td>5) Availability house</td>
<td>2</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>6) Back to roots</td>
<td>12</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>7) Knew area already (through holidays)</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>8) Social relations (family/friends)</td>
<td>6</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>9) Near services/centrally located</td>
<td>6*</td>
<td>0*</td>
<td>1*</td>
</tr>
<tr>
<td>10) Possibility outdoor activities</td>
<td>2*</td>
<td>2</td>
<td>0*</td>
</tr>
<tr>
<td>11) No crime/not crowded</td>
<td>0</td>
<td>0*</td>
<td>4*</td>
</tr>
<tr>
<td>12) Other</td>
<td>5*</td>
<td>2</td>
<td>0*</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

(1) Every respondent was asked to give two reasons, if only one reason was given, this reason is counted twice.
* case study areas scores significantly different (Z-score => or <= +/- 1.96, significance at 0.05) for this answer category in relation to at least one of the other Dutch case study area(s).
n= number of answers
Source: Survey, 1996
In Chapter 5 it was shown that households with specific characteristics are more than average represented amongst the incomers to the Dutch study areas. One of these groups was the *early retirees*. To verify whether the residential choice of people above 54 were indeed less job motivated and more driven by environmental considerations such as the presence of natural amenities, a comparison was made for stated motivations between younger and older residents (see Annex 6, Tables 18). This comparison shows that elder residents hardly mention job-related motivations. In the case of the Weerribben and the Lauwersmeer area, these elder groups involve characteristics of the physical environment more often in their residential choice considerations than the younger do. This outcome further supports the expectation that elder people are more than average attracted to protected natural areas. Another observation is that for the Dwingelerveld the elder residents were considerably more often driven by *back-to-the-roots* migrations than elderly in the other case study areas.

Since in Chapter 5 it was seen that *middle class* households were more than average interested in living in the study areas, it can also be expected that these more often involve considerations related to the quality of the living environment in their choice of house. To verify this, a comparison was made of the stated residential choice motivations of lower and higher education groups (see Annex 6, Table 19). A higher education is assumed to be one of the characteristics of the middle class household group. The comparison shows that in the Weerribben and Lauwersmeer area, higher educated more often mentioned motives related to characteristics of the environment. However, it also becomes clear that higher educated score as high on job related considerations as lower educated. In the Dwingelerveld and the Lauwersmeer area even the opposite is the case as higher educated mention job related considerations more often than the lower educated do. In the Lauwersmeer area it is seen that the lower educated considerably more often move to this area because of the lower housing prices than the higher educated do. It further supports the conclusion that in the Lauwersmeer area residential choice motivations are more often driven by personal characteristics and constraints.

Overall it can be concluded that strong similarities were found in the motivations given to select the three Dutch areas as new places of residence. The main motivations were related to characteristics of the physical environment, followed by job related considerations and ‘back to the roots’ migration. In the Dwingelerveld and Weerribben area characteristics of the physical environment were of greater importance and were more often connected to the presence of natural amenities. In the Lauwersmeer area, motivations were more often driven by personal characteristics and constraints, such as ‘low housing prices’ indicating that lower costs of living seekers are an important group in this area.

**Northumberland**

The motivations given to choose the Northumberland National Park area as a new place of residence show a lot of overlap with the reasons given in The Netherlands (see Table 6.8). The largest proportion of motivations was also directly related to characteristics of the physical environment and job related motivations came second. Well over 40% of the answers fell in the category of characteristics of the physical environment. The proportion of job related motivations was similar to the in the Dutch areas.

When looking more closely at distribution of answers over the environmental categories the picture in Northumberland diverges from the in the Dutch areas. The appreciation of the environment in Northumberland is especially related with perceived aesthetic and rural quality and peace and quiet. Natural amenities were less important in the residential choice, whilst rural amenities of Northumberland were mentioned relatively more often. There are two main explanations for this difference: Firstly, it indicates that the Northumberland National Park area is not perceived as a ‘natural’ area and therefore there is no mention of natural qualities either. This also shows that the concept of ‘nature’ in Britain is different from the in The Netherlands. Secondly, it suggests that rural amenities get more attention in Britain, which supports the existence of a wider spread idolisation of the countryside, a so-called ‘rural idyll’. Another significant difference with the Dutch areas is that incomers in Northumberland area more often driven by anti-urban motivations (see Table 6.8). This is related with the relatively high proportion of incomers originating from urban, mining and industrial centres such as the Tyne and Wear area. This is also in line with the relatively high score on anti-urban motivations, mentioned as disadvantages of former places of residence by many incomers in Northumberland, as already discussed in Section 6.3.5.
That the score on ‘back to the roots’ migration is lower than in The Netherlands is also expected as the proportion of return migration was significantly lower for Northumberland (see Section 6.3.1). The zero score on ‘location’ and ‘services’ further supports the remote rural character of the Northumberland National Park area. The higher score on ‘price of house’ in comparison to the Dwingelderveld and Weerribben indicates that also here a small group of incomers, like in the Lauwersmeer area, are lower costs of living seekers. This is not surprising as housing prices are still under the English average in Northumberland and within this territory housing prices vary strongly. There are a couple of remotely situated parishes where relatively cheap housing can be found. This housing is often situated in former Forestry Commission estates such as Stonehaugh, Kielder and Byrness, where services such as shops and public transport are completely absent. In the last decade Forestry Commission housing has been sold off to private households.

Like for the Dutch situation it was also investigated whether the overrepresentation of elderly amongst the incomers to Northumberland is also supported by the stronger stated preference for environmental aspects (see Annex 6, Table 20). The comparison of the younger and elder groups shows the same pattern because elderly hardly mention job-related motivations and they also involve characteristics of the physical environment more often in their residential choice.

Since the Northumberland area was also characterised by a more than average attraction of middle class

<table>
<thead>
<tr>
<th>Table 6.8 The two most important reasons(1) to choose the case study area as a new place of residence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northumberland (n=102)</td>
</tr>
<tr>
<td>1) Job related</td>
</tr>
<tr>
<td>2) Characteristics (physical) environment:</td>
</tr>
<tr>
<td>a. Beautiful/landscape/remote</td>
</tr>
<tr>
<td>b. tranquillity</td>
</tr>
<tr>
<td>c. clean/healthy air/no pollution</td>
</tr>
<tr>
<td>d. presence nature/wildlife</td>
</tr>
<tr>
<td>e. presence water/beach</td>
</tr>
<tr>
<td>f. rural/countryside</td>
</tr>
<tr>
<td>3) Characteristics house/garden</td>
</tr>
<tr>
<td>4) Price of house</td>
</tr>
<tr>
<td>5) Availability house</td>
</tr>
<tr>
<td>6) Back to roots</td>
</tr>
<tr>
<td>7) Knew area already (through holidays)</td>
</tr>
<tr>
<td>8) Social relations (family/friends)</td>
</tr>
<tr>
<td>9) Near services/centrally located</td>
</tr>
<tr>
<td>10) Possibility outdoor activities</td>
</tr>
<tr>
<td>11) No crime/not crowded</td>
</tr>
<tr>
<td>12) Other</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>100</td>
</tr>
</tbody>
</table>

(1) Every respondent was asked to give two reasons, if only one reason was given, the reason is counted twice.
* Northumberland case study area scores significantly different (Z-score => or <= +/- 1.96, significance at 0.05) for this answer category in relation to at least two Dutch case study areas.

n= number of answers
Source: Survey, 1997
households it was also investigated whether higher educated, as representatives of this group, involved environmental aspects more often in their residential choice (see Annex 6, Table 21). In comparison to the Dutch study areas, the higher educated group in Northumberland is even more pronounced in the stated residential preferences for environmental considerations. It is also seen that the higher educated, less often involve job related motivations in their residential choice whilst, similar to the Lauwersmeer, the lower educated more often moved to the Northumberland because of the lower housing prices.

It could therefore be concluded that in Northumberland motivations related to the characteristics of the physical environment were most important in the residential choice. However, in contrast to The Netherlands, ‘presence of natural amenities and wildlife’ were hardly mentioned as a residential choice consideration, whilst ‘rural aspects of the physical environment’ and ‘aesthetic’ and ‘tranquillity’ aspects were mentioned very often. Job related motivations came on the second place and ‘back to the roots’ migration was hardly an issue in Northumberland. Instead it were social relationships and anti-urban motivations that were also mentioned.

| TABLE 6.9 The two most important reasons(1) to choose the case study area as a new place of first and second home residence |
|--------------------------------------------------|--------------------------|--------------------------|
| Doñana                                           | Incomers (n=26)          | 2-home residents (n=54)  |
| 1) Job related                                   | 77*                      | 2**                     |
| 2) Characteristics (physical) environment:       |                          |                          |
| a. Beautiful/landscape/remote                    | 4                        | 9                       |
| b. tranquility                                  | 4                        | 6                       |
| c. clean/healthy air/no pollution                | 0                        | 0                       |
| d. presence nature/wildlife                      | 0                        | 6                       |
| e. presence water/beach                          | 4                        | 38                      |
| f. rural/countryside                             | 0                        | 0                       |
| 3) Characteristics house/garden                  | 0                        | 0                       |
| 4) Price of house                                | 4                        | 0                       |
| 5) Availability house                            | 0                        | 6                       |
| 6) Back to roots                                 | 0                        | 0                       |
| 7) Knew area already (through holidays)          | 4                        | 0                       |
| 8) Social relations (family/friends)             | 0                        | 11                      |
| 9) Near services/centrally located               | 0                        | 21                      |
| 10) Possibility outdoor activities               | 0                        | 0                       |
| 11) No crime/not crowded                         | 0                        | 0                       |
| 12) Other                                        | 0                        | 2                       |
| Total                                           | 100                      | 100                     |

(1) Every respondent was asked to give two reasons, if only one reason was given, the reason is counted twice.
* Doñana case study area scores significantly different (Z-score => or <= +/- 1.96, significance at 0.05) for this answer category in relation to at least two Dutch case study areas and the Northumberland area.
** 2-home residents score significantly different (Z-score => or <= +/- 1.96, significance at 0.05) for this answer category in relation to incomers group.

n = number of answers
Source: Own survey, 1997
several times. In addition, the relatively high score on the motivation related to the low housing prices only by
the lower educated, suggests that lower costs of living seekers are also found in Northumberland.

**Doñana**
The reasons to choose the Doñana case study area as a new place for permanent or second home residence do
not coincide strongly with the motivations given by the incomers in the Dutch and English study areas (see Table
6.9). Especially the motivations given by the incomers group diverge strongly. For this group, job motivations
were by far the most important, because almost 80% of all incomers came to the Doñana area for work reasons.
In the other four study areas this percentage is under 20. The lower socio-economic and high unemployment
level in Andalucía, is one of the main reasons that makes residential choice more job than environmentally lead.
The second most important motive mentioned by the incomers, is related to the physical environment of the
area. More specifically, the ‘aesthetic beauty’, the ‘peace and quiet’ and the ‘presence of water and beach’. The
‘presence of nature’ is not mentioned a single time, which indicates that this is not an issue at all to move to
Doñana on a permanent basis.

For second home residents the picture was different. Motivations to choose the area of Doñana as a place to have
a second home were strongly environmentally driven (see Table 6.9). Almost 60% of the motivations were related
to aspects of the physical environment of which ‘presence of water and beach’ were by far the most important.
‘Aesthetic’, ‘peace and quiet’ and ‘natural amenities’ were also mentioned, but were still relatively insignificant
in comparison to ‘presence of sea and beach’. The second most important motivation of second home residence
was related to the location of the Doñana area in relation to the cities of Sevilla and Huelva (see Table 6.9). Since
second home owners spend most of their weekends and holidays in their second homes, it is important that it is
situated within an acceptable travelling distance of their permanent place of residence. The relatively high score
on social relations may either be related with the fact that people find it more important to be near friends or
family when they have time off.

**6.4.3 Motivations to choose the dwelling**
The second question asked to the incomers about their residential choice considerations was related with the
characteristics of the dwelling. The incomers were asked for the two main reasons to select their present
dwelling. The answers given were grouped into eight categories. The results for the Dutch, British and Spanish
case study areas are discussed separately. Before the main motivations to choose a dwelling are given, the
characteristics of the housing stock are discussed. In this way a better idea can be derived of the characteristics of
the housing supply to which the incomers had to adapt their residential demands.

**Dwingelerveld, Weerribben and Lauwersmeer**
When comparing distribution over ownership and rented housing categories (Annex 6, Table 22), one can observe
that the supply of rented housing in the Lauwersmeer area is higher than in the other two Dutch areas. In addition,
the proportion of incomers that is living in a rented dwelling is higher in the Dwingelerveld and Lauwersmeer.
Significant differences between incomers and local residents appear in the Dwingelerveld area (see Annex 6,
Table 22). Here the incomers rent their houses relatively more often than local residents do. This difference is
probably caused by higher pressure on the housing market. For incomers it is more difficult to get access to the
buyers market and they are therefore often forced to rent a house first and than, when already living in the area,
exchange the rented house for own property housing. In the Weerribben the locals more often live in rented
housing, suggesting that the housing market in this area is still less pressured than in the Dwingelerveld.
When focussing on the type of dwellings households live in (see Annex 6, Tables 23), the semi-detached family
houses are the most common dwellings followed by the detached family houses. In the Dutch case study areas it is
also quite common to live in an old farm, which is no longer in agricultural use. The local residents have been
more successful in finding such a dwelling then the incomers because of the relative scarcity of such popular real
estate objects in this region. In the Weerribben and Lauwersmeer, incomers are more often living in converted
farmhouses because these are still easier to buy than in the Dwingelerveld. To determine whether incomers in
the three Dutch study areas have similar residential preferences, distribution over housing types have been
compared (see Annex 6, Table 24). The incomers in all three areas show a remarkable similarity in distribution over the different housing types, whilst local residents differ significantly. This indicates that households with similar type of residential preferences have been moving towards the three case study areas in the last couple of years. The local residents in the case study areas have a significantly different distribution over housing categories, because these live more according to the composition of the local housing stock, which is rather different per case study area.

In Annex 6 (Tables 25 and 26) information is also given about the location and view from the dwellings. What becomes clear is that in the Weerribben and the Lauwersmeer, incomers in comparison to local residents more often have a house in the countryside, with an open view. In the Dwingelderveld the opposite is the case. This again is related with the higher pressure on the housing market; real estate objects in an attractive location in relation to natural and rural amenities are therefore more difficult to obtain for newcomers. When comparing the situation between the three Dutch case study areas it becomes clear that in the Dwingelderveld area the relative number of houses situated outside villages is much larger than in the two other Dutch areas. Overall it can be concluded that the large majority of the housing stock in all Dutch study areas consists of property housing. In the Lauwersmeer the proportion of ownership property is lowest however. In relation to characteristics of the housing stock, it becomes clear that the Dwingelderveld has a larger supply of housing of high rural amenity value because there are relatively more farm houses available with a residential function only, and the proportion of houses situated outside villages in the countryside is also higher. However, because of the higher pressure on the local housing market, it also becomes clear that it has been more difficult for incomers to get access to the buyers market in general, and even more to rural amenity properties such as old farm houses and houses situated in the countryside. In the Weerribben and Lauwersmeer, this is not (yet) the case as the proportion of incomers that have obtained a farmhouse or a house in the countryside, is considerably higher than amongst locals.

In Table 6.10 an overview is given of the two main motivations, incomers gave to select their present dwelling. The first answer category ‘job related’ refers to a situation in which the dwelling comes with the job or the dwelling was selected because it offered the right space to establish a business in. As becomes clear from Table

<table>
<thead>
<tr>
<th></th>
<th>Dwingelderveld</th>
<th>Weerribben</th>
<th>Lauwersmeer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Job related</td>
<td>6</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>2) Availability of house</td>
<td>14</td>
<td>17</td>
<td>13</td>
</tr>
<tr>
<td>3) Characteristics house/garden</td>
<td>38</td>
<td>27*</td>
<td>39*</td>
</tr>
<tr>
<td>4) Location of house in relation to services/infrastructure (roads/railways)</td>
<td>10</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>5) Attractive/open/natural/tranquil direct surroundings</td>
<td>17</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>6) Price of house</td>
<td>11</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>7) Built house themselves</td>
<td>4</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>8) Other</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

(1) Every respondent was asked to give two reasons, if only one reason was given, the reason is counted twice.
* case study areas scores significantly different (Z-score => or <= +/- 1.96, significance at 0.05) for this answer category in relation to at least one of the two other Dutch case study area(s).
* n= number of answers
* Source: Own survey, 1996
6.10, again the distribution over the answer categories is fairly homogeneous for all three case study areas. For all areas the most important motivation to choose the house was related to the specific characteristics of the house and/or garden. This motivation was however more often mentioned in the Dwingelderveld and Lauwersmeer area than in the Weerribben area. In this latter area relatively more attention was paid to ‘availability of the house’, ‘presence of services and amenities’ in the direct surroundings and ‘price of house’. The second most important motive in all three case study areas was the relative location of the house in relation to characteristics of the direct surroundings such as natural and rural amenities. Especially in the Weerribben and Lauwersmeer area, the relative location of the house in relation to ‘open views’ and ‘space’ were mentioned often. Apparently this is one of the typical features of the Weerribben and Lauwersmeer which makes living in these areas attractive. It is also striking that in the selection of the residential area the price of the house played a significant larger role in the Lauwersmeer area, but in the selection of the dwelling this motivation was not mentioned more often than in the other areas.

Northumberland

In Northumberland the composition of the housing stock in relation to rent and property is quite similar to the Dutch situation, except that there is also a third category, the tight housing, that is quite common (see Annex 6, Table 22). ‘Tight housing’ means that a dwelling is supplied together with a job. If one comes to work on a farm or an estate it is still common in Northumberland, that the employer supplies the employee with housing. There is not much difference in distribution over rent and ownership categories between incomers and locals within Northumberland, except that the first make use of tight housing twice as often as the locals do (see Annex 6, Table 22). This also implies that quite a considerable group of households still settle in the Northumberland area to work in the agricultural sector.

When concentrating at type of housing (Annex 6, Table 23), the survey data reveal that there are no significant differences in distribution over housing categories between incomers and locals. In Northumberland the semi-detached family houses, which are often houses in a so-called terraces, are more common than in The Netherlands. Living in a farmhouse that is no longer in agricultural use is not very standard either in Northumberland. On the other side, in the Northumberland area dwellings are more often located outside a village in the countryside than in the Dutch situation (see Annex 6, Table 25). The higher proportion of houses in Northumberland with an open view (see Annex 6, Table 26) also further confirms the stronger rural and remote character of the Northumberland area in comparison to the Dutch. When comparing the type of dwellings of incomers and locals it becomes clear that the first have had a stronger preference for dwellings located in the countryside with open views. This may indicate that the residential choice process of this incomer group has been strongly driven by preference for rural and green amenities.

It can therefore be concluded that also in Northumberland the largest share is ownership housing. A specific category of tight housing is also present. In comparison to the Dutch case study areas, within Northumberland there are relatively more houses situated in the countryside located away from other dwellings. This implies that there is a large supply of housing that is desired by people with a strong preference for living in the countryside in a relatively isolated location.

Like in the Dutch situation also in the Northumberland case study area, the most important motivation to choose the house is related to the characteristics of the house and/or garden (Table 6.11). Other motivations often mentioned were the ‘availability of the dwelling’, ‘the price’ and the fact that the house went together with the job they got. In relation to this last motivation, the Northumberland area scores significantly higher than the Dutch areas do, which is related with the common practice of tied housing.

The direct surroundings of the house, both in relation to physical aspects and services, are mentioned by a couple of incomers, but these motivations were not as frequently mentioned as in The Netherlands. The relative high score on ‘housing price’ may indicate that lower-costs-of-living-seekers are also part of the incomer group in the Northumberland area.

Doñana

In Doñana most of the local residents own their houses, while new settlers start with renting a house. All second
home residents either own or stay in family properties (see Annex 6, Table 22). For Doñana data on type, location and view from the house were not collected since the interview situation did not allow for it. The location and view from houses in this area are however not as indicative for the residential preferences of people because almost all houses in Doñana are situated within a village or nucleus. Living in the countryside does not appear in this region unless one lives on one of the large estates scattered over the area.

Like with the selection of the area, the selection of the dwelling is also most strongly driven by job considerations (Table 6.12). Even more strongly than in the Northumberland area, in the Doñana area it is the habit that the employer provides or helps his employee to find a place to live. Finding a house in Doñana is never very difficult because there are many empty holiday houses available, which are rented out outside the summer season. If a dwelling has to be found by the incomers themselves, without the help of their employers, motivations like price and characteristics of the house start to be of influence. Relative location of the dwelling is also relevant in relation to the place where one works.

The second most important motivation was related to the location of the Doñana area in relation to the cities of Sevilla and Huelva (see Table 6.9). Since second home owners in this area spend most of their weekends and holidays in their second home it is important that it is situated within an acceptable travelling distance of their permanent place of residence. The relatively high score on social relations may either be related with the fact that people find it more important to be near friends or family when they have time off.

Motivations for the second home residents to choose the dwelling were concentrated in two main answer categories (Table 6.12): ‘characteristics of the dwelling or garden’ and ‘price of the house’. Location of the dwelling near one of the specific elements of the physical environment, like the beach/sea or the protected natural area of Doñana, were not mentioned. This is rather surprising as exactly these elements were stated to be so important for the selection of the area. Apparently, the physical appearance of the direct surroundings are not as important as having natural amenities in the wider living environment. The second most important category, ‘other’ was high as a result of the frequently mentioned motivation that second home residents choose their dwelling because it was located near the house of friends or because friends had helped them to obtain the house. This motivation was very specific to second home residents.

<table>
<thead>
<tr>
<th>Table 6.11 The two most important reasons (1) to choose the present dwelling</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Northumberland</strong></td>
</tr>
<tr>
<td>(n=102)</td>
</tr>
<tr>
<td>1) Job related</td>
</tr>
<tr>
<td>2) Availability of house</td>
</tr>
<tr>
<td>3) Characteristics house/garden</td>
</tr>
<tr>
<td>4) Location of house in relation to services/infrastructure (roads/railways)</td>
</tr>
<tr>
<td>5) Attractive/open/natural/tranquil direct surroundings</td>
</tr>
<tr>
<td>6) Price of house</td>
</tr>
<tr>
<td>7) Built house themselves</td>
</tr>
<tr>
<td>8) Other</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

(1) Every respondent was asked to give two reasons, if only one reason was given, the reason is counted twice.
* Case study areas scores significantly different (Z-score => or <= +/- 1.96, significance at 0.05) for this answer category in relation to one or two other Dutch case study area(s).

n= number of answers
Source: Own survey, 1997
In this Chapter the following question was answered:
What importance does the presence of a protected natural area play in the decision to make a residential move?

This was done on the basis of survey data, collected in the five study areas. In order to get an understanding of the importance of a protected natural area in the decision to move, it was necessary to further disentangle the different interrelated factors that influence the residential choice. Since the presence of protected nature is only one of the pull factors that plays a role in this decision, to determine its relative importance it is necessary to get an overall picture of other important pull and push factors involved. For the analysis in this Chapter a distinction was made between:

1. personal characteristics and related constraints that influence the ability, information and preference of households to respond to certain perceived opportunities such as the presence of nature;
2. the importance of the residential environment in the residential choice on which the presence of nature can have an important influence and
3. the importance of characteristics of the dwelling in the residential choice on which the nearby presence of nature can also have an influence.

1. The presence of nature and personal characteristics and constraints

In Chapter 5 it already became clear that early retirees, middle class and footloose households and lower costs of living seekers were more than average attracted to most of the five case study areas. In this Chapter more information was collected on personal characteristics of incomers, which further reveal specific motivations to move to the study areas. Two new groups could be distinguished in some of the five study areas, and further confirmation was found for the existence of the specific groups already found in Chapter 5 and their related preference for

---

**Table 6.12 The two most important reasons (1) to choose the present dwelling as first or second home**

<table>
<thead>
<tr>
<th>Reason</th>
<th>Incomers (n=26)</th>
<th>Doñana 2-home residents (n=36)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Job related</td>
<td>53*</td>
<td>0</td>
</tr>
<tr>
<td>2) Availability of house</td>
<td>12</td>
<td>0</td>
</tr>
<tr>
<td>3) Characteristics house/garden</td>
<td>19*</td>
<td>61*</td>
</tr>
<tr>
<td>4) Location of house in relation to services/infrastructure (roads/railways)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5) Attractive/open/natural/tranquil direct surroundings</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>6) Price of house</td>
<td>12</td>
<td>22</td>
</tr>
<tr>
<td>7) Built house themselves</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>8) Other</td>
<td>0</td>
<td>17*</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

(1) Every respondent was asked to give two reasons, if only one reason was given, the reason is counted twice.

* Case study areas scores significantly different (Z-score => or <= +/- 1.96, significance at 0.05) for this answer category in relation to one or two other Dutch case study area(s) and Northumberland.

** 2-home residents score significantly different (Z-score => or <= +/- 1.96, significance at 0.05) for this answer category in relation to the incomers group in Doñana.

Source: Own survey, 1997

---

6.5 Summary and conclusion

In this Chapter the following question was answered:
What importance does the presence of a protected natural area play in the decision to make a residential move?

This was done on the basis of survey data, collected in the five study areas. In order to get an understanding of the importance of a protected natural area in the decision to move, it was necessary to further disentangle the different interrelated factors that influence the residential choice. Since the presence of protected nature is only one of the pull factors that plays a role in this decision, to determine its relative importance it is necessary to get an overall picture of other important pull and push factors involved. For the analysis in this Chapter a distinction was made between:

1. personal characteristics and related constraints that influence the ability, information and preference of households to respond to certain perceived opportunities such as the presence of nature;
2. the importance of the residential environment in the residential choice on which the presence of nature can have an important influence and
3. the importance of characteristics of the dwelling in the residential choice on which the nearby presence of nature can also have an influence.

---
living near natural amenities. The new groups found were return migrants and households originating from urban places, the so-called urban drop-outs, and it was also revealed that the early retirees in the Weerribben area often coincide with empty nesters. Overall, it must be taken into account however, that all these groups that have been separated from the incomer populations are not mutually exclusive. Finally, it was also further confirmed that elderly and higher educated had a stronger stated preference for living near natural amenities than younger and lower educated groups and that most incomers were more mobile than the locals.

Firstly, it was observed that incomers in all three Dutch and the UK case study area were significantly more mobile than the local residents groups if mobility was expressed in number of moves per household. This further confirms the ‘footloose’ nature of the households that have recently been attracted to the case study areas. If mobility is expressed in migration distance, incomers could not be characterised as more mobile, since overall migration distances did not increase recently. However, what did change in recent years was the number of places of origin of the incomers. This suggests that population flows have become more differentiated in recent years which may be due to an increased popularisation of the study areas as places to live. This is in line with the overall increased complexity of population flows adding to the differentiation of the European countryside, as already discussed in Chapter 2.

Secondly, it became clear that mobility of households differs per case study country and that Dutch migrants proved to be more strongly led by ties with former places of residence than incomers in the English and Spanish study areas. In all Dutch areas the proportion of return-migrants was over 40% of the total incomer population, which was twice as high as in Northumberland and Doñana. In addition to this, mobility of households, as expressed in number of times a household moved, was higher in the English than in Dutch cases.

Thirdly, the expectation that societal changes, such as increased urbanisation and deterioration of urban environments increased the wish to exchange these urban places for the tranquil, natural amenity rich environments, was confirmed for three of the five study areas. The number of residents coming from urban places of origin increased in Dwingelderveld, Weerribben and Northumberland. In the Lauwersmeer, only residents originating from moderately urban places increased. In the Doñana area has a complete different position from the other study areas in relation to residential choice considerations. Incomers are mainly attracted to this area for job reasons. Most of them come to work in new agricultural activities. This explains the recent increase in incomers originating from other rural areas. Others come to work in the tourist industry, which is strongly related with the high proportion of second homes in the area. These second homes are mainly owned by people from the two nearby cities, Sevilla and Huelva. As expected, they chose the area for complete other reasons than the permanent residents did. For these second home residents attractiveness of the physical environment, especially caused by the presence of sea and beach, in combination with the favourable location of the area in relation to the cities of Huelva and Sevilla, were the main considerations.

Fourthly, the motivations given by the incomer groups to choose the study areas as new places to live confirmed that lower costs of living seekers were present, both in the Lauwersmeer and in the Northumberland area, especially among the lower educated. This was not surprising as in both regions housing prices are still relatively low in a national perspective, especially for objects situated in natural and rural amenity rich environments. In the Northumberland area this applies most strongly to dwellings situated in the most remote parts of the region, far away from services.

Fifthly, the presence of empty nesters among the incomers in the Weerribben area and the Lauwersmeer area, was confirmed by the relatively high score on dissatisfaction with former dwelling as the main disadvantage of the former place of residence, in combination with the high proportion of people in the age above 55 years. This is
the group that contains many households, which experience that children are leaving the home. After such event, parents may decide to move because the house no longer satisfies the needs. Finally, although seemingly in contrast with the fore mentioned overrepresentation of empty-nesters, it was also observed that households with children are overrepresented in the migration flow towards the Dutch case study areas. The overrepresentation of this group suggests that in The Netherlands there is a relatively strong preference of parents with children to live in a natural amenity rich environment, whilst the opposite is the case in the Northumberland area.

2. Protected natural areas and the importance of the residential environment in the residential choice
It was not possible to unravel what aspects obtained more priority in the residential choice process: the characteristics of the residential environment or the characteristics of the dwelling. It was observed that most households had difficulty with separating or prioritising the selection of both dwelling and living environment in the residential choice. Both have to meet minimal requirements when searching for a new place. The assumption that the residential environment is important could be confirmed, but an overall picture of what was more decisive in the eventual decision to move, could not be derived. There was a strong variation in answers given per study area and type of resident group. In the Dwingelderveld, Weerribben and Northumberland, the large majority of the incomers said that the residential environment had been either equally or even more important in their residential choice than the characteristics of the house. In the Doñana area this also applied to the second home residents but not at all to the incomers. In the Lauwersmeer area there was a clear majority that said that the characteristics of the house had been of more importance. The strong differences in distribution over answer categories between the case study areas, indicates that the importance of the residential environment in the residential choice process depends strongly on the specific characteristics of the area in combination with the availability of desired housing within this area. If the characteristics of the area meet the requirements of the household, but the desired dwelling cannot be found in this area, the area will still not be selected. This will also work the other way around, when the desired housing is found but the residential environment does not meet the requirements set by a household. The most important reasons mentioned to choose the Dutch and English case study areas as new places to live were related to the presence of a protected natural area or the quality of the physical environment, which is enhanced by the presence of a protected natural area. Job considerations came second. In the Spanish case study area, this also applied to the second home residents, but the motivation of the incomers to choose the Doñana area were almost entirely job related. It was striking that both the Dutch as the Northumberland incomers showed a strong similarity in relative distribution over motivations to choose the residential area. When only concentrating on the motivations in the physical environment category, it became clear that all motivations were strongly related to endogenous qualities of rural areas in general, to which the presence of nature added considerably. In the Dwingelderveld and Weerribben area the presence of nature and wildlife were the most frequently mentioned motivations within the physical environment category, whilst in the other three areas, general aesthetic and rural characteristics were more important. Area specific characteristics related to the presence of water and beach, like in the Doñana and Weerribben, also scored very high. In the Northumberland area the ‘presence of nature’ was hardly mentioned as a motivation, but to the ‘aesthetic’ and ‘tranquillity’ aspects (peace and quiet) and the typical ‘rural character’ of the area, which is also an attribute of the protected area designation, were mentioned very frequently. There are two conclusions to be drawn from this observation. The higher value attached to natural amenities in the residential environment in the Dutch case study areas indicates that the perception of nature between the Dutch and British population is different. The higher score on rural and ‘aesthetic amenities’ points to the presence of a stronger ‘rural idyll’ among the incomers in the English in comparison to the Dutch and Spanish study areas. In the Doñana area the high score in the physical environment category by the second home residents was mainly caused by the most frequently mentioned motivation: ‘the presence of sea and beach’. The ‘presence of nature and wildlife’ or ‘tranquillity’ and ‘aesthetic’ characteristics scored considerably less in this case study area. In the Weerribben area, ‘the presence of water’ was also mentioned frequently and further increased the already highest score on the physical environment category.
The contribution of the presence of a protected natural area to the attractiveness of the physical environment is large in most case study areas but varies per type of nature present and the presence of other assets, especially water. In two of the Dutch case study areas the presence of protected nature is the most strongly appreciated for the occurrence of nature and wildlife. In the other areas the appreciation is more related to general aesthetic, rural and tranquillity amenities to which the presence of protected nature contributes. It is also clear that the strong Dutch appreciation for natural amenities does not apply to all types of nature because the incomers in the Dwingelerveld and Weerribben mentioned the presence of nature and wildlife more often than the incomers in the Lauwersmeer area. In the Spanish case study area, nature is not so much involved in the residential choice but this may have been different if water and beach would have not been present.

Besides the motivation related to the physical environment and the job motivations, some other consideration were also important in the residential choice process. These were the ties to the former places of residence increasing the ‘back to the roots’ migration category in the three Dutch case study areas. An explanation for the high proportion of return-migrants in the Dutch case study areas can probably be sought in the smaller scale of existence in The Netherlands in comparison to the UK and Spain. In the Lauwersmeer area, where most incomers already indicated that characteristics of the house were more decisive in their residential choice consideration than characteristics of the residential environment, considerations related to personal constraints were more often mentioned; especially ‘lower housing prices’ of the area and ‘social contacts’. In the Northumberland and Lauwersmeer area motivations related to overcrowding in urban areas were also a push factor for some residents to decide to move. For the Doñana area it became clear that incomers, mainly move to area for job reasons. Second home residents, choose the Doñana area both for the attractive physical environment, especially ‘presence of water and beach’, but also because of the presence of desired housing on an acceptable travelling distance from the cities of Sevilla and Huelva.

3. Protected natural areas and selection of dwelling

Firstly, it became clear that the type of housing supply already creates a pre-selection in the preferences of households that come to search for a house in the case study areas. Therefore the way incomers live, in relation to ownership and type and location of the housing, in comparison to their local fellow residents already reveals information about the residential preferences of these newcomers. Secondly, from the way incomers live, in relation to type and location of housing, in comparison to locals it also becomes clear that a large proportion of them had a clear preference for living in a rural setting.

In the Dwingelerveld, Weerribben and Northumberland areas the large majority of the housing stock consisted of property housing. In the Lauwersmeer and Doñana area there was also more housing for renting available, attracting more lower income groups not interested in buying. The same applied to housing prices and type and relative location of dwellings. In the Lauwersmeer and in some parts of Northumberland, housing prices and rents are relatively low making these areas more attractive to lower income groups. In relation to types of housing, it became clear that old farmhouses were attractive objects in the Dutch study areas. This became clear from the larger proportion of incomers in the Weerribben and Lauwersmeer who obtained these objects in comparison to local residents. The same applied to houses located in the countryside. In comparison to Lauwersmeer and Weerribben, Dwingelerveld contained a larger proportion of old farm houses and houses in the countryside, but because of the larger pressure on the housing market in this region, relatively few incomers had been successful in obtaining such property. Also in Northumberland the stronger preference of incomers for living in a real rural setting becomes apparent. Like in the two Dutch case study areas, incomers significantly more often live in a house situated outside a village in the open countryside.

In all Dutch and British study areas the main reason to select a dwelling was related to the specific characteristics of the house and garden. This was followed in Dutch study areas, by the second most important reason, which was the physical attractiveness of the direct surrounding of the house. For the incomers in the Northumberland and Doñana area job motivations were the second most important motivation. This was related with the fact that job opportunities that attract people to these areas often include the provision of a dwelling. Motivations for the second home residents in the Doñana area to choose the dwelling were concentrated in two main answer categories: characteristics of the dwelling or garden and the price of the dwelling. Location of the dwelling near
one of the specific elements of the physical environment, like the beach/sea or the protected natural area of Doñana, were not mentioned.

Overall, it can be concluded that for the selection of the house the physical appearance of the direct surrounding of a dwelling is not as important as having natural amenities in the wider living environment. It can also be concluded that incomers in both the Dutch and English study areas showed a strong preference for real-estate objects in open locations in the countryside. In the Dutch study areas the presence of protected nature in the direct surrounding of one’s house is valued more than in the British case study area. This is probably related with the larger scarcity of dwellings situated in open natural and rural amenity rich countryside.

What importance does the presence of a protected natural area play in the decision to make a residential move?
The presence of a protected natural area or the quality of the physical environment, which is enhanced by the presence of a protected natural area, proved to be the most frequently involved considerations in the selection of the residential environment by all incomers in the Dutch and English study areas. In the Spanish study area this was however different. It also became clear that for the selection of the house, the presence of nature in the direct surrounding of a dwelling is not as important as having natural amenities in the wider living environment. Although in the Dutch cases natural amenities in the direct environment of the house were still involved in the residential choice by a large proportion of incomers, whilst this was not the case in the English and Spanish areas. Since selection of house and living environment cannot be separated in the residential choice process, as both have to meet the minimal requirements a household has when searching for another place to live, the presence of protected nature is only one of the pull factors that can only be of decisive importance if other requirements in relation to house and garden are met. Since protected nature it is a specific commodity of rural areas scarcely spread over the European countryside it will often be more difficult to meet this requirement than the requirements imposed on the characteristics of house and garden. Rural areas containing the desired housing stock in combination with the presence of protected nature, will therefore be more successful in attracting new residents than areas that can only meet the requirements for house and garden. The importance of protected nature in the residential choice is greater for household groups with specific characteristics such as early retirees, empty nesters, footloose households, middle class households and urban drop-outs. In the case study areas where housing prices are relatively low like in the Lauwersmeer area and parts of the Northumberland area, there is also a relatively stronger attraction of lower costs of living seekers. In The Netherlands this will also applies to family households with children and return-migrants. Ties to former places of residence are strong in The Netherlands, especially if these places are characterised by attractive natural amenities.
7 Living near protected nature: advantages and disadvantages

7.1 Introduction

In this Chapter analyses the function of nature in remote rural areas in relation to appreciation of the residential environment, recreational and economic opportunities and economic development. This is done in order to answer the following research questions:

6. How does the presence of a protected natural area contribute to the satisfaction with the residential environment?
7. What possibilities are offered and what constraints are imposed by the presence of protected natural areas?

These questions are answered on the basis of the survey results in the five study areas (see Chapter 5 and annex 4 and 5). This Chapter starts from the general expectation that the presence of nature in the living environment is to be evaluated in a positive way by most local people. The main reason for this is that nature offers possibilities for recreational use and possibly also employment opportunities. Several studies have also indicated that views of ‘nature’ and being in ‘nature’ are perceived to be beneficial for people’s physical wellbeing, fitness, and work satisfaction (see Ulrich, 1979 and 1981; Driver et al., 1987; Levitt, 1988 and Kaplan et al., 1988). Indications were also found of the positive influence of nearby nature on residential satisfaction (Kaplan, 1983). On the other hand, negative aspects are expected to arise from the presence of nature as well, such as the constraining influence of conservation needs on local economic development and the increased attraction of tourist activities that may disturb the tranquillity of an area. In the literature on protected natural areas many examples were given of the influence of protected nature on the regional, especially the economic development of areas (see Whitelaw and Niemy, 1989; Rasker, 1993; White, 1993 and Wescott and Williams, 1994). Until recently, the general impression of the presence of nature in rural areas was that it constraints the rural economy (see Zube & Bush, 1990; Rao & Geisler, 1990 and Wells et al., 1992).

In Section 7.2 the way protected nature in the residential environment is evaluated, the reasons for positive and negative evaluation, and the relative importance of nature in relation to other local assets is described. In Section 7.3 the recreational use of the nearby protected natural area is investigated. In Section 7.4 employment opportunities in relation to the presence of protected nature are discussed. In Section 7.5 the conflicts that arise from the presence of protected nature get attention. Since major conflicting situations have come to the front for the Doñana and Northumberland areas, focus will be on the situation and attitudes of the local population of these study areas.

7.2 Protected nature and residential satisfaction

To get a better understanding of the evaluation of nature in the residential environment, residents in the study areas were first asked what the main reasons were to be satisfied with their residential environment. Than they were asked whether they found it pleasant to live in or near protected nature and what the main motivations were to find this pleasant and/or unpleasant. To further determine the relative importance of living near protected nature the respondents in the case study areas were also asked to deliberate the presence of nature in relation to other assets of the local environment. In the next the outcome of this analysis is discussed per case study country.

7.2.1 Protected nature and residential satisfaction in the Dutch study areas

In the Dutch study areas, more than 92% of both incomers and local households, stated to be satisfied with their living environment. Table 7.1 shows that more than half of them related this satisfaction with either the ‘presence of nature and wildlife’ or the general appreciation of the physical environment in relation to aesthetic
attractiveness, tranquillity and/or rurality, which are also aspects enhanced by the presence of protected nature. In the Dwingelderveld and Weerribben area, the ‘presence of nature and wildlife’ were significantly more often mentioned than in the Lauwersmeer area, where indirect effects of nature were more important.

When comparing the motivations for being satisfied between locals and incomers, one can see that in Dwingelderveld and Weerribben there are hardly any significant differences in motivations given. In Lauwersmeer there were however more differences between the groups, and it became clear that the incomers related their satisfaction more often to the presence of nature and the attractiveness of a village, whilst for the locals, roots with the area and the presence of nearby services were more important.

When comparing the reasons for being satisfied between the case study areas, a few important differences can also be mentioned. The presence of nature and wildlife and the presence of services as a reason for satisfaction is

---

### Table 7.1 The two most important reasons(s) for residential satisfaction

<table>
<thead>
<tr>
<th></th>
<th>Dwingelderveld</th>
<th>Weerribben</th>
<th>Lauwersmeer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Incomers  (n=98)</td>
<td>Locals  (n=238)</td>
<td>Incomers  (n=160)</td>
</tr>
<tr>
<td>1) Job related</td>
<td>1</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>2) Characteristics physical environment:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Tranquillity</td>
<td>16</td>
<td>18</td>
<td>19</td>
</tr>
<tr>
<td>b. Beautiful/landscape/remote</td>
<td>18</td>
<td>18</td>
<td>12</td>
</tr>
<tr>
<td>c. Clean/healthy air/no pollution</td>
<td>2#</td>
<td>0##</td>
<td>1</td>
</tr>
<tr>
<td>d. Presence nature/wildlife</td>
<td>18*)</td>
<td>15*</td>
<td>15</td>
</tr>
<tr>
<td>e. Rural/countryside</td>
<td>5</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>f. Presence water/beach</td>
<td>0</td>
<td>0##</td>
<td>3</td>
</tr>
<tr>
<td>3) Characteristics house/garden</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Characteristics house/garden</td>
<td>7</td>
<td>7*</td>
<td>11</td>
</tr>
<tr>
<td>b. Relative location house i.r.t view/open space</td>
<td>5</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>4) Social relations</td>
<td>10</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>5) Possibility outdoor activities</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6) My roots/always lived here</td>
<td>1</td>
<td>3*</td>
<td>1#</td>
</tr>
<tr>
<td>7) Nice village</td>
<td>4</td>
<td>5*</td>
<td>1*</td>
</tr>
<tr>
<td>8) Near services/centrally located</td>
<td>10*</td>
<td>10</td>
<td>11*</td>
</tr>
<tr>
<td>9) Good area for children to grow up</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>10) Other</td>
<td>2</td>
<td>2</td>
<td>0*</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

(1) Every respondent was asked to give two reasons, if only one reason was given, the reason is counted twice.
# Incomers and locals within the case study area score significantly different (Z-score => or <= +/- 1.96, significance at 0.05) for this answer category (s).
* Incomers or locals between the case study area score significantly different (Z-score => or <= +/- 1.96 significance at 0.05) for this answer category
n= number of answers
Source: Own survey 1996
more often mentioned in Dwingelderveld and Weerribben than in Lauwersmeer. Furthermore, in Lauwersmeer, satisfaction is relatively more often related to the specific characteristics of the house and garden. These same differences were already detected in Chapter 6, when motivations for residential choice were investigated. The Lauwersmeer incomers were more often driven by characteristics of the house than by characteristics of the environment in the residential choice.

As there were also some households in all case study areas that were not satisfied with their residential environment, they were also asked to motivate this. It turned out that the absence of services and also social problems, were the main reasons mentioned. The only reason for dissatisfaction that could directly be related with the presence of nature and that was mentioned a few times in all three study areas, was that the natural area attracted tourists, which caused extra traffic and busyness in the area.

When concentrating on the question whether people found it pleasant to live near a protected natural area, the vast majority of all population groups in all three study areas, ranging from 85% to 92%, found it pleasant to live near protected nature (see annex 6, Table 27). The local residents in Dwingelderveld and Weerribben, were slightly less positive about the presence of nature than the incomers, whilst in the Lauwersmeer area hardly any difference was detected between these two groups.

The most important reasons mentioned for appreciating the presence of nearby nature, were the recreational opportunities offered by nature and the contribution of the presence of protected nature to the attractiveness of the physical environment in the region (see Table 7.2). This last motivation scored high, especially because most

<table>
<thead>
<tr>
<th>Table 7.2 The two most important reasons(1) to find it pleasant to live near a protected natural area</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dwingelderveld</strong></td>
</tr>
<tr>
<td>Incomers (n=88)</td>
</tr>
<tr>
<td>1) Characteristics physical environment</td>
</tr>
<tr>
<td>a. Beautiful landscape/space/rural</td>
</tr>
<tr>
<td>b. Tranquillity</td>
</tr>
<tr>
<td>c. Healthy/no contamination</td>
</tr>
<tr>
<td>d. Nice to have nature/wildlife near</td>
</tr>
<tr>
<td>2) Planning security</td>
</tr>
<tr>
<td>a. Well-looked after/maintained</td>
</tr>
<tr>
<td>b. Security of no development</td>
</tr>
<tr>
<td>3) Opportunities for outdoor activities</td>
</tr>
<tr>
<td>4) Attracts tourists (good local economy)</td>
</tr>
<tr>
<td>5) Helps to get grants</td>
</tr>
<tr>
<td>6) Other</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

(1) Every respondent was asked to give two reasons, if only one reason was given, the reason is counted twice.

# Incomers and locals within the case study area score significantly different (Z-score => or <= +/- 1.96, significance at 0.05) for this answer category (s).

* Incomers or locals between the case study areas score significantly different (Z-score => or <= +/- 1.96 significance at 0.05) for this answer category

n= number of answers

Source: Own survey, 1996
respondents referred to the indirect effects and thought that the presence of protected nature added to the aesthetic attractiveness, the openness and rural character of the landscape and/or the tranquillity of the area. There were also respondents that appreciated the direct effect which was just simple the near presence of nature and wildlife. In general, it can therefore be concluded that incomers appreciated the presence of nature relatively more because they thought it added to the quality of the living environment, whilst local residents more often mentioned the recreational opportunities offered by nature. In the Lauwersmeer area this difference was especially large because of the relatively higher appreciation by incomers for having nature and wildlife in the direct living environment.

No significant differences between the study areas was detected, but it is still striking that especially in Weerribben and Lauwersmeer, incomers mentioned the presence of nature and wildlife very often and also significantly more often than the local residents (Table 7.2). For the incomers in the Weerribben area this was not as surprising as it already became clear in Chapter 6, that for many in this group the presence of nature and/or wildlife was also an important reason to chose this area as a new place to live. For Lauwersmeer this is more surprising however, because considerably less incomers said to have settled in this area for the presence of nature and/or wildlife. Apparently the presence of nature and wildlife is highly valued once living in the Lauwersmeer area, although it has not been the first reason for most incomers to settle in the area. In comparison to the other two Dutch case study areas, the nature of the Weerribben area was more often appreciated for the positive contribution of it to the quality of the environment than for the recreational opportunities it offers. This difference can both be caused by the specific attractiveness of the nature and landscape in the Weerribben and/or the more restrained access to this area for recreational use because of the presence of water. Apparently, restricted access to a protected natural area does not lead to a lower appreciation of the area by local population groups. Finally, it was striking that in all Dutch case study areas there was hardly any mention of planning security offered by the presence of protected nature, whilst in the English and Spanish study areas this motivation was mentioned often (see next Sections). Apparently, either the planning system in The Netherlands is such that there is not much difference in planning arrangements between the overall countryside and the area directly bordering a protected natural area or Dutch people are not so involved in countryside planning.

The proportion of the population groups that mentioned negative aspects for the presence of protected nature never exceeded 10%, except for the locals in Dwingelderveld. The few respondents that found it unpleasant to live near protected nature, motivated this with unwanted restraining influence of planning restrictions on economic opportunities and the strong attraction of tourists to the nature area, which made the area busier and increased traffic.

To determine the relative importance of the presence of nature for the appreciation of the living environment, the interviewed households were asked to deliberate the priority they gave to having nature in their living environment or to having other services near their house. The outcomes of this are summed in Table 7.3. By means of awarding points to every answer given, the results could be accumulated and analysed. For the nature-related characteristics of the environment 1 point was given; for the opposite of this answer, a –1 was given. All the points were added up in an end-score: the higher the end-score, the stronger the nature preference of the respondent. On the basis of this, the general preference for nature-related characteristics of the environment could be determined together with differences in this preference between incomers and local residents between the different study areas.

All population groups in all case study areas have a clear stronger preference for nature-related characteristics of the environment than for the nearby presence of services (Table 7.3). This was however to be expected, since most people would not have chosen to live in the relatively remotely situated study areas in the first place, if they would have had a strong preference for having high level services near their houses. More interesting it is however to see that the nature preference is quite strong, average 2, in all case study areas and that there is no significant difference in this score between incomers and local residents within and between the case study areas. Although one does see within the Dwingelderveld the locals have a stronger nature preference, whilst in the Weerribben area this applies to the incomers. This difference is probably related with the fact, already showed in Chapter 6, that locals in Dwingelderveld were the ones that more often lived in the countryside further away from services, whilst in Weerribben it were the incomers that more often lived away from services. The
services that ‘compete’ most strongly with nature were shopping services, especially in Lauwersmeer and Dwingelderveld. Other services, especially the high level services as theatres and cinemas, were least missed by all population groups. The relatively high score in the Weerribben area on preference for having a family doctor near the house, is probably related with the high proportion of people in the 55+ age amongst both incomers and local resident groups, in combination with the fact that this service is indeed sparsely spread over the Weerribben area.

Overall it is concluded that the presence of nature in the living environment is very much appreciated in all Dutch study areas. The incomers are more positive about the presence of nature in their living environment than the locals. The main reasons for this appreciation were related to the recreational opportunities offered by the protected natural area, especially if access to the area is not restricted, the contribution of the presence of nature to the aesthetic and tranquillity aspects of an area and the presence of nature and wildlife. The extra planning security offered by the presence of protected nature was hardly mentioned as a motivation.

<table>
<thead>
<tr>
<th></th>
<th>Dwingelderveld</th>
<th>Weerribben</th>
<th>Lauwersmeer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Incomers (n=40)</td>
<td>Locals (n=86)</td>
<td>Incomers (n=64)</td>
</tr>
<tr>
<td>-1: Shopping services near house</td>
<td>43</td>
<td>37</td>
<td>35</td>
</tr>
<tr>
<td>1: Protected natural area near house</td>
<td>57</td>
<td>63</td>
<td>65</td>
</tr>
<tr>
<td>-1: Family doctor near house</td>
<td>23</td>
<td>19</td>
<td>32</td>
</tr>
<tr>
<td>1: High natural and scenic qualities around house</td>
<td>77</td>
<td>81</td>
<td>68</td>
</tr>
<tr>
<td>-1: Supermarket near house</td>
<td>34</td>
<td>19</td>
<td>17</td>
</tr>
<tr>
<td>1: Living in quiet surroundings</td>
<td>66</td>
<td>81</td>
<td>83</td>
</tr>
<tr>
<td>-1: Cinema/theatre near house</td>
<td>7</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>1: Opportunities for outdoor activities near house</td>
<td>93</td>
<td>95</td>
<td>92</td>
</tr>
<tr>
<td>Mean score*</td>
<td>1.80</td>
<td>2.35</td>
<td>2.19</td>
</tr>
<tr>
<td>Significance of 2-tailed P*</td>
<td>not significant</td>
<td>not significant</td>
<td>not significant</td>
</tr>
</tbody>
</table>

* Level of preference for natural and scenic characteristics of the environment. For the nature-related characteristics of the environment 1 point was given; for the opposite of this, the preference for a service, a –1 was given. All the points were added up in an end-score: the higher the end-score, the stronger the nature preference of the respondent. Since there were 4 questions, the maximum end-score cannot be higher than 4 and the minimum end-score not lower than –4. A 2-tailed significance test for independence of mean preference scores was done for comparing between incomers and local residents.

n = number of households
Source: Own survey, 1996
7.2.2 Protected nature and residential satisfaction in the Northumberland case study areas

In the Northumberland area the proportion of households that was satisfied with their residential environment was 70% for incomers, and 80% for locals. When comparing this with the situation in the Dutch study areas it means that in Northumberland more people had reservations about the contribution of protected nature to residential satisfaction than in the Dutch situations.

When concentrating on the reasons given for satisfaction with ones residential environment (see Table 7.4), one can see that even more frequently than in the Dutch situation, satisfaction was related with either the presence of nature and wildlife or the general appreciation of the quality of the physical environment. Especially the tranquillity and aesthetic aspects of the environment were mentioned often. An important difference with the Dutch situation is that the rural qualities of the environment are more often mentioned. This already became clear in Chapter 6, where motivations for residential choice between the Dutch and English study areas were compared, and motives related to ‘presence of nature and wildlife’ were mentioned more often by incomers in

<table>
<thead>
<tr>
<th>Table 7.4 The two most important reasons(s) for residential satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Northumberland</strong></td>
</tr>
<tr>
<td><strong>Incomers (n=90)</strong></td>
</tr>
<tr>
<td>1) Job related</td>
</tr>
<tr>
<td>2) Characteristics physical environment:</td>
</tr>
<tr>
<td>a. Tranquillity</td>
</tr>
<tr>
<td>b. Beautiful/landscape/remote</td>
</tr>
<tr>
<td>c. Clean/healthy air/no pollution</td>
</tr>
<tr>
<td>d. Presence nature/wildlife</td>
</tr>
<tr>
<td>e. Rural/countryside</td>
</tr>
<tr>
<td>f. Presence water/beach</td>
</tr>
<tr>
<td>3) Characteristics house/garden</td>
</tr>
<tr>
<td>a. Characteristics house/garden</td>
</tr>
<tr>
<td>b. Relative location house i.r.t view/open space</td>
</tr>
<tr>
<td>4) Social relations</td>
</tr>
<tr>
<td>5) Possibility outdoor activities</td>
</tr>
<tr>
<td>6) My roots/always lived here</td>
</tr>
<tr>
<td>7) Nice village</td>
</tr>
<tr>
<td>8) Near services/centrally located</td>
</tr>
<tr>
<td>9) Good area for children to grow up in</td>
</tr>
<tr>
<td>10) Other</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

(1) Every respondent was asked to give two reasons, if only one reason was given, the reason is counted twice.

# Incomers and locals within the Northumberland case study area score significantly different (Z-score => or <= +/- 1.96, significance at 0.05) for this answer category.

* Incomers or locals score significantly different (Z-score => or <= +/- 1.96 significance at 0.05) with at least two other Dutch (respectively) incomers or local population groups (only comparisons were made between incomers and incomers and locals and locals in other case study areas)

n = number of answers

Source: Own survey, 1997
the Dutch than by incomers in Northumberland. A last significant difference with the Dutch situation is that in Northumberland, satisfaction with the residential environment is never connected to characteristics of house and garden (see Table 7.4).

Reasons mentioned for being unsatisfied with the residential environment are summed in Table 7.5. Like in the Dutch situations, the reasons most often mentioned were related to the relative absence of high level services and crowding resulting from the attraction of tourists to the National Park area. The high score on the first motivation is probably related to the larger scale of existence in Northumberland, making accessibility to services more limited. Another motive mentioned by a few incomers in Northumberland which is directly related to the presence of protected nature, is the dissatisfaction with planning regulations. Some households in Northumberland believe that planning permission applications are evaluated more strict in National Park areas than in undesignated countryside. The incomers were the ones mentioning this reason as they were probably more often confronted with planning applications when they moved into the area and wanted to refurbish their recently bought house.

In Northumberland the residents were also asked whether they found it pleasant to live near protected nature. The large majority of the residents found it pleasant to live in or near a National Park area (see annex 6, Table 27). There were however more incomers that found this pleasant than local residents. When first focussing on the reasons to find it pleasant to live in or near Northumberland National Park, one can see (Table 7.6) that the contribution of the presence of nature to the quality of the environment was most often mentioned. Especially the aesthetic, rurality and tranquillity aspects scored often. Beside the motives related to the environment, the planning security that comes from the presence of a National Park is also much appreciated together with opportunities for outdoor recreational activities. The incomers mentioned this last motive significantly more often than the locals. This may partly be related to the higher age composition of the local resident group, which therefore contains many households that are less able to go for walks in the National Park.

There are some important differences in motivations given for finding it pleasant to live in or near Northumberland National Park in comparison to the Dutch situation. In the first place, the Northumberland population related their motivation significantly more often to the contribution of protected nature to the overall quality of the environment, especially in relation aesthetic attractiveness and tranquillity; whilst ‘the presence of nature and wildlife’ was not mentioned as often. In the second place, it was striking that in Northumberland, planning security that comes from the presence of the National Park was mentioned by 19% of both incomers and locals as a positive asset of living in or near protected nature. Apparently, there are clear differences in the way local people are involved in planning and/or the type of planning arrangements between the two countries.

Table 7.5 The two most important reasons(1) for being unsatisfied with the residential environment

<table>
<thead>
<tr>
<th>Reason</th>
<th>Incomers (n=31)</th>
<th>Locals (n=54)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Too isolated/no services/public transport</td>
<td>42#</td>
<td>63#</td>
</tr>
<tr>
<td>2) Too busy/too much traffic near house</td>
<td>19</td>
<td>26</td>
</tr>
<tr>
<td>3) Too many planning restrictions</td>
<td>16#</td>
<td>0#</td>
</tr>
<tr>
<td>4) Other</td>
<td>23#</td>
<td>11#</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

(1) Every respondent was asked to give two reasons, if only one reason was given, the reason is counted twice.
# Incomers and local residents within the Northumberland case study area score significantly different (Z-score => or <= +/- 1.96, significance at 0.05) for this answer category.

n = number of answers
Source: Own survey, 1997
In Britain, planning regulations in and near National Parks are probably assumed to be a better security for maintenance of the quality of the environment than planning regulations in the rest of the British countryside. This will receive more attention in Section 7.5 of this Chapter. In the third and last place, the motive that protected natural areas offer recreational opportunities was significantly more often mentioned in the Dutch case study areas. A further explanation of this difference is given in the next Section, where intensity and type of recreational use of the case study areas is investigated.

Reasons why residents of the Northumberland National Park area do not appreciate living in or near a protected natural area are summed in Table 7.7. The negative aspects of living in or near a protected natural area were mainly mentioned by the locals and were most often related to the perceived negative influence of the National Park status on the economic development and the extra bureaucratic problems arising from the interference of the National Park authority in planning regulations. These regulations are believed to interfere negatively with local life and freedom. The restraining influence on economic development especially relates to the restrictions placed on intensive agricultural practices in the National Park area and the conflict that exists between the Northumberland National Park authority and the Ministry of Defence (MoD) about intensifying training activity in the Otterburn Training Area. The perceived hard line of the National Park authority in this conflict is believed to endanger employment opportunities for civilians in the Otterburn Training area (see also Section 7.5).

Like in the Dutch study areas, the interviewed households were asked to deliberate the priority they gave to either having protected nature in their living environment or to having other services near their house. The results of this deliberation are summed in Table 7.8 where data were analysed in the same way as in the Dutch situations. The average score for appreciation of nature-related assets of the environment is significantly higher among

### Table 7.6: The two most important reasons (1) for finding it pleasant to live near a protected natural area

<table>
<thead>
<tr>
<th>Reasons for living near protected nature</th>
<th>Incomers (n=99)</th>
<th>Locals (n=239)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Characteristics environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Beautiful landscape/space/rural</td>
<td>59*</td>
<td>66*</td>
</tr>
<tr>
<td>b. Tranquility</td>
<td>31*</td>
<td>39*</td>
</tr>
<tr>
<td>c. Healthy/no contamination</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>d. Nice to have nature/wildlife near</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2) Planning security</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Well-lived after/maintained</td>
<td>19*</td>
<td>19*</td>
</tr>
<tr>
<td>b. Security of no development</td>
<td>8*</td>
<td>9*</td>
</tr>
<tr>
<td>3) Opportunities for outdoor activities</td>
<td>18#*</td>
<td>8#*</td>
</tr>
<tr>
<td>4) Attracts tourists (good local economy)</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5) Helps to get grants</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>6) Other</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

(1) Every respondent was asked to give two reasons, if only one reason was given, the reason is counted twice.

# Incomers and locals within the Northumberland case study area score significantly different (Z-score => or <= +/- 1.96, significance at 0.05) for this answer category (s).

* Incomers or locals score significantly different (Z-score => or <= +/- 1.96 significance at 0.05) for this answer category with at least two Dutch case study areas for this answer category

n = number of answers
Source: Own survey, 1997

In Britain, planning regulations in and near National Parks are probably assumed to be a better security for maintenance of the quality of the environment than planning regulations in the rest of the British countryside. This will receive more attention in Section 7.5 of this Chapter. In the third and last place, the motive that protected natural areas offer recreational opportunities was significantly more often mentioned in the Dutch case study areas. A further explanation of this difference is given in the next Section, where intensity and type of recreational use of the case study areas is investigated.

Reasons why residents of the Northumberland National Park area do not appreciate living in or near a protected natural area are summed in Table 7.7. The negative aspects of living in or near a protected natural area were mainly mentioned by the locals and were most often related to the perceived negative influence of the National Park status on the economic development and the extra bureaucratic problems arising from the interference of the National Park authority in planning regulations. These regulations are believed to interfere negatively with local life and freedom. The restraining influence on economic development especially relates to the restrictions placed on intensive agricultural practices in the National Park area and the conflict that exists between the Northumberland National Park authority and the Ministry of Defence (MoD) about intensifying training activity in the Otterburn Training Area. The perceived hard line of the National Park authority in this conflict is believed to endanger employment opportunities for civilians in the Otterburn Training area (see also Section 7.5).

Like in the Dutch study areas, the interviewed households were asked to deliberate the priority they gave to either having protected nature in their living environment or to having other services near their house. The results of this deliberation are summed in Table 7.8 where data were analysed in the same way as in the Dutch situations. The average score for appreciation of nature-related assets of the environment is significantly higher among
Table 7.7 The two most important reasons (2) to find it unpleasant to live near a protected natural area

<table>
<thead>
<tr>
<th>Reason (2)</th>
<th>Incomers (n=2)</th>
<th>Locals (n=32)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Restrictions make natural area less accessible</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>2) Restrictions restrain economic development of area</td>
<td>0</td>
<td>29</td>
</tr>
<tr>
<td>3) Too many tourists in the area/too busy/crowded</td>
<td>100</td>
<td>9</td>
</tr>
<tr>
<td>5) Leads to unnecessary bureaucracy/waist of time and money/interferes in local life</td>
<td>0</td>
<td>25</td>
</tr>
<tr>
<td>6) Other</td>
<td>0</td>
<td>34</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

(1) Every respondent was asked to give two reasons, if only one reason was given, the reason is counted twice.

n = number of answers

Source: Own survey, 1997

Table 7.8 Average level of individual preference for presence of nature in the direct living environment as deliberated against the nearby presence of certain services*

<table>
<thead>
<tr>
<th>Choice between:</th>
<th>Incomers (n=53)</th>
<th>Locals (n=174)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1: Shopping services near house</td>
<td>18</td>
<td>40</td>
</tr>
<tr>
<td>1: Protected natural area near house</td>
<td>82</td>
<td>60</td>
</tr>
<tr>
<td>-1: Family doctor (GP) near house</td>
<td>25</td>
<td>42</td>
</tr>
<tr>
<td>1: High natural and scenic qualities around house</td>
<td>75</td>
<td>58</td>
</tr>
<tr>
<td>-1: Supermarket near house</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>1: Living in quiet surroundings</td>
<td>98</td>
<td>88</td>
</tr>
<tr>
<td>-1: Cinema/theatre near house</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>1: Opportunities for outdoor activities near house</td>
<td>98</td>
<td>89</td>
</tr>
<tr>
<td>Mean score*</td>
<td>2.96</td>
<td>1.80</td>
</tr>
<tr>
<td>2-tailed significance P</td>
<td>0.00</td>
<td></td>
</tr>
</tbody>
</table>

* Level of preference for natural and scenic characteristics of the environment. For the nature-related characteristics of the environment 1 point was given; for the opposite of this, the preference for a service, a –1 was given. All the points were added up in an end-score: the higher the end-score, the stronger the nature preference of the respondent. Since there were 4 questions, the maximum end-score cannot be higher than 4 and the minimum end-score not lower than –4. A 2-tailed significance test for independence of mean preference scores was done for comparing between incomers and locals.

n = number of households

Source: Own survey, 1997
incomers than among the local residents in Northumberland. The average score in all Dutch study areas for both incomers and locals is higher than for Northumberland. In Northumberland it were especially the tranquillity aspects and the opportunities for outdoor activities related to the presence of protected nature that were appreciated more strongly by local population groups than the presence of high level services. The overall conclusion is that although the large majority is satisfied with the living environment in Northumberland, there are still more local residents than in the Dutch study areas, that are not satisfied. For the groups that were satisfied with their living environment one can conclude that this satisfaction was even more strongly than in The Netherlands related to the direct and indirect effects of the presence of nature on the attractiveness of the physical environment. The most important reasons for groups to be dissatisfied were lack of services in general and stricter planning regulations perceived to be linked with the presence of the National Park Northumberland. Like in The Netherlands, also the large majority of both incomers and local residents found it pleasant to live in or close to a protected natural area, although there were more locals that also mentioned disadvantages for living in or near protected nature. The main reasons for the appreciation of the presence of protected nature were related to the aesthetic, rural and tranquillity aspects of an area whilst the presence of nature and wildlife was not mentioned as often as in The Netherlands. This is probably related with different perceptions of nature and the stronger influence of the ‘rural idyll’ in British society. What is also different from the Dutch situation is that outdoor opportunities offered by the presence of the protected natural area are mentioned significantly less, whilst the extra planning security offered by the presence of protected nature were mentioned significantly more. In contrast for the group that did have problems with living near protected nature, the restraining influence of planning restrictions of economic development together with undesired bureaucracy were the main reasons mentioned.

7.2.3 Protected nature and residential satisfaction in the Doñana case study area
Like in the Dutch and English case study areas, also in the Spanish study area the large majority of the residents said to be satisfied with their residential environment. The incomers were however relatively more satisfied, since 93% of them stated to be satisfied, whilst 88% of both the locals and the second home residents gave this same answer. The reasons for satisfaction are summed in Table 7.9. These reasons are often different from those given by the population groups in the Dutch and English study areas. Also within the Doñana area the distribution over the answer categories between incomers, locals and second home residents groups differs strongly. Most incomers in Doñana are satisfied with their residential environment either because of the good social relationships they have with local people, they have a job in the area or because of the attractive environment with respect to tranquillity and the presence of beach and sea. The locals motivate their satisfaction more strongly to characteristics of the environment with respect to tranquillity but also to the presence of nature and wildlife. The social relationships with local groups were also mentioned by some of this group. For the second-home residents the characteristics of the environment are by far the most important reasons to be satisfied with the living environment in Doñana. Especially the presence of water and beach and the tranquillity of the area make this environment attractive to them. Social relations with the local populations are also important, but certainly not as important as for the permanent resident groups.
In Doñana there are some important differences in motivations for being satisfied with one’s living environment with the Dutch and English study areas. In the first place, social relations are an important reason to be satisfied in Doñana, especially among permanent residents, whilst in the Dutch and English case this was hardly mentioned. In the second place, both in the Dutch and English study areas, the attractiveness of the physical environment was by far the most important motive for satisfaction, especially in relation to aesthetic attractiveness. In the Doñana case few environmentally related motives were mentioned, except by the second home residents, and certainly very little reference was made to aesthetic attractiveness. Overall, one can see after comparison of the permanent residents of the Northern European and the southern European cases, motives related to social relations and the fact that one has a job in the vicinity of one’s house, are more important for residential satisfaction than the quality of the physical environment.
In the Doñana area the residents were also asked directly whether they appreciated living near a protected natural area. All incomers stated to find it pleasant. Of the other two groups 80% found it pleasant and another 20% had
doubts about it being pleasant and also saw negative aspects of living near protected nature (see annex 6, Table 27). This means that like in the Northumberland area, the proportion of households in Doñana that are being critical about the presence of protected nature is larger than in the Dutch study areas.

From Table 7.10 it becomes clear that the most important reasons given by all resident groups to find it pleasant to live near the protected territory of Doñana are related to appreciation of the presence of nature and wildlife in general, but also by the perceived contribution of protected nature to the aesthetic and air quality and tranquillity.

The incomers mentioned these last motives more often than the local residents did. The locals and second home residents were especially happy with the presence of nature and wildlife in general. The contribution of nature to

### Table 7.9 The two most important reasons (%) for residential satisfaction

<table>
<thead>
<tr>
<th>Reason</th>
<th>Incomers (n=25)</th>
<th>Locals (n=56)</th>
<th>2-home-residents (n=104)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Job related</td>
<td>24#*+</td>
<td>7#+</td>
<td>3#</td>
</tr>
<tr>
<td>2) Characteristics (physical) environment:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Tranquility</td>
<td>8</td>
<td>20</td>
<td>11</td>
</tr>
<tr>
<td>b. Beautiful/landscape/remote</td>
<td>0*</td>
<td>4*+</td>
<td>5*+</td>
</tr>
<tr>
<td>c. Clean/healthy air/pollution</td>
<td>4</td>
<td>2</td>
<td>4*</td>
</tr>
<tr>
<td>d. Presence nature/wildlife</td>
<td>0</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>e. Rural/countryside</td>
<td>0</td>
<td>0+</td>
<td>0+</td>
</tr>
<tr>
<td>f. Presence water/beach</td>
<td>8*</td>
<td>5#+</td>
<td>23#*+</td>
</tr>
<tr>
<td>3) Characteristics house/garden</td>
<td>12</td>
<td>4</td>
<td>12+</td>
</tr>
<tr>
<td>a. Characteristics house/garden</td>
<td>12</td>
<td>4+</td>
<td>12*+</td>
</tr>
<tr>
<td>b. Relative location house i.r.t. view/open space</td>
<td>0</td>
<td>0</td>
<td>0*</td>
</tr>
<tr>
<td>4) Social relations</td>
<td>40#*+</td>
<td>34#*+</td>
<td>11#</td>
</tr>
<tr>
<td>5) Possibility outdoor activities</td>
<td>0</td>
<td>7*</td>
<td>9*+</td>
</tr>
<tr>
<td>6) My roots/always lived here</td>
<td>0</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>7) Nice village</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>8) Near services/centrally located</td>
<td>4</td>
<td>0*+</td>
<td>0*</td>
</tr>
<tr>
<td>9) Good area for children to grow up in</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>10) Other</td>
<td>0</td>
<td>2</td>
<td>6*</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

(1) Every respondent was asked to give two reasons, if only one reason was given, the reason is counted twice.
# Incomers and/or locals and/or 2-home residents score significantly different (Z-score => or <= +/- 1.96, significance at 0.05) for this answer category.
* Incomers, locals and second home residents in this case study area score significantly different (Z-score => or <= +/- 1.96 significance at 0.05) with at least two other Dutch (respectively) incomers and local population groups (only comparisons were made between incomers and incomers, locals and locals and locals and second home residents).
+ Incomers or local residents in this case study area score significantly different (Z-score => or <= +/- 1.96 significance at 0.05) with (respectively) the incomers or local population group in Northumberland (only comparisons were made between incomers and incomers, locals and locals, and locals and second home resident groups)

n = number of answers
Source: Own survey, 1997
the air quality was mentioned more often by second-home residents, probably because most of them have their first residence in the cities of Huelva and Sevilla, where air pollution is relatively strong. Besides the contribution of nature to the quality of the environment, the motivation of planning security that comes from the presence of the protected nature, were also mentioned a couple of times. Some locals found it pleasant that the protection status gives more security about maintenance of the quality of the environment in the area.

When comparing the motives for appreciation of the presence of protected nature, there are differences between Doñana and Dutch and English study areas. Firstly, even though the Dutch and English study areas score very high on the motivations related to the contribution of protected nature to the quality of the environment, the proportion of households that score on this motive in the Doñana area is larger. Secondly, in the Dutch and English case study areas the recreational opportunities offered by a natural area was an important reason for appreciation, whilst in Doñana this was hardly mentioned. Thirdly, like in Northumberland and in contrast to the Dutch situation, planning security offered by the presence of protected nature was also an important motive for appreciation in Doñana.

The reasons most given for finding it unpleasant to live near the protected territory of Doñana were limited accessibility to the protected area, especially the National Park, and the restraining influence of the protected territory on economic development and construction. That these motives were mentioned is not surprising.

### Table 7.10 The two most important reasons to find it pleasant to live near a protected natural area

<table>
<thead>
<tr>
<th>Reason</th>
<th>Incomers (n=27)</th>
<th>Locals (n=65)</th>
<th>2-home (n=102)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1) Characteristics physical environment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Beautiful landscape/space/rural</td>
<td>93*+</td>
<td>80*+</td>
<td>92*+</td>
</tr>
<tr>
<td>b. Tranquility</td>
<td>30#</td>
<td>25#*+</td>
<td>15#+</td>
</tr>
<tr>
<td>c. Healthy/no contamination</td>
<td>26#</td>
<td>8#</td>
<td>16#</td>
</tr>
<tr>
<td>d. Nice to have nature/wildlife near</td>
<td>15*+</td>
<td>17*+</td>
<td>22*+</td>
</tr>
<tr>
<td><strong>6) Planning security</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Well-looked after/maintained</td>
<td>0</td>
<td>15#*</td>
<td>7#*+</td>
</tr>
<tr>
<td>b. Security of no development</td>
<td>0</td>
<td>12#*</td>
<td>4#*</td>
</tr>
<tr>
<td><strong>3) Opportunities for outdoor activities</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7*</td>
<td>3*</td>
<td>1*+</td>
<td></td>
</tr>
<tr>
<td><strong>4) Other</strong></td>
<td>0</td>
<td>2</td>
<td>0*+</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

(1) Every respondent was asked to give two reasons, if only one reason was given, the reason is counted twice.

# Incomers and/or locals and/or 2-home residents score significantly different (Z-score => or <= +/- 1.96, significance at 0.05) for this answer category.

* Incomers, locals and second home residents in this case study area score significantly different (Z-score => or <= +/- 1.96 significance at 0.05) with at least two other Dutch (respectively) incomer and local groups (only comparisons were made between incomers and incomers, locals and locals and locals and second home residents).

+ Incomers or local residents in this case study area score significantly different (Z-score => or <= +/- 1.96 significance at 0.05) with (respectively) the incomers or local population group in Northumberland (only comparisons were made between incomers and incomers, locals and locals, and locals and second home resident groups).

n= number of answers

Source: Own survey, 1997

Living near protected nature: advantages and disadvantages
because the accessibility of the protected territories is indeed more restrained than in the Dutch and English situations. The perceived restraining influence of the protected territory on development is also to be expected within the historical context (see Section 7.5).

Since the local circumstances differed strongly from the Dutch and English case study areas, other questions were asked to measure the relative appreciation of protected nature in the Doñana area. In three questions, appreciation of nature related characteristics of the area were compared against other specific features of the Doñana region. The respondents had to choose between the following pairs of answers:

1. the high natural and scenic characteristics of the environment opposed to the presence of the sea and beach;
2. the high natural and scenic characteristics of the environment opposed to the proximity to the cities of Huelva and Sevilla;
3. the high natural and scenic characteristics of the environment opposed to the pilgrimage towards el Rocío ('La Romeria') (see Chapter 4 for further explanation).

The results of this deliberation process are summed in Table 7.11 and the data were analysed in the same way as in the Dutch and English study areas.

Table 7.11 shows that the incomers have the strongest preference for nature. The second home residents have the lowest nature preference. Second home residents rather come to the Doñana area for the sea and beach than for the natural and scenic characteristics of the area. Since relatively more locals have their roots in the Doñana area than the second home and incomer residents do, they also have a stronger preference for the Romería to El Rocío. This pilgrimage is one of the most important in Spain, which gives a lot of positive publicity to the Doñana area.

### Table 7.11 Average level of individual preference for presence of nature in the direct living environment as deliberated against another typical feature of the region*

<table>
<thead>
<tr>
<th>Choice between:</th>
<th>Incomers (n=13)</th>
<th>Locals (n=33)</th>
<th>2-home (n=56)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1: high natural and scenic characteristics environment</td>
<td>62</td>
<td>58</td>
<td>41</td>
</tr>
<tr>
<td>1: presence sea and beach</td>
<td>38</td>
<td>42</td>
<td>59</td>
</tr>
<tr>
<td>-1: high natural and scenic characteristics environment</td>
<td>69</td>
<td>62</td>
<td>59</td>
</tr>
<tr>
<td>1: proximity of the cities of Sevilla and Huelva</td>
<td>31</td>
<td>38</td>
<td>41</td>
</tr>
<tr>
<td>-1: high natural and scenic characteristics environment</td>
<td>79</td>
<td>67</td>
<td>79</td>
</tr>
<tr>
<td>1: pilgrimage to el Rocío</td>
<td>21</td>
<td>33</td>
<td>21</td>
</tr>
<tr>
<td>Mean score*</td>
<td>1.26</td>
<td>0.68</td>
<td>0.51</td>
</tr>
</tbody>
</table>

* Level of preference for natural and scenic characteristics of the environment. For the nature-related characteristics of the environment 1 point was given; for the opposite of this, the preference for another typical feature of the region, a –1 was given. All the points were added up in an end-score: the higher the end-score, the stronger the nature preference of the respondent. Since there were 3 questions, the maximum end-score cannot be higher than 3 and the minimum end-score not lower than –3. A two-tailed significance test on independence of mean preference scores could not be done because number of observations was too small.

least preference strongest preference

n = number of households
Source: Own survey 1996
In conclusion also in the Doñana area the large majority of all residents were satisfied with their residential environment. For the second home residents and locals this was most strongly motivated by appreciation of the physical characteristics of the environment. For incomers, social relationships were the most important motivation for satisfaction. The appreciation of the physical environment by second home residents is most strongly related to the presence of water and beach in the area, whilst for the local residents this was more often related to the presence of protected nature. The presence of protected nature in the residential environment is also valued very positively by most residents in Doñana, although there were also several second home and local residents that were more critical about this. The most important reasons to be satisfied about the presence of protected nature, which was mentioned significantly more often than in the Dutch and British study areas, was the contribution of protected nature to the physical environment.

7.3 Protected nature and recreational use

Recreational opportunities give protected natural areas a consumptive use value. The objectives of the planning regulations in many protected natural areas are not only aimed at conserving the natural environment but also to provide good recreational facilities. National Parks in England were even designated in the first place for providing recreational opportunities for urban population groups. However, most urbanites still have to travel long distances to get to these protected natural areas, whilst the advantage for households in our study areas is that they have these facilities directly on their doorstep. From the former it already became clear that for many households, especially in the Dutch study areas, this was an important and frequently mentioned reason to appreciate living near protected nature. In Northumberland this aspect was not mentioned as often as in the Netherlands but it was still mentioned by several households, especially incomers. In the Doñana area relatively few households mentioned this as an advantage of living near the protected nature. In this Section the frequency and type of recreational use by local populations of the protected natural areas is investigated.

In Table 7.12 an overview is given of the frequency in which households visited the protected natural areas for recreational purposes. All Dutch and British areas are intensively used for recreational purposes because there is hardly any household in these four areas that never visited the nearby protected territory for recreation use. In the Doñana area, frequency of visits to both protected territories is considerably lower and the proportion of households that never visited one of these areas is very high, especially among the incomers.

The large majority of all population groups in both Dutch and British study areas, visited the protected territories with a frequency of at least once a month. In Dwingelderveld the frequency of visits is higher than in the other two areas. This is related to the better accessibility of this natural area because it only consists of dry land, which is accessible all year through. In addition to this, the network of walking and cycling paths is relatively dense in Dwingelderveld. On the other hand, both Lauwersmeer and Weerribben, contain many wetland areas, which makes visiting these more complicated and less attractive during autumn and winter time. Another thing that becomes apparent for the Dutch study areas is, that the frequency at which incomers make recreational use of the protected territories is higher than for local residents. This is surprising since local residents scored higher on recreational opportunities as a motive to appreciate the nearby presence of protected nature (see former Section, Table 7.2). Apparently the higher appreciation of nature for recreational opportunities does not lead to a higher frequency in use.

In the Northumberland National Park area, differences in recreational use between incomers and local residents are larger than in the Dutch situation. The frequency of visits by locals is lower and there are also more of them that never visited the National Park for recreation in the previous year. This difference between incomers and local residents is probably, related to the significantly older population composition of the local resident group as already became clear in Chapter 5, but probably also to differences in lifestyles. When comparing this with the situation in the Dutch situation, one can conclude that in the Northumberland National Park area relatively less local residents make recreational use of the protected territory, especially the locals. However, if people make recreational use of the protected natural area, they do this as often as residents do in the Dutch case study areas. In the Doñana area the incomers make least recreational use of the protected territory. The local residents most
frequently visit the Entorno Park, whilst second-home residents visit the National Park area more often (see Table 7.12). This is not surprising since locals have been living in the area for longer and therefore usually have more acquaintance with local landowners to give them permission to visit. The proportion of people that visit the protected territory of Doñana is relatively low, both amongst permanent and second-home residents. The low recreational use activity of the second-home residents is surprising because one would expect that they have relatively more spare time when residing in the Doñana area and should therefore be more inclined to visit the protected natural area than the permanent residents. The considerably lower recreational use of the Doñana area in comparison to the Northern European case studies may be related with national habits towards the way people spend their spare time, the fact that most people rather go to the beach than visit the natural area, and the relative restricted access to the protected territory of Doñana.

To investigate how this restricted access to the National Park area is experienced the local population in the Doñana area was asked their opinion about this. It became clear that around 40% of the local population groups (39% of the incomers, 43% of the local residents and 38% of the second home residents) experienced the accessibility of the National Park as too restrictive. The most important criticism given by the local population groups on the accessibility regime of the National Park were: (1) visits are only allowed in organised tours for

| Table 7.12 Visitor frequency to the protected natural areas (on average in last year) |
|---------------------------------|----------------|----------------|----------------|--------|--------|
|                                 | at least once | at least once | Less than once | never  | n      |
|                                 | a week        | a month       | a month        |        |        |
| Dwingelderveld                  |               |               |                |        |        |
| Incomers                        | 50            | 28            | 22             | 0      | 50     |
| Locals                          | 44            | 37            | 18             | 1      | 119    |
| Weerribben                      |               |               |                |        |        |
| Incomers                        | 28            | 47            | 24             | 0      | 74     |
| Locals                          | 25            | 44            | 28             | 3      | 112    |
| Lauwersmeer                     |               |               |                |        |        |
| Incomers                        | 42            | 31            | 27             | 1      | 101    |
| Locals                          | 29            | 43            | 24             | 4      | 149    |
| Northumberland                  |               |               |                |        |        |
| Incomers                        | 47            | 17            | 17             | 19     | 53     |
| Locals                          | 32            | 16            | 14             | 38     | 177    |
| Doñana                          |               |               |                |        |        |
| Incomers*                       | 0             | 100           |                |        | 13     |
| Locals*                         | 44            | 56            |                |        | 34     |
| Second-home*                    | 48            | 52            |                |        | 56     |
| Doñana Entorno Park             |               |               |                |        |        |
| Incomers                        | 31            | 69            |                |        | 13     |
| Locals                          | 50            | 50            |                |        | 34     |
| Second-home                     | 36            | 64            |                |        | 56     |

(1) The Doñana situation is given separately because the answer categories in the survey are not comparable to the answer categories in the Dutch and British case study areas.

n = number of households

* Incomers and locals, and second home residents (only in the Doñana area) within the case study areas score significantly different (Z-score => or <= +/- 1.96, significance at 0.05) for this answer category.

Source: Own survey, 1996/1997

Living near protected nature: advantages and disadvantages 7
which one has to make a reservation beforehand, (2) visits cost a lot of money, (3) it is very hard to get permission to visit the National Park outside organised tours, (4) the National Park authorities make too little publicity for visiting possibilities, (5) the number of visitors allowed to visit per day is too low.

The type of recreational activities performed are determined by local facilities, type of terrain and cultural differences in the way people spend their spare time. In The Netherlands biking is much more popular (see annex 6, Table 28). In the Northumberland area there is more walking and horseback riding (see annex 6, Table 29). In the Doñana area people more often go bird watching, hunting, picnicing and also horseback riding (see annex 6, Tables 30 and 31).

Overall, one can conclude that intensity in recreational use between the Dutch and British case study areas does not differ strongly, while in the Spanish case study area the intensity is considerably lower. In the Dutch and British case study areas incomers seem to visit the protected areas relatively more frequently to perform recreational activities. Especially in the Northumberland area this difference between incomers and local residents is large. In the Doñana area the opposite is the case as incomers least visit the protected territories of Doñana. The overall lower recreational visiting rates in the Doñana area are related to differences in culture, the presence of sea and beach, and the restrained accessibility of the areas which is negatively evaluated and not well understood by local population groups. There does not seem to be a relationship between intensity of recreational use or limited accessibility to the protected territory and level of satisfaction with having a protected natural area near to where one lives.

7.4 Protected nature and employment

Protected natural areas may positively contribute to the economic development of an area through creation of employment. The way protected territories influence the employment opportunities of an area depend very much on whether economic activities are still allowed to take place in and around the protected territory, the labour intensity of managing and maintaining the protected territory and the number of tourists that are attracted to the natural area. Exploitation of natural resources is usually restrained in protected territories but in many some form of extensive economic activity is still allowed to take place. However, this depends on the type of protection regime in place (see Section 3.3). In the next an estimation is made of the local employment opportunities directly and indirectly created by the presence of the protected territories in the study areas.

7.4.1 Protected nature and employment in The Netherlands

The number of people directly and permanently employed by the conservation authorities that manage the protected territories of the study areas vary strongly. They amount 18 persons for Dwingelderveld, 40 persons for Weerribben and only 10 persons for Lauwersmeer (Oral information derived from the nature conservation organisations Natuurmonumenten and Staatsbosbeheer, October, 2001). Weerribben has the largest number of employees. This is related with the labour intensive character of conservation practices in the area and the larger amount of money available to Staatsbosbeheer to perform these activities. Important revenues come from renting out of land to local farmers for reed exploitation and government support payments for maintenance of the protected territories under the responsibility of Staatsbosbeheer. In Dwingelderveld most people work in the visitors centre, in administration, as rangers, or in maintenance of the area and as shepherds for the heather grazing by sheep. In the Lauwersmeer area there is no visitors centre because the area is not yet a National Park. There is however a regional office of Staatsbosbeheer, where these 10 people work as rangers and help to maintain the territory. Although the number of direct jobs created by the three protected areas is relatively small, one should not under-estimate the number of indirectly created jobs in the tourist and recreation sector as a result of the attraction of tourists.

On the basis of the survey results the direct and indirect local employment opportunities created by the presence of the protected territories could be divided in four groups:

1. paid employment with the nature conservation organisations managing the protected territories;
2. paid employment in exploitation of natural resources in the protected territory, needed for the maintenance of the quality of the landscape and natural resources;
3. paid employment in the tourism and recreation sector and
4. voluntary work related with the natural area.

In the Weerribben the effect of the natural area on local employment opportunities seems to be larger than in the other two Dutch case study areas. It was observed that relatively more households in the Weerribben work in the tourism and recreation sector and in reed exploitation and fishing. The proportion of respondents involved in voluntary work for the Dwingelerveld National Park is high in comparison to the other two areas and points to a stronger local involvement with the National Park. In the Lauwersmeer area the protected territory does not seem to give much employment to local population groups since respondents directly employed in conservation and management of the protected territory were not found and jobs in the tourism sector were relatively small. The only type of activity that gives some employment in this area is the fishing by a few professional fishermen.

7.4.2 Protected nature and employment in Northumberland

There are around 65 people permanently employed by the Northumberland National Park authority (information derived through oral communication with Northumberland National Park Head Office in Hexham, May 2000). In comparison to the situation in the Dutch areas this is a relatively much, but still not very surprisingly large given the fact that Northumberland National Park is 20 times the surface of Dwingelerveld and contains three visitors centres and many archaeological sites which also need to be maintained. The 65 people permanently employed by the National Park are responsible for several activities in the field of general administration, managing recreation and visitor services, planning, supervising and maintenance of landscape elements and archaeological sites. In addition, many activities are subcontracted to local people and organisations. For example most of the stonewalling work is sub-contracted. The National Park is the planning authority for the territory of the National Park but sub-contracts most of the related activities to the County Council of Northumberland. Many archaeological sites are managed and maintained by English Heritage. The conservation activities in the Otterburn training area are for the responsibility of the Ministry of Defence (MoD). One should also realise that 80% of the Northumberland National Park area is in agricultural use, which means that the most important group of people that help to conserve the cultural landscape in the area are the farmers. One can therefore conclude that many more jobs are directly created by the presence of the Northumberland National Park in addition to the 65 jobs already mentioned above.

Survey results also showed that the proportion of local households in Northumberland directly or indirectly employed because of the presence of the National Park is comparable to that in the Dutch Dwingelerveld and Weerribben area. The tourism sector is an important job provider. Besides, it also became clear that incomers are more often doing voluntary work for the National Park than the locals.

7.4.3 Protected nature and employment in Doñana

In the Doñana area there are three organisations that have the responsibility for the conservation of the protected territory of Doñana. The National Park and Entorno Park authorities are responsible for the administration, management and maintenance of the two protected territories of Doñana and they respectively employ 170 and 30 persons on a permanent basis. At the biological research station of Doñana, Estación Biológica, 210 people are working on a permanent basis (Oral information derived from Doñana National Park and Doñana Entorno Park authorities, October 2001). Part of this staff is located in the National Park, whilst the rest is stationed in the city of Sevilla. Like in the Northumberland Park, almost the whole territory of the Entorno Park is in private hands using the territory for extensive farming, fishing and forestry, which means that most of the work for maintaining the cultural landscape in this part of Doñana is done by the local land owners. In addition, there are also around 30 people involved in some traditional activities which are still allowed to take place in the National Park of which livestock farming, fishing and carbon production are the most important.

From the survey results it was also concluded that the proportion of local households that work directly or indirectly employed for the organisations that manage the protected territory is higher than in the Dutch and English study areas. All incomers that have some working relationship with the protected territory of Doñana, work in the tourist and
recreation sector. The influence of the protected territory of Doñana on job opportunities in the tourist and recreation sector should however not be overestimated as the most important reason for tourists and second home residents to come to the area is the presence of sea and the beach. Although it cannot be denied that the presence of the natural area of Doñana does further increase the quality, fame and attractiveness of this area. In comparison to the Dutch and English situation the involvement of the local population with voluntary work for the protected territory is low, certainly among the incomers.

7.5 The constraining influence of protected nature on economic development

In the former Sections focus was mainly on advantages of the presence of protected nature in the residential environment. The positive influence on residential satisfaction through the contribution of nature to the attractiveness of the physical environment, the provision of recreational opportunities and jobs became clear, although some disadvantages of the presence of protected nature also came to the front. In Section 7.2 it became clear that in Northumberland and Doñana there were more residents that were critical about the presence of protected nature in their residential environment than in the Dutch study areas (see also annex 6, Table 27). The negative association in the Northumberland and Doñana area was also more often related with the restraining influence of the presence of protected nature on economic development and local life in general than in the Dutch study areas. This is however not surprising given the longer history of conflicts related to the presence of protected nature in these case study areas. It influenced the opinion of local residents, especially of those residents of longer standing. In the following the opinion of local residents in relation to the influence on economic development of Northumberland National Park and Doñana National and Entorno Park will be further analysed and placed in the context of passed incidents which have influenced the perceptions of these groups.

7.5.1 Conflicts and the National Park Northumberland

Although the primary purpose of the establishment of the National Park Northumberland was environmental conservation and recreation, the realisation of these are not an easy task for the National Park Authority (NPA). Almost all land within the National Park has a multi-functional use and is in hands of farmers, the MoD and Forest enterprises. Recreational use in the National Park has to be arranged by Rights of Way or through Access Agreements (see also Section 4.4). Conservation of the ecological, landscape and cultural assets has to be done in close cooperation with all the other parties that have rights in the Park and formal and informal management agreements between the NPA and relevant parties. An important instrument is the designation of Sites of Special Scientific Interest (SSSIs). More than in the Dutch study areas, realisation of conservation and recreational purposes in the Northumberland Park depends on local involvement and close cooperation between many different parties. Given the former it is not surprising that conflicts and differences of opinion among local population groups on the way the National Park should be managed have arisen in course of time.

Agriculture is very important in the Northumberland National Park area as 80% of the total surface is farmed. The quality of the landscape depends strongly on the continuation of agricultural activities and several measures are taken to support extensive farming methods. Especially hill farming still enjoys a considerable amount of both national and European support. The opportunities for getting grants and the support and advice for getting these grants are greater for farmers within than outside the National Park. On the other hand, farmers in the National Park also experience more pressure to use specific extensive farming methods that favour the quality of the landscape and help maintain landscape elements and buildings in a traditional way, which automatically involves higher expenses. In addition, farmers in the National Park, especially those located in the Hadrian’s wall area, receive relatively many recreationists on their land. Chances that recreationists impose damage to gates, walls, fences and crops, disrupt farming activities or let animals escape, are larger in National Parks. This creates stress and extra costs. For that matter, trespassing may not only be disturbing to farmers but also to local residents seeking a tranquil life in the countryside.

Besides the conflicts that may occur from the tuning between conservation, recreation, agriculture and residence in the National Park area, the military activities in the Otterburn training area are the main source of conflict in
the area at this moment. In Chapter 4 the context and interests of all parties involved were already described. Although in the 37 years of combined presence of the National Park and the MoD, the differences in interest and opinion between the two parties have always been solved through mutual consultation. However disagreements in the last couple of years had to be solved through external interference in a public inquiry. This was mainly caused by the increased pressure to intensify military training in the Otterburn Training Area (OTA). As a result recreational use of this area has gradually diminished. For the National Park Authority (NPA) this together with the related expected increase in damage to ecological and cultural assets has become unacceptable and therefore a reason to ask for a public inquiry. For some local population groups the rigid position of the NPA has become a source of concern as they fear that civilian jobs on the OTA are at stake if the MoD is not allowed to further expand its training activity. After all, 90 local people are employed by the MoD in the OTA, which is much more than the 65 people permanently employed by the National Park.

Table 7.13 reveals that there are still more residents that believe that the presence of the protected territory of Northumberland stimulates than that it restrains the local economy. Apparently, incomers are more positive about the influence of Northumberland National Park on the local economy than the local residents. There are two plausible explanations for this difference. Firstly, locals have been living for longer in the area and have therefore been witness of more conflicts or differences of opinion between the NPA and other parties. Secondly, local residents are relatively more often employed in agriculture or work for the MoD at the OTA. They are therefore more directly involved with restrictions on developments related with the presence of the National Park.

In Tables 7.14 and 7.15 the motivations for thinking that the presence of the protected territory stimulates or restrains the local economy are given. The distribution over the motivations for finding that the National Park stimulates the local economy are not very different between the incomers and local residents. For both groups, the main motivation is connected to the attraction of tourists to the area and, although a much lower score, was found on creation of jobs in other than the recreation sector, extra grants in the agricultural sector and PR for the area. When concentrating on the main motives for thinking that the presence of the nature area of Northumberland adversely influences the local economy one can observe many significant differences between the local and incomer groups. Both groups connect the restraining influence to those activities, which are most relevant to them. The fact that the public inquiry is putting civilian jobs in the OTA at risk, is the motivation most often mentioned by local residents, followed by the restraining influence on agricultural or other economic activities.

The incomers are more concerned with the restraining influence on setting up a non-agricultural business activity, as new business development in the area more often occurs among this group than among locals (see Chapter 5). Overall, it became clear that around 50% of the local residents think that the National Park Northumberland positively influences the local economy, whilst 25% thinks that it only restrains the economic development. Incomers are more often than local residents of the opinion that the National Park positively contributes to the

Table 7.13 Answer to the question whether the presence of the Northumberland National Park stimulates or restrains the local economy

<table>
<thead>
<tr>
<th></th>
<th>Northumberland</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Incomers (n=55)</td>
</tr>
<tr>
<td>Restains local economy</td>
<td>24</td>
</tr>
<tr>
<td>Stimulates local economy</td>
<td>52</td>
</tr>
<tr>
<td>Both restrains and stimulates local economy</td>
<td>4</td>
</tr>
<tr>
<td>Don’t know/no opinion</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

n= number of respondents

Source: Own survey 1997
local economy. This is not surprising as this group works less often in sectors that are most confronted with restrictions related to the presence of the National Park. The most important reason to think that the National Park stimulates the local economy is related to the attraction of tourists. The most important reason to think that it restrains the local economy is related to adverse effects on agricultural and non-agricultural business activities. The high score on this last motivation is rather surprising, especially for the incomer group, as in Chapter 5 it was already shown that the Northumberland area attracted relatively many self-employed people. Apparently this perceived restraining influence of the National Park does not prevent entrepreneurs to settle in the area. What

<table>
<thead>
<tr>
<th>Table 7.14</th>
<th>Relative distribution over motivations (1) to think that the presence of the Northumberland National Park stimulates the local economy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Northumberland</strong></td>
<td><strong>Incomers (n=60)</strong></td>
</tr>
<tr>
<td>1) Attracts tourists to the area</td>
<td>79</td>
</tr>
<tr>
<td>2) Gives work to the local population</td>
<td>2</td>
</tr>
<tr>
<td>3) Helps to derive extra grants for local businesses</td>
<td>0</td>
</tr>
<tr>
<td>4) Free public relations for the area/attracts people and businesses</td>
<td>2</td>
</tr>
<tr>
<td>5) Other</td>
<td>17</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100</td>
</tr>
</tbody>
</table>

(1) Every respondent was asked to give two reasons, if only one reason was given, the reason is counted twice.
* Significant difference between incomers and local residents in proportion of motives in this answer category (Z-score +/- 1.96)
** Not a normal distribution; total answers and cell filling too small (N< 30 and cell filling < 5) to determine Z-score.

n= number of answers
Source: Own survey 1997

<table>
<thead>
<tr>
<th>Table 7.15</th>
<th>Motivations (1) to think that the presence of the Northumberland National Park restrains the local economy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Northumberland</strong></td>
<td><strong>Incomers (n=38)</strong></td>
</tr>
<tr>
<td>1) Restrains the agricultural sector</td>
<td>5</td>
</tr>
<tr>
<td>2) Restrains employment in OTA</td>
<td>3*</td>
</tr>
<tr>
<td>3) Restrains opportunities to set up business/imposes restrictions</td>
<td>68*</td>
</tr>
<tr>
<td>4) Creates extra bureaucracy/inefficiency</td>
<td>8</td>
</tr>
<tr>
<td>5) Other</td>
<td>16*</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100</td>
</tr>
</tbody>
</table>

(1) Every respondent was asked to give two reasons, if only one reason was given, the reason is counted twice.
* Significant difference between incomers and local residents in proportion of motives in this answer category (Z-score +/- 1.96)
** Not a normal distribution; total answers and cell filling too small (N< 30 and cell filling < 5) to determine Z-score.

n = number of motives given by total respondents
Source: Own survey 1997
also became apparent is that if households think that the National Park restrains local economic development, this is not a reason to not appreciate living in or near a National Park, at least for the incomer group. Many locals look at this in another way though (see Section 7.2.2). Finally it was also seen that the position of the NPA in the public inquiry about the extension of the military training activity in the OTA is driven by its interest in guaranteeing conservation and recreational use of the area. Local people that are in favour of intensifying the training activity because they fear a loss of employment, interpret the rigid position of the NPA as if it objects against economic development of the area.

7.5.2 Conflicts and the protected territory of Doñana

The protected natural area of Doñana is one of the largest and in ecological respect one of the most important natural areas of Europe, but also one of the areas with most controversies and to which an endless list of scientific and newspaper publications has been dedicated. In spite of this, very little attention has been paid to the opinion of local people about the way they experience the presence of the protected territory of Doñana. Also in the production of plans for the sustainable development of the area, local public opinions have never been involved, in spite of the extensive production of plans, laws and documents for management and planning policy for the Doñana region in the last decades (e.g. Dictámen del Comité de Expertos, Plan de Ordenación de Recursos Naturales, Plan Director Territorial de Coordinación) (see also Section 3.4.3 and Chapter 4). The controversies in relation to the protected territory of Doñana are rooted in the period before the protected area was even created, but were further aggravated by the creation and progressive increase of the protected territory since the 1960s and the constant involvement of many different national and international parties in this process. The local population of the Doñana area always had limited admission to most parts of the Doñana area. The situation that there are large areas of unproductive and inaccessible land, which could, when exploited, help to solve the local socio-economic problems have often been a cause for frustration under the local population. Before Doñana was made a protected territory, the area was owned by the nobility, which restricted the productive use of the area to hunting and forestry. Later attempts to put the area into productive use also failed because of the breaking out of the Spanish Civil War. From the 1950s onwards the first arguments for conservation of the area started to come out which resulted in the gradual acquisition of parts of the Doñana territory for conservation as already discussed in Chapter 4. With the establishment of the protected territory, again the admission to the Doñana area for the local population was being minimised, but this time by conservationists from Madrid and abroad. To compensate the local population for this, several tourist and agricultural projects were started in the area simultaneously, in order to create alternative economic opportunities (see Chapter 4). The process of managing both economic and conservation interests was and still is problematic. The presence of unique nature, of which the quality is easily disturbed by pollution and lack of water, increases the necessity for restraining construction activity and irrigation of agricultural land, whilst at the same time the low socio-economic development level of the area pressures the government to create more employment opportunities (see also Elbersen & Prados, 1999). The need for consistent management of the area is therefore very large but also very complicated. Several incidents took place in the last two decades that illustrate how unsatisfactory the situation in the Doñana area has been for many groups.

The most important tourist projects in the Doñana area were started in the beginning of the sixties, when the ‘Promoción Turística de la Costa de Huelva’ was approved which led to the construction of several tourist resorts on the coast side. At this moment this construction activity still continues, although in a lower intensity. Under influence of the constant competition for land between conservationists and real estate developers, not only construction sites increased in size and number, also the total protected territory increased importantly. Especially in the 1980s, the tension between conservation and construction interests became stronger. Some sites were built up and other planned construction projects received so much opposition from conservation groups that they were cancelled. The same happened with the planned construction of a highway between Huelva and Cádiz and the widening of the Almonte-Matalascañas road. The highway between the two port cities would have decreased the travel time importantly and would have brought increased efficiency and economic opportunities to the area, but it would also have inflicted irreversible damage to the feeble ecosystem of Doñana. Plans for construction of this highway were therefore cancelled, frustrating many economic opportunities for the area.
Another source of conflict is the constant competition for land and water between the protected territory and the agricultural sector. In the beginning of the 1970s an ambitious irrigation scheme was started to bring the Almonte-Marismas zone into agricultural use. In the original plan considerably more hectares were planned to be transformed, but during the process recommendations by the ‘Instituto Geologico Minero de España’ and the WWF and IUCN forced the project coordinators to diminish the originally planned surface since excessive use of irrigation water was to have negative repercussions on the water reservoir underlying the National Park of Doñana. Apart from the competition for fresh water between agriculture and the National Park, the use of pesticides is another source of conflict. In the 1980s this even had to be solved in court. Conservation movements accused rice farmers of illegal pesticide use, which was supposed to have caused massive bird mortality. After six years of legal procedure the case was closed with the conclusion that the bird mortality was caused by botulism, strongly connected with the severe drought in that year. A couple of years later another confrontation took place when cattle breeders drove their herds into the Doñana National Park to force local authorities to start a dialogue on productive use of the park area. Cattle breeders are short of grazing lands in periods of severe drought. Until now the National Park authority never responded to the demand of the cattle breeders to start a public dialogue as they hold on to the strict definition of a National Park under the IUCN-New Delhi-Conference, which states that National Parks should not be used for economic exploitation and human occupation (see Chapter 4).

The different efforts to integrate the economic development of the area with conservation of the environment, as already discussed in Chapter 4, have sorted little success as they were merely top-down approaches aimed at keeping both (international) conservationists and local population groups happy. The constant struggle between the protection of conservation rights against the wish to further enhance the economic development can largely be ascribed to the politicisation of the situation. Most local politicians keep on repeating that the economic development of the area should come before warranting the conservation in the natural area (El País Andalucía, 3rd November 1996) and that the constraining influence of the protected area should be financially compensated. This situation is rather in contrast to the situation in other protected Spanish territories, where local politicians do acknowledge the potential of protected natural areas to positively contribute to the local development of an area (see El Campo, 1993).

The situation of conservation in the area of Doñana was further complicated with the approbation of the Autonomy Act in 1985, which resulted in a decentralisation of certain legislative powers including the on conservation issues. The protected area of Doñana now consists of the National Park, which falls under national legislation, and of a natural area (Parque Natural del Entorno de Doñana) which falls under regional legislation. From the beginning of the creation of the Entorno Park, very little coordination exists between these two nature conservation bodies. Taking into consideration the increasing integration of Andalucía in Europe, it is remarkable that the ICONA, the National body responsible for management of National Parks, still continues to defend an ‘island model’ for nature conservation. During the pollution disaster of 1998, when a dam from the reservoir of a pyrite mine broke, this again became apparent. All energy was invested to build a provisional dam to prevent the polluted mud to enter into the National Park. At the same time, hardly anything was done to prevent the toxic mud to flow and spread over the surface of the Entorno Park and the adjacent agricultural lands. The Minister of the Environment Tocino declared within a few days after this disaster that the National Park of Doñana was saved (‘El Parque Nacional de Doñana está a salvo’, El País, April, 1998). At the same time hundreds of farmers saw their land covered with a meter of toxic mud, putting these lands out of productive use for an unknown period of time. With this statement the Spanish Minister for the Environment confirmed again that the National government still considered the National Park of Doñana as an island with no physical nor legislative connection with the rest of the region. The enormous ecological damage to flora and fauna inside and outside the National Park and the difficulties with implementing measures to coordinate the cleaning up of the area and to prevent another disaster, have shown that integrating the National Park territory with the wider environment is the only solution for a sustainable future for both human and ecological populations in the region.

To involve the local population it is necessary to understand their opinion and posture towards the protected territory of Doñana. This opinion of the local population has been formed within the context the developments that have been taken place as described in the former. In the inquiry for this research several other questions on the relationship between the protected area and the economic development of the area were asked to the local
population. It should be noted that the people in Doñana were interviewed one year before the disaster with the mine in Aznalcóllar took place. Since this disaster it is very well possible that the opinions of many have changed.

From Table 7.16 it becomes clear that there are relatively more people that believe that the presence of the protected territory of Doñana restrains than that it stimulates the economy of the area. This is not surprising given the whole history of conflicts that have arisen between the protected territory of Doñana and local population groups. This is also the reason why the locals and second home residents, that have already been living in the area for a longer period of time, are relatively more negative about the influence of Doñana on the local economy than the incomers.

In Tables 7.17 and 7.18 the motivations for thinking that the protected territory stimulates or restrains the local economy are summed. Like in the Northumberland area, the main motivation for thinking that the nature area stimulates the local economy is connected to the assumption that the nature area attracts tourists. All incomers mentioned this motivation, whilst locals and second home residents also indicated that jobs in other than the tourist sector were created by the presence of protected nature. For the second home residents it was also important that the presence of the nature area helped to increase the quality of the area, which was supposed to add extra economic value to the region.

When looking at the main motives to think that the presence of the protected area adversely influences the local economy, a lot of variation over answer categories between the population groups was seen (see Table 7.18). The incomers suspect a restraining influence of the nature area but few of them are able to motivate this, which illustrate their relative lack of understanding or interest concerning the relationships with the protected area. The local resident group connect the restraining influence to those activities which are most relevant to them; the restraining influence on development of overall economic activities and the restrained possibilities to exploit the natural resources in the protected natural area. The second home residents are more concerned with the restrained construction activities and the lack of an efficient infrastructural system, as these are more relevant to them.

From the former it became clear that in course of time the national and regional government has always tried to take measures to compensate the local population groups for the perceived restraining influence of the Doñana natural area. Apparently, these have however not been enough to satisfy the local population groups (see Table 7.19). Especially the local residents group is negative. Most residents indicate that it is necessary to create more employment opportunities for the local population (see Table 7.20). Other compensatory measures needed, are the creation of more efficiency in planning and legislation, realisation of government plans, and further improvement of infrastructure. This last measure was often mentioned by the second home residents group not

### Table 7.16

<table>
<thead>
<tr>
<th></th>
<th>Doñana total population (n=103)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restrains local economy</td>
<td>49</td>
</tr>
<tr>
<td>Stimulates local economy</td>
<td>24</td>
</tr>
<tr>
<td>Both restrains and stimulates local economy</td>
<td>8</td>
</tr>
<tr>
<td>Don’t know/no opinion</td>
<td>19</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

n= number of households
Source: Own survey, 1997
surprisingly since they are mostly affected by an inefficient transport network when travelling between their first and second homes.

As already became clear in the former, there are many local population groups that think that construction activities are restrained by the presence of the nature areas of Doñana. From Table 7.21 it becomes clear that many people experienced this as positive, but there are also many who do not know how to evaluate this. The second home residents are most positive about the restrained construction activity in the area. The most important reason for this is of course related to the increased value of their property (see Table 7.22).

In conclusion one can say that although the majority of the population is of the opinion that the protected territory of Doñana restrains the local economy and they are unhappy about the way the government is handling this, most people were still convinced of the fact that the protected natural area of Doñana should continue to exist. This becomes clear from Table 7.23, where the majority of the households still considered himself pro-

<table>
<thead>
<tr>
<th>Table 7.17 Relative distribution over motivations (1) to think that the presence of the Doñana protected territory stimulates the local economy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Doñana total population (n=32)</strong></td>
</tr>
<tr>
<td>1) Attracts tourists to the area</td>
</tr>
<tr>
<td>2) Gives work to the local population</td>
</tr>
<tr>
<td>3) Helps to increase/maintain the quality of the area</td>
</tr>
<tr>
<td>4) Other</td>
</tr>
<tr>
<td>5) Don’t know</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

(1) Every respondent was asked to give two reasons, if only one reason was given, the reason is counted twice. 

<table>
<thead>
<tr>
<th>Table 7.18 Motivations (1) to think that the presence of the Doñana protected territory restrains the local economy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Doñana total population (n=57)</strong></td>
</tr>
<tr>
<td>1) Restrains the agricultural sector</td>
</tr>
<tr>
<td>2) Restrains economic activities in general</td>
</tr>
<tr>
<td>3) Restrains construction activity in the area</td>
</tr>
<tr>
<td>4) Creates extra bureaucracy/inefficiency</td>
</tr>
<tr>
<td>5) Money goes to protected territory and not to local population</td>
</tr>
<tr>
<td>6) Restrains development of infrastructure</td>
</tr>
<tr>
<td>7) No access to park limits exploitation of natural resources</td>
</tr>
<tr>
<td>8) Other</td>
</tr>
<tr>
<td>9) Don’t know</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

(1) Every respondent was asked to give two reasons, if only one reason was given, the reason is counted twice. 

n= number of motives given by total respondents

Source: Own survey 1997
Doñana. This is also in line with the high proportion of Doñana households that found it pleasant to live near a protected natural area (see Section 7.2.3). It is surprising and also in contrast to what most local politicians still continue to proclaim. There are many Doñana households that acknowledge that the presence of the area also positively contributes to the local economy and that it adds to the value and fame of the area. This does however not mean that there are no doubts. These especially result from the difficult relationship between conservation and economic development interests and the impotence of government bodies to solve the problems related to this complicated relation. For the participation of the local population groups in the integrated and sustainable development of the area it will be very important to inform and involve the local population of the area.

<table>
<thead>
<tr>
<th>Table 7.19 Answers to the question whether the government takes enough measures to compensate for the restraining influence of the protected natural area on the local economy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Doñana total population (n=61)</strong></td>
</tr>
<tr>
<td>1) Yes, enough</td>
</tr>
<tr>
<td>2) No, not enough</td>
</tr>
<tr>
<td>3) Don’t know/no opinion</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>n= number of households</td>
</tr>
<tr>
<td>Source: Own survey, 1997</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 7.20 The two most important measures (1) to be taken by the government to compensate for the restraining influence of Doñana according to local population</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Doñana total population (n=86)</strong></td>
</tr>
<tr>
<td>1) Invest more in employment opportunities for local population</td>
</tr>
<tr>
<td>2) Create less rules/more efficiency/implement plans</td>
</tr>
<tr>
<td>3) Attract more tourists, invest more in PR of area</td>
</tr>
<tr>
<td>4) Improve infrastructure in area</td>
</tr>
<tr>
<td>5) Permit more construction in the area</td>
</tr>
<tr>
<td>6) Other</td>
</tr>
<tr>
<td>7) Don’t know</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>(1) Every respondent was asked to give two reasons, if only one reason was given, the reason is counted twice.</td>
</tr>
<tr>
<td>n= number of answers</td>
</tr>
<tr>
<td>Source: Own survey 1997</td>
</tr>
</tbody>
</table>

Doñana. This is also in line with the high proportion of Doñana households that found it pleasant to live near a protected natural area (see Section 7.2.3). It is surprising and also in contrast to what most local politicians still continue to proclaim. There are many Doñana households that acknowledge that the presence of the area also positively contributes to the local economy and that it adds to the value and fame of the area. This does however not mean that there are no doubts. These especially result from the difficult relationship between conservation and economic development interests and the impotence of government bodies to solve the problems related to this complicated relation. For the participation of the local population groups in the integrated and sustainable development of the area it will be very important to inform and involve the local population of the area.
### Table 7.21 Evaluation of restrained influence of the protected area of Doñana on housing construction in the area

<table>
<thead>
<tr>
<th>Response</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>40</td>
</tr>
<tr>
<td>Negative</td>
<td>11</td>
</tr>
<tr>
<td>Both negative and positive</td>
<td>13</td>
</tr>
<tr>
<td>Don’t know</td>
<td>36</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

**Doñana total population (n=88)**

n = number of households  
Source: Own survey 1997

### Table 7.22 Relative distribution over answer categories of most important reason to see the restraining influence of the protected natural area on construction activity as positive

<table>
<thead>
<tr>
<th>Reason</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher property prices</td>
<td>64</td>
</tr>
<tr>
<td>More rest</td>
<td>14</td>
</tr>
<tr>
<td>More nature</td>
<td>11</td>
</tr>
<tr>
<td>Don’t know</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

**Doñana total population (n=36)**

n = number of households  
Source: Own survey 1997

### Table 7.23 Relative proportion of households that considers himself pro- or anti-Doñana

<table>
<thead>
<tr>
<th>Position</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anti-Doñana</td>
<td>0</td>
</tr>
<tr>
<td>Pro-Doñana</td>
<td>74</td>
</tr>
<tr>
<td>Not anti-nor pro-Doñana</td>
<td>26</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

**Doñana total population (n=36)**

n = number of households  
Source: Own survey 1997
7.6 Summary and Conclusion

In this Chapter the evaluation of protected nature in the living environment was investigated in relation to residential satisfaction, outdoor recreation and economic and rural development. Overall, it became clear that appreciation of protected nature in the residential environment is large, as virtually all households in all case study areas value the widely accepted contribution of the presence of protected nature to the quality of the living environment. In spite of this, there were still household groups that were not happy with living near protected nature, especially the local household groups in the Northumberland and Doñana area. The reasons for this should be sought in variations in specific circumstances that affect values in planning and local management regimes. It was also noted that the personal situation of people very much determine how they perceived the influence of protected nature on aspects of their personal life and local development in general. Two research questions were answered in this Chapter in order to structure the analysis of the evaluation of protected nature in the living environment.

The first question: how does the presence of a protected natural area contribute to the satisfaction with the residential environment can be answered as follows:

In all case study areas the large majority of all household groups were satisfied with their living environment. This was most often connected to the attractiveness of the local physical environment. In the Dutch and English study areas the presence of protected nature was the most important factor determining the attractiveness of the residential environment. Overall, incomers were more satisfied with their residential environment than local residents. This difference was especially large in Northumberland and Doñana. The reasons to be dissatisfied with the residential environment were most often related to lack of services in the case study areas. Dissatisfaction with the presence of protected nature was usually connected with the restraining influence of planning regulations in the protected area as well as increases in tourists leading to crowds and tranquillity disturbance.

The importance of the presence of protected nature in the satisfaction of the residential environment emerged in three different ways. Firstly, there was general satisfaction with the residential environment in all case study areas. The large majority of residents in the Dutch and British case study areas motivated this with either general appreciation of the presence of nature and wildlife or in terms of aesthetic attractiveness of landscape, tranquillity and/or rurality. These are all aspects enhanced by the presence of protected nature. The proportion of residents in the Dwingelderveld and Weerribben area that mentioned the presence of nature and wildlife as a reason for satisfaction was larger than in other areas. In the Northumberland area the high score on the nature and wildlife motivation only applied to the incomer group. The highest scoring motivation for satisfaction of the second home residents in the Doñana area was the presence of the sea and the beach. The other incomers and local resident group in Doñana diverged markedly from this picture as for these groups social contacts and the availability of employment were being the most important motivations for satisfaction with their living environment. In the Dutch study areas, especially in Lauwersmeer, social contacts and satisfaction with house and garden were also frequently mentioned and were secondary to motivations related to the physical environment.

Secondly, most resident groups in all case study areas found it pleasant to live in, or near, a protected natural area. In The Netherlands and in England nearby protected nature is mainly appreciated because it offers possibilities for outdoor activities and adds to the quality of the environment, especially in relation to the aesthetic attractiveness, naturalness, rurality and tranquillity. In the English case there is however a lower score on motivations connected to nature and wildlife. The planning security that comes from the presence of nature is also mentioned very often in Northumberland. It suggests that there are differences in the way local people are involved in planning and that the type of planning arrangements between the two countries differ, both within, and outside protected territories. In the Spanish case study area the reasons for appreciation of nearby protected nature were almost entirely connected to the quality that nature offers to the environment, especially in relation to aesthetic attractiveness, absence of pollution and the naturalness. Planning security that comes from protected nature is less often mentioned than in the English case study, but more often than in Dutch case.
studies. This again indicates the stronger difference in planning protection arrangements between unprotected and protected zones in Spain, while in The Netherlands the difference may be smaller.

Thirdly, the strong appreciation of protected nature also came to the fore when asking people to determine the relative preference for natural amenities, as opposed to other specific assets of the residential environment, such as services and other local assets. In both the Dutch and English case study areas most people would rather have natural amenities directly near their house than retail, medical or cultural services. However, cultural services are less highly valued than retail or medical services. The older the population is, the less important nearby nature and the more important nearby medical and retail services become. From the Spanish case, it became clear that the presence of the sea and the beach was still more appreciated by second home residents in the Doñana area than the presence of natural amenities. What also became clear for all case study areas was that incomers had a stronger preference for natural amenities in their residential environment than locals.

The second question: what possibilities are offered and what constraints are imposed by the presence of protected natural areas can be answered as follows:

**Possibilities offered by nature**

The first research question showed that the main possibilities offered by nature are residential satisfaction, outdoor recreational opportunities and planning security, but also employment. Constraints were imposed by the presence of nature are related to access and economic development, construction of houses and infrastructure.

Protected nature certainly plays an important role in residential satisfaction, which is most strongly driven by the generally accepted positive contribution to the quality of the environment in relation to natural, aesthetic, tranquility and rurality aspects of an area. Outdoor opportunities offered by nature are the second most important advantage of living near protected nature for The Netherlands. In the Northumberland and Doñana case outdoor opportunities are mentioned as the third most important motive for appreciation after ‘extra planning security offered by the presence of protected nature’. The higher score on recreational opportunities in the Dutch study areas shows that many residents use the protected territory for recreation and appointed this as an important reason for appreciating to live in, or near, protected nature. In The Netherlands walking and biking are the most popular recreational activities in protected areas, whereas in Northumberland it is mainly walking. In the Doñana area the low frequency of recreational activities may be related to access and to cultural differences.

Job opportunities offered by nature are often underestimated by local population groups especially if they are outside the tourism sector. The proportion of direct employment offered by the presence of nature is limited. Indirect employment in the tourist sector are considered to be the most important contribution to the economy by local population groups. The influence of protected nature on the economic aspects of agriculture are both positively and negatively evaluated. On the one side, the presence of protected nature increases the chances for the agricultural sector to obtain grants. On the other hand it may also force farmers to make extra costs because of the obligation to use extensive production techniques or maintain building and landscape elements. Little mention was made by local people of the perceived contribution of protected nature to the development of economic activities outside the agricultural or tourist sector. The high proportion of incomers that were self-employed in all Dutch and English case study areas, as was already shown in Chapter 5, shows however that the attraction by protected natural areas of small and medium sized enterprises should not be underestimated. In Doñana the majority of the population is of the opinion that the protected territory restrains the local economy and they are unhappy about the way the government is handling this. In spite of this, the large majority of the population positively evaluates the presence of it in the living environment.

**Constraining influence of protected nature**

Although in the Northumberland and Doñana areas the presence of protected nature in the direct living environment was appreciated almost as much as in the Dutch case study areas, evaluation of the influence of the presence of nature on rural development, especially economic development was more negative. This especially applies to the local resident group. The most important reason for this was the constraining influence of protected nature on the development of economic activities in the area. The perceived unnecessary bureaucracy
and the inability to exploit local resources were also mentioned as motives, but were mentioned considerably less than the former.

In the Northumberland National Park there was restraining influence on both agricultural and non-agricultural business activities and on military training activities. The expected restraining influence on non-agricultural activities is rather surprising, especially for the incomer group, as in Chapter 5 it was already shown that the Northumberland area had attracted relatively many self-employed people in recent years. Apparently, this perceived restraining influence of the National Park does not prevent entrepreneurs from settling in the area.

What also became apparent is that if households think that the National Park restrains local economic development then this is not a reason to not appreciate living in, or near, a National Park, at least for the incomer group. However, many locals look at this in another way. In the Northumberland case the conflicts mainly arise from the multi-functional land use, involving all conservation and recreational objectives in close collaboration with the different land owners and users in the area. Permanent well paid jobs are also relatively scarce in a remote area like Northumberland, making people more critical towards the constraining influence of conservation needs on the local economy.

In the Doñana area the proportion of residents that does not appreciate living near protected nature is larger than in the Dutch case study areas but is still surprisingly low given the fact that so many conflicts in the Doñana area have taken place in the past in relation to nature conservation and rural development. The explanation for this is connected to different levels in which people perceive nature. When people connect the presence of nature in their personal life they most often evaluate this as very positive. But, when people are asked to evaluate nature as part of a region and therefore forced to look at it at a more generalized level, the influence of protected nature tends to be evaluated much more negatively, especially in relation to economic development. In the Doñana case the problems are mainly related to three factors: deeply rooted historical conflicts on access rights to the Doñana area by local population groups; the politicisation of the Doñana area paralysing the introduction of bottom-up approaches to the management of the area; and low socio-economic development of the area, making local population groups more critical towards constraining influences on the local economy.
Living near protected nature: advantages and disadvantages
8 Conclusions and recommendations

8.1 General findings

The main objective of this study is to gain insight into the ability of protected natural areas to attract new residential activity and in the role they play in the enhancement of the quality of life of local rural residents. To understand these processes information was collected on the characteristics of households that were living in or directly adjacent to protected natural areas and their behavioral responses to the presence of protected nature. The assessment by local people of the presence of protected nature in their residential environment was also taken into consideration.

The principle conclusion of the empirical research of this study is that the presence of a protected natural area or the quality of the physical environment, which is enhanced by the presence of a protected natural area, are important reasons to select such an area as a new place to live. Motives related to the quality of the physical environment were also most frequently mentioned reasons for residential satisfaction in the study areas. The composition of the population group that had recently moved towards protected natural areas was distinctive. Early retirement, higher education, self-employment and commuting were overrepresented characteristics in the incomers population of the study areas, in comparison with incomers in other adjacent rural areas. Striking similarities were also found in household characteristics, appreciation and behavioural response to protected nature between incomers in the Dutch and British case study areas. This also applied to household characteristics of second home residents in the Spanish case study area as compared to incomers of the Dutch and British study areas. In addition, clear differences in residential choice motivations between Dutch, British and Spanish study populations were also detected, which could be connected to differences in perceptions of the concepts ‘rural’ and ‘natural’ and the specific regional and national settings. The research results further indicate that under influence of societal changes, household behaviour will be driven by the wish to use rural areas for consumption orientated activities in which the specific endogenous qualities of rural areas, such as natural amenities, play an important role.

The explanation of the overall strong appreciation of protected nature in the residential environment should be sought in the notion that nature contributes to the quality of the living environment and therefore to the personal quality of life. The protection measures that are inherent to the protection regime of designated areas did however restrict or reduce the appreciation of protected nature in the residential environment. Especially in the English and Spanish case study areas this caused a more critical posture towards the presence of protected nature or more specifically towards the side effects of the protection status of the area.

8.2 Data collection and research approach

This study showed that by combining revealed behaviour, preferences and values of individual households with the characteristics of these households, a better understanding could be gained in the processes that drive the rural restructuring process. New insights resulted in the factors that are important in the residential choice and the residential satisfaction of households in rural areas.

Data were collected through survey research in five case study areas in Europe in order to characterise the behavioural responses of present and potential residents to the presence of protected nature. It was assumed that to gain insight into the functional change process in rural areas, underlying household relations with protected natural areas need to be studied. The joint conclusions of the data analysis therefore form the basis for determination of the implications for functional change in rural areas, which will be discussed in Section 8.6 of
this Chapter. It was assumed that the aggregated behaviour of the households living in the case study areas influence the functional change in rural areas, but that this functional change together with societal changes also formed the context within which household behaviour takes place. By choosing a case study approach and selecting five case study areas in three different European countries, clear cultural differences in rural development, individual preferences and behavioural responses in relation to protected nature were detected. Comparison of the case studies from the different countries helps to differentiate between universal trends and country-specific effects. It was shown that the processes investigated in the Dutch and British case study areas showed many similarities, while the Spanish case study area more often diverged.

In The Netherlands three case study areas were selected while in the UK and Spain only one area for each was selected. Concentration of three areas within one country enabled to separate the influence of both national and regional specific qualities and the individual characteristics of the protected areas on residential choice. On the basis of the English and Spanish research it was also possible to link outcomes to the different regional qualities and to the specific characteristics of the protected area, but there was less certainty about whether the results could also applied at national level. Although one also has to be careful with generalising the research results of this study to the European level, the research results do shed a light on differences and similarities in conservation and residential activities, especially between the north and south of Europe. They need to be considered in both European and national rural policy formulation and implementation. In addition to advantages of doing international comparative research, there are also some disadvantages. For example since the secondary data that were available per research area often differed in the way they were collected and the years that were available, comparisons between developments in the study areas and with reference areas could not always be made.

An important difference exists in the composition of the survey population because second home residents comprise an important part of the Doñana research population, whilst in the Dutch and British study areas these groups were not involved because their numbers were low. In the Doñana area, almost half of the total housing stock consists of second homes because it is located on the coast and Spain is the country with the second highest proportion of such ownership in Europe. Doñana is a typical example of an area to where the urban residents of the crowded Andalusian cities can avoid the very hot summers; ‘veranear’.

8.3 Protected natural areas and population development

The importance of natural amenities in residential preferences was clear from the recently increased migration towards the case study areas of this study. The increased ability of certain household groups to allow residential environmental considerations prevail over job considerations also became clear from this migration, through the selectivity in the composition of the incomers population. This also has consequences for the population composition of these areas.

Population development

The research results of this study indicate that natural amenity rich rural areas in the EU have become more popular as places to live. In four of the five case study areas the post-1990 migration surplus proved to be larger than in the rest of the adjacent rural regions. An overruling common trend in population development for all five case study areas, attributable to the presence of protected nature was difficult to find, since many other interrelated factors have also influenced the population development process. Housing construction, as coordinated by local governments and an increase in local labour opportunities were two important driving factors. These were especially influenced in Dwingelerveld and Doñana. However, there were three common tendencies detected in population development that supported the recently increasing popularity of the five case study areas as places to live, in comparison to the rest of the adjacent rural regions. Firstly, in all five areas population either increased over the last 15 years or, if there was a population decline in the pre-1990 period, it shifted into a population increase or stabilisation in the post 1990 period. Secondly, in all areas population
increase or stabilisation was caused by an increase in immigration figures while growth through natural increase remained relatively constant. Thirdly, in all case study areas household numbers increased during the whole 15 year period under investigation, even in those areas where population numbers first declined in the 1980s, like in the Lauwersmeer, Weerribben and Northumberland area. The assumption formulated in the beginning of this study that natural amenity rich rural areas have become more popular as places to live was therefore confirmed.

**Selectivity of migration**

The recently increased migration towards the case study areas was accompanied by recent changes in the population flows and by an overrepresentation of household groups with specific socio-economic, demographic and occupational characteristics. It was noticed that the migration flow towards the case study areas had become more complex in the post-1990 period as the number of places of origin of the incomers increased in comparison to that the population groups that moved to the case study areas a longer time ago. This did not concur with an increase in migration distances but it did show a bias towards immigrants originating from urban areas. An exception was the Doñana area, which experienced an inflow of immigrants originating from rural areas, since the availability of agricultural labour was their main migration motive.

By combining household characteristics of the incomers groups in the study areas and comparing these with a combination of the same characteristics of incomers in other rural areas, for all case study areas three household groups could be separated that were overrepresented in the incomers populations of the Dutch and British study areas and in the second home resident population of the Doñana area. These were the early retirees, middle class households and footloose households. In a few but not all case study areas lower-costs-of-living-seekers, empty nesters, return-migrants, households with children and urban-dropouts also proved to be overrepresented in the incomers population. The more than average attraction of these groups could be related to a combination of the presence of protected nature and other specific local pull factors. It must be taken into account that these classifications are not however mutually exclusive. The largest overlap exists between the early-retirees and the footloose households as early retirees are no longer tied to a working place, which qualifies them as footloose. The same applies to early retirees and empty-nesters.

The overrepresentation of early retirees became apparent in all case study areas where a more than average attraction of migrants in the age above 54 years, often in combination with households with no ties to a working place, was found. All three Dutch case study areas and the Northumberland area attracted relatively many people in the age above 54 years, but in the three Dutch case study areas this also went together with an overrepresentation of people with an early retirement payment whilst this was not the case in Northumberland.

In the Doñana area only the second home household group contained relatively many households in the age above 54 years with no ties to a working place, but this did not apply to the incomers.

The importance of middle class households in the incomers population was most strongly shown by an overrepresentation of middle and higher educated groups, in combination with a larger proportion of middle and/or higher income groups. The concentration in the higher education classes in combination with a concentration in the middle and/or higher income classes became clear for all Dutch and English study areas when compared with other rural areas. In the Doñana area this only applied to the second home residents, whilst the incomers even showed the opposite trend. That middle class households were attracted above average to the study areas, especially in recent years, was further supported by the higher proportion of households in white collar occupations amongst the incomers, in comparison to the local populations. In addition in Doñana this only applied to the second home residents group.

Confirmation of the above average interest of footloose households to live near protected natural amenities was found in all case study areas. Footloose refers to households that are either not tied to a working place, or contain people that are working but are able to work at home or commute long distances. These households are therefore better able to involve quality of life considerations in their residential choice rather than job considerations. In all three Dutch study areas the proportion of incomer households that were tied to work was relatively low in comparison to other rural areas. In Dwingelderveld and Weerribben this was especially caused by the high proportion of households living on early retirement payments. In Lauwersmeer this was also caused by the high proportion of households living on unemployment benefits, or other sources of income, rather than
on salaries. Footloose households in a working situation were also more than average attracted to the three Dutch case study areas as the relatively high proportion of self-employed, home-workers and long-distance commuters amongst the incomer population confirmed. In the Northumberland study area an average proportion of households with no ties to work was found among the incomers group. However, among the households that still contained workers there was a clear overrepresentation of self-employed, home workers and long-distance commuters. The Doñana area was again an exception, as no indications were found for a more than average attraction of footloose households amongst the incomers. The second-home residents in Doñana did nevertheless have characteristics that qualified them as footloose, as the proportion of households that were not tied to a working place was very large in this group. This was however expected from the second home resident group. The above average attraction of lower-costs-of-living-seekers was only present for Lauwersmeer and Northumberland. In both these study areas, the proportion of low income households amongst the incomers was relatively large in combination with a relatively higher score on ‘housing price’ as a motive to select the area as a new place to live. This was expected as in both regions housing prices are still relatively low viewed in a national perspective, especially so for objects situated in natural and rural amenity rich environments.

The expected presence of empty nesters amongst the incomers was only confirmed for the Weerribben and the Lauwersmeer by the relatively high score on ‘dissatisfaction with former dwelling’, in combination with the high proportion of people in the age above 55 years. Parents whose children are leaving home usually belong to an age group that qualifies them for early retirement. After experiencing such a life event, they may decide to look for another place to live because the house and the living environment no longer meet their residential requirements. Quality of life factors, like the presence of natural amenities, will then become more important in the residential choice of this group.

The former does however not mean that the households with children are underrepresented in the migration flow towards protected natural areas as for all Dutch case study areas it became clear that relatively more households with children settled in these areas in comparison to other rural areas in The Netherlands. The overrepresentation of this household group indicates that in The Netherlands there is a relatively stronger preference of parents with children to live in a natural amenity rich environment, whilst the opposite is the case in Northumberland. In addition, there was also an overrepresentation of return-migrants detected in all Dutch case study areas, showing that in The Netherlands ties to former places of residence are stronger than in the other case study countries. This is probably related to the smaller scale of existence in The Netherlands as compared to the UK and Spain. It is therefore relatively easy for most Dutch households to move to another Dutch region and maintain contacts with the former place of residence, than it is for most British or Spanish households.

Finally, it became clear that the recent increase in the relative number of incomers originating from urban areas was linked to the high proportion of households that indicated that perceived disturbing characteristics associated with urban environments, such as crime, pollution and traffic nuisance. These were therefore push factors in their residential choice. This was most strongly the case for the incomers in Lauwersmeer and Northumberland and supports the expected overrepresentation of people that wish to leave urban places, the so-called ‘urban dropouts’, in the incomers population of natural amenity rich rural areas. With ongoing urbanisation and increasing overcrowding, congestion and pollution in western urbanised countries it can be expected that this group will further increase in the migration flow towards natural amenity rich rural areas in the near future.

Changes in population composition under influence of selective migration

This selective migration process, as discussed in the foregoing Section, also has implications for the local population composition. The way it affects this composition depends on the characteristics of the local population groups, and the way in which these differ from those of the incomers. Quantified statements on changes in population composition under influence of net-migration could not be given in the present study as information on characteristics of the out-going migrants was not collected. It is therefore likely that immigration leads to changes in the local population composition; especially in relation to age, education and income level, occupation and work organisation.

The most obvious effect of migration on population composition is age selectivity. The more than average
attraction of early retirees leads to a constant flow of households in the age above 54 years towards the natural amenity rich rural areas. The effect on the population depends however on age composition of the population that already lives in the area, the local household group. Simultaneous inflow of younger migrant may offset this effect. In all Dutch case study areas an overrepresentation of elderly, i.e. over 54 years, in the recent migration flow was found which in Dwingelderveld and Lauwersmeer also went together with an overrepresentation of the younger, aged under 35 years. In the Dwingelderveld area, which already contained a relatively old local population resulting from a long history of early retirement migration, immigration has led to a relative rejuvenation. In the Weerribben the incomers had an age distribution which was almost identical to that the local population and therefore helps to maintain the present age structure. In Lauwersmeer the younger than 35 age group was relatively small in the local household group. Immigration therefore leads to a relative rejuvenation. In Northumberland the incomers were strongly concentrated in the 55+ and the 35-54 age groups. Nevertheless, the high average age of the local population makes that migration still leads to a relative rejuvenation. In the Doñana area the immigration of permanent residents further rejuvenated the population. The presence of many young households in this case study area is however partially and seasonally compensated for by the strong overrepresentation of older people in the 55+ age in the second home resident group.

An unambiguous effect of the selective migration on household composition of the local population composition could not therefore be detected. The differences in distribution over household groups with children and single and two-person households between the incomers and the local groups in all case study areas were not large. The effect of migration on population composition is therefore limited. Both incomers in the Dutch and English study areas contained considerably more persons belonging to middle and higher educated and middle and higher income groups and to households working in white collar occupations than the local groups. It was therefore concluded that immigration caused an overall increase of middle class households. In the Spanish case study area the presence of middle class households only applied to second home residents, which therefore were expected to bring relatively more purchasing power into the area. There was also a disproportional attraction of footloose households on income and work organisation of the local population. In all Dutch study areas the proportion of households in a working age that were still tied to a working place was considerably lower among incomers. Their number in the local population is therefore expected to increase under influence of immigration. In the Doñana area almost half of the second home residents had no ties to work either in the first or second place of residence, whilst among the locals and incomers this proportion of footloose households was lower than in all other case study areas. In relation to work organisation the same phenomena were seen. The proportion of households that were self-employed, working at home and commuting was very high in all Dutch and British case study areas. Since the proportion of self-employed and work-at-home households was already very high among the local households in these case study areas, immigration did not lead to a further increase but it only helped to maintain the already large share of these groups in the total local working population. For commuters this was however different, in all Dutch and English areas immigration can be expected to lead to a significant increase in their share. In the Doñana area the proportion of self employed and commuters was relatively high among local households, but incomers hardly contained footloose working households.

The overriding conclusion can therefore be that the selective immigration process may lead to important changes in the population composition of natural amenity rich rural regions. Immigration is usually leading to relative ageing in areas where the population is still relatively young, while it causes relative rejuvenation in areas where the population is relatively old. Immigration also causes an increase in socio-economic development level, which is expressed in a general shift towards more higher educated and higher income groups and households occupied in white-collar jobs. In most natural amenity rich rural areas the number of early retirees can be expected to further increase but in regions where living costs are relatively low, this can also lead to a further increase of households living of unemployment benefits or disability pensions. It was also confirmed that protected natural areas attracted many households that work from home either for a company or self-employed. This also supports the positive influence of protected natural areas on the simultaneous attraction of new residential and economic activities. Finally, it could be concluded that the number of commuters was increasing under influence of immigration, which must also have consequences for the mobility in rural areas.
8.4 Protected natural areas and residential choice

Selection of residential environment and dwelling
In this study it was not possible to unravel what aspects obtained more priority in the residential choice process: the characteristics of the residential environment or the characteristics of the dwelling. It could however be concluded that most households have difficulty with separating or prioritising the selection of both dwelling and living environment in the residential choice considerations, as both have to meet the minimal requirements a household sets when searching for another place to live.

In relation to the selection of the residential environment the research results confirmed that the presence of protected nature was important in the residential choice. The presence of a protected natural area or the quality of the physical environment, which is enhanced by the presence of a protected natural area, proved to be the most frequently involved considerations in the selection of the residential environment by all incomer in the Dutch and British study areas. Whilst job considerations were second. But in the Spanish study area, the opposite was the case, as the residential choice motivations of the incomers were almost entirely job related. The second home residents mainly choose the area of Doñana for the presence of sea and beach, but characteristics of the physical environment related to the presence of protected nature such as aesthetic and tranquillity aspects are secondary. On the one hand, the high score on the physical environment related motivations for all case study areas was not surprising because of the preference for living in natural amenity rich environment by the households was already partly revealed by their move to the case study areas. However, this study showed that it had indeed been the contribution of the protected natural area to the quality of the physical environment that was the most frequently mentioned motive for the already revealed residential choice and that all other involved motives came second.

Motivations for selection of the residential area within the physical environment category were strongly related to endogenous qualities of rural areas in general, to which the presence of protected nature added considerably. In the Dutch Dwingelderveld and Weerribben areas the presence of nature and wildlife were the most frequently mentioned motivations within the physical environment category. In the other three areas, general aesthetic and rural characteristics were more important but in the case of both the Lauwersmeer and Northumberland area these could also directly be attributed to the presence of protected nature. Area specific characteristics related to the presence of water and beach, like in the Doñana and Weerribben area also scored very high in the physical environment category.

For the selection of the dwelling, the presence of nature adjacent to the house was not an important choice consideration, especially in the British and Spanish study areas. However, in the Dutch case study areas natural amenities in the direct environment of the house were still linked to the residential choice by several incomers. In a general sense this result suggests that having natural amenities in the direct surrounding of one’s house is not as important as having natural amenities in the wider living environment.

Finally, it should also be taken into account that the type of supply of housing, in relation to ownership and characteristics and location of the housing, in the case study areas already influences the type of residents that are attracted to these areas. Their preference for a dwelling in these particular areas is already revealed by the fact that people come to search a dwelling in these areas and by the type of dwellings they are live in. In both the Dutch and British case study areas it was seen that incomers were more often living in ‘rural objects’ than local residents. ‘Rural objects’ are old farmhouses, which are mostly seen in the Dutch case study areas, and houses located outside villages in the countryside with open views.

The general conclusion is that in the selection of the residential area the presence of protected nature plays an important role but in the selection of the house it is not so important. Since the selection of the house and living environment both have to meet the minimal requirements a household has set when searching for a new place to live, the presence of a protected natural area can only be one of the pull factors in the residential choice. This factor can therefore only be of decisive importance if other requirements in relation to house and garden are met. However, since protected nature is a specific commodity of rural areas generally in short supply in most European countryside, it will often be more difficult to meet this requirement than the demands imposed on the characteristics of house and garden. Rural areas containing the desired housing stock in combination with the
presence of protected nature will therefore be more successful in attracting new residents than areas that can only meet the requirements imposed for house and garden.

**National and regional differences in residential choice**

There were two important differences detected between the Dutch and British residential choice considerations which were evident in the score of physical environment motives for selection of the residential area. In the Northumberland area the presence of nature was hardly mentioned as a motivation, but the aesthetic and tranquillity aspects and the typical rural character of the area, were mentioned very frequently. In the Dutch areas the score on the presence of nature and wildlife as a residential choice motivation was very high and was even the highest scoring motive within the physical environment category in two of the three Dutch case study areas.

There are two explanations for this difference. Firstly, there is a divergent perception of nature between the Dutch and British populations. In The Netherlands ‘greenness’ in general together with rural spaces where human involvement is limited, are often directly associated with ‘nature’. In Britain the concept of ‘nature’ hardly exists since most parts of the British countryside, including the National Parks, are perceived to be the product of human involvement in natural processes, but nevertheless carrying the typical flavour of the English countryside. Secondly, the much higher score on rural and aesthetic amenities in the British case study points to the ‘idolisation’ of the countryside which is more strongly embedded in the British than in the Dutch culture.

The Doñana area takes a position completely different from the other case study areas in relation to residential choice considerations. Incomers were mainly attracted to this area for job reasons. Most of them come to work in new agricultural enterprises. Others come to work in the tourist industry, which is related with the high proportion of second homes in the area. These second homes are mainly owned by inhabitants of the two nearby cities of Sevilla and Huelva. They chose the area of Doñana for different reasons than the permanent residents. For them attractivity of the physical environment, especially caused by the presence of sea and beach, in combination with the favourable location of the area in relation to the cities of Huelva and Sevilla, and social relationships with local people were the main considerations to select the Doñana area. On the whole one can therefore conclude that in Spain residential choice seems to be more driven by economic considerations, if it concerns a first place of residence, and consumption driven if it concerns a second home. In comparison to the Dutch and British case study areas there is very little attention for natural amenity assets of the environment. This is probably related with the lower interest in nature conservation issues in Spanish society. In spite of the fact that government involvement in conservation of natural areas started much earlier in Spain than in The Netherlands and the UK, this has always been a separate activity, coordinated by elite groups in Spanish society. Protected areas like Doñana were therefore always separated from the rest of region. In the case of the Doñana area this is still the case, as it is seen as an island with a primary conservation objective and a limited accessibility for recreational activities.

Besides the motivations related to the physical environment and the job availability, some other considerations were also important in the residential choice process which were either national specific or regional specific. These were the ties to the former places of residence responsible for the relatively high score on the back to the roots migration category in the Dutch study areas. This was less important in Lauwersmeer, where most incomers already indicated that characteristics of the house were more decisive in their residential choice consideration than characteristics of the residential environment. Here considerations related to personal constraints were more often mentioned as selection criteria. Especially the lower housing prices of the area and social contacts played an important role in the selection of the Lauwersmeer area. There are two important factors that explain these regional differences in residential choice motivations within The Netherlands. Firstly, the characteristics of the population groups that recently came to live in the Lauwersmeer area are different or more heterogeneous in composition from those of the other two case study areas. This is accompanied by differences in residential preferences. Secondly, relatively few households are attracted by the type of natural environment in Lauwersmeer. This may be related to differences in appreciation of the type of nature between the case study areas. A follow-up survey would be required however to exactly uncover the reasons for this difference.
8.5 Appreciation of protected nature in the residential environment: perceived advantages and disadvantages

The contribution of protected nature to the overall physical quality of the region was the most important reason for general residential satisfaction in all case study areas. For all the study areas protected nature in the residential environment is much appreciated by households that live in the near presence of it, even if the accessibility is limited and even if it is perceived to be restraining the local economic development. There were however important differences detected between the research countries in the reasons why households appreciate living near protected nature and in the proportion of households that appreciate and do not appreciate the presence of protected nature in their living environment. The way in which natural areas are managed is very influential in the assessment of protected nature in the living environment. Households often make a difference in the evaluation of protected nature in relation to their personal life and the influence of protected nature on the local development in general.

Protected nature and residential satisfaction

General household satisfaction with the residential environment was large in all case study areas. The majority of residents in the Dutch and English study areas motivated their satisfaction with the presence of nature and wildlife or the general appreciation of the physical environment in relation to aesthetic attractiveness of the landscape, tranquillity and/or rurality. These are all aspects enhanced by the presence of protected nature. The proportion of residents in Dwingelderveld and Weerribben that mentioned the presence of nature and wildlife as a reason for satisfaction was again larger than in other areas. In Northumberland there was also a high score on the nature and wildlife motivation, but this only applied to the incomers. The highest scoring motivation for satisfaction of the second home residents in Doñana was the presence of sea and beach while for the other groups in this area it was social contacts and the availability of employment. Finally, it also became clear for the Dutch and British situations that characteristics of the physical environment were more often mentioned by the incomers as motivations for residential satisfaction than by the local residents. This further confirms the stronger involvement of environmental aspects and the importance of these for the quality of life of population groups that have only recently made a residential choice.

In relation to dissatisfaction with the residential environment it was observed that the local resident group in Northumberland had a higher proportion of dissatisfied residents, whilst in the Dutch and Spanish areas their proportion was negligible. The most important reason for dissatisfaction in Northumberland was related to lack of services, which is associated with the larger scale of existence in this area. Other reasons, which were also mentioned but much less frequently, were related to the presence of protected nature. These were connected with the perceived restraining influence of planning regulations on economic development and the attraction of tourists to the protected natural area leading to a disturbance of the tranquillity in the region.

Perceived advantages and disadvantages of living near protected nature

Living in or near to a protected natural area has advantages and disadvantages but it became clear that the advantages are more important, since in all case study areas most residents appreciated the presence of protected nature in their residential environment. In the Dutch and English case study areas the appreciation of nature was further confirmed by the higher proportion of households who preferred to live near protected nature rather than to services. This was most pronounced for high level services. This outcome was not surprising since most people would not have chosen to live in the relatively remotely situated case study areas in the first place if they would have had a strong preference for having high level services in near distance to their houses. There were important differences in the arguments mentioned for enjoying the living in or near to protected nature between the three case study countries. In the Dutch case study areas the most frequently mentioned motivation for appreciation was that protected natural areas offer possibilities for outdoor activities. The second most frequently mentioned motivation was related to the contribution of nature to the quality of the environment, especially in relation to the aesthetic attractiveness, naturalness, rurality and tranquillity aspects in the area. In the British case study the order was different as appreciation was firstly connected to the
contribution of protected nature to the quality of the environment, secondly to the extra planning security offered by protected nature and thirdly to opportunities for outdoor activities. In the Spanish study area, as in Northumberland, the first reason for appreciation of nearby protected nature was connected to the contribution to the quality of the environment, especially in relation to aesthetic attractiveness, absence of pollution and the natural character of the area. The planning security that comes from protected nature came second and was mentioned less often than in the English study, but more often than in Dutch studies. Recreational opportunities were hardly mentioned in this study area, except by some second home residents.

That there were relatively more Dutch households that used the natural areas for recreational purposes than British and especially Spanish households did, is probably related to access and to cultural differences. The difference in recreational use is especially large between the Dutch and Spanish study areas. Contrary to the Spanish situation, in The Netherlands access did not seem to influence the level of appreciation however. In Weerribben and Lauwersmeer, where access is more limited by natural handicaps especially in wintertime, the appreciation of the presence of the protected territory is at least as large as in Dwingelderveld, where access is better arranged all year through.

The number of households that did not appreciate living near a protected natural area was very small in all case study areas. In all Dutch case study areas this was around 10% for both incomers and local resident groups. In the Northumberland area there were hardly any incomers that found it unpleasant to live near a protected natural area, but more than 30% of the local residents were unhappy with the nearby presence of protected nature. In Doñana the incomers did not mention any disadvantages of living near protected nature, but the locals and second home residents were more critical as 20% of both population groups said to find it unpleasant to live near the protected natural area. In all case study areas the main arguments mentioned for this negative evaluation were the restraining influence of planning restrictions on economic development. Undesired bureaucracy caused by the interference of the National Park authorities in local affairs was a second most important reason for negative evaluation, but this argument was mentioned considerably less than the first. In the Doñana area the limited access to the protected territory was also a third reason to negatively evaluate the presence of the protected territory.

That protected natural areas contribute to the economic development of an area through the creation of work is therefore well accepted. This employment effect can be divided in direct employment, indirect employment and induced employment. For all study areas it was seen that some local households were directly employed in the protected area but that their proportion varied strongly per study area. Indirect employment in the tourism and recreation sector also ranged more strongly per case study area. One should also be careful in estimating indirect effects of protected areas since it is not possible to attribute all this employment to the presence of a protected territory. In the Doñana area almost half of the incomers group worked in the tourism sector, but most of this employment could not be attributed directly to the presence of protected nature as it was clear that many more tourists and recreationists were attracted to the area by the sea and beach and the pilgrimage to El Rocío, than to the protected territory of Doñana. On the other hand it cannot be denied either that the presence of the protected area of Doñana does not add to the quality, fame and attractiveness of the area and therefore further stimulates the attraction of tourists to the region. It was also seen that the presence of protected nature also induced employment through the attraction of small businesses of entrepreneurs that want to live in a natural amenity rich rural area. It was seen that all Dutch and British case study areas attracted more households that were self-employed than other rural areas and that the proportion of self-employed among the incomer population ranged between 20% and 30%. Most of these households combined living and working in the same place. Beside the paid employment it also became clear that the protected territories created voluntary work for local people especially in the Dutch and British case study areas.

Different views exist on the perceived employment effect of a protected natural area among local population groups as became clear for Northumberland and Doñana where this issue was investigated more closely than in the Dutch study areas. In the Northumberland National Park around 50% of the local residents think that the presence of the national park stimulates the local economy, and 25% thinks that it only restrains the economic development. In Doñana more than 50% of the local population groups thinks that the presence of the protected territory restrains the local economy and 24% think that it only positively contributes to the local economy. In
both Northumberland and Doñana it was also seen that incomers were more often of the opinion that the National Park stimulates the local economy than local residents. The most important reason to think that it stimulates the local economy was related to the attraction of tourists, which was perceived to stimulate the tourist sector. A few residents also mentioned the positive contribution of the protected territory to other economic sectors. For the second home residents in Doñana it was also important that the presence of the nature area helped to increase the quality of the area, which was supposed to add extra economic value to the region. The most important reason mentioned in both Northumberland and Doñana for perceived restraint of the local economy was that it negatively influences local agricultural and non-agricultural business activities. In Doñana it was striking that most incomers suspect a restraining influence of the natural area but few of them were able to motivate this. The locals in Doñana connected the restraining influence on development of overall economic activities and the restrained possibilities to exploit the natural resources in the protected natural area. The second home residents were more concerned with the restrained construction activities and the lack of an efficient infrastructural system.

In the Doñana area most people were also unhappy about the way the government was handling the restraining influence of the protected area. In spite of this and given the history of conflicts and the constant call by local politicians for the need to compensate for the restraining influence of the Doñana natural area on the local economic environment, it is surprising that there is still a large majority of people who positively evaluate the presence of Doñana in the living environment. Contrary to what most local politicians claim, there are still many people that acknowledge that the presence of the area also positively contributes to the local economy and adds to the value and fame of the area. However, especially among the local residents group, there are still many doubts about the wish to continue protecting the natural area of Doñana. These doubts are the result of the difficult relationship between conservation and economic development interests, the fact that protection of nature is mainly a top-down and ‘outsiders exercise’, and the difficulties that government bodies experience in responding to these issues. It will be important to encourage the participation and inform the local population groups about the integrated and sustainable development of the area.

**Explaining the differences in evaluation of protected nature**

Overall, there is a high appreciation of protected nature in the residential environment, since virtually all households in all case study areas value the notion of the contribution of the presence of protected nature to the quality of the living environment and therefore to their personal quality of life. Very few people denied that it is was pleasant to live near nature. Nevertheless, there were still household groups that did not appreciate living near protected nature, especially those in Northumberland and Doñana. The reasons for this are variations in national and regional circumstances which affect personal values and local planning and management regimes. This study showed that there are five important factors that drive the relationship local people have with the protected territory and that explain differences in assessment between the case study areas.

Firstly, the more protection and management regimes influence local people’s lives, the more important they are in the evaluation of protected nature by local population groups. In comparison to the Dutch and Spanish case study areas, the planning regime of the Northumberland National Park area still leaves more space to practice certain types of economic and residential activities and therefore allows a multi-functional land use within the territory of the Park. Residence, agriculture, forestry, recreation, military training and conservation are often combined on one and the same piece of land. In addition to this, land is also in hands of many different landowners. More than in the Dutch and Spanish case study areas, realisation of conservation and recreational purposes in the Northumberland Park depends on local involvement and close cooperation between many different parties. This of course implies that relatively more households in the Northumberland National Park are directly confronted with planning and management arrangements. More local people and organisations are also involved in the decision process. Overall this leads to a stronger commitment of local people to the protected natural area but it also increases the chances for conflicts since more households are directly affected in their livelihoods by planning decisions. In the Dutch case study areas this is different as most land under conservation is separated from agricultural or residential land and is in hands of conservation organisations. Land use regulations are very strict within the protected territory but not outside these territories and few people
are directly affected by regulations. As access is well arranged for the local people they see the protected territory as an attractive piece of land where they can carry out outdoor activities and enjoy the nature and landscape. In the Doñana area the situation is more complicated. Within the National Park, land use is strictly confined to conservation and recreation and public access is limited. In the Entorno Park of Doñana multi-functional land use is allowed, but access is limited for the public. The effect is that more than in the Dutch and British situation, local people feel separated and distant from the protected area. This is also further enhanced by the lack of involvement of local people in nature conservation issues. Local people in Doñana therefore have more difficulty accepting that the protected territory also affects land use regulations outside the protected area, especially if these restrain the development of economic activities.

Secondly, national values in relation to ‘nature’, nature conservation and the ‘rural’ also influence the evaluation of a protected natural area in the residential environment. In The Netherlands in comparison to Britain and Spain, the presence of nature and wildlife was more often mentioned as a motivation to move towards the case study areas and to positively evaluate the presence of protected nature in the residential environment. This difference can be explained by differences in perception of the concept of ‘nature’ and attitudes towards nature conservation. In The Netherlands, where natural amenities are scarce because of the very high population density and urbanisation pressure; greenness in general and rural spaces where human involvement is limited are often directly associated with ‘nature’. The understanding of the need for conserving the natural environment is common amongst the Dutch population and natural areas are scarce commodities, which are highly valued when present in the living environment. In England, where population density and urbanisation pressure is also high, the concept of ‘nature’, as connected to ‘wilderness’, is rare because most parts of the countryside have evidence of human interference. Even the National Parks are perceived to be the product of human involvement in natural processes. Contrary to the Dutch culture, where the lack of natural amenities led to a stronger idolisation of greenness and cherishing the scarce pieces of relatively unaffected countryside, in the British culture it led to a stronger idolisation of rural amenities. This explains the higher score in Northumberland on rural and aesthetic amenities. It shows that the idolisation of the countryside which is more embedded in the British than in the Dutch culture. In Spain the tradition of protecting natural lands started earlier than in The Netherlands and the UK. This Spanish approach to protection was strongly inspired by the American National Park approach in which ‘wilderness’ protection was the central objective. Protected territories were therefore strongly separated from the rest of the rural areas and protection was often an elite activity in which local population groups were not involved. In addition, since the urbanisation process started later and population density is lower, rural and natural amenities are also still more common in Spain than in the Dutch and British countryside. Both the separation of protected nature from local rural life and the fact that natural amenities are less scarce means that the concept of ‘nature’ is less important in residential choice in the Spanish case study area. The tradition of separating protected nature from the rest of rural areas also explains why households in the Doñana area more often perceive the presence of protected nature as restraining local development, than in the UK and The Netherlands.

Thirdly, differences in the stages of rural development and socio-economic development level also influence the involvement and appreciation of protected nature in the residential environment. The scale in which the rural commodification and integration process has affected areas in the three countries is different. In comparison to the UK and The Netherlands, regional differences in the extent and the way to which rural areas have been integrated in the Spanish urban society, by the increased use of rural areas for new consumption orientated activities, has been much bigger in both absolute and relative terms. At the same time the socio-economic development of many households in Spain, especially in rural areas, still lags behind most of Europe. Relatively few households in Spain are therefore able to allow their residential choice be driven by other than job considerations. The idea that the countryside can be used for consumption orientated activities such as residence, recreation and conservation is not so widely adopted in Spanish society as it is in the Dutch and British situation. Many rural people in Spain still consider rural spaces as primarily for agricultural production. However, second home residents in urban areas, did show a greater ‘consumption’ orientation towards the regional qualities of the Doñana area both in their residential preferences and in their evaluation of the area.

Fourthly, the specific natural and aesthetic characteristics of a natural area also influence the evaluation and the
behavioural response. In The Netherlands the protected natural areas of the Dwingeldeveld and Weerribben had more influence on the residential choice behaviour than in Lauwersmeer. In the evaluation of the presence of the protected territory in the residential environment the positive evaluation of the Weerribben was also more often related to the quality of the physical environment than in the two other study areas. Apparently, the type of natural amenities present in this case study area are more important for appreciation and attraction of residents than in the other case study areas.

Fifthly, specific regional circumstances are also influential in the evaluation of the presence of protected nature in the residential environment, especially if these circumstances have led to conflicts in the past. In the Dutch case study areas few conflicts have been reported in the past or present situation. And if this was the case only few population groups were affected by these situations. In the Northumberland and Doñana area the situation was different. In the Northumberland area more conflicts and differences of opinion among local population groups concerning the way the National Park should be managed have arisen in course of time. At the time when the survey for this study was held a public inquiry about intensification of military training in the National Park area was held. For the National Park Authority (NPA) intensification of military training had become unacceptable as it was perceived to lead to a further reduction in opportunities for recreational use together with a perceived increase in damage to the ecological and cultural assets in the area. Many local population groups, especially the incomers agreed with the NPA’s standpoint. However, for some local population groups the rigid stance of the NPA had become a source of concern as they feared this would jeopardise civilian jobs at the training area. For them this was also a reason to perceive the presence of a protected natural area as restraining the local economic development.

In the Doñana area the list of conflicts between conservationists and local population groups and politicians was much longer than in the Northumberland area. The controversies in relation to the protected territory of Doñana are rooted in the period before the protected area was even designated. These have been further aggravated by the creation and progressive increase of the protected territory since the 1960s and the constant involvement of many ‘outsiders’, national and international groups. The limited admission of the local population to the protected area has often been a cause for a general feeling of frustration about the area large areas of unproductive and inaccessible land, which could be exploited and help to solve the regional socio-economic problems. The constant struggle between the protection of conservation rights against the promotion of economic development, has led to the politicisation of the situation. Many local politicians continue emphasising that the economic development should have priority over nature conservation. The situation of conservation in the area of Doñana was further complicated by the lack of coordination between the National Park, which falls under national legislation, and the Entorno Park, which falls under regional legislation. The National body responsible for management of the National Park, still continues to defend an island model for nature conservation. The negative evaluation of the presence of the protected territory of Doñana is especially the result of the difficult relationship between conservation and economic development interests and the inability of government bodies to solve these problems. For the sustainable development of the area it is important to inform and involve the local residents of the area. It is hoped that the pollution disaster of 1998 with the pyrites mine in Aznalcóllar, an incident which took place just after the survey for this study was held, will finally convince all parties that integrating conservation with local development interests is the best way of approaching a sustainable development of the Doñana area.

8.6 Functional changes in rural areas and policy implications

Now that we have come to the end of this study it is possible to translate the empirical research results of this study in some implications for the functional change process and policy implications for rural areas of western urbanised countries. The research results of this study should be placed in the context of profound changes that rural areas in western urbanised societies have experienced in the post 1945 period. These changes will continue in the future and the use of rural land for consumption orientated activities such as residence and nature conservation, will play an increasingly important role in this process. The most striking characteristic of the
whole rural restructuring process in the post 1945 period is the differentiation of the countryside caused by the
diverse ways that the commodification and integration process have operated in different rural areas. This study
has showed that the presence of natural amenities can play a determinant role in this differentiation process, as
they have proved to be an increasingly popular endogenous quality of rural areas and have the ability to influence
the residential choice and satisfaction of households, especially those with specific characteristics and self-
employed. They have therefore not only become an important driving factor in the attraction of residential and
other consumption orientated activities towards rural areas but also need to be considered in policy formulation.
The progressive increase in households acting upon their wish to live in natural amenity rich rural areas has
come to the front in this study. This trend is likely to continue in the future. Natural amenities are likely to
continue to be important discriminating factors to distinguish rural from urban environments. Under the
influence of the continuing urbanisation process, these natural amenities will only become more scarce for a
growing number of households and will therefore increasingly valued. These amenities do not only involve
ecological qualities and greenness but also tranquillity, aesthetic attractiveness and even remoteness. In
addition, it is also likely that more households will be able to involve quality of life considerations in their
residential choice consideration. Personal mobility will probably still rise and the number of people with no ties
to a working place, such as early retirees, self-employed and commuters will continue to grow. Technological
innovations will enable more people to combine working and living in the same place. This will have important
implications for the countryside.
That rural areas will continue to experience a differentiation process is beyond dispute, but this will be even more
than before driven by the presence of endogenous qualities. The areas that are most strongly characterised by
amenities associated with nature and rurality will become most attractive for residential activities. The
interdependency between mutual rural and urban areas will increase even more as the contrasts between them
will automatically single out within the continuous differentiation process. But at the same time the integration
process between urban and rural areas will also continue under influence of further urbanisation of specific
urban areas together with a ‘greening’ process in certain urban areas. The relative location of rural areas will also
play a role in this process, but not so much in terms of distance but more in terms of rural qualities. Many rural
areas which are located further away from the urban concentration areas may no longer be unattractive for
consumption orientated activities because with increasing personal mobility will effectively reduce a distance.
Volkers and de Vocht (1992) already indicated how relative the concept of geographical peripherality is;
according to them ‘peripherality in the new context’ is less a matter of distance but more a matter of endogenous
qualities of regions. After all, tranquillity, low population density and lack of human interference usually go
together with a remote rural location and therefore the remote location in itself will become an endogenous
quality of rural areas. This implies that it can be foreseen for the near future, that even the most remote rural
areas will become more involved in the commodification and differentiation of rural areas.
The expected developments for rural areas have important policy implications. After all, expanded use of rural
areas for residence and other consumption orientated activities will often be welcome in areas that have long
been struggling with depopulation, ageing and disappearance of services, but it may not always be desired in
areas with a more pressured population development as found in the more centrally located rural areas of The
Netherlands and the UK. In addition, it may also be desirable to monitor and coordinate or compensate for the
effects of the selective migration process towards amenity rich rural areas if this causes an unwanted one-sided
population composition in relation to age or socio-economic development or when it pushes housing prices up
making the admission to the housing market for local population groups more difficult. Unwanted selective
migration may be prevented by taking accompanying measures. These measures may be focussed on
coordination of the type of housing supply or the admission to the local housing market. If changes in
population composition will increase the pressure on certain services such as medical or educational services, it
could be desirable to adapt the service level to the newly created needs.
In the context of rural development an interesting phenomenon came to the front in this study. Overall, it was
seen that nature conservation activities in rural areas do not come alone as they will attract other consumption
orientated activities such as residence and economic activities but also recreation and tourism. This in itself is
positive because the attraction of new and different activities will help to broaden the local economy of rural

Conclusions and recommendations
areas and therefore increase the development opportunities. However, problems may also arise from the combination of functions since many activities can adversely affect each other if no regulatory measures are taken to tune their co-existence. For a sustainable and balanced development of rural areas it is therefore very important to both combine different activities and create basic conditions that will make the combination of these activities possible. Moreover, many rural activities can only continue to exist if they are combined with other functions. In this study it was seen that the landscape that is perceived to be one of the most attractive amenities of Northumberland, Weerribben, Dwingelderveld and Doñana Entorno is the product of extensive agricultural practices. The endogenous quality of these areas therefore strongly depends on the combination of different activities and also on the continuation of specific activities such as extensive agriculture. The need for comprehensive policy approaches creating the basic conditions for combining conservation with other consumption orientated activities will therefore be of utmost importance. In addition, it should also be taken into account that under influence of the expected further changes in the agricultural sector, new residential activities together with other consumption orientated activities may become a sustainable alternative or a welcome supplementary source of income for farming. It can be expected that these changes in the agricultural sector will develop differently through the European countryside. On the one side, in regions where many farmers will need to give up farming and sell their land to others, these new consumption orientated activities may be located on the abandoned agricultural land. Elsewhere these consumption orientated activities may form a welcome additional income source for the marginalised agricultural sector and need to provide a more viable overall enterprise than farming alone. The design of these comprehensive policy-instruments should be based on studies that take notice of the relationship that exists between protected natural areas, the way they affect each other and the needs and interests of the local population. Otherwise, these policies will not produce the required benefits for both local population and environment. Protection of the quality of the natural environment should be the primary policy objective, as this will be an insurance for the subsistence of the endogenous quality of a rural area. Restrictions on economic development opportunities for locals should also be avoided as much as possible. It will also be important to adapt the policy measures to specific local and national circumstances, which will be discussed for the EU, The Netherlands, the UK and Spain in the next paragraphs.

**European Union**

Under the influence of the expected further differentiation, European rural areas will only become more dissimilar. The revision of the CAP and the different agricultural crises, will be important driving forces in this process and will lead to a further overall decline of the agricultural sector as a dominant economic and land use activity. European rural policy will need to continue to be focussed on diminishing the imbalances in services, employment opportunities and living standards between rural areas in combination with guaranteeing the maintenance of specific endogenous qualities of rural areas. The attraction of alternative economic, residential, recreational and conservation activities should be stimulated but will need to be accompanied by policy measures to protect the environmental, natural and ecological qualities. It should be taken into account that this will not be easy since market forces and further urbanisation will continue to impose threats on natural, landscape and ecological amenities. In many rural areas further efficiency through intensification will be a rational option, even where agriculture is already intensive. On the other side in other rural areas it is important to acknowledge the function of a less intensive agricultural sector for the maintenance of the rural community but also for the quality of the environment and landscape. The policy for these rural areas should not necessarily imply paying more subsidies to the agricultural sector. Rather it would be more effective to create or attract alternative sources of income, especially those that can be combined with farming, and measures to maintain the local population and to attract new residents from elsewhere. This may be more practical if sectoral policies are further abandoned and shifts take place towards more comprehensive approaches coupling rural development with nature and landscape conservation. After all, natural amenities increasingly remain the main discriminating qualities of rural areas and once these are destroyed the opportunities to attract new consumption orientated activities in the future to broaden the local development opportunities will also definitely disappear.
This also implies that the rural policy measures, which are usually formulated at a European level, should be related more policy measures at lower levels of government which are better able to design the regional policy measures that guarantee the maintenance of the local endogenous qualities and needs. European support programmes such as LEADER and other regional development programmes are effective instruments as long as they enhance the sustainable exploitation of endogenous qualities and if they are picked up by local groups and governments in rural areas that are most strongly confronted with development problems.

**The Netherlands**

The wish for quality of life and living near natural amenities is common amongst the Dutch population and it can be expected that the number of households that are able to act upon this wish will only further increase in the future. On the one side this implies that urbanisation in the already pressured rural areas in and near the urban and economic centre of the country, the Randstad, will further expand. On the other side, rural areas further away from the Randstad, in Noord-Holland, Friesland, Groningen, Drenthe, Overijssel, Limburg and Zeeland, will increasingly attract new residents, provided that they have enough green endogenous qualities and that they are able to meet the quality housing requirements of the increasingly demanding ‘residential consumers’. An advantage of this may be that these areas could relieve the urbanisation pressure of the rural areas in and near the Randstad. It will also provide these areas with an alternative for the expected diminishing agricultural activities and additionally will help to maintain a demand for rural services. Policy measures need however to accompany these developments especially if the increased wish for living in natural amenity rich rural areas may become widely spread and persistent among the Dutch ‘residential consumers’. Under these circumstances it will become very difficult to resist the pressure on the housing markets in the centrally located rural areas, especially if these have many natural amenities. Direct population flows towards the more decentralised rural areas should then be a good option as long as the quality of the natural and rural environment is guaranteed and the constraining influence of development in the broader rural economy is avoided as much as possible. A consistent and coherent policy for Dutch rural areas is therefore needed that pays attention to the multi-functional use of the differentiated countryside and the sustainable exploitation of the valuable endogenous qualities. Decentralisation of policy implementation to the local governments is efficient, since local governments will be better able to adapt policy measures to the specific local qualities and needs. Local population groups also need to be involved. This will however only work if clear objectives exist to which the local policy instruments can be adapted to guarantee coherency between the interrelated developments in the differentiated rural and urban areas.

In the near future it can be expected that rural areas will become increasingly attractive for residential and other consumption orientated activities. It will be very important to guide these processes through comprehensive policy measures that guarantee the maintenance of the ecological and landscape qualities but at the same time avoid restrictions on rural development that enable rural areas to build up a sustainable economic base and find alternatives for an expected reduction of change in agricultural activities. The areas that will be most strongly influenced by the processes investigated in this study coincide with the area categories in the fifth Dutch planning memorandum (VIJNO) which are the ‘red’ areas, if situated around villages in the Dutch countryside, the ‘white’ and the ‘green’ areas. In the ‘white’ areas, which will cover the largest proportion of the Dutch countryside, a clear policy should be formulated that acknowledges the importance of the endogenous qualities and arranges for a sustainable development in which natural and rural qualities are employed adequately to stimulate local development. In the ‘green’ areas, rural development may become a problem if a one-sided focus on conservation will prevent any other consumption orientated activity to establish or further develop. For a sustainable and balanced development of rural areas it is important to combine different activities and drive these in such a way that they may profit from each other. Furthermore, since it can be expected that especially these ‘green’ areas which are most rich in natural amenities, will become increasingly attractive as residential areas, only a stop on real estate development may increase the pressure on the local housing markets. It may push housing prices up making the admission for local population groups more difficult and it may lead to an unwanted one-sided population composition in relation to age or socio-economic development.

For the management of natural amenity rich rural areas in The Netherlands it will be useful to take notice of the
experiences in the British National Parks. In these areas it is shown that it is possible to combine different land use activities such as agriculture, recreation, residence and conservation on one piece of land through a process of negotiation and creation of consensus. In a densely populated country like The Netherlands the relevance of multi-functional land use applications is also very large. The British system also shows that absence of strict land use regulations, which is in contrast with the Dutch planning system, does not automatically have to lead to unwanted or even ‘sneaky’ urbanisation of rural areas. Many examples in the British countryside are also found of integration of new functions in already existing buildings such as farmhouses and estates. These work well and may also serve as examples for the way old farmhouses and barns can be converted into cottages and apartments for residential purposes in The Netherlands.

The British National Park approach and the concept of 'Nationale Landschappen', should also serve as inspiring examples for designing the necessary instruments and arrangements to realise the rest of the Dutch ecological network (Ecologische Hoofdstructuur). Natuurmonumenten came with the idea to bring back the protected area category of ‘Nationale Landschappen’. Through this they also acknowledge that creating ‘islands of nature’ will not work. Through re-creating these ‘Nationale Landschappen’ large pieces of attractive countryside can be sustained in which different land use functions can co-exist and profit from each other. Ecological entities, such as river basins and habitats should serve as steering principles for the allocation of these areas which also fits to the in the VIJNO suggested network approach.

Finally, it is hoped that the outcome of this study will assist in a debate about the way the Ecologische Hoofdstructuur should be realised in the next decade. The extensive land purchases that still have to be carried out to realise this ambitious nature conservation plan are already lagging behind, and it is doubtful whether they will ever be realised given the high land prices, the limited budget and the pressure on land in The Netherlands. A better option would therefore be to think more in terms of function combinations, of which the ‘Nationale Landschappen’ and the British National Parks which form tested examples and differentiated alternatives for the mono-functional Ecologische Hoofdstructuur approach.

**United Kingdom**

In the UK the same development as foreseen for the Dutch countryside will take place. The wish for quality of life and living in amenity rich countryside is widely spread among the British population and it can also be expected that more British households will succeed in acting upon this wish. It can therefore be expected that urbanisation pressure in the already pressured rural areas around the larger cities and in the most attractive pieces of the countryside will only further increase. The rural areas situated in the south of the country, as well as the decentralised rural areas in Wales, northern England and Scotland will increasingly attract new residents, provided that they have enough green and rural endogenous qualities and that they are able to meet the quality housing requirements. Like in These areas may also relieve the urbanisation pressure of the rural areas in the more centrally located parts of the country and the most pressured countryside in the National Parks.

In Britain the countryside is more than in The Netherlands and Spain seen as a space where different activities should be mixed. Using the countryside for living and recreation at an extensive scale started earlier than in the rest of Europe. The rural planning system is therefore more adapted to arranging such multi-functional land use applications. However, this does create problems because the differences between centralised areas and remote areas is still large, especially in relation to the north-south divide. Much rural land in the more centrally located and amenity rich areas, like in The Netherlands, have experienced severe urban pressure. In areas where building is restricted, for example in Cornwall, Devon, the Lake District, the Yorkshire Dales or parts of rural Scotland, the demand for housing by usually higher income groups and or retirees from outside the local area has led to a strong competition for housing and inflated real estate prices(see e.g. Shucksmith, 1985, 1990 and 1991; Halliday & Coombes, 1995 and Allan & Mooney). Intervening in this process has proved to be difficult. At the same time the mountain areas of the UK still have a population density which is among the lowest of the EU. The situation in the remoter rural areas of the UK should therefore be placed in a different context, as the scale of existence in these areas is larger than in The Netherlands and the ability to solve the problems of rural deprivation are more complicated. An important difference with The Netherlands is that since the level of remoteness is considerably larger, the challenge to move into such countryside is also larger. The need to attract new residential and
economic activities in remote rural areas in the UK is even greater than in much of The Netherlands. The British agricultural sector has been suffering strongly from decreasing agricultural subsidies, low meat prices and crises such as BSE and Foot & Mouth disease in recent years and has led to further pressure in the rural economy. It can therefore be expected that there will be a further reduction in number of farms. These factors have implications for the maintenance of the landscape, as in most UK countryside, landscape is man-made and its current character depends on the continuation of extensive livestock farming. Also rural communities will continue to lose more population if alternative activities are not found. This process will increase the liveability problems of remote rural communities.

It is therefore important that the quality of endogenous amenities of these areas is guaranteed in order to maintain the attractiveness of these areas for new consumption orientated activities, especially housing and conservation. In many cases the settlement of new household groups to the remoter rural areas should be accompanied with measures that will stimulate the attraction of people of all ages and all sorts of household composition. Otherwise there will be a great risk that new households will not stay for long and new residential activities will not deliver the sustainable alternatives needed for the viable development of these remote rural areas. If people decide to move away again after a couple of years, new residential activities will then not lead to the development of a stable rural community and maintain rural services. Apart from the attraction of residential activities it is important that other economic activities will also be attracted to these areas. Provision of basic services to make the settlement of small and medium sized enterprises attractive should therefore be stimulated, especially because the interest and willingness of the self-employed to live in amenity rich rural areas is already common.

**Spain**

In Spain employment will continue to be the main driving factor for permanent moves in and out of rural areas. This does not mean that environmental considerations will not play a role in residential choices, but it can only be expected from the research results of this study that environmentally motivated moves will certainly in the short term not take the scale of the in Dutch and British rural areas. After all, in comparison to the situation in the Dutch and British case study areas the presence of protected nature in the Doñana area certainly did not prove to be dominant in the development of the residential function. What did however come to the front was that second home residential activities were much more strongly attracted by environmental considerations and that urban people were more ‘consumption’ orientated than rural people. Under the influence of growing economic development, urbanisation and the strong tradition in Spain of having a second home, consumption orientated use of the countryside through second home residential activities can be expected to increase. Coastal areas were the first to attract these second home activities, but these areas may now become saturated and many may reach the maximum in relation to urban expansion. They are becoming too crowded and cannot fulfil the quality of life wishes for which Spanish urban households are also increasingly searching. It can therefore be expected that, as in Britain and The Netherlands, the natural amenity rich rural areas in the more inland locations will increasingly attract second home residents. At this moment rural areas that are located relatively near to larger urban centres such as the Gredos mountains near Madrid, the Pyrenees near Barcelona, Sierra de Gibraltar and Ronda near the Andalucian urban centres already showed an increased popularity for second home residential development (see e.g. Troitiño Vinuesa, 1989; Colón Díaz, 1989 and Elbersen & Prados, 1999). The disadvantage of such extensive development of second homes is that they do not provide a balanced contribution to a rural community as permanent residential activities. In addition, the extensive urbanisation of these areas also negatively affects the nature and therefore the endogenous qualities of these areas. It is therefore important that the attraction of permanent residential and economic activity is simultaneously stimulated. Efforts should be invested in the provision of adequate basic services not only for residents, but also for entrepreneurs to set up small and medium sized enterprises. Furthermore, the rapid construction in such areas can have serious consequences for the quality of the environment. In the Doñana area the effect of rapid and often illegal construction activities are well known and provide an example of the inefficient way planning regulations work in Spain. The need for government regulation of this process is therefore of utmost importance, especially because these natural qualities are the most important endogenous qualities of remoter rural areas and destroying these will threaten future sustainable development of these areas.
It should also be realised that in a European perspective Spain still has relatively many remote rural areas with a relatively unspoiled natural character. The uniqueness of these areas will make them increasingly attractive for future consumption orientated activities not only for Spanish but also for other European population groups. In addition, the natural and rural amenities also come with a good climate and relatively low real estate prices. At this moment the population flow of mainly northern European population groups towards the Spanish coastal areas is wide spread. In the future it can however be expected that with the further crowding of the coastal areas, together with the increased involvement of quality of life considerations and growing personal mobility, that the inland and more remote rural areas of Spain become increasingly important for European migrants. Their sustainable development will however only be guaranteed only if basic needs in housing and services are met and their endogenous qualities are sustained that make them attractive for the settlement of first and second home residents, new economic activities and the attraction of tourists.

Even more than in the UK, Spain has many rural areas which have large rural deprivation problems. Contrary to the UK and The Netherlands, these areas continued to lose population over the last four decades. Such regions are located in central and or mountainous parts of the Iberian Peninsula. Their prospects of population loss, ageing, and the maintenance of basic services will continue to be difficult, because they are remote and lack access to basic services and employment. Their future is also further complicated through the expected reduction in agriculture. The maintenance of the landscape in these regions is also depending on continuation of extensive livestock farming. To put a hold to the vicious circle of rural deprivation on the short run more effort needs to be invested in maintaining the liveability. These areas will often need a specific approach and exceptional temporary measures may need to be taken in order to attract new activities. At the same time it will always be very important to continue to invest in the maintenance of the quality of the endogenous amenities. In the short run this may not stop further depopulation, but in the long run it will increase the chances for these areas to become attractive for consumption orientated activities.

In the Spanish rural policy approach the conservation of quality of the endogenous amenities needs to become a central issue and alternatives for agricultural activity should be sought. European support programmes, such as LEADER, and other regional development programmes are very useful in this respect as large European financial resources are made available for deprived rural areas and relatively little national resources need to be invested. The advantage of these approaches is that they are concentrated on stimulation of local initiatives. They enable local population groups to exploit their endogenous qualities in a sustainable way and Spanish government interference should be aiming at stimulating these using national and European resources, whilst maintaining of the environmental quality.

8.7 Further research?

Several recommendations for further research have arisen from this study. Firstly, population changes in rural areas need to be further investigated in relation to the size of migration flows within rural areas and between urban and rural areas. Within this study the focus was on the revealed residential preference of population groups that lived in and around protected natural territories in remote rural areas. Their residential choice considerations were investigated together with their household characteristics. It was seen that there was an increasing preference of urban people to settle in these natural amenity rich rural areas. A more exact and complete estimation of the proportion of people that have a stated preference for living in natural amenity rich rural areas could however not be made. Follow up research focusing on obtaining information on the proportion of rural and urban population groups that have an interest in living in amenity rich rural areas will help to obtain a better idea of size and character of the demand for rural housing. It may also shed a further light on the selectivity of the population flows towards the amenity rich rural areas and the possible consequences for changes in the composition of local population groups. Such information would be vulnerable as it could help to estimate the scale and nature of expected future population flows between urban and rural places, which will be relevant to policy formulation for both rural and urban spaces.

Secondly, beside research on the size of urban to rural population flows it is also important to get a further
understanding of the number and type of households that are moving away from amenity rich rural areas and their motives and perceptions that are driving their residential choice. In this study it was seen that population flows towards natural amenity rich rural areas were selective in nature. The net effect of migration on local population composition of these amenity rich rural areas could however not be determined as no information was obtained on the population characteristics of the households that had moved away. Net effects of migration on population composition can be very useful for rural policy formulation as they will disclose where governments need to adjust service levels and housing provision and where pressure on local housing markets will increase or decrease.

Thirdly, there is a need for further research on the relationship between economic activities and natural amenities in rural areas. The current research has already shed light on the way that protected natural areas may positively influence rural development in remote areas by stimulating the setting up of new small business activities. Obtaining an insight in the background of such processes and estimating the extent of these, will help to stimulate rural areas to take measures that warrant the quality of the environment and simultaneously enhance the attraction of new business activities that will help areas that are coping with depopulation and liveability problems. In The Netherlands limited research has been covered in this field, although in England more research is available (see e.g. Elbersen et al., 1999).

Fourthly, there is a need for further research on the role protected natural areas play in the enhancement of commitment to places. This study showed that the presence of protected nature was an important reason for residential satisfaction of local population groups. It was however not investigated whether this satisfaction also led to a stronger commitment to a place. That is whether there was a greater willingness amongst local people to actively participate in maintenance of the quality of the area or that it would make households less reluctant to move away again. The more commitment there is to a place, the more sustainable new residential activities in a rural areas will become and the more certainty there is about maintaining the endogenous qualities of rural areas. Obtaining a better understanding of the factors that influence the commitment to rural areas will therefore be useful, as it will enable governments to give more opportunities to local people to maintain the quality of their living environment.

Fifthly, this study showed that there are important links between perceptions, preferences and real spatial behaviour. In this study the concentration was on revealed residential behaviour, and it was therefore possible to connect the perceptions and preferences households had to their revealed move towards a natural amenity rich rural area. However, in many residential choice studies it is also seen that people express to have certain perceptions and/or preferences but these are not converted into real spatial behaviour, as only a limited proportion of people will act upon their stated preference. For a better understanding of the spatial changes that result from individual behaviour, it is therefore very important to develop more insight in the way perceptions, preferences and real spatial behaviour are linked.

Finally, several serious gaps in statistical information were discovered in this study. First of all it turned out to be very difficult to get recent and comparative information on the size and extent of second homes in Europe. Since it can be expected that these will progressively become important with the increasing consumption orientated use of rural areas, it will be useful to monitor such developments to understand their various prominence in various European countries. In addition there is a consistent low level of statistical information for the European Union as a single unit. This restricts the execution of international comparative research, which is essential for developing more insights into the rural development process and the building up of experience that can be compared and transferred to similar situations throughout the EU. Quantitative databases are also important for getting a better understanding of the way rural policy needs to be implemented. After all, the implementation of more comprehensive policy instruments that pay attention to the specific endogenous qualities of rural areas can only be done efficiently if they are accompanied with adequate monitoring systems. Monitoring needs data collected on consistent geographical and time scales. If new policy measures are introduced without monitoring, no evidence of their success in comparison with control areas can be found and money will be wasted as no insights will be obtained on how to improve European, national and regional policies.
Samenvatting: Natuur bij huis
De relatie tussen beschermde natuurgebieden en residentiële activiteiten in het Europese platteland

Context en doel van het onderzoek
Het centrale doel van dit onderzoek is inzicht te verwerven in de invloed van de aanwezigheid van natuur op residentieel keuzegedrag en op de kwaliteit van de leefomgeving. Daarbij wordt verondersteld dat dit inzicht ook zal leiden tot een beter begrip van het functionele veranderingsproces in landelijke gebieden van Europa.

De belangrijkste vragen die in dit onderzoek worden beantwoord, zijn:
1. Verschilt de bevolkingsontwikkeling nabij natuurgebieden van die in andere rurale gebieden?
2. Wat zijn de karakteristieken van huishoudens die recent naar natuurgebieden zijn verhuisd?
3. Op welke wijze hebben recente migratiestromen de bevolkings samenstelling in en rond natuurgebieden beïnvloed?
4. Heeft de aanwezigheid van een beschermd natuurgebied invloed op de woonkeuze van potentiële verhuizers?
5. Op welke wijze draagt een natuurgebied bij aan de grensvertegenwoordiging van lokale bewoners?
6. Wat zijn de voor en nadelen van wonen in de omgeving van een beschermd natuurgebied?

Sinds de Tweede Wereldoorlog hebben steeds meer plattelandsgebieden in westerse landen hun geïsoleerde positie verloren en zijn ze verder geïntegreerd geraakt in de verstedelijkte samenleving. Dit veranderingsproces ging gepaard met een sterke verandering in activiteiten en functies. Naast de traditionele landbouwactiviteit nam het gebruik van landelijke gebieden voor recreatie, toerisme, wonen, werken en natuurbescherming sterk toe.


In de loop der tijd is er veel ervaring opgedaan met aanwijzing en beheer van natuurgebieden in Europa. Er bestaat op dit moment een wijdverbreid inzicht dat natuurgebieden in landelijke gebieden niet als geïsoleerde stukken land kunnen worden behandeld maar dat er bij hun beheer rekening moet worden gehouden met andere activiteiten die door lokale bevolkingsgroepen binnen en nabij die beschermde gebieden worden uitgeoefend.

Natuurbescherming speelt hierdoor een belangrijke rol in de ontwikkeling van rurale gebieden en voor het beheer is het dan ook van belang rekening te houden met de relaties die bestaan tussen natuur en andere rurale activiteiten.

Naast het toenemend gebruik van landelijke gebieden voor consumptieve activiteiten, is er ook sprake van een steeds groter wordende differentiatie tussen landelijke gebieden. Dit differentiatie proces wordt vaak in verband gebracht met het tijd-ruimte-bereik van individuen (‘time-space compression’, Cloke & Goodwin, 1992) dat ervoor zorgt dat het voor steeds meer huishoudens makkelijker wordt toenemende afstanden te overbruggen. Hierdoor wordt het gebruik van landelijke gebieden voor nieuwe woon en recreatie activiteiten, steeds minder bepaald door hun relatieve ligging en steeds meer door hun kwaliteit. Een van de specifieke kwaliteiten die de aantrekkelijkheid van landelijke gebieden positief beïnvloedt is de aanwezigheid van natuur.

Dat mensen een woning wensen in een natuurrijke omgeving is op zich niets nieuws. Niet voor niets werden in de laatste twee eeuwen in gebieden als het Gooi en de Vechtstreek, in Nederland, en het Lake District, in Engeland, prachtige buitenhuizen gebouwd. Echter in het verleden was wonen in het groen en werken in de stad alleen voor een handjevol mensen weggelegd. Tegenwoordig kan door de welvaartstijging, de toename van de
mobiliteit en de toename van de vrije tijd een steeds grotere groep mensen buiten de grote steden nabij het groen gaan wonen. Dit blijkt uit een toename in de migratiebewegingen tussen stedelijke en landelijke gebieden in de laatste decennia in Nederland, het Verenigd Koninkrijk en delen van Spanje. In de twee eerste landen is dit vooral tot uiting gekomen in het toenemend gebruik van landelijke gebieden voor permanente woonactiviteit, terwijl in Spanje het tevens gaat om een toename van het tweede woningbezit. De ontwikkelingen in de drie genoemde landen, die als case study landen werden gekozen voor deze studie, onderbouwen de observatie dat steeds meer mensen in een groene omgeving wensen te wonen en deze wens ook verwezenlijken. Naast bevolkingsbewegingen komt de wens voor wonen nabij natuur ook tot uiting in de prijs van woningen. Onderzoek heeft aangetoond dat woningen in de nabijheid van groen een hogere waarde hebben dan woningen die dit missen (Fennema et al, 1995; Van Leeuwen, 1997 en Powe et al., 1995).

Opzet van het onderzoek

In vijf onderzoeksgebieden in Europa zijn data verzameld via een enquête. Deze werd gehouden onder de bevolking die binnen een straal van 3 kilometer rond het beschermde natuurgebied woonde dat centraal in het onderzoeksgebied gelegen was. De vijf onderzoeksgebieden zijn (in Nederland) het Dwingelerveld, de Weerribben, het Lauwersmeergebied, (in Engeland) Northumberland en (in Spanje) Doñana. De drie beschermde natuurgebieden die onderdeel uitmaken van de Nederlandse onderzoeksgebieden behoren tot de grotere aaneengesloten natuurgebieden en zijn of Nationaal Park of Nationaal Park in Oprichting. Het natuurgebied in het Engelse onderzoeksgebied is een van de 11 Nationale Parken in Engeland. Het beschermde natuurgebied in Doñana bestaat uit zowel een Nationaal Park als een Regionaal Park. Daarnaast liggen alle vijf de onderzoeksgebieden relatief ver verwijderd van de economische en politieke centra, in regio’s met een lage bevolkingsdichtheid waar een relatief hoog percentage van de bevolking nog werkzaam is in de landbouw. Naast deze overeenkomsten vertonen de onderzoeksgebieden veel verschillen in o.a. de omvang van het beschermd gebied, type plannings- en beschermingsregime, toegang tot beschermde gebied, type landschap, sociaal-economisch ontwikkelingsniveau en bevolkingssamenstelling.

Door data te verzamelen in drie verschillende Europese landen, zijn duidelijke culturele verschillen, verschillen in rurale ontwikkeling en verschillen in voorkeuren en gedrag in relatie tot beschermde natuur naar voren gekomen. Daarnaast heeft de vergelijking tussen de onderzoeksgebieden ook een onderscheid tussen algemene trends en nationaal specifieke ontwikkelingen laten zien. Over het algemeen werden er meer overeenkomsten tussen de Nederlandse en Engelse onderzoeksgebieden gevonden, terwijl de uitkomsten voor het Spaanse onderzoeksgebied vaker afwijken.

De onderzoekspopulatie in de vijf onderzoeksgebieden is in twee groepen verdeeld: de recente bewoners, die in de laatste vijf jaar naar het gebied zijn verhuisd, en de autochtone, die al meer dan vijf jaar in het gebied wonen. Door beide bevolkingsgroepen met elkaar te vergelijken is er bepaald of er een verandering in bevolkingssamenstelling onder invloed van immigratie heeft plaatsgevonden. Daarnaast kon in de onderzoekspopulatie in het Spaanse onderzoeksgebied nog een derde bevolkingsgroep onderscheiden worden: de tweede woningbezitters. Bijna de helft van de woningvoorraad in dit gebied bestaat namelijk uit tweede woningen. In de Nederlandse en Engelse onderzoeksgebieden vormen tweede woningbezitters een te verwaarlozen groep.

Beschermde natuurgebieden en bevolkingsontwikkeling

De uitkomsten van dit onderzoek suggereren dat natuurrijke landelijke gebieden in Europa populairder zijn geworden als woongebied. In vier van de vijf onderzoeksgebieden is te zien dat in de periode na 1990 sprake is van een migratieoverschot dat groter is dan dat van de omliggende regio’s. Een eenduidige trend in de bevolkingsontwikkeling in de vijf onderzoeksgebieden dat direct te relateren is met de aanwezigheid van een beschermde natuurgebied was echter moeilijk te vinden, aangezien er verschillende elkaar beïnvloedende factoren een rol spelen in dit proces. De bouw van nieuwe woningen onder invloed van lokale overheidsbeslissingen en de
groei van locale arbeid, bleken van grote invloed op de bevolkingsontwikkeling, vooral in respectievelijk het Dwingelderveld en Doñana. Toch zijn er drie gelijke tendensen in de bevolkingsontwikkeling van de vijf onderzoeksgebieden ontdekt. Ten eerste, bleek dat er in alle gebieden sprake was van een bevolkingstoename of stabilisatie in de laatste vijf jaren van de 15 jarige onderzoeksperiode (1980-1995). In twee onderzoeksgebieden was er sprake van een positieve jaarlijkse bevolkingsgroei over de volledige 15 jaar. In de andere gebieden was er alleen sprake van een bevolkingstoename of, in het geval van het Lauwersmeer, van een bevolkingstabilisatie, vanaf 1990. Ten tweede, werd in alle gebieden de bevolkingstoename of stabilisatie veroorzaakt door een toename van de immigratie terwijl het sterfteoverschot stabiel bleef over de gehele periode. Ten derde, bleek dat in alle vijf gebieden sprake was van een constante groei in het aantal huishoudens over de gehele 15 jarige onderzoeksperiode.

Ten aanzien van het migratiepatroon kan worden geconcludeerd dat de migratiestromen naar de vijf onderzoeksgebieden complexer zijn geworden omdat de nieuwe vestigers in de laatste vijf jaren uit meer verschillende plaatsen afkomstig zijn dan vestigers in voorgaande periodes. In de Nederlandse en Engelse onderzoeksgebieden ging dit samen met een toenemen aanwezigheid van de laatste vestigers die een stedelijke gemeenschap konden kiezen.

De uitkomsten van het onderzoek laten ook zien dat er een voorkeur van bepaalde bevolkingsgroepen met specifieke karakteristieken bestaat om in de buurt van natuur te gaan wonen. Dit heeft gevolgen voor de bevolkingsontwikkeling van de onderzoeksgebieden. Door de huishoudenskarakteristieken van de recent gevestigde huishoudens te vergelijken met die van huishoudens die in andere gebieden zijn gevestigd, kon de selectiviteit van de migratie naar de natuurgebieden in de onderzoeksgebieden worden bepaald. Vier huishoudensgroepen waren duidelijk oververtegenwoordigd in de recente vestigersgroep in alle Nederlandse en Engelse onderzoeksgebieden en bleken ook dominant aanwezig te zijn in de tweede woningbezittersgroep in het Spaanse onderzoeksgebied. Het betreft ‘vutters’, ‘vroeg vutters’, ‘middelklasse’ huishoudens en zogenaamde ongebonden ofwel ‘footloose’ huishoudens. Met de laatste groep wordt verwezen naar huishoudens die niet of nauwelijks een werkplek of werk gemeten hebben. In alle onderzoeksgebieden was er sprake van een bepaald aantal huishoudens met deze karakteristieken.

Het gaat dan om huishoudens die af en toe verhuisen om te ontsnappen aan de drukte van de stad. In deze groep vallen bijvoorbeeld ‘vutters’, ‘vroeg vutters’, ‘middelklasse’ huishoudens en zogenaamde ongebonden huishoudens. In het onderzoek was duidelijk dat deze groep vooral in de Nederlandse en Engelse onderzoeksgebieden aanwezig was. In het Spaanse onderzoeksgebied was er sprake van een minder sterke aanwezigheid van deze groep. In de Nederlandse onderzoeksgebieden waren er duidelijk meer huishoudens met deze karakteristieken aanwezig, vooral in het Lauwersmeer en Northumberland. In de Engelse onderzoeksgebieden waren er minder huishoudens met deze karakteristieken aanwezig, hoewel de aanwezigheid in het Northumberland en Het Lauwersmeer nog steeds duidelijk was.

De gevolgen van de selectieve migratie voor de bevolkingsaanwezigheid werden ook onderzocht. Er is duidelijk een toenemende selectiviteit in de bevolkingsaanwezigheid. De meest duidelijke is die van de leeftijdsselectiviteit die gevolgen heeft voor de lokale leeftijdsoverschrijding. Door de oververtegenwoordiging van vutters en vroege vutters zijn er relatief veel mensen van boven de vijftig naar de onderzoeksgebieden verhuisd. In de gebieden waar al relatief veel ouderen wonen, zoals in het Dwingelderveld, is er sprake van een oververtegenwoordiging van ouderen. In de andere gebieden is er sprake van een minder sterke oververtegenwoordiging van ouderen.
Dwingelderveld en het Lauwersmeergebied. In deze gebieden leidt leeftijdselectieve migratie dus tot twee tegengestelde ontwikkelingen; naast vergrijzing is er ook sprake van verjonging door een gelijktijdige toename van mensen onder de 35 jaar. In het Spaanse onderzoeksgebied Doñana was alleen sprake van instroom van een jonge groep permanente bewoners. De relatief jonge bevolkingssamenstelling van het gebied wordt hierdoor in stand gehouden. In de grote groep tweede woningbezitters in Doñana was het percentage ‘vutters’ echter wel erg hoog, waardoor er toch veel mensen van middelbare en hoge leeftijd in het gebied verblijven, met name gedurende de lange zomerperiode.

In alle Nederlandse en Engelse onderzoeksgebieden behoorden de recente bewoners vaker tot een hogere opleidings- en inkomensgroep. Ook lag het aantal huishoudens waarvan een of twee partners een zogenaamde ‘white-collar’ positie bekleedden veel hoger in de recente huishoudensgroep dan in de autochtone huishoudens-groep. Uit deze verschillen kon worden geconcludeerd dat migratie het aantal middenklasse huishoudens in de Nederlandse en Engelse onderzoeksgebieden zal vergroten. In het Spaanse onderzoeksgebied bleek het percentage middenklasse huishoudens in de tweede- woningbezittersgroep groter te zijn dan in de recente vestigers en autochtone bevolkingsgroepen waardoor geconstateerd kon worden dat de koopkracht in het gebied met name door tweede woningbezitters wordt opgeschroefd in het gebied en niet door permanente immigratie. De relatief grote aantrekking van de zogenaamde ‘footloose’ huishoudens naar de onderzoeksgebieden heeft ook gevolgen voor de locale bevolkingssamenstelling. In alle drie de Nederlandse onderzoeksgebieden bleken de recente bevolkingsgroepen veel vaker dan de autochtone groepen te bestaan uit mensen die niet aan een werkplek gebonden waren omdat ze met de VUT of werkloos waren. Dit gold ook voor de groep mensen die wel een baan had maar als ‘footloose’ gekarakteriseerd kon worden omdat ze vanuit huis werkten, een eigen bedrijf hadden of vanaf langere afstand pendelden. In het Engelse onderzoeksgebied werd het hoge percentage ‘footloose’ huishoudens in de recente bevolkingsgroep in vergelijking met de autochtone groep met name bepaald door de werkende huishoudens die als footloose kon worden gekarakteriseerd. Met name het aantal huishoudens met een eigen bedrijf en lange afstand forensen lag erg hoog in de recent vestigers groep van dit Engelse onderzoeksgebied. Geconcludeerd kan worden dat migratie het aantal ‘footloose’ huishoudens vergroot in de Nederlandse en Engelse onderzoeksgebieden maar niet in het Spaanse Doñana. In dit laatste gebied bestaat echter wel het aantal tweede woningbezitters voor een groot deel uit ‘footloose’ huishoudens, wat met name wordt veroorzaakt door het hoge percentage ‘vutters’.

Over het geheel kan worden gesteld dat de meest voorkomende gevolgen van selectieve migratie naar natuurgebieden zijn de vergrijzing in gebieden met een relatief jonge bevolkingsopbouw en verjonging in gebieden met een oude bevolkingsopbouw. Daarnaast leidt de migratie naar beschermde natuur meestal tot een toename van het gemiddelde sociaal-economische ontwikkelingsniveau in een gebied. Ook het aantal ‘vutters’ zal stijgen in de onderzoeksgebieden, maar in gebieden met relatief lagere kosten van levensonderhoud is het tevens te verwachten dat huishoudens die van een uitingering leven, zoals werklozen en arbeidsongeschikten, zullen toenemen. Ten aanzien van arbeidsorganisatie van huishoudens kan verwacht worden dat het aantal zelfstandigen en forensen sterker zal stijgen rondom beschermde natuurgebieden.

Beschermde natuurgebieden en het residentieel keuzeproces

De aanwezigheid van natuur of de kwaliteit van de fysieke omgeving die direct wordt beïnvloed door de aanwezigheid van een natuurgebied, bleken veruit de meest genoemde woonkeuzemotieven in de Nederlandse en Engelse onderzoeksgebieden. Deze motieven werden aanzienlijk vaker genoemd dan motieven die gerelateerd waren aan werk. Dit bevestigt het belang van de invloed die een natuurgebied op de woonkeuze van veel recente vestigers in de onderzoeksgebieden heeft gehad. Het Spaanse onderzoeksgebied vormde echter een uitzondering hierop. Daar bleken motieven die gerelateerd zijn met werk veruit de belangrijkste reden om naar dit gebied te verhuizen. De tweede woningbezitters noemden wel motieven die gerelateerd waren aan de fysieke omgeving als reden om in Doñana een tweede woning te nemen. Deze motieven waren echter vaker gerelateerd aan de aanwezigheid van zee en strand dan aan de aanwezigheid van beschermde natuur.

Voor de Nederlandse en Engelse onderzoeksgebieden was het overduidelijk dat motieven die werden opgegeven
voor de selectie van de gebieden als woonlocatie sterk gerelateerd waren aan endogene kwaliteiten van landelijke gebieden in het algemeen, aan welke de aanwezigheid van een beschermd natuurgebied een belangrijke bijdrage levert. In het Dwingelderveld en de Weerribben werd in de antwoordcategorie die gerelateerd is aan aspecten van de fysieke omgeving het motief ‘aanwezigheid van natuur en wild’ het meest genoemd. In de andere drie onderzoeksgebieden werden er vaker meer algemene motieven genoemd als aantrekkelijkheid van het landschap en het rurale karakter van de omgeving.

Ook is gebleken dat voor de meeste recente vestigers natuur in de wijdere omgeving zeker een rol heeft gespeeld in de selectie van het woongebied, maar dat deze natuur niet direct aan de woning hoefde te grenzen. Dit laatste bleek namelijk geen belangrijke overweging te zijn geweest bij de selectie van de woning. Het gaat bij de meeste mensen dus vooral om de aanwezigheid van natuur in de wijdere leefomgeving en dit verklaart dat de aanwezigheid van beschermd natuur wel vaak is meegenomen bij de selectie van de wijdere woonomgeving, maar niet in de uiteindelijke selectie van de woning.

Tot slot moet ook rekening worden gehouden met het feit dat het type woningaanbod in de onderzoeksgebieden al zorgt voor een voorselectie van de huishoudens die er een nieuwe woning komen zoeken. De woonvoorkeuren van mensen worden dus niet alleen duidelijk uit de door hun opgegeven woonkeuzeoverwegingen maar ook uit het feit dat ze in de onderzoeksgebieden een huis zijn gaan zoeken. Daarnaast geven de karakteristieken van de woning en de ligging daarvan ook al duidelijk weer wat voor een voorkeur hebben de recente vestigers hebben. Zowel in de Nederlandse gebieden als in het Engelse onderzoeksgebied is gebleken dat recente vestigers veel vaker dan autochtone huishoudens wonen in zogenaamde ‘rurale objecten’. Hiermee worden oude boerderijen en in het landelijk gebied gelegen vrijstaande huizen bedoeld.

Over het algemeen kan gesteld worden dat de aanwezigheid van natuur een belangrijke rol speelt bij de keuze van een nieuw woongebied in Nederland en Engeland, maar dat het bij de keuze van een woning een minder belangrijke rol speelt. Aangezien bij de keuze van een nieuwe woning zowel de woonomgeving als de woning aan de minimale eisen van een huishouden moet voldoen, is de aanwezigheid van natuur slechts een van de ‘pull’-factoren in het residentiële keuzeproces. De aanwezigheid van een natuurgebied kan dus alleen een doorslaggevende factor zijn als aan alle andere eisen ten aanzien van woning en tuin wordt voldaan. Echter, aangezien natuur een specifieke endogene kwaliteit van Europese rurale gebieden is en deze tegelijkertijd ook een schaars goed is, zal het moeilijker zijn om aan de eis van aanwezigheid van natuur te voldoen dan aan de aanwezigheid van een huis dat aan alle eisen voldoet. Vermachtigd kan daarom worden dat de recente vestigers veel hoger op woonkeuzecategorieën die verwijzen naar de esthetische en rurale aspecten van de nieuwe woonomgeving als natuur hebben het meest succesvol zullen worden in het aantrekken van nieuwe bewoners.

Aangezien dit onderzoek in drie verschillende landen in Europa is uitgevoerd werden er ook specifieke nationale en regionale verschillen in woonkeuze-overwegingen gevonden.

In de Nederlandse onderzoeksgebieden werd voor woonkeuzeoverwegingen veel frequenter de aanwezigheid van ‘natuur en wild’ genoemd, terwijl in het Engelse onderzoeksgebied wel hoog werd gescoord op motieven die verwijzen naar de fysieke omgeving maar die veel vaker verwreven naar de rurale en esthetische kwaliteiten van de omgeving. Dit verschil heeft twee verklaringen. Ten eerste komt dit voort uit verschillen in percepties van wat onder natuur kan worden verstaan. In Nederland wordt groen en een omgeving waarin een relatief beperkte menselijke invloed is al snel geassocieerd met natuur. In Engeland lijkt het begrip ‘natuur’ echter een andere connotatie te hebben aangezien het grootste deel van het Engelse platteland, inclusief de Nationale Parken, wordt gezien als een product van menselijk handelen. Ten tweede scoorden de Engelse recente vestigers veel hoger op woonkeuzecategorieën die verwijzen naar de esthetische kwaliteiten van de nieuwe woonomgeving en dit bevestigt dat de rurale idylle, of wel de verheerlijking van het platteland, in Engeland groter is dan in Nederland.

Het Spaanse onderzoeksgebied Doñana leverde de meest afwijkende resultaten. Hier speelden bij de selectie van een woongebied voor permanente bewoning met name economische overwegingen een rol en bij de selectie van een tweede huis vooral de consumptieve. In vergelijking met de Nederlandse en Engelse situatie werd er in Doñana relatief weinig aandacht besteed aan de kwaliteiten van de natuurlijke omgeving. Dit is waarschijnlijk te verklaren uit het feit dat in Spanje de publieke belangstelling van natuur en milieubescherming achterloopt bij de twee Noord-Europese onderzoekslanden. Hoewel de inmenging van de Spaanse overheid in natuurbescherming veel vroeger begon dan in Nederland en het Verenigd Koninkrijk is natuurbescherming altijd een geïsoleerde
activiteit van met name de Spaanse elite gebleven. Ook in het geval van Doñana is dit gebied daardoor nog steeds sterk gescheiden van de rest van de regio. De toegang tot het beschermd gebied is beperkt en heeft waarschijnlijk verder bijgedragen aan de beperkte betrokkenheid van de lokale bevolking met het natuurgebied.

**Waardering van beschermde natuur in de woonomgeving: voor- en nadelen**

De bijdrage van de aanwezigheid van een natuurgebied aan de kwaliteit van de fysieke omgeving was de meest genoemde reden voor algemene woonwonen. Dit geldt zowel voor de meerderheid van de Nederlandse en Engelse respondenten als voor de permanente bewoners van het Doñana onderzoeksgebied. Voor de tweede woningbezitters in Doñana was de aanwezigheid van zee en strand echter een vaker genoemde reden voor woonwonen dan de aanwezigheid van natuur.

In alle onderzoeksgebieden werd ook duidelijk dat de tevredenheid van lokale bewoners met de aanwezigheid van een beschermd natuurgebied in hun directe woonomgeving zeer groot is. Zelfs in het geval van Northumberland en Doñana waar een groot gedeelte van de bevolking van mening is dat de aanwezigheid van een beschermd natuurgebied de lokale economie remt, blijkt de ruime meerderheid toch tevreden te zijn met de aanwezigheid van een beschermd natuurgebied in hun directe woonomgeving.

Ondanks het feit dat in alle vijf de gebieden een ruime meerderheid van de bevolking tevreden was over het wonen nabij een beschermd natuurgebied, bleken er ook grote verschillen tussen de drie onderzoekslanden te bestaan in de wijze waarop het natuurgebied werd gezien en beoordeeld door de lokale bevolking.

In de Nederlandse situatie wordt de aanwezigheid van een beschermd natuurgebied in de woonomgeving vooral gewaardeerd om twee redenen. Ten eerste vanwege de mogelijkheid die een natuurgebied biedt voor recreatief gebruik. Ten tweede door de bijdrage van de beschermd natuur aan de kwaliteit van de fysieke omgeving met name in relatie tot de esthetische aantrekkelijkheid, natuurlijke en rurale kenmerken en rust. In de Engelse situatie werd de bijdrage van natuur aan de kwaliteit van de fysieke omgeving het meest frequent als reden genoemd. Daarna kwam de extra planologische zekerheid die een beschermd natuurgebied geeft waardoor de kwaliteit van de leefomgeving in en om een natuurgebied beter gewaarborgd wordt dan in de rest van het landelijk gebied. De mogelijkheid voor recreatief gebruik werd aanzienlijk minder genoemd dan in de Nederlandse gebieden, maar speelde wel een rol.


Het feit dat de extra planologische zekerheid die van natuurgebieden uitgaat wel vaak in het Engelse en Spaanse onderzoeksgebied was genoemd en nauwelijks in de Nederlandse gebieden heeft twee mogelijke verklaringen. Ten eerste is de planologische bescherming van het landelijk gebied in Nederland vrij streng geregeerd zowel in en nabij natuurgebieden als verder weg van natuurgebieden. Ten tweede is het planingsysteem in Engeland en Nederland sterk verschillend waardoor er in Nederland minder sprake is van actieve betrokkenheid van lokale groepen bij planologische beslissingen dan in Engeland.

Concluderend kan worden gesteld dat een ruime meerderheid van de bewoners in alle vijf de onderzoeksgebieden het prettig vindt om in de buurt van een beschermd natuurgebied te wonen. Toch was er in met name het Engelse en het Spaanse onderzoeksgebied een aanzienlijke minderheid die het nadelig vond om in de buurt van een natuurgebied te wonen. De belangrijkste reden voor deze negatieve evaluatie was in beide gebieden de invloed van de aan het natuurgebied gerelateerde planologische restricties die remmend werkten op de lokale economie. Op de tweede plaats werd de ongewenste bureaucratie genoemd die uit de bescherming van het gebied voortkwam. In Doñana had men ook moeite met de beperkte toegang tot het natuurgebied. De meer kritische houding tegenover het beschermd natuurgebied in de Spaanse en Engelse situatie in vergelijking met die in de Nederlandse gebieden heeft een aantal specifieke oorzaken. Deze kunnen in vijf punten worden samengevat:

**Samenvatting**
Ten eerste is gebleken dat hoe meer de protectieregimes de locale bevolking beïnvloeden in hun doen en laten, hoe meer deze aspecten een rol spelen in de evaluatie van de aanwezigheid van een natuurgebied en meestal leiden tot een meer kritische houding door de locale bevolking. In Northumberland is de betrokkenheid van de bevolking bij de plannings- en protectieregimes ook groter dan in de Nederlandse en Spaanse situaties omdat vele functies in het Nationale Park Northumberland gecombineerd zijn. Mensen wonen, werken en recreëren vaak op een en dezelfde plek. Ook is een belangrijk deel van het land in Northumberland in handen van particulieren als boeren en ook andere grondbezitters. Bescherming van de natuur- en landschapswaarden en recreatie-activiteiten kunnen alleen in overleg met alle locale bevolkingsgroepen gerealiseerd worden. In de Nederlandse gebieden is het meeste land in de natuurgebieden al in handen van natuurbeschermingsorganisaties. Toegang tot de gebieden is meestal goed geregeld waardoor de lokale bevolking de natuurgebieden goed kan bezoeken zonder dat de aanwezigheid van deze gebieden verder veel beperkingen aan lokale bevolkingsgroepen oplevert. In een deel van het beschermde gebied van Doñana is de situatie te vergelijken met die in Northumberland. Het land is in handen van particulieren waarmee in overleg met hen beschermingsmaatregelen voor natuur en landschap tot stand komen. Het andere deel van het beschermde gebied, het Nationaal Park, is strikt beschermd en natuurbescherming staat voorop. De lokale bevolking wordt sterk gescheiden van dit gebied en betreding is nauwelijks toegelaten. Dit leidt er toe dat men weinig binding heeft met het gebied. Dit gevoel wordt vaak versterkt door het totaal niet betrekken van de lokale bevolking in conservering van het gebied. De lokale bevolking heeft hierdoor meer moeite met het accepteren van planologische beperkingen die voortkomen uit de aanwezigheid van het beschermde natuurgebied en die (economische) gevolgen hebben voor het gebied buiten de beschermingszones.

Ten tweede zijn er culturele verschillen in opvattingen ten aanzien van ‘natuur’ en ‘ruraal’ die zorgen voor verschillen in houding ten aanzien van beschermde natuurgebieden in de leefomgeving. Zo werden in de Nederlandse onderzoeksgebieden natuurwaarden veel vaker opgegeven als motivering om naar een gebied te verhuizen of een gebied te waarderen dan in de Engelse en Spaanse onderzoeksgebieden. Dit verschil kan verklaard worden door verschillen in de perceptie van het begrip ‘natuur’ en houdingen ten aanzien van natuurbescherming. In Nederland waar de bevolkingsdichtheid en de urbanisatiegraad hoog is, wordt groen of landelijk gebied waar sprake is van een geringe menselijke invloed al vrij snel als ‘natuur’ opgevat. Er is daardoor ook een wijder verbreide acceptatie onder de Nederlandse bevolking van de noodzaak om de schaarse natuur te beschermen en natuurgebieden in de woonomgeving worden daardoor hoog gewaardeerd. In Engeland is de bevolkingsdichtheid en urbanisatiegraad over het algemeen ook heel hoog. Toch wordt het begrip natuur niet zoals in Nederland aan ‘wildernis’ gekoppeld. Het hele Britse platteland, inclusief alle Nationale Parken, wordt als een product gezien van menselijke ingrepen in natuurlijke processen. In tegenstelling tot de Nederlandse situatie, waar het gebrek aan natuur ertoe heeft geleid dat elk stukje groen en relatief onaangetast landelijke gebied gekoesterd en beschermd wordt, leidde dit in de Britse situatie juist tot een sterkere idealisering van rurale kwaliteiten. Dit verklaart ook de hogere score in Northumberland op rurale en esthetische kwaliteiten die samenhangt met de sterke idealisering van het platteland in de Engelse cultuur. In Spanje is de traditie van natuurbescherming wel ouder maar is het veel langer een elitaire activiteit geweest gericht op het beschermen van wildernis volgens de Amerikaanse traditie. Dit was ook beter mogelijk aangezien een leeg land als Spanje waar veel aristocratische grondeigenaren hun jachtgronden eeuwen land tegen aantasting konden beschermen. Natuur is minder schaars in Spanje en de lange scheiding van natuurgebieden met het omliggende platteland heeft ervoor gezorgd dat er nog steeds minder aandacht onder de Spaanse bevolking is voor natuur en natuurbescherming. Dit verklaart ook waarom het vaak niet in woonkeuze-overwegingen en waardering van gebieden wordt meegenomen en waarom natuurgebieden vaak als contraproductief voor lokale economische ontwikkeling worden gezien.

Ten derde, verschillen in stadia van rurale ontwikkeling en sociaal-economische ontwikkeling tussen de onderzoekslanden hebben ook de opvattingen over natuur in de leefomgeving beïnvloed. De mate waarin het proces van ‘commodification’ en integratie het Spaanse landelijke gebieden hebben beïnvloed is geringer dan in Nederland en het Verenigd Koninkrijk. Tegelijkertijd ligt het sociaal-economisch ontwikkelingsniveau, zeker op het Spaanse platteland, nog onder het gemiddeld Europese niveau. Relatief veel Spaanse huishoudens moeten zich daardoor nog veel laten leiden door louter economische overwegingen in hun woonkeuze dan in de...
Nederlandse en Britse situatie. Het idee dat het platteland ook voor consumptieve activiteiten als wonen en recreatie kan worden gebruikt is hierdoor minder wijdverbreid in Spanje dan in Nederland en het Verenigd Koninkrijk, zeker onder rurale bevolkingsgroepen. Onder de Spaanse urbane bevolking gaat dit echter niet op aangezien een groot deel wel het platteland gebruikt voor het hebben van hun vakantiewoningen.

Ten vierde, de specifieke locale natuurlijke en esthetische kwaliteiten van de vijf onderzoeksgebieden hebben ook de evaluatie en het gedrag van de respondenten beïnvloed. In het Dwingelderveld en de Weerribben kwam het duidelijk naar voren dat de natuurwaarden vaker het residentiële keuzeproces hebben beïnvloed dan in het Lauwersmeer gebied. Ook de positieve evaluatie van de leefomgeving in de Weerribben werd vaker gerelateerd aan de kwaliteit van de fysieke omgeving dan in de andere gebieden. Dit betekent toch dat natuurwaarden in bepaalde gebieden een grotere rol kunnen spelen in het aantrekken van nieuwe bewoners naar een gebied dan in andere gebieden.

Ten vijfde, specifieke regionale omstandigheden zijn zeer bepalend voor de evaluatie van de aanwezigheid van een natuurgebied, zeker als deze specifieke omstandigheden conflicten in het verleden hebben veroorzaakt. In de Nederlandse onderzoeksgebieden werd zelden over conflictsituaties met het beschermd natuurgebied geraporteerd. In Engeland en Spanje was dit anders.

In Northumberland wordt de lokale kritische houding ook veroorzaakt doordat een derde deel van het Nationaal Park als militair oefenterrein in gebruik is. Hierover bestaat echter een controverse. De autoriteit die het Nationaal Park bestuurt verzet zich tegen verdere uitbreiding van de militaire trainingactiviteiten vanwege beperking van recreatief medegebruik die hiervan het gevolg zijn en de eventuele negatieve invloed op de flora en fauna. Enkele lokale bevolkingsgroepen zijn bang dat deze houding van het Nationaal Park de lokale werkgelegenheid negatief zal beïnvloeden aangezien beperking van militaire trainingactiviteit ook kan leiden tot een beperking van arbeidspunten voor lokale burgers die in het militair gebied werken.

Het natuurgebied Doñana is lange tijd verboden gebied geweest voor de lokale bevolking aangezien het diende als jachtgebied voor de aristocratie. Hoewel in de jaren vijftig steeds meer sprake was van ontginning van het gebied voor landbouw en andere activiteiten, werd onder druk van internationale natuurbeschermingsbewegingen vanaf de jaren zestig het gebruik van dit gebied weer aan banden gelegd. Vanaf die tijd zijn er altijd conflicten geweest tussen de natuurbeschermers en de mensen die het gebied economisch en recreatief wilden exploiteren. Doñana is daardoor vaak onderwerp geweest van een politiek krachtspeel. De houding van de lokale bevolking in Doñana ten opzichte van het natuurgebied is hierdoor sterk beïnvloed. De hele situatie wordt verder gecompliceerd doordat samenwerking tussen de nationale overheid, die de planningsautoriteit voor het nationaal park van Doñana heeft, en de regionale overheid, die de planningsautoriteit van het Entorno buffer Park van Doñana heeft, stroef verloopt. De nationale overheid blijft vasthouden aan het eilandmodel voor natuurbescherming wat het proces van geïntegreerde ontwikkeling van het gebied bemoeilijkt. Het onderzoek heeft aangetoond dat de meerderheid van de lokale bevolking wel tevreden is met de aanwezigheid van het natuurgebied van Doñana en dat ze ook inzien dat het de kwaliteit van het gebied kan helpen waarborgen. Desalniettemin is men van mening dat de overheid beter en effectiever moet optreden in het combineren van natuurbescherming en economische ontwikkeling van het gebied.

**Functionele veranderingen in landelijke gebieden en beleidsimplicaties**

Natuurlijke kwaliteiten spelen een belangrijke rol bij het aantrekken van nieuwe consumptieve activiteiten naar het landelijk gebied en zullen daardoor als zodanig aandacht moeten krijgen in beleidsformulering voor landelijke gebieden.

Natuurlijke kwaliteiten zullen in de toekomst nog meer dan nu het verschil tussen rurale en urbane gebieden gaan bepalen. Onder invloed van de groeiende urbanisering zullen natuurlijke kwaliteiten ook steeds schaarser worden. Ondertussen zal het aantal mensen dat deze natuurlijke kwaliteiten waardeert blijven toenemen en zullen tevens die groepen in de samenleving blijven groeien die zich in hun woonkeuzeoverwegingen laten leiden door de kwaliteit van de leefomgeving omdat dit bijdraagt aan welzijn.

Die gebieden die het sterkst worden gekenmerkt door natuurlijke en rurale kwaliteiten zullen het meest attractief
worden voor woonactiviteiten. De onderlinge afhankelijkheid tussen landelijke gebieden en tussen landelijke en stedelijke gebieden zal toenemen omdat de contrasten verder zullen uitsorteren tussen deze gebieden. Tegelijkertijd zal er ook sprake zijn van een voortgang in het differentiatieproces van landelijke en stedelijke gebieden zijn onder invloed van verdere urbanisering van de rurale gebieden maar ook met het groener worden van specifieke urbane gebieden. De relatieve locatie van landelijke gebieden zal ook minder relevant worden omdat afstanden toch wel overbrugd zullen worden als er een goede reden is om dit te doen. Vaker zal het ook zo zijn dat juist de afgelegen landelijke gebieden aantrekkelijker worden door het voorkomen van rust, ruimte en groen wat betekent dat de perifere landelijke locatie een op zichzelf staande endogene kwaliteit van specifieke landelijke gebieden zal worden. Ook betekent dit dat de meest afgelegen landelijke gebieden in Europa steeds verder in het zogenaamde ‘commodification’- en integratietoepassing zullen worden betrokken. Een toename in het consumptief gebruik van landelijke gebieden zal welkom zijn in die gebieden die lang geconfronteerd zijn geweest met ontvolking, vergrijzing en verdwijning van voorzieningen, maar zal niet altijd wenselijk zijn in gebieden die al met een overduik situatie te kampen hebben zoals veel voorkomt in centraal gelegen Engelse en Nederlandse landelijke gebieden. Mogelijk is het ook wenselijk om die gevolgen van selectieve migratie naar natuurlijke landelijke gebieden te compenseren of tegen te gaan. Een eenzijdige bevolkingsopbouw in relatie tot leefstedelijk of sociaal-economische situatie is vaak niet goed en kan leiden tot het opstuwen van woningprijzen en/of een toenemende druk op specifieke voorzieningen.

Een belangrijke bevinding in deze studie is dat natuurbescherming meestal niet een op zichzelf staande activiteit is in landelijke gebieden. Waar natuur wordt beschermend, worden vaak ook andere woon-, werk- en recreatieve activiteiten aangetrokken. Dit is op zichzelf geen slechte ontwikkeling aangezien de aanwezigheid van beschermde natuur een impuls kan zijn voor de verbreding van de locale economie. Aan de andere kant moet er ook rekening mee worden gehouden dat de juiste maatregelen worden getroffen om verschillende functies te combineren. Immers veel activiteiten kunnen elkaar negatief beïnvloeden als geen specifieke afstemming heeft plaatsgehad. Denk bijvoorbeeld aan intensieve recreatieve activiteiten die niet samen kunnen gaan met bescherming van natuurwaarden. Daarnaast is het mogelijk dat bepaalde activiteiten alleen kunnen voortbestaan als andere activiteiten ook bestaan. Denk bijvoorbeeld aan het rietlandschap in de Weerribben dat alleen blijft gehandhaafd als het niet geëxploiteerd blijft worden of het landschap in Northumberland dat een product is van extensieve begrazing door schapen. Kortom veel specifieke kwaliteiten van landelijke gebieden zijn afhankelijk van een geïntegreerd beleid dat de basiscondities creëert voor het combineren van natuurbescherming met consumptieve activiteiten. Daarnaast zullen in de toekomst onder invloed van de voortgaande veranderingen in de landbouwsector nieuwe consumptieve activiteiten een welkom alternatief of additionele inkomensbron worden voor de landbouw.

Bij het ontwikkelen van duurzame consistente beleidsinstrumenten voor landelijke gebieden moet rekening gehouden worden met de relatie die bestaat tussen natuurgebieden en andere activiteiten en de behoeften en belangen van lokale bevolkingsgroepen. Bescherming van de natuur en landschapswaarden moet centraal komen te staan omdat zij de specifieke kwaliteiten van landelijke gebieden waarborgen. Tegelijkertijd is het belangrijk dat restricties die de economische ontwikkelingsmogelijkheden voor lokale bevolkingsgroepen beperken zoveel mogelijk worden voorkomen. Daarbij moet zoveel mogelijk rekening worden gehouden met de specifieke regionale en lokale omstandigheden. Dit betekent dat er een verdere nuancering van de beleidsimplicaties voor de Europese, Nederlandse, Britse en Spaanse situatie gegeven moet worden.

EU

In de EU kan verwacht worden dat de regionale verschillen verder zullen toenemen. Dit zal sterk gestuurd worden door veranderingen in het Europese landbouwbeleid en de voortgaande afname van de agrarische sector als de dominante economische en grondgebruiksaaktiviteit in landelijke gebieden. Europees ruraal beleid zal dan nog meer dan voorheen aandacht moeten besteden aan het tegengaan van verschillen tussen rurale gebieden in o.a. beschikbare voorzieningen, werkgelegenheid en levensstandaard. Het aantrekken van consumptieve activiteiten naar de perifere landelijke gebieden moet blijvend gestimuleerd worden maar dit moet vooral samengaan met het beschermen van de natuur, milieu en landschapswaarden.

Dit zal niet makkelijk zijn omdat voortgaande urbanisatie en intensivering in de landbouw de kwaliteit van...
natuur, milieu en landschap zullen blijven bedreigen. In veel landelijke gebieden zal verdere intensivering echter de meest rationale optie blijven, zeker waar landbouw al intensief en grootschalig is. Het is echter ook van belang dat het belang van de minder intensieve landbouw voor rurale ontwikkeling en voor het onderhoud van de kwaliteit van het landschap nog meer wordt onderkend. Dit hoeft niet te leiden tot meer landbouwsubsidies. Het aantrekken en combineren van nieuwe functies naast de landbouwfunctie zou veel effectiever zijn. Het betrekken van locale overheden bij het formuleren van beleidsmaatregelen is van groot belang in dit proces aangezien het de specifieke locale kwaliteiten zijn die moeten zorgen voor aantrekking van alternatieve activiteiten.

Nederland
De wens voor kwaliteit van leven en wonen in de buurt van natuur is wijdverbreid onder de Nederlandse bevolking en het kan worden verwacht dat het aantal mensen dat naar deze wens zal en kan handelen steeds groter wordt. Dit betekent enerzijds dat de urbanisatiedruk in de landelijke gebieden in en rond de Randstad steeds verder zal toenemen. Anderzijds zullen de landelijke gebieden die verder van de Randstad afvallen in het noorden, oosten en zuiden van het land ook steeds meer residentiële activiteiten aantrekken, mits ze over voldoende groene endogene kwaliteiten beschikken en kunnen voldoen aan de kwaliteitseisen die de huidige ‘woonconsument’ tegenwoordig aan de woning en woonomgeving stelt. Een voordeel hiervan kan zijn dat deze gebieden de urbanisatiedruk op de landelijke gebieden in en rond de Randstad verlichten. Het zal deze gebieden ook een alternatief bieden voor de verwachte verdere afname van de landbouwsector en helpt de vraag naar voorzieningen in stand houden. Deze ontwikkeling zal echter door beleidsmaatregelen begeleid moeten worden vooral als deze vraag naar groen wonen wijd verspreid en persistent wordt. Immers de druk op de groene woongebieden in en om de Randstad wordt dan alleen maar groter en een deconcentratie van deze bevolking naar de meer decentrale rurale gebieden in Nederland is dan een goede oplossing mits dit gepaard gaat met maatregelen die de kwaliteit van de natuurlijke en rurale omgeving waarborgen. In het algemeen zal er dus een consistent beleid nodig zijn waarin aandacht is voor het multifunctioneel gebruik van het gedifferentieerde platteland en het duurzaam gebruik van waardevolle specifieke kwaliteiten. Decentralisatie van beleidsimplementatie zal efficiënt zijn aangezien lokale overheden beter in staat zijn beleidsmaatregelen af te stemmen op de lokale kwaliteiten en behoeften en lokale bevolkingsgroepen te betrekken. Dit zal echter alleen werken als er van tevoren duidelijke doelstellingen worden geformuleerd waaraan de lokale beleidsmaatregelen kunnen worden getoetst die voor coherentie tussen de aan elkaar gerelateerde ontwikkelingen in de gedifferentieerde rurale en urbane gebieden zorgen.

De gebieden die het meest zullen worden geconfronteerd met de processen die in deze studie zijn bestudeerd, vallen samen met de gebieden die in de Vijfde Nota over de Ruimtelijke Ordening (VIJNO) nader worden gepreciseerd. Deze zijn de ‘Rode contour gebieden’, mits gesitueerd rond dorpskernen in landelijke gebieden, de ‘witte contour gebieden’ en de ‘groene contourgebieden’. In de witte gebieden, die het grootste deel van de plattelandsgebieden in Nederland beslaan, zal een duidelijk beleid geformuleerd moeten worden op zodanige wijze dat de duurzame ontwikkeling van deze gebieden gegarandeerd wordt en de natuurlijke en rurale kwaliteiten van deze gebieden efficiënt worden aangewend voor lokale ontwikkeling. In de groene gebieden kan rurale ontwikkeling een probleem worden als een eenzijdige focus op natuurbescherming de verdere aantrekking of ontwikkeling van meer consumptieve activiteiten tegengaat. Voor een duurzame en gebalanceerde ontwikkeling van rurale gebieden is het immers noodzakelijk om verschillende activiteiten te combineren en zodanig dat ze van elkaar kunnen profiteren. Bovendien kan verwacht worden dat juist die gebieden die over de meeste groene kwaliteiten beschikken, steeds meer woonactiviteiten zullen aantrekken. In deze gebieden zal daarom een stop op verder residentiële ontwikkeling snel leiden tot een geweldige druk op de lokale woningmarkt. Het zal de woningprijzen sterk opstuwen en toegang tot de woningmarkt voor lokale bevolkingsgroepen steeds moeilijker maken. Ook kan het tot een ongewenste eenzijdige bevolkingsopbouw leiden met betrekking tot leeftijd en sociaal-economische bevolkingskenmerken.

Voor het management van natuurrijke rurale gebieden in een dichtbevolkt land als Nederland is het nuttig om naar de ervaring die men in Engelse Nationale Parken heeft opgedaan te kijken. In deze gebieden heeft men laten zien dat het mogelijk is om verschillende grondgebouwactiviteiten als recreatie, landbouw, wonen en natururbescherming op hetzelfde stuk land te laten plaatsvinden en dit te regelen via een proces van overleg en
consensus. Het Engelse voorbeeld laat ook zien dat afwezigheid van strikte landgebruiksvoorschriften zoals die in Nederland overal van toepassing zijn, niet automatisch hoeft te leiden tot ongewenste of zelfs stiekeme urbanisatie van landelijke gebieden. Daarnaast zijn in Engeland ook vaak nieuwe extra functies aan bestaande oude boerderijen en schuren gegeven en deze kunnen dienen als nuttige voorbeelden voor het creëren van nieuwe woonactiviteiten in Nederlandse rurale gebieden.

Gezien de enorme aankopen van land die nodig zijn om de rest van de Ecologische Hoofdstructuur te realiseren is het zeer de vraag of dit ooit zal gaan lukken gegeven de enorme hoge grondprijzen, het beperkte budget en de geweldige druk op de grond door andere sectoren dan alleen de landbouw. Een betere optie zal daarom zijn om meer te denken in functiecombinaties, waarbij de Nationale Landschappen en de Engelse Nationale Parken als uitgeteste voorbeelden en multifunctionele alternatieven kunnen dienen voor de huidige monofunctionele Ecologische Hoofdstructuurbenadering.

De Vereniging Natuurmonumenten kwam met het idee om het oude planologische concept van Nationale Landschappen weer uit te kast te halen. Hiermee geven ze aan dat ze het model van het creëren van zogenaamde ‘natuureilanden’, afgesloten stukken monofunctionele stukken groen, niet aanhangen. Door opnieuw Nationale Landschappen te ontwikkelen, kunnen grote stukken aantrekkelijk platteland worden onderhouden waarbinnen verschillende grondgebruiksactiviteiten naast elkaar kunnen plaatsvinden. Ecologische eenheden als stroomgebieden en habitats kunnen daarbij dienen als richtlijn voor de afgrenzing van deze gebieden wat ook goed samenvaalt met de in de VIJNO voorgestelde netwerkbenadering.

Verenigd Koninkrijk

In Engeland kan men dezelfde processen verwachten als in Nederland. Ook hier zal de behoefte aan groen wonen groot blijven en zal dit de druk op de meer centraal gelegen landelijke gebieden in het Zuiden van Engeland vergroten. Tegelijkertijd zullen de meer decentrale landelijke gebieden in Wales, Noord Engeland en Schotland ook steeds meer woonactiviteiten aantrekken, mits ze over voldoende natuurlijke en rurale kwaliteiten beschikken. Net als in Nederland zal dit de mogelijkheid geven om de urbanisatiedruk in de meer centrale landelijke gebieden te verlichten.

Meer dan in Nederland en Spanje heeft men in het Verenigd Koninkrijk de neiging verschillende activiteiten in het landelijk gebied te mengen. Het gebruik van landelijke gebieden voor recreatie en wonen is al veel vroeger begonnen in Engeland en het Britse planningsysteem is hierdoor ook veel sterker ingespeeld op het regelen van multifunctioneel grondgebruik. Echter dit gaat ook niet zonder problemen. Verschillen tussen de meer centrale en de perifere landelijke gebieden, zeker tussen de zuidelijke en noordelijke gebieden in het Verenigd Koninkrijk, zijn nog erg groot. In de groene aantrekkelijke landelijke gebieden is er sprake van enorme urbanisatiedruk. In gebieden waar bouwactiviteiten sterk aan banden zijn gelegd, als Cornwall, Devon, het Lake District en de Yorkshire Dales, neemt de vraag naar woningen met name door vutters en hogere inkomensgroepen nog steeds erg toe en dit leidt tot een sterke druk op de woningmarkt en extreem hoge prijzen. In dit proces interventiëren blijkt zeer moeilijk. Tegelijkertijd zijn er ook enorme stukken platteland in het Verenigd Koninkrijk met de laagste bevolkingsdicht van de EU. De situatie in deze gebieden is niet te vergelijken met die in Nederlandse perifere gebieden aangezien de schaal van bestaan veel groter is en het oplossen van de problemen met veeziektes en lage vleesprijzen die de laatste jaren de landbouw hebben beïnvloed veel heftigere gevolgen hebben voor de Britse situatie met name in de grote stukken platteland. De toekomst van deze gebieden is hierdoor erg onzeker geworden. De afname in het aantal landbouwbedrijven zal versneld verder gaan. Dit kan belangrijke gevolgen hebben voor de kwaliteit van het landschap in deze gebieden die vooral afhankt van continuering van extensieve veehouderij activiteiten. Daarnaast zal de bevolking verder blijven afnemen wat tenzij alternatieve activiteiten worden gevonden die nieuwe mensen aantrekken en de bestaande bevolking extra alternatieve inkomsten geven.

Voor alle landelijke gebieden in het Verenigd Koninkrijk geldt dat het op peil houden van de endogene kwaliteiten voorraad moet staan zodat deze gebieden aantrekkelijk blijven voor nieuwe consumptieve activiteiten.

Samenvatting
In veel gebieden zal het aantrekken van nieuwe bewoners begeleid moeten worden door maatregelen die de aantrekking van verschillende huishoudengroepen in combinatie met nieuwe economische activiteiten stimuleert. Anders zal dit leiden tot een eenzijdige bevolkingsopbouw in rurale gebieden en dit zal ervoor zorgen dat veel huishoudens na verloop van tijd weer wegtrekken uit de gebieden waardoor zij niet zullen bijdragen aan een duurzame ontwikkeling. Dit onderzoek heeft ook aangetoond dat er grote interesse bestaat onder mensen met een eigen bedrijf om in aantrekkelijke landelijke gebieden te gaan wonen. Dergelijke kleinschalige economische activiteiten zijn nuttig voor de verbreding van de rurale economie en dienen verder gestimuleerd te worden.

**Spanje**

In Spanje zal werk nog steeds de belangrijkste motivator voor woonkeuzegedrag blijven en dit zal dus ook het gebruik van landelijke gebieden voor permanente woonactiviteiten het sterkst beïnvloeden. Dit betekent niet dat de aspecten die samenhangen met de kwaliteit van de woonomgeving geen rol zullen spelen in woonkeuzegedrag, maar dit onderzoek heeft aangetoond dat de invloed van de woonomgeving op het woonkeuzegedrag op korte termijn niet zo’n grote invloed zal hebben op de bevolkingsontwikkeling in Spanse landelijke gebieden als in Nederland en het Verenigd Koninkrijk. Immers de residentiële ontwikkeling in het Doñana gebied bleek niet zo sterk beïnvloed door de aanwezigheid van een natuurgebied dan in de Nederlandse en Engelse onderzochte situaties. Wat wel heel duidelijk naar voren kwam in het Spaanse onderzoeksgebied was dat de ontwikkeling van de tweede woningsector wel sterk werd beïnvloed door aspecten van de omgeving en dat de wonkingsgroepen wel veel sterker in hun gedrag werden gestuurd door consumptieve overwegingen. Daarom kan verwacht worden dat onder invloed van de toenemende economische groei, de urbanisatie en de sterke traditie in Spanje om een tweede huis te bezitten, het consumptieve gebruik van het landelijk gebied sterk zal blijven toenemen. De gebieden langs de kust komen hier het eerst voor in aanmerking, maar veel van deze gebieden zijn al volgebouwd en overbevolkt. Bovendien kunnen zij vaak niet meer voldoen aan de groeiende behoefte aan kwaliteiten waaraan de Spaanse urbane bevokingsgroepen ook steeds meer behoefte hebben. Het kan verwacht worden dat de meer in het binnenland gelegen landelijke gebieden die over veel natuurlijke kwaliteiten beschikken populaireder zullen worden als gebied voor ontwikkeling van tweede woningen. Op dit moment gebeurt dit al veel in de aantrekkelijke landelijke gebieden die in de nabijheid van grotere bevokingsconcentraties liggen zoals het Gredos gebergte nabij Madrid, de Pyreneën nabij Barcelona en de Sierra de Gibraltar nabij de Andalusiëse grootstedelijke gebieden. Het nadeel van een grote ontwikkeling van de tweede woningsector is dat het niet zo’n duurzame bijdrage levert aan de lokale ontwikkeling omdat het meestal een seizoensmatig karakter heeft. Daarnaast paart de grootschalige ontwikkeling van huizen in deze gebieden vaak ten koste van de natuurlijke en landschappelijke kwaliteiten. Het is dan ook van belang dat ontwikkeling van de tweede woningsector samengaat met aantrekking van permanente woonactiviteiten en economische activiteiten. Net als in het Verenigd Koninkrijk moeten basisvoorzieningen gecreëerd worden die het aantrekken van kleine economische activiteiten stimuleert. Daarnaast is het van het grootste belang dat ontwikkeling van nieuwe activiteiten niet de kwaliteit van de natuurlijke en landschappelijke waarden aantast aangezien dit juist de endogene kwaliteiten zijn die de toekomstige ontwikkeling van deze gebieden garanderen. Men moet zich tevens realiseren dat Spanje binnen de EU nog over veel perifere plattelandsgebieden beschikt die een relatief onaangetast natuurlijk karakter hebben. Het unieke karakter van deze gebieden zal ze in de toekomst enorm aantrekkelijk maken voor toekomstig gebruik als woongebied voor eerste en tweede woningbezitters uit Spanje maar ook daarbuiten. Daarnaast zijn in deze gebieden niet alleen unieke natuurwaarden aanwezig, maar gaan deze ook samen met nog relatief lage onroerend goed prijzen en een goed klimaat. Op dit moment zijn vooral de Spaanse kustgebieden voor Europese migranten zeer in trek. Dit zal met het verder bevolkt raken van deze kustgebieden en de groeiende mobilitie en voorkeur voor kwaliteit van leven kunnen verschuiven naar rurale gebieden die meer in het binnenland op perifere locaties liggen. Dit zal echter alleen beheuren in gebieden die voldoende endogene kwaliteiten hebben en ook kunnen voldoen aan de vraag naar basisvoorzieningen en een bepaalde kwaliteit huisvesting.

In vergelijking met het Verenigd Koninkrijk heeft Spanje nog meer rurale gebieden die met grote leefbaarheidsproblemen kampen. In tegenstelling tot de situatie op het Britse en Nederlandse platteland, beschikt Spanje nog

**Samenvatting**
over veel rurale gebieden die nooit een periode na de Tweede Wereldoorlog hebben gekend waarin de bevolking niet terugliep. De meeste van deze gebieden liggen in het centrale en bergachtige deel van het Iberisch Schiereiland. De mogelijkheden om een eind te maken aan de voortgaande bevolkingsterugloop, de veroudering van de bevolking en het in stand houden van minimale basisvoorzieningen zijn erg beperkt, vooral vanwege de zeer perifere ligging en het daarmee samenhangende gebrek aan toegang tot diensten en werk voor de meerderheid van de bevolking van deze gebieden. De toekomst van deze gebieden waar nog steeds het merendeel van de bevolking in de agrarische sector werkzaam is, is ook niet erg rooskleurig vanwege de verwachte teruggang in agrarische activiteit en werkgelegenheid. Net als in veel afgelegen gebieden van het Verenigd Koninkrijk geldt ook voor deze Spaanse perifere gebieden dat de kwaliteit van het landschap zal teruglopen als extensieve landbouwactiviteiten niet in stand worden gehouden. Het doorbreken van de neerwaartse spiraal van rurale deprivatie is gecomprimeerd en specifieke exceptionele maatregelen zullen vaak nodig zijn. Centraal in de aanpak van de problemen in deze gebieden zal echter moeten zijn dat de specifieke kwaliteiten worden beschermd. Op korte termijn zal dit misschien niet direct positieve effecten hebben voor de bevolking, maar behoud van deze kwaliteiten zal de mogelijkheid om in de toekomst nieuwe woon-, recreatie en economische activiteiten aan te trekken waarborgen.

Aanbevelingen voor verder onderzoek

Ten eerste zouden bevolkingsveranderingen in rurale gebieden verder onderzocht moeten worden in relatie tot omvang van de migratiestromen tussen rurale gebieden onderling en tussen rurale en urbane gebieden. In deze studie werden de geopenbaarde woonvoorkeuren van huishoudens die in en in de buurt van beschermde natuurgebieden in perifere landelijke regio’s wonen onderzocht. Hun woonvoorkeuren werden in relatie tot huishoudens karakteristieken bekeken. Een van de uitkomsten van dit onderzoek was dat er steeds meer mensen uit urbane gebieden naar deze natuurrijke landelijke gebieden verhuizen. Een exacte en complete schatting van het aantal mensen in stedelijke gebieden dat een duidelijke voorkeur heeft om naar een natuurrijke landelijke omgeving te verhuizen kon binnen dit onderzoek niet gemaakt worden. Vervolgonderzoek om inzicht te krijgen in het aantal rurale en urbane huishoudens die graag in een natuurrijke landelijke omgeving wonen zouden willen wonen zou nuttige informatie kunnen opleveren over de omvang en het karakter van de vraag naar landelijke woonlocaties. Dit kan ook nuttige informatie opleveren over de te verwachten selectiviteit van de migratie naar landelijke gebieden en de veranderingen in rurale bevolkingssamenstelling die dit tot gevolg kan hebben. Dergelijke informatie zal ook van nut zijn bij de beleidsonsentwikkeling voor landelijke en stedelijke gebieden. Ten tweede, is het van belang om niet alleen begrip te krijgen van het aantal en type huishoudens dat naar landelijke gebieden toetrekt, maar ook van die huishoudens die juist uit natuurrijke landelijke gebieden wegtrekken. Vooral hun motieven om dit te doen dienen achterhaald te worden. In deze studie werd het duidelijk dat er sprake was van selectieve migratie naar landelijke gebieden. Het netto effect van selectieve migratie naar deze natuurrijke gebieden kan echter alleen bepaald worden als ook duidelijk is wie er uit deze gebieden wegtrekken. Inzichten in netto effecten zijn zeer nuttig voor het verkrijgen van een beter begrip over de wijze waarop beleid kan anticiperen op veranderingen in de huizenmarkt. Ten derde is er behoefte aan meer onderzoek naar de relatie tussen economische activiteiten en natuur in landelijke gebieden. In dit onderzoek werd al duidelijk dat er sprake is van een positieve bijdrage aan rurale ontwikkeling door natuurgebieden via het aantrekken van kleine bedrijven. Het verkrijgen van een beter inzicht in de onderliggende processen die deze relatie sturen is nuttig aangezien het kan helpen bij het formuleren van maatregelen die de kwaliteit van de natuurlijke omgeving waarborgen en tegelijkertijd het aantrekken stimuleren van kleine economische activiteiten naar landelijke gebieden die met leefbaarheidproblemen kampen. In Nederland is nog maar weinig bekend over de ontwikkeling van kleinschalige economische activiteiten in landelijke gebieden terwijl in Engeland hier al veel meer onderzoek naar is gedaan. Ten vierde is er behoefte aan onderzoek naar de rol die beschermde natuurgebieden kunnen spelen in het verhogen van de verbondenheid die mensen kunnen hebben met gebieden. Dit onderzoek laat zien dat de
aanwezigheid van beschermde natuur in belangrijke mate bijdraagt aan de woonbepaalt. Er is echter niet
onderzocht of deze uit de aanwezigheid van het natuurgebied voortkomende baten ook een reden was voor
een sterkere verbondenheid met het gebied. Deze verbondenheid kan er immers voor zorgen dat lokale bewoners
een sterkere verantwoordelijkheid voelen voor het onderhouden van de kwaliteit van de woonomgeving en dat ze
minder geneigd zullen zijn het gebied weer te verlaten. Aangenomen kan worden dat hoe meer verbintenis er is
met een woninggebied, hoe meer duurzaam residentiële activiteiten in een gebied worden en hoe groter de
zekerheid is over het behoud en onderhoud van de lokale endogene kwaliteiten. Een beter inzicht verkrijgen in de
factoren die de verbondenheid met een gebied vergroten zijn nuttig aangezien zij overheden in staat stellen meer
vrijheid en verantwoordelijkheid te geven aan lokale bewoners voor het onderhoud van hun eigen leefomgeving.
Ten vijfde heeft dit onderzoek laten zien dat er een belangrijke relatie bestaat tussen percepties, voorkeuren en
ruimtelijke gedrag. Aandacht in dit onderzoek ging vooral uit naar het geopenbarde residentiële gedrag.
Hierdoor werd het mogelijk een link te leggen tussen de percepties en voorkeuren van huishoudens en hun
uitkomstige beslissing om naar een van de natuurrijke onderzoeksgebieden te verhuizen. Echter, uit veel
woonkeuzeonderzoek is gebleken dat huishoudens vaak zeggen dat ze bepaalde percepties en voorkeuren
hebben maar dat uiteindelijk maar een klein deel van deze huishoudens ook naar deze voorkeuren zal handelen.
Om daarom beter inzicht te krijgen in de werkelijke ruimtelijke veranderingen die optreden als gevolg van
individuele voorkeuren is het nuttig de relatie tussen percepties, voorkeuren en werkelijk gedrag verder te
onderzoeken.
Tenslotte is in dit onderzoek duidelijk geworden dat er vele gaten zitten in de statistische bronnen die voor dit
onderzoek werden geconsulteerd. Allereerst bleek het zeer moeilijk te zijn recent en vergelijkbare cijfers te
krijgen over tweede woningen in Europa. Omdat het verwacht kan worden dat juist deze activiteiten in belang
zullen toenemen met de groei in het consumptieve gebruik van het landelijk gebied, is het zeer nuttig om een
adequaat monitoring systeem hiervoor te ontwikkelen waardoor duidelijk wordt waarom tweede woninggebruik
belangrijker is in het ene Europees land en niet in het andere. Naast het verkrijgen van informatie over tweede
woningen, bleek in het algemeen dat er maar zeer weinig consistentie statistische informatie voorhanden is op
een laag regionaal niveau voor de gehele EU. Dit is een belangrijk knelpunt bij het uitvoeren van internationaal
vergelijkend onderzoek naar ruimtelijke ontwikkelingsprocessen. Juist dit type onderzoek is essentieel voor het
opbouwen van kennis en ervaring dat toegepast kan worden in andere ruimtelijke gebieden met vergelijkbare
problemen. Kwantitatieve databases zijn ook essentieel voor het effectief implementeren van beleid. Immers, de
implementatie van meer consistentie beleidsinstituten die rekening houden met de specifieke endogene
kwaliteiten van een gebied kunnen alleen werken als ze begeleid worden met adequate monitoring systemen die
hun effecten meten. Het monitoren van effecten van beleidsmaatregelen kan alleen worden gedaan als er
consistentie data aanwezig zijn die vergelijkingen in ruimte en tijd mogelijk maken.
References


Brechin, S.R. & P.C. West (1990), Protected areas, resident people and sustainable conservation. The need to link top-down with bottom-up. Society and Natural Resources 3, p. 77-79.


Commission of the European Communities (1987), Third periodic report on the social and economic situation and development of the regions of the community. Brussels: CEC.


Department of the Environment (DoE)(1990), This common inheritance. London: DoE.


References
References


Eurostat (1993), Portrait of the regions. Commission of the European Communities. Luxembourg/Brussels: CEC.


Fielding, A.J. (1982), Counterurbanisation in Western Europe. Progress in Planning 17, p. 5-34.


References


Institute of Terrestrial Ecology (several years), Countryside Survey reports.
IUCN (1994), A guide to the Convention of Biological Diversity, Cambridge: IUCN.


References

Mathieson, A. & G. Wall (1982), Tourism; economic, physical and social impacts, Harlow: Longman.
Ministry of Agriculture, Nature Conservation and Fisheries (1990), Natuurbeleidsplan. 's-Gravenhage: Ministerie van LNV.
Ministry of Agriculture, Fishery and Food (1988), Mapa de cultivos y aprovechamientos de España, Dirección General de la Producción agraria, Madrid.
Ministry of Housing, Physical Planning and Environment (1997), Woonverkenningen MMXXX, Wonen in 2030. 's-Gravenhage: Ministerie van VROM, DGVH.
Ministry of Housing, Physical Planning and Environment (2000), Vijfde Nota over de Ruimtelijke Ordening. 's-Gravenhage: Ministerie van VROM.


References
References

Natuurmonumenten (2000), website: www.natuurmonumenten.nl
O’Cinneide, M.O & M. Cuddy (eds.) (1992), Perspectives on rural development in advanced economies. Galway: Centre for Rural Studies, Social Sciences Research Centre, University College Galway.


References
References


Stankey, G.H. (1989), Linking parks to people. The key to effective management. Society and Natural Resources 2, p. 245-250.


Vining, D.R. & A. Strauss (1977), A demonstration that the current deconcentration of population in the United States is a clean break with the past. Environment and Planning A 9, p. 751-758.


Zube, E.H. (1986), Local and extra-local perceptions of national parks and protected areas. Landscape and Urban Planning 13, p. 11-17.
Institutional and legal framework of government interference in The Netherlands, the UK and Spain

Government interference in rural areas takes place within a national framework. This framework consists of the administrative and legal systems. Newman and Thornley (1996) use the division of Zweigert and Kötz who divided Europe in five administrative and legal families. Both the Netherlands and Spain belong to the Napoleonic family and the UK is the only country which falls within the British family category. The differences between the families are based on ‘their historical development, their legal mode of thought, their legal sources and their ideology’ (Newman & Thornley, 1996, p. 28).

The differences between the British and Napoleonic families are several, but there are two main aspects on which they discriminate: the (I) legal style and (II) the degree of power attributed to the lower tier governments. The Napoleonic family starts from a legal base consisting of abstract principles. On the basis of this, plans are developed made up of strict rules on land use regulations and even on future land use prescriptions. In the British family a more flexible legal base is used which consists of case law. This law has an evolutionary structure, which builds up decision by decision. Within the Napoleonic family, land use planning is therefore less flexible because everything is already laid down in plans, whilst the British system is characterised by a high level of flexibility.

A second difference between the British and Napoleonic family is determined by the division of power over the tiers of government. In the Napoleonic family the local government commands over more authority than the local government in the British family. In this latter family, local government does not obtain special status by law. The authority is more concentrated in the hands of the central government, which sets the legal and financial constraints for local authorities and acts as a supervisor. The British planning practice is therefore more focussed on efficiency whilst in the Napoleonic system more attention is paid to local authority. Although the differences between the British and Napoleonic families are large, there is also important variation between the national systems within one family. The Dutch and Spanish planning systems both belong to the same Napoleonic family but there are still important distinctions caused by variations in culture and in historical development of the state organisation.

The Netherlands

In the decentralised unitary state of The Netherlands, rural planning involves three administrative levels; the national, the provincial and the municipal. Each level has independent legislative and administrative powers. This means that all levels can formulate their own planning objectives and translate them into their own plans, as long as these do not conflict with a higher level plan. On a national level there are a couple of institutions that determine rural planning policy: The National Spatial Planning Agency (Rijksplanologische Dienst: RPD), which is part of the Ministry of Housing, Spatial Planning and Environment, is the integrating institution, which coordinates all sectoral planning interests. Furthermore, in the determination of the rural planning policies there is involvement of the Ministries of Agriculture, Nature Management and Fisheries; The Ministry of Transport, Waterways and Public Works; the Ministry of Economic affairs and the Ministry of Defence. In the Dutch democratic tradition there are also many private and semi-public agencies (NGOs) that influence the rural policy and planning process of which the most important ones are: several farmers associations; the Association for the Conservation of Natural Monuments (Natuurmonumenten); the Dutch Automobile Association (ANWB) ; the State Forest Service (Staatsbosbeheer), the Government Service for Land and Water Management and different water boards.

The legal base for Dutch area planning is the spatial planning act (Wet op de Ruimtelijke Ordening), which came into
effect in 1965 and was revised in 1986. According to this act, the national, provincial and municipal governments have to make official planning documents, which steer the contents and procedure of planning policy. At all levels both sectoral as well as integrated plans are developed. The national government prepares the national spatial planning policy documents, in which the priorities in national spatial planning in the medium and long term are laid out. The first national spatial planning memorandum came out in 1960 and the last, the fifth national spatial planning memorandum (VIJNO), in 2001. The provinces translate and integrate the national plans, in regional plans (Streekplan). These regional plans are binding for the municipalities. The most important planning instrument is the local plan or land use plan (Bestemmingsplan), made by the municipality, in which all land use regulations at municipal level are reported. Contrary to the national and provincial plans, the municipal land use plan is the only plan, which is legally binding both for the individual as for the municipality itself. This means that all building permits and other developments can not go against the contents of this plan. The municipality is obliged to produce a land use plan for its area that is not urban, but it can also voluntarily produce a plan for urban land and for single topics. The land use plans should be based on the regional plans, made by the provincial governments. In these regional plans, land use prescriptions are given which are indicative for the municipalities when making their local plans. These prescriptions for land use are based on national spatial planning documents and on predictions of the expected regional population and economic development. In the regional plans, the provinces also indicate what nuclei are allowed to grow, where new building activities are to take place and what type of housing can be developed. As the regional plans are binding for the municipalities, the development of the housing stock and therefore also the dispersion of the population growth over a municipality is very much driven by the contents of the regional plan.

As the land use plan is legally binding, it has to be approved by the province and the Inspector of Spatial Planning of the State. The public can also raise an objection against the plan. Additionally, the municipality can also produce for all or part of its territory a structure plan (Structuurplan). This is however not obligatory, it only needs approval by the Municipal Council. This plan consists of a study and a policy statement on the future developments in the municipality.

According to Davies et al. (1989), the Dutch planning system can be characterised as plan-led, which means that both government bodies as citizens know exactly what is and what is not allowed. The disadvantage of the system is that it is not very flexible, since everything is already settled in the land use plan. There are however possibilities to revise or withdraw the plan under certain conditions, this however takes a lot of time. Furthermore, if a new land use plan is in the process of being made (every land use plan has a planning horizon of 10 years), planning permission can be given to developments that go against the contents of the old plan but correspond with the new plan. According to Boas-Vedder (1992), another disadvantage of the Dutch system is that it is a very expensive system. To lower the costs a higher degree of flexibility must be introduced in the design of the land use plans.

The United Kingdom

The UK comprises of England, Scotland, Wales and Northern Ireland. The government is unitary although there are ministries with special responsibilities for Scottish, Welsh and Northern Irish affairs. Since 1974, there are three government levels in the British planning system; the national level, the county level and the district level. However, in the case of Greater London, the six metropolitan areas and the island areas of Scotland only two levels exist; a national and a local government. This means that in all the rural areas of the UK, with the exception of the Scottish Islands, a three level local authority system of counties and districts is applicable. There are 64 county councils and 484 district councils and seven metropolitan counties (Eurostat, 1993, p.161).

The institutions that coordinate the national planning tasks and rural policies are the Department of Agriculture, the Department of the Environment (DoE) for England, and the Welsh, Scottish and Northern Ireland Offices for the rest of the UK. Like in the Dutch situation, also in the UK there are many commissions and quangos (quasi autonomous non-governmental organisations) that advise and influence policies and planning for rural areas of which the most important ones are: the National Farmers Union (NFU), the Countryside Commission, the Countryside Commission for Scotland, the Countryside Council for Wales, the Rural Development Commission, the Council for the Protection of Rural England, the National Trust, The National Trust for Scotland, English

Typical for the British planning family is that there is no written constitution. Only the acts of parliament say what must be done and what may not be done. The basic principles of the UK planning legislation are based on the 1947 Town and Country Planning Act. According to this act, County Councils were to produce development plans, which set out the preferred location of development. In 1968 the Town and Country Planning Act was amended with the Countryside Act and in 1974 a government reorganisation was carried through. Consequently, the development plans, which were prepared by the County Councils, were replaced by structural plans, containing more flexible broad-scaled strategies than in the former plans. Furthermore, the newly established District Councils got the task to produce local plans, which are plans with a more detailed character. In the structural plans, within the context of national and regional policy, a strategic policy framework for planning and development control in the medium and long term is described (Cullingworth and Nadin, 1995). They are strategic plans, which are made for the whole territory of the county, except for National Parks. For these a separate planning authorities exist, the National Park Authority, which prepare the structure plans for the National Park. A local plan, prepared by the District Council, consists of a map and a written statement containing proposals for the development or other use of land in the whole district, including improvement and the management of traffic (Ball, et al., 1992).

The County Councils audit whether district planning is consistent with national policy. Furthermore, they secure the consistency between local plans for neighbouring areas (Cullingworth & Nadin, 1995, p. 50). The Central Government has the task to make the legislation, issue policy guidelines and guide the work of the local planning authorities. The ability of the central government to influence local policy is arranged in the so called Planning Policy Guidance Notes which can be both topic-based and area-based (Newman and Thornley, 1996, p. 43).

The local authorities do not have independent legislative and administrative powers, like the Dutch and Spanish local authorities. In the British planning family the central government has more influence on planning than local authorities have. According to the planning legislation ‘consent or planning permission is required for carrying out of any development of land’ (Ball, et al., 1992, p. 241). The application for this permission is sent to the local authority, i.e. the district, which decides on whether the intended development can get consent. The structure and local plans are an important consideration in making the decision on the application, but they are not legally binding. There are other considerations that might over-ride the contents of the plans. If the local authorities reject the application for planning permission or consent, the applicant can appeal to the central government, which will make the final decision.

Before a local or structure plan can be made official, the county and district authorities have the obligation to make the contents public. Subsequently, they are also obliged to take all comments made on the plans into consideration. If there are serious objections against the plans or concerning the granting of planning permission, a public inquiry might be held. In this inquiry the central government’s decision is final.

Spain

With the death of the dictator Franco in 1975, the democratic system was restored and a new constitution was formulated which was passed in 1978. As a consequence, a more federalist political system was introduced which led to a shift of many competencies from the central government to the authority of the autonomous areas. Although there exists a high degree of variation in the powers delegated to the autonomous areas (Autonomías), the regional, town planning and housing competence shifted to the lower levels of the autonomous areas. Since the introduction of the new constitution the distribution of competencies over the national and autonomous authorities continues to be in a constant state of evolution resulting in variations in the competencies between the autonomous areas. At this moment the national government still retains responsibility for National Parks, although a lot of resistance has arisen against this. At a national level it is the Ministry of Public Works and Town Planning (Ministerio de Obras Públicas y Urbanización) that coordinates planning. The 17 Autonomies of Spain are divided in provinces and these consist of municipalities, of which there are 9,000 in Spain (Newman and Thornley, 1996). The responsibilities, legislative and administrative powers of
these local authorities for planning, are based on the 1992 Land Act (Ley del Suelo). This act is the result of the consolidation of the 1956 Land Act. At this moment 98 per cent of the Spanish territory is under some planning regulation (Dal Cin et al., 1992). Municipalities with a population of more than 5,000 are obliged to prepare an urban plan, PGOU (Plan General de Ordenación Urbana) and the smaller rural municipalities only have to make general plans (Normas Subsidiarias, NNSS).

The PGOU divides the whole territory of the municipality in three categories: land already developed, land available for development and land excluded from development. Each category is accompanied by different degrees of detail in plan formulation. The second category, which refers to land that is reserved for urbanisation, is divided in programmed land (land needed in the short term) and non-programmed land (land needed in the longer run). The programmed land has to be developed in accordance with the general plan, whilst non-programmed land can be developed according to urban programmes which are developed after the general plan. The Normas Subsidiarias, made by the rural municipalities, cover in less detail the same kind of issues as the general plans of the larger municipalities, but they do not distinguish between programmed and non-programmed land. Both the general plans and the Normas Subsidiarias can be accompanied by ‘Planes Parciales’, in which details at a smaller scale are worked out. These more detailed plans can be made for parts of the municipality like historic towns centres, villages and countryside with special character, like protected natural areas.

The general plan and the Normas Subsidiarias have to be checked for legality and conformity with higher order plans, by the planning authority of the autonomous area. Every autono-mous area has in its community government a councillor who is in charge of planning. There is also a Town Planning Commission (Comisión de Prueba de Urbanismo) in every autonomy, composed of politicians and technical civil servants, who have responsibility for the final approval of the different planning instruments (Dal Cin, et al, 1992). The conformity of the local plans with higher order plans is difficult to check since a national plan with which local plans should conform, has never been produced. Furthermore, regional plans have been slow in preparation. This means that in practice municipalities have little higher level guidance (Newman and Thornley, 1996).

During the drafting phase of the local plans, citizens and institutions can make suggestions and make formal objections. If the parties can not come to an agreement, an appeal can go to the High Court. When the local plans are approved, they are legally binding. Since 1978, licences have to be obtained for all development, demolition and land subdivision. Applications have to go to the municipality who check the appeal on conformity with plans and building regulations.

Comparison of the Dutch, UK and Spanish planning systems

If the three planning systems are compared on the degree of flexibility, one can conclude that the British planning system is most and the Dutch is least flexible. In The Netherlands every piece of land is under a detailed planning regulation whilst in the UK and Spain, local plans are not worked out in such great detail certainly not for every piece of land. Furthermore, in the UK planning system local plans are not legally binding, which means that decisions on planning permission, can still differ from the contents of the local plans. Officially, the ability of the local governments to decide on planning matters is much larger in the Dutch and Spanish system than in the UK system. This is connected with the special status by law on which the local planning authorities in The Netherlands and Spain can act. In practice however, the Spanish local authorities have more autonomy in influencing the land use developments in their territory than the Dutch have. This is because the conformity of the local plans with higher order plans is very strict in The Netherlands, leaving limited scope to local authorities to fill in the plans according to their own insights. In Spain, the higher order plans have not always been available when making up the local plans which gave the munici-palities many possibilities to decide all by their selves about certain land use prescriptions.
Main characteristics of the post 1945 rural development processes in the Netherlands, the UK and Spain
Annex 2

The Netherlands

Agricultural changes

Point of departure (1945):
- % labour force in agriculture high
- Strong emphasis on self-sufficiency in food
- Strong farmers lobby
- Relative lack of space
- Good physical-climatic conditions for agriculture

Main characteristics of change:
- Strong increase in production, productivity, rationalisation, on-farm and regional specialisation
- Strong increase in use of chemical products
- Fast improvement of land at expense of quality of natural environment and landscape
- Long and intensive agricultural market involvement through CAP (since 1968)
- 1980s start of stage for reformulation of agricultural policy as a result of public and political concern with environment and saturated food markets.

Present situation:
- Most intensive agricultural land use of EU
- Position agriculture weak in comparison to other land use sectors
- Very modern agriculture
- High quality agricultural products
- Land scarcity at farm and national level is main weakness
- Agriculture still relative important as a (indirect) labour supplier (4% labour force in agriculture) and as an (indirect) income supporter to the national income (3% GDP)

Land use changes

Point of departure (1945):
- Agricultural land deficit
- High proportion urbanised land
- Low proportion woodland
- Low proportion natural land
- Cultural agricultural landscape is dominant

Main characteristics of change:
- Strong relative and absolute increase in urban land
- Strong relative and absolute decrease in agricultural land
- Strong decrease in natural land
- Small absolute but big relative increase in woodland and increase in the recreational and conservation function of woodland in last decades
- Increase in land with protection status
- Relative bigger land use changes outside Randstad area

Present situation:
- Big proportion of urban land
- Small proportion of agricultural land (6.4%)
- Smallest proportion of woodland (6%) in EU
- Small proportion of natural land

Population dynamics

Point of departure (1945):
- High population density
- High proportion of urban population
- Already pre-1945 'exode agraire'

Main characteristics of change:
- 1950s all rural areas de-population
- Relative early start of re-population of rural areas
- 1950s re-population of rural areas Randstad, rest rural areas (selective) de-population
- 1970s and 1980s further separation and integration of production and consumption functions through zoning of rural areas, more attention for conservation of nature and environment, more attention for quality of life in remote rural areas, also outside key settlements, and for prevention urbanisation of rural areas.
- 1990s continuation of policy 1980s but more de-centralisation of powers and more protection and conservation measures

Present situation:
- Highest population density EU—with strongest concentration in Randstad
- High % urban population (89%)
- Further population-de-concentration to many rural areas inside and outside Randstad
- Second home ownership is still not very important in rural areas of the Netherlands

Rural policy

Point of departure (1945):
- After war strong policy focus on agricultural modernisation and increase in agricultural production capacity.
- Early introduction of land use planning to regulate urbanisation of rural areas
- Agriculture and conservation were not seen as conflicting

Main characteristics of change:
- 1960s rural areas already seen as multi-functional spaces, concern for strong concentration of people and activities in Randstad and de-population in rest rural areas. Stimulation of agricultural production and modernisation also through CAP. Central focus on rural key settlements
- 1970s and 1980s further separation and integration of production and consumption functions through zoning of rural areas, more attention for conservation of nature and environment, more attention for quality of life in remote rural areas, also outside key settlements, and for prevention urbanisation of rural areas.
- 1990s continuation of policy 1980s but more de-centralisation of powers and more protection and conservation measures

Present situation:
- Unitary state and relative flexible planning system
- Highly efficient land use planning
- Government interference in rural areas characterised by integrated approach, strict environmental and land use control measures, strong emphasis on nature protection and encouragement of market-oriented agricultural production.
- De-centralisation of powers to lower-level government
### Annex 2

#### The UK

<table>
<thead>
<tr>
<th>Agricultural changes</th>
<th>Land use changes</th>
<th>Population dynamics</th>
<th>Rural policy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Point of departure (1945):</strong></td>
<td><strong>Point of departure (1945):</strong></td>
<td><strong>Point of departure (1945):</strong></td>
<td><strong>Point of departure (1945):</strong></td>
</tr>
<tr>
<td>- % labour force in agriculture already low</td>
<td>- in spite of small size of agricultural labour force, high proportion of land in agricultural use</td>
<td>- Size urban population relatively big</td>
<td>- After war strong policy focus on agricultural modernisation and increase in agricultural production capacity.</td>
</tr>
<tr>
<td>- Strong emphasis on self-sufficiency in food</td>
<td>- low proportion woodland</td>
<td>- already post-1945 exode agraire</td>
<td>- Early introduction of central government planning control to prevent urbanisation and stimulate recreational use of countryside.</td>
</tr>
<tr>
<td>- Strong farmers lobby</td>
<td>- low proportion natural land</td>
<td>- very early recreational use of countryside because of early ideniation of the countryside</td>
<td>- agriculture and conservation were not seen as conflicting</td>
</tr>
<tr>
<td>- Strong regional differences in physical circumstances and structural characteristics of the farm sector between the regions</td>
<td>- Cultural agricultural landscape is dominant</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Main characteristics of change:

- **Agricultural changes:**
  - Strong increase in production, productivity, rationalisation, on-farm and regional specialisation
  - Strong improvement of land at expense of quality natural environment and landscape
  - Intensive agricultural market involvement through CAP since 1973
  - 1980s start of stage for reformulation of agricultural policy as a result of public and political concern with environment and saturated food markets.

- **Land use changes:**
  - tremendous relative and absolute increase in urban land
  - relative small decrease in agricultural land
  - small absolute but big relative increase in woodland and increase in the recreative and conservation function of woodland in last decades
  - decrease in natural land but tremendous increase in land with protection status

- **Population dynamics:**
  - in 1940s re-population already in centrally located rural areas of the Southwest in direct vicinities of urban centres
  - remote rural areas continue loosing population until beginning of 1970s
  - 1970s re-population gradually shifts to remoter areas of south England and south Wales, but the most remote rural areas continue loosing population
  - 1980s also most remote rural areas experience re-population although population dynamics show an increasing regional variation

- **Rural policy:**
  - 1950s protection and agricultural functions separated and emphasis on prevention of urbanisation of countryside and stimulation of recreational use.
  - 1960s less emphasis on agricultural production increase, more attention to handle increased recreational pressure, protection of nature and landscape also outside designated areas. Relative decentralisation of planning powers. Key-settlement approach
  - 1970s and 1980s continuation of key-settlement approach, more integrated approach to rural quality of life problems and better integration of agriculture and conservation of the environment.
  - 1990s further shift from agricultural to territorial approach, more attention for social aspects and for diversity of rural areas. De-centralised bottom-up approach.

#### Present situation:

- **Agricultural changes:**
  - Strong regional differences in intensity of agricultural land use and in level of efficiency and modernisation of farm sector
  - Position agriculture in society and policy relatively weak
  - Most efficient farm structure in relation to size
  - Agriculture relative unimportant as a labour supplier and in GDP (2% labour force and 1.5 % GDP).

- **Land use changes:**
  - Strong regional differences in land use, southwest England high proportion urbanised land while Northern England, Wales and Scotland have a high proportion agricultural land
  - Relative high proportion of agricultural land (73%)
  - small proportion of woodland (10%)
  - High proportion of land under protection regime

- **Population dynamics:**
  - Strong regional differences in population density, southwest England most densely populated of Europe while Northern England, Wales and Scotland have a low population density
  - High proportion urban population (69%)
  - Further population-de-concentration to most rural areas
  - Second home ownership not important

- **Rural policy:**
  - Unitary state with relative flexible planning system
  - Efficient land use planning
  - Government interference in rural areas characterised by integrated territorial, bottom-up approach, encouragement of market-oriented agricultural production, more emphasis on social aspects of rural development.
### Spain

#### Annex 2

##### Agricultural changes

**Point of departure (1945):**
- Dependence of Spanish active population on agriculture extremely high (50% worked in agriculture)
- Very big food shortages
- Production capacity and modernisation level extremely low
- Power in hands of landed property

**Main characteristics of change:**
- Until late 1950s limited introduction of labour saving technologies, modernisation and increase in production capacity of the agricultural sector
- Since 1960s tremendous labour drain out of agriculture leading to enormous rural de-population and unemployment
- Since 1980s tremendous increase in production, productivity, rationalisation, on-farm and regional specialisation
- Tremendous improvement of land at expense of the quality of natural environment and landscape
- Late CAP involvement (since 1986) therefore relatively little profit from it

**Present situation:**
- Strong regional differences in state and importance of agriculture
- Overall good climatic conditions for agriculture, especially early-year products but main handicaps weakening the agricultural prospects are irregular water availability
- Still polarised landownership
- Traditional mixed farming structure continues to exist beside very modern sector
- Agriculture still very important as a labour supplier (9% labour force in agriculture) and as part of GDP

##### Land use changes

**Point of departure (1945):**
- Relative small proportion land in agricultural use
- Very high proportion woodland
- Low proportion urban land

**Main characteristics of change:**
- Relative small increase in urban land in relative terms but relative big increase in absolute terms
- Relative small decrease in agricultural land
- Big relative and absolute decrease in woodland and increase in the recreative and conservation function of woodland in last decades
- Tremendous decrease in natural land but increase in land with protection status
- Overall, land use changes have been small in relative terms but huge in absolute terms

**Present situation:**
- Big proportion of woodland (30%)
- Small proportion of urban land
- In spite of strong decrease still big proportion of natural land

##### Population dynamics

**Point of departure (1945):**
- Rural population as proportion of population very big
- Very low population density
- No exode agraire before 1945

**Main characteristics of change:**
- Since 1960s constant rural de-population process but most intense de-population between 1950s and 1970s but after 1980 starts to diminish
- From half of 1970s also repopulation of rural areas around metropolitan centres and Mediterranean coast
- From the 1980s repopulation also spreads to remoter rural areas, although very remote rural areas continue to lose population until now
- Regional variations in population dynamics have been big
- Second home ownership in rural areas, especially in remote rural areas has increased tremendously

**Present situation:**
- Overall low population density, but strong regional differences, on the Mediterranean coast density is much higher than in the centre of the country
- Low proportion urban population (76%)
- Strong regional differences in population dynamics continue to exist
- Second home ownership in rural areas, especially in the more remote rural areas and in the coastal areas

##### Rural policy

**Point of departure (1945):**
- Chaos in rural areas and policy intervention only focused on stimulation of agricultural production and modernisation
- Highly centralised and hierarchical government interference
- Striving for autarky and target of international boycott
- No planning policy
- Agriculture and conservation separated

**Main characteristics of change:**
- 1950s and 60s emphasis in policy on agricultural production and modernisation stimulation, growth-pole approach and introduction of some regional planning
- 1970s continuation of stimulation agricultural production and modernisation, more measures to diminish social and economic differences between regions.
- 1980s and 90s gradual de-centralisation of powers to regions, gradual introduction of land use planning and control, continuation of measures to diminish regional differences and to modernise the agricultural sector.
- More integrated approach to rural development. Continuation of separation of agriculture and conservation.

**Present situation:**
- De-centralised often inefficient land use planning system with some control of urbanisation of the countryside
- Strong emphasis on regional development programmes as instruments for rural development encouragement
- Continued emphasis on stimulation of modernisation of the agricultural sector
- Increased integrated approach to rural development and first signs of integration of agriculture, conservation and recreation
- Regional development differences continue to be reason for concern
Main characteristics of protected nature in
The Netherlands, the UK and Spain
Public involvement in nature and nature conservation

The start of public involvement in nature conservation:
- Nature conservation movement influenced by German approach in which nature conservation focussed on elements with ‘remarkable’ character (rareness, ecological value)
- Aesthetic, cultural, recreational and ‘wilderness’ considerations were less influential in nature conservation approach
- First conservationists were from elite groups (nobility, businessmen and biologists)

Main developments post 1945:
- Tremendous increase in membership of nature conservation organisations
- Tremendous increase in acquisition of land by private and public nature conservation organisations
- Increased public interest for living, recreating and working in ‘green’ environments

Present situation:
- Wide public involvement in nature conservation
- High degree of institutionalisation of nature conservation organisations
- Nature conservation movement not militant. Wide public involvement in nature conservation but of passive nature.

Nature conservation policy

Point of departure:
- Late political involvement in nature conservation
- First governmental involvement in nature conservation only through acquisition of land
- In beginning only nature conservation through separation
- First legislation for conservation only for birds
- Early subsidising of private conservation initiatives

Main developments post 1945:
- Tremendous increase of land in hands of private and public nature conservation organisations
- Early shift from protection through separation to protection through integration
- Rareness and ecological value, main reason for conservation but recreational, cultural and aesthetic value became more important in the last decades
- Planning instruments have become increasingly effective in nature conservation
- Early introduction of ecological network approach in conservation policy
- Increased attention to landscape conservation: creation of multi-functional beside the mono functional designated areas
- Nature conservation approach shifted from separation to more integration with rural policy to area specific rural policy in which natural and landscape values become endogenous quality

Present situation:
- Central in conservation policy is ecological network approach: Ecologische Hoofdstructuur
- Main conservation instruments: acquisition, management agreements with farmers, legislation and strict planning regulations
- Strong variation in designations of protected area categories
- Implementation of conservation policy increasingly in hands of lower-tier governments and more local population involvement

State of protected natural areas

Main characteristics:
- Relatively little undisturbed natural land left
- Relatively many aquatic and wetland reserves
- Most land protected under strict planning and legislative arrangements and through consultation
- Both monofunctional and multifunctional designated areas
- Relatively high proportion of land under designation: 14% of land area
- Average size of designated areas relatively small
- Strong fragmentation of nature, which explains early and strong concentration on connectivity between designated areas (ecological network approach)
- High proportion of land in designated areas in hands of private or public nature conservation organisations

The Netherlands
**Public involvement in nature and nature conservation**

**The start of public involvement in nature conservation:**
- Under influence of the early industrialisation and urbanisation process emphasis was on rural preservation
- Countryside conservation had broad public interest in an early stage
- Aesthetic, recreational and cultural aspects were main reason for nature conservation, while ecological considerations were less relevant
- Early establishment of many environmental voluntary and pressure groups, with radical character
- Concern for animal welfare and bird protection started very early

**Main developments post 1945:**
- Tremendous increase in membership of nature conservation organisations
- Tremendous increase in acquisition of land by National Trust
- Increased public interest for living, recreating and working in ‘green’ environments

**Present situation:**
- Average public involvement in nature conservation
- High degree of institutionalisation of nature conservation organisations
- Nature conservation organisations more militant than in The Netherlands

**Nature conservation policy**

**Point of departure:**
- Late political involvement in nature conservation
- Separate designated areas only created after 1945
- From the beginning nature conservation through integration with recreation and other functions
- Aesthetic, recreational and cultural aspects were main reason for designation of protected areas

**Main developments post 1945:**
- Tremendous increase in types of area designation and total territory under designation
- Type of designations increased with decentralisation of powers to autonomous bodies
- Conservation of cultural, aesthetic and recreational values remained most important reason for area designation
- Most conservation realised through consultation, management agreements with farmers and managers

**Present situation:**
- Main conservation instruments are management agreements with farmers, consultation and planological land use regulations
- Strong variation in designation, type of management and planological and legislative arrangements between protected areas
- Strong differences in area designations between the regions
- Always integration of land use functions within designated areas
- No ecological network approach on national level, although participation in European Natura 2000

**State of protected natural areas**

**Main characteristics:**
- Very little undisturbed natural land left
- Most designated areas are landscapes of high cultural and aesthetic value
- Most land protected through planological land use arrangements and through consultation with land owners
- Very high proportion of land under designation: 20% of UK land area
- Average size of designated areas is relatively big
- Small proportion of land in designated areas in hands of private or public nature conservation organisations

---

**The UK**

---

**The Netherlands**
### Public involvement in nature and nature conservation

The start of public involvement in nature conservation:
- Early public concern about ecological deterioration, but only among elite groups (nobility, scientists and Alpinists)
- Fear for deterioration of natural environment and natural disasters created early necessity of nature conservation
- Relatively huge areas of undisturbed natural lands in comparison to other European countries

Main developments post 1945:
- Public involvement in nature conservation remained very limited
- Small increase in membership of nature conservation organisations
- Explanation for limited public interest in nature conservation related with late urbanisation, only recent economic development and therefore relatively low GDP and relatively undisturbed natural lands are not as scarce as in the UK and The Netherlands

Present situation:
- Low public involvement in nature conservation
- Low degree of institutionalisation of nature conservation organisations
- Nature conservation organisations very militant

### Nature conservation policy

Point of departure:
- Early governmental involvement in area designation
- First national Parks already established in 1918 according to American national Park model
- Ecological concerns, wilderness preservation, aesthetic, recreational and nationalistic aspects were main reason for nature conservation

Main developments post 1945:
- Early establishment of designated areas, but only recent increase in total designated territory
- Legislation is main conservation instrument, especially for national government
- Type of designations have increased recently with decentralisation of powers to autonomous bodies
- Until recently strict separation of productive and recreation and conservation functions in rural areas
- Recent development of new planological instruments improved area designations
- Recent trend towards more integrative approach towards nature conservation, especially by regional governments

Present situation:
- Main conservation instruments are land use regulations, legislation and consultation with land owners and acquisition
- Strong variation in designation, type of management and planological and legislative arrangements between protected areas
- Strong differences in area designations between the regions (autonomies)
- Still strong separation of land use functions within designated areas, especially the national designated areas (e.g. National Parks)
- No ecological network approach on national level, although participation in European Natura 2000

### State of protected natural areas

Main characteristics:
- Relatively much undisturbed natural land left
- Most land protected through legislation, planological land use arrangements and through consultation with land owners
- Relatively low proportion of land under designation: 8% of land area but still
- Average size of designated areas is relatively big
- Small proportion of land in designated areas in hands of private or public nature conservation organisations

Spain
Justification of primary data collection: representation, response, non-response and weighing factors

1. Representativity and response

<table>
<thead>
<tr>
<th>Country</th>
<th>Case study area</th>
<th>Administrative entities</th>
<th>Population</th>
<th>Sample</th>
<th>Response</th>
<th>Response as % population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Netherlands*</td>
<td>Dwingelerveld</td>
<td></td>
<td>3222</td>
<td>510</td>
<td>207</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Weerribben</td>
<td></td>
<td>4574</td>
<td>652</td>
<td>246</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Lauwersmeer</td>
<td></td>
<td>3520</td>
<td>941</td>
<td>329</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>11316</td>
<td>2103</td>
<td>782</td>
<td>7</td>
</tr>
<tr>
<td>UK**</td>
<td>Northumberland</td>
<td>Tynedale</td>
<td>5365</td>
<td>345</td>
<td>168</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Alnwick</td>
<td></td>
<td>520</td>
<td>59</td>
<td>36</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Berwick</td>
<td></td>
<td>1140</td>
<td>92</td>
<td>43</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>7025</td>
<td>496</td>
<td>247</td>
<td>4</td>
</tr>
<tr>
<td>Spain***</td>
<td>Doñana</td>
<td>Villamanrique</td>
<td>1200</td>
<td>80</td>
<td>28</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>El Rocío</td>
<td></td>
<td>1902</td>
<td>90</td>
<td>36</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Matalascañas</td>
<td></td>
<td>8610</td>
<td>60</td>
<td>29</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Mazagón</td>
<td></td>
<td>3144</td>
<td>66</td>
<td>35</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>14856</td>
<td>296</td>
<td>128</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>All 5 case study areas</td>
<td></td>
<td>33197</td>
<td>2895</td>
<td>1157</td>
<td>4</td>
</tr>
</tbody>
</table>

* Source used to estimate empirical population: Kleine Kernen Bestand, 1995 (Utrecht University, 1995). To determine household numbers total population figures were divided by 2.5 (= average household size in the region of Northwest Drenthe)

** Source used to estimate empirical population: Electoral rolls 1997 (if available otherwise before this year).

*** Sources used to estimate empirical population: Censo de Población y Vivienda, 1991, INE. Household numbers were estimated on the basis of the number of dwellings present in the four nuclei that were situated within 3 kilometers of National Park and Entorno Park border.

n = number of households
Since it was important to get enough recent residents in the sample population to produce statistically reliable estimates when treating them as a separate group, it was aimed at drawing a relatively bigger sample of incomers from the population than of the local residents. To make this possible, municipality or parish councils were asked to collaborate by providing a list of households that lived within the research area including information on the duration of residence in the case study area. In The Netherlands, around two thirds of the municipality councils collaborated. For the municipalities of which the councils did not collaborate, a sample was taken out of the telephone directory. To get a separate sample of incomers and local residents, a 1996 telephone directory was compared with a 1991 telephone directory. The addresses missing in the 1991 directory were assumed to be incomers in the 1996 lists. Through these two methods for all three Dutch case-study areas it was possible to create a response amongst both incomers and local household groups that was large enough to analyse adequately (see Table 2). The same was the case for the English case study. In Northumberland we had access to the electoral rolls of all parishes that were situated within the case study area. Parish councillors of almost all these parishes were than asked to provide us with information on the duration of residence of the residents present on the rolls. In general this was not a problem and the result was an adequate response amongst both incomers and local residents.

In Spain the situation was more complicated. Also here municipalities were asked to provide lists with resident names including information on duration of residence. However, two of the municipality councils did not wish to collaborate, and the others could not provide the data or could not provide the data within the time available. Using a telephone directory, like we did in some of the Dutch municipalities, was not an option in Doñana as the proportion of people with a telephone registration was very low. As a result another sampling method had to be used (see point 4).

### Table 2: Distribution of the response in recent and autochthonous households

<table>
<thead>
<tr>
<th>Case-studies</th>
<th>Incomers (&lt;=5 years)</th>
<th>Locals (&gt;5 years)</th>
<th>Other**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Dwingelderveld</td>
<td>85</td>
<td>41</td>
<td>122</td>
</tr>
<tr>
<td>Lauwersmeer</td>
<td>176</td>
<td>54</td>
<td>153</td>
</tr>
<tr>
<td>Weerribben</td>
<td>127</td>
<td>52</td>
<td>119</td>
</tr>
<tr>
<td>Northumberland</td>
<td>69</td>
<td>28</td>
<td>178</td>
</tr>
<tr>
<td>Doñana*</td>
<td>24</td>
<td>19</td>
<td>82</td>
</tr>
<tr>
<td>Total</td>
<td>481</td>
<td>42</td>
<td>654</td>
</tr>
</tbody>
</table>

* In the Doñana case-study the incomers and local residents consist of both permanent and second home residents
** Only in the Doñana case-study there is an important group of temporary residents that are not home owners but live in the case-study area during a couple of months or even a year to work or to pass the summer months (veranear). These people were only included if they remained in the research area for more than 2 months.

n = number of households
2. Data collection, response/non-response in the Dutch study areas

About a week before the sample population of the three Dutch study areas was approached by telephone to be asked to answer the questions of the questionnaire, they received a letter. In this letter the general purpose of the research was explained, and it was announced that they would receive a telephone call within 4 weeks time, in which they would be asked to participate in the investigation through answering a 20 minutes questionnaire. The person to be interviewed needed to be the head of household or the partner of the head of household. The sample population was called on several moments of the day. All the telephone numbers of the sample population were used three times or more. If people had no time, but did not object to collaborate on another point of time, an appointment was made to call them back.

<table>
<thead>
<tr>
<th></th>
<th>Dwingelderveld</th>
<th>Weerribben</th>
<th>Lauwersmeer</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Response</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>207</td>
<td>41</td>
<td>246</td>
<td>38</td>
</tr>
<tr>
<td>Non-response:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>no-communication</td>
<td>31</td>
<td>6</td>
<td>71</td>
<td>11</td>
</tr>
<tr>
<td>Wrong number*</td>
<td>83</td>
<td>16</td>
<td>81</td>
<td>12</td>
</tr>
<tr>
<td>Refusal</td>
<td>136</td>
<td>27</td>
<td>160</td>
<td>24</td>
</tr>
<tr>
<td>Other**</td>
<td>22</td>
<td>4</td>
<td>23</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>510</td>
<td>100</td>
<td>652</td>
<td>100</td>
</tr>
</tbody>
</table>

* The telephone number did not exist or the telephone number no longer corresponded with the name or address in the sample.
** After calling 3 or more times the telephone was still engaged, not answered or/and an answering machine was connected.

n  = number of households

Table 3 Response/non-response in the three Dutch study areas
3. Data collection, response/non-response in Northumberland

In Northumberland people were not approached by phone but they were visited at home. Before they were visited by a pollster, a letter was sent to them, explaining the general purpose of the research, and announcing the visit of a pollster to do a 20 minute inquiry. The refusal rate was low but the proportion of addresses where nobody was found at home was relatively high. This was to be expected since the addresses were strongly dispersed over the huge survey area of Northumberland and it was impossible, within the time and money available, to visit most addresses more than twice.

4. Data collection, response/non-response in Doñana

In Doñana a both a combination of systematic and cluster sampling with the help of a street map was applied and people were approached on the street:

1. Systematic and cluster sampling in Villamanrique de la Condesa and El Rocío:
   From detailed street maps, blocks of houses (clusters) were randomly selected and within these blocks every n-th house was selected to be included in the sample (with n depending on the total number of houses in the nucleus). The people in the houses were then approached and they were asked to collaborate in the 20 minutes inquiry.

2. People approached on the street in Matalascañas and Mazagón:
   People were approached on the street, explained about the purpose of the investigation and asked to collaborate in a 20 minutes questionnaire. The questioning was done on the streets. The pollsters were dispersed over strategic locations in the nuclei such as supermarkets, local bars and the market.

To get enough second home households in the sample population of Doñana, it was decided to do the enquiry in a period in which many of these households would spend time in their second homes. The period chosen was between Wednesday the 5th of June until Tuesday the 11th of June 1996. The 6th and 7th of June were bank-holidays and therefore many people had a long weekend to go to their second homes. On these bank holidays and in the weekend, the enquiry was done in the villages of Matalascañas, Mazagón and El Rocío, where most of the second homes are situated while on non-weekend days and on non-holidays Villamanrique was visited. Since different sample methods were used in the different research villages it is very difficult to give a reliable estimation of the non-response.

Annex 4
In the two villages of Villamanrique and El Rocío, where a sample of houses was selected on the basis of street maps, 40% of the houses visited resulted in an inquiry. This low percentage is related with the fact that the street maps were not very accurate and still relatively few people were found at home. Especially in Villamanrique many existing lots on the map were empty and even whole streets did not exist in reality. In El Rocío the low response was mainly related to the fact that a high percentage of the housing stock consisted of second houses where, despite of the bank holiday weekend and the good weather, no people were present. In the villages of Matalascañas and Mazagón, where people were approached on the street, 50% of the contacts made resulted in an inquiry. Of the 50% group not leading to an inquiry, about half of the persons did not qualify since he/she did not dispose off a house in the research area or was not a head of or a partner of the head in a household. The other half refused to collaborate because they were not interested or had no time.

5. Weighing factor

<table>
<thead>
<tr>
<th>Response</th>
<th>Population</th>
<th>weighing factor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Northumberland</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tynedale</td>
<td>168</td>
<td>68</td>
</tr>
<tr>
<td>Alnwick</td>
<td>36</td>
<td>15</td>
</tr>
<tr>
<td>Berwick</td>
<td>43</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>247</td>
<td>7025</td>
</tr>
<tr>
<td>Doñana</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Villamanrique</td>
<td>28</td>
<td>18</td>
</tr>
<tr>
<td>El Rocío</td>
<td>36</td>
<td>28</td>
</tr>
<tr>
<td>Matalascañas</td>
<td>29</td>
<td>23</td>
</tr>
<tr>
<td>Mazagón</td>
<td>35</td>
<td>26</td>
</tr>
<tr>
<td>Total</td>
<td>127</td>
<td>14856</td>
</tr>
</tbody>
</table>

n = number of households
Annex 5

The questionnaire

1. Name Fieldworker:............................................................................................................

2. Questionnaire number: ....................................................................................................

3. Address of respondent: (street and parish/nucleus):...........................................................

A. Introduction
Method of approach:
Good morning, afternoon, evening my name is .........................
I am a student of the University of Newcastle and am conducting fieldwork for a research project of the
University of Utrecht, a Dutch university, in collaboration with Newcastle University.
I hope you have already received a letter of the University of Utrecht concerning this project, if not, this letter
outlined the scope of the survey which covers three different National Park areas in Europe.

5. Did you receive this letter?
   1 Yes ---------> go to question 6
   2 No

If not, please can I explain what this research is about. The main aim is to collect information about the residential situation of
people who live in or near protected natural areas. To do this we would like to gather the views from residents of the area in or near
the Northumberland National park.

(The person we would like to question should be the head of a household or the partner of the head of the household. The head of
household is person who takes the major decisions about the household).

6. Would you mind taking part in the study? It will take about 20 minutes.
   1 yes --------> go to question 10
   2 yes but not now, you have to come back another time --------> go to question 7
   3 no --------> go to question 8

7. When do you have time to make an appointment to do this survey?
ENQ: See schedule

8. I’m sorry to hear that you are unable to take part, but would you mind telling me why you are unable to? .
   1. No /no answer -------> end
   2. not interested/ I don’t see the benefit of it -------> end
   3. I’ve cooperated enough times with surveys -------> end
   4. no time -------> try question 7 or end
   5. not able because of illness -------> try question 7 or end
6. not able because of work to do/ or visitors ----> try question 7 or end
7. not able because of language difficulty ----> end
8. Don’t want to have to do anything with Northumberland NP ----> end
9. Other ......................... ----> end

9. Observation fieldworker .................................................................

8. General questions

If at any stage you feel uncomfortable about a question or would simply rather not answer please say so!!!!

10. Including yourself, would you mind telling me how many people there are in your house-hold (family)?
(Fieldworker: Household is the number of people that lives together in one house and, at least, has dinner together)
......................... persons (fill in number)

14. Would you mind telling me what the composition of your household is? (That is, what persons are part of
your household?) (Fieldworker: enumerae answers)
1 single person ----> to q. 17
2 2 persons h.h (couple without kids) ----> to q. 17
3 one parent family with (at home living) child(ren)
4 two parent family with (at home living) child(ren)
5 single person living together with other member of family ----> to q. 17
6 couple without kids living together with other member of family ----> to q. 17
7 couple with kids living together with other member of family
8 other, .................................................................

15. (in case of kids) Would you mind telling me how many of your children are living at home? .................
(fill in number of children)
99 n.a.

17. Would you mind telling me whether you have children that are no longer living at home, and if so, how
many? .........................(fill in number of children)
98. no, children outside household ----> goto q. 20

18. Would you mind telling me where this child (these children) live(s)?
(village, town, county, country)
Child 1: .................................................................
Child 2: .................................................................
Child 3: .................................................................
Child 4: .................................................................
Child 5: .................................................................
Child 6: .................................................................
99. n.a.

20. (in case of kids living at home) Would you mind telling me the age of your oldest child living at home?
(Fieldworker: show list of agegroups)
......................... (number of years)
99.n.a.

Annex 5
22. (in case of more than one kid living at home) Would you mind telling me the age of your youngest child living at home?  
(Field worker: show list of age groups)  
........................................ (number of years)  
99 n.a.

24. (if partner) Would you mind telling me the age of your partner?  
(Field worker: show list of age groups)  
........................................ (number of years)  
999.n.a.

26. Would you mind telling me your age?  
(Field worker: show list of age groups)  
........................................ (number of years)  

50. Would you mind telling me whether you work including paid, unpaid or voluntary work?  
1. yes paid work  
2. yes unpaid and/or voluntary work  
3. no  
4. retired  
5. unemployed  
6. other,  

51. What kind of work have you been doing before you retired/became unemployed?  
1. Never worked before  
2.  

52. In what sector do you work?  
1. agriculture  
2. fishery  
3. forestry  
4. Industry  
5. construction  
6. tourism  
7. other services,  

54. Would you mind explaining what type of work you do?  

56. Where (in what village/parish/town/district) do you work?  

57. What is your employment status?  
1. fixed appointment (permanent contract)  
2. temporary  
3. own business  
4. family business  
5. other,  

58. How many hours a week do you work?  

Annex 5
60. What kind of business is the business you (or your family) have (has)?
   ..................................................................................................................................................

61. When was the business established? ...........................................................................................

65. Who started the business? ...............................................................................................................

67. Do you plan to change anything regarding your employment situation in the near future?
   (Fieldworker: give examples by enumerating some answers)
   1 No  ----------> goto q. 70
   2 Yes, work less
   3 Yes, work more at home
   4 Yes, look for an other job
   5 Yes, stop working
   6 Yes start my own business
   7 Yes, other, .........................
   88. Don’t know
   98 no answer
   99 n.a.

If partner goto next question otherwise goto q. 90

70. Would you mind telling me whether your partner works, including paid, unpaid or voluntary work?
   1 yes, paid work  -----------> goto q. 72
   2 yes unpaid work  -----------> goto q. 72
   3 no, doesn’t work  -----------> goto q. 90
   4 retired  -----------> goto q. 71
   5 unemployed  -----------> goto q. 71
   6 other, .............................

71. What kind of work has your partner been doing before he/she retired/became unemployed?
   1. Never worked before
   2. .........................
   .............................-> goto q. 90

72. In what sector does partner work? (Fieldw.: enumerate some answers)
   1 agriculture
   2 fishery
   3 forestry
   4 Industry
   5 construction
   6 tourism
   7 other services

74. Would you mind explaining what type of work your partner does?
   ..................................................................................................................................................

Annex 5
76. Where (in what village/city/parish/district) does your partner work?

77. What is the employment status of your partner? (Poll: more answers possible)
   1 fixed appointment (permanent contract)
   2 temporary
   3 own business -> goto q. 80
   4 family business -> goto q. 80
   5 other, ............................

78. How many hours a week does your partner work? ........................ hours
     ---------------- go to q. 90

80. What kind of business does your partner do or their family have?

81. When was the business established?

85. Who started the business?

86. Does your partner plan to change anything regarding his/her employment situation in the near future? (Fieldworker: give examples by enumerating some answers)
   1 No -> goto q. 90
   2 Yes, work less
   3 Yes, work more at home
   4 Yes, look for another job
   5 Yes, stop working
   6 Yes start own business
   7 Yes, other, ............................
   88 Don’t know
   98 no answer
   99 n.a.

87. Would you mind estimating your monthly family income bracket take home pay after tax? (include income of both partners) (Fieldworker: Show list of income categories)
   1 Yes, I would rather not tell you
   Category .............................

90. Would you mind telling me what your latest accomplished education is? (Fieldworker: enumerate answers if necessary)

91. Would you mind telling me the latest accomplished education of your partner? (Fieldworker: give examples by enumerating some answers)

Annex 5
93. Do you have any vehicles in your household (vehicles used partly or entirely for own personal transport, this may include a van or pick-up truck)? (multiple answers possible)
   1 one car
   2 two cars
   3 three or more cars
   4 motorcycle
   5 two or more motorcycles
   6 no car, nor motorcycle
   88 Don’t know
   98 No answer

95. Do you or any member of your household have outdoor hobbies like for example: horse-back riding, bird watching, fishing, hunting, sailing, windsurfing, walking, hiking, cycling, jogging, running etc. (Fieldworker: Multiple answers possible)
   1 horseback riding ---------> goto 96
   2 bird watching ---------> goto 97
   3 fishing ---------> goto 97
   4 hunting ---------> goto 97
   5 sailing ---------> goto 97
   6 windsurfing ---------> goto 97
   7 walking/hiking ---------> goto 97
   8 cycling ---------> goto 97
   9 jogging/running ---------> goto 97
   10 other, ............................... ----> goto 97
   11 No, no outdoor hobbies --------> goto q.100
   88 Don’t know --------> goto q.100
   98 No answer --------> goto q.100

96. If you or any member of your household go horseback riding, do you/they hire horses or do you/they have your/their own horses?
   1 hire horses
   2 have own horses
   3 Other ..............................

97. Where do you or any member of your household usually perform these outdoor hobbies?
   ........................................................................................................................................
   88 Don’t know
   98 No answer
   99 n.a.

C. Residential history and actual characteristics of dwelling

100. For how long have you been living in this parish?
   1 less then 2 years
   2 between 2 and 5 years
   3 between 6 and 10 years
   5 between 11 and 20 years
   6 for more then 20 years
   7 I was born in this parish and I have always lived here since ---------> to q. 110

Annex 5
8. I only live here part of the year  
9. I'm (only) having a holiday here  
88. I don't know  
98. No answer

102. Where (in which parish, town, county, or other country) were you born?  
(Fieldworker: we mean the place where mother lived and not location of hospital)

103. Until what age did you live in your place of birth?  
(roughly to nearest 5 years)

104. Where did you live before moving to this parish?  
(parish/town/part of country/country)

106. Where else have you lived?  
(only if it has been for more than a year)

107. If you moved here from elsewhere, did you ever live here or near here before?  
1 yes, ............................... (fill in parish and village/city)  
2. No

108. Before coming to this parish, did you ever take holidays in this area? If so, was this only once, on a regular basis, or was it because you/family already had a second home or caravan in this area?  
1. No  
2. Yes, once before  
3. Yes, a couple of times  
4. Yes, regularly  
5. Yes, we have been having a second home/caravan and were living here already part of the year/during holidays  
6. Other, ...............................

110. Where (in which parish, county/or other country) was your partner born?  
(Fieldworker: we mean the place where mother lived and not location of hospital)

111. Until what age did your partner live in his/her place of birth?  

112. Before you and your partner were together. If your partner moved here from elsewhere, did he/she ever live here or near here before?  
1 yes, ...............................  
2. No
9. Was born in this parish and always lived here
88 Don’t know
98 No answer
99 n.a.

113. Before you and your partner were together. Before coming to this parish, did your partner ever spend his/her holidays in this area? If so, was this only once, on a regular basis, or was it because they already possessed a second home or caravan in this area?
1 No
2 Yes, once before
3 Yes, a couple of times
4 Yes, regularly
5 Yes, they have been having a second home/caravan and living here already ................. part of the year
6 other, ........................................
88 Don’t know
98 No answer
99 n.a.

120. Since when do you live in this house? Since .......... (year)
87. all my life
88 I don’t know
98 no answer
99 n.a.

124. Is your home? (Fieldworker: enumerate answers)
1 Bought by yourselves
2 Rented from local authority
3 Rented from private owner
4 Rented from housing association, ........................................ (name association)
5. Family property
6 other, ........................................
88 Don’t know
98 No answer

If recent settlers (respondents who came to live in the area in the last 10 years (question 100 answered with 1, 2, 3)) goto q. 130
If respondent lives in area longer than 10 years than goto q. 140

E. Questions for recent settlers (moved to areas in last 10 years)

130. What were the two main reasons for your move to the Northumberland National Park area?
First reason: ........................................................................................................
Second reason: ...................................................................................................

132. What were the two main reasons for your move to this village/parish?
First reason: ........................................................................................................
Second reason: ...................................................................................................

134. What were the two main reasons for choosing this house?
First reason: ........................................................................................................
Second reason: .................................................................

136. When you moved, which characteristics were most important in making your decision; the characteristics of the house or the characteristics of the village/parish?
   1 Characteristics of the house
   2 Characteristics of the village/parish
   3 Both characteristics
   88 Don’t know
   98 no answer
   99 n.a.

137. When you moved to this area, which characteristics were most important in making your decision; the characteristics of the village/parish or the characteristics of the whole region?
   1 Characteristics of the village/parish
   2 Characteristics of the whole region
   3 Both characteristics
   88 Don’t know
   98 no answer
   99 n.a.

138. What were the disadvantages of your former residential environment in comparison to your present residential environment? .................................................................
   88 Don’t know
   98 no answer
   99 n.a.

F. Questions about living environment

140. How far is your nearest neighbour?
   1 this dwelling is attached to other dwelling
   2 within 25 meters
   3 within a 100 meters
   4 within a mile
   5 more than a mile
   88 don’t know
   98 no answer

144. How satisfied are you with the immediate surroundings of your house? With ‘immediate surroundings’ we mean the area within one mile (one quarter of an hour walk) from your house?
   1 Very satisfied
   2 satisfied
   3 Neutral
   4 not so satisfied
   5 unsatisfied
   88 don’t know
   98 no answer

145. Can you give me the reason(s) why you are satisfied with the immediate surroundings of your house?
   First reason: .................................................................
Second reason:  

-------------- > to q. 149

147. Can you give me the reason(s) why you are not satisfied with the immediate surroundings of your house?
First reason:  
Second reason:  

-------------- > to q. 149

149. How satisfied are you with the broader surroundings of your house? With 'broader surroundings' we mean the area within 6 miles (one hour walk) from your house?
1 Very satisfied
2 satisfied
3 neutral
4 not so satisfied
5 unsatisfied
88 don't know
98 no answer

-------------- > goto q. 154

150. Can you give me the reason(s) why you are satisfied with the broader surroundings of your house?
First reason:  
Second reason:  

-------------- > to q. 154

152. Can you give me the reason(s) why you are not satisfied with the broader surroundings of your house?
First reason:  
Second reason:  

-------------- > to q. 154

I will say something about your living environment, would you mind telling me whether you agree or disagree with my statement?

154. I live in a quiet surrounding.
1 agree
2 disagree

155. The nature and landscape are very beautiful in these surroundings.
1 agree
2 disagree

156. In summer time there are too many tourists here.
1 agree
2 disagree

157. I live in a healthy environment.
1 agree
2 disagree

158. I live in a beautiful environment.
1 agree
2 disagree

Annex 5
159. It is too quiet here.
   1 agree
   2 disagree

160. This area is a very good environment for children to grow up in.
   1 agree
   2 disagree

161. There is little crime in this area.
   1 agree
   2 disagree

162. This area is isolated and remote.
   1 agree
   2 disagree

163. The area belongs to one of the most beautiful areas of The Netherlands/England/Spain.
   1 agree
   2 disagree

Suppose you could have a house in an ideal location. From the following pairs of characteristics which one is most important.

Between:

170. shopping services for daily shopping (like groceries, butcher’s, bakery, supermarket etc.) within one mile of your house or living in or beside National Park.
   1 shopping services
   2 National Park

172. family doctor within one mile of the house or living in an area with high natural and scenic characteristics.
   1 family doctor
   2 natural and scenic characteristics

174. a supermarket within one mile of house or living in quiet surroundings:
   1 supermarket
   2 quiet surroundings

176. a cinema and theatre within 10 miles of the house (15 minutes by car) or good opportunities for recreational activities like for example walking, jogging, sailing, fishing etc. in the immediate surrounding of the house?
   1 cinema and theatre
   2 recreational opportunities

178. good opportunities for recreational activities like for example walking, jogging, biking etc. in the direct surrounding of the house or big piece of open water where one can sail, fish, swim etc in the immediate vicinity of the house?
   1 walking, jogging, biking
   2 sailing, fishing, swimming
179. living in an area with an attractive natural environment or good educational services in the immediate vicinity of the house (within a 15 minute walk)?
1 natural environment
2 educational services

180. Do you expect to move from here within 2 years from now?
1 Yes
2 No -------> goto q. 190
3 Probably
4 Probably not -------> goto q. 190
88 Don’t know -------> goto q. 190
98 No answer -------> goto q. 190

182. Why do you expect to move?

184. Do you know to what place you are probably going to move?
1 yes, .........................
2 No

186. What will you be looking for in your new residential environment?

G. Services

190. Are there shops for daily shopping (supermarket, groceries, butcher’s, bakery) within one mile from where you live? If not, do you or other members of your households regard this as a problem?
(Fieldworker: shops for daily shopping are budget’s, bakery, groceries, supermarket)
1 yes
2 no, but it is not a problem
3 no, and it is a problem
4 no, but i make use of mobile services that visit regularly
5 don’t do my own shopping (any more) -------> to q. 195
88 don’t know
98 no answer
99 n.a.

192. If you do your shopping what means of transport do you use?
1 walking
2 bicycle
3 car/motorbike
4 public transport
5 other, .........................
88 don’t know
98 no answer
99 n.a.
193. On average how many times a week do you do your shopping (for daily necessities like food)?

1. once a week
2. twice a week
3. three times a week
4. four times or more a week
88 don’t know
98 no answer
99 n.a.

194. In what village/town/city do you normally do your shopping (for daily necessities like food)?

.................................................................................................................................
88 don’t know
98 no answer
99 n.a.

195. (only if respondent has children) Are there primary, secondary schools, crèches in your village or within one mile of where you live? If not, do you or other members of your household regard this as a problem?

1. yes ......................
2. no, but it is not a problem
3. no, and it is a problem
88 don’t know
98 no answer
99 n.a.

196. Are there medical services (like doctor, dentist) in your village or within one mile of where you live? If not, do you or other members of your household regard this as a problem?

1. yes ......................
2. no, but it is not a problem
3. no, and it is a problem
88 don’t know
98 no answer
99 n.a.

197. Do you or other members of your household ever make use of telebanking, -shopping, or teleworking or do you make use of other digital communication techniques?

1. no
2. yes telebanking/girotel
3. yes, teleshopping
4. yes, teleworking
4. yes, other ..................
88 don’t know
98 no answer
99 n.a.

198. Does your area lack other services? If so, which services are lacking?
(multiple answers possible)

1. no, no services lacking
2. clothing/fashion shops
3. other shops
4. post office/bank
5 other medical services (like hospital, nursing home etc.)
8 bus-/train station
9 cultural services like cinema, theatre, opera house
10 public transport services
11 other, ........................................
88 don’t know
98 no answer
99 n.a.

---------> goto q. 210 !!!!!!!!!!

H. Questions only for temporary residents and holidaymakers!!!!!!!

200. Is the home where you lodge: (Fieldworker: enumerate answers)

1 Bought by yourselves
2 Rented --------> goto q. 202
3 Family property (ancestral property)
88 no answer --------> goto q. 204
98 don’t know --------> goto q. 204

201. For how long has it been your property/family property?

1 less than 1 year
2 1-5 years
3 6-10 years
4 more than 10 years
5 has always been in the family
6 other, .................................

---------> goto q. 206

202. For how long do you rent this dwelling?

1 1-4 weeks
2 1-3 months
3 4-6 months
4 7-12 months
5 1-5 years
6 permanently --------> goto q. 204

203. Are you renting this dwelling for the first time, or do you rent this dwelling or other dwellings in this area on a regular basis?

1 This year for the first time
2 regularly, one’s a year
3 a couple of times a year
4 not every year but we’ve rented houses before in this area
5 other, .................................

205. As you are only staying here temporarily/spending your holidays here, where do you live permanently?
(parish, county, country) ..........................................................
206. What are the two most important reasons to stay in this area/spend your holidays in this area?
First reason: ........................................................................................................................................
Second reason: ....................................................................................................................................

207. Suppose you are no longer bound to a fixed place of residence, would you like to live in this area permanently?
   1 yes
   2 yes and no ----> goto 208 and 209!!!!!!
   3 no ----> goto q. 209
   98 Don’t know ----> goto q. 220

208. Can you give me the two most important reasons why you would like to live here permanently?
First reason: ........................................................................................................................................
Second reason: ....................................................................................................................................

209. Can you give me the two most important reasons why you would not like to live here permanently?
First reason: ........................................................................................................................................
Second reason: ....................................................................................................................................

H. Nature in the residential environment

210. Is your dwelling situated within the National Park? If not, how far away is it from the National Park border?
   1 I live within the NP
   2 Within 1 mile of the border
   3 Within 3 miles of border
   4 More than 3 miles away of the border
   88 don’t know
   98 no answer
   99 n.a.

212. Do you find it pleasant to live within or near a National Park?
(Poll: enumerate all the possible answers)
   1 Yes very pleasant ----> to q.214
   2 Yes pleasant ----> to q.214
   3 neutral ----> to q. 217
   4 not so pleasant ----> to q.216
   5 not at all pleasant ----> to q.216
   88 Don’t know ----> to q. 217
   98 no answer ----> to q. 217

214. Why do you find it pleasant to live within or near a National Park?
(multiple answers possible)?
......................................................................................................................................................
   88 Don’t know
   98 no answer
   99 n.a

-----> go to q.207
216. Why do you not find it pleasant to live within or near a National Park?
88 Don’t know
98 no answer
99 n.a.

217. Do you or any members of your household make recreational use of the National Park area? If so, in what way?
1 No, I never visit the NP area for recreational purposes -------> goto q. 220
2 I use the area for outdoor activities like walking, jogging, horseback riding, fishing, cycling, jogging, hunting etc.
3 I use the area for walking my dog
4 Other, .............................

218. How often do you or any members of your household visit the NP area for recreational purposes?
1 Every day
2 A couple of times a week
3 A couple of times a month
4 Once every month
5 A couple of times a year
6 Once a year
7 Other, .............................

219. If you or any members of your household visit the NP area for recreational purposes. With what means of transport do you go there? (Poll: More answers possible)
1 Walking
2 bike
3 car
4 motorcycle
5 Horse
6 public transport
7 Other, .............................
88 don’t know
98 no answer
99 n.a.

220. Do you think that the National Park status of the area stimulates or restrains the economic development of the Northumberland area?
1 Stimulates
2 Restrains -------> goto q. 224
3 Both stimulates and restrains -------> goto q. 222 and 224!!!!
88 Don’t know -------> goto q. 226
98 No answer -------> goto q. 228
99 n.a. -------> goto q. 228

222. Why do you think the National Parks status stimulates the economic development of the area?
--------------------------------------------------------------------------------------
--------> goto q. 228

Annex 5
224. Why do you think the National Parks status restrains the economic development of the area?

226. Do you think the government should compensate for the restriction of the economic development? If so, how should this compensation be structured?

228. Do you think the value or rent of your dwelling is influenced by the presence of the National Park? If so, how is it influenced?
   1 No, no influence
   2 Yes, influenced by ......................
   88 don't know
   98 no answer
   99 n.a.

230. Are you a member of any conservation, recreation and/or amenity organisation or Trust?
(Poll: more answers possible)
   7 No, I'm not a member of any Trust or organisation
   88 don't know
   98 no answer
   99 n.a.

232. Do you perform any activities, paid or unpaid, that are related with the presence of the National Park? For example, working with the National Park authority, being a member of any administration of a nature protection trust, forestry, etc.

234. How do you inform yourself about the developments relate to the Northumberland National Park?
(Poll: more answers possible)
   1 No I don't inform myself about the NP
   2 .........................
   88 don't know
   98 no answer
   99 n.a.

250. This was the last question of the questionnaire. Do you have any comments, questions or things to add to this survey?

Thank you very much for your time and cooperation!!!
Fieldworker: Fill in o.b.o. own observation:

260. Respondent is male or female?
   1 Male
   2 Female

265. To what kind of category belongs dwelling?
   1 detached one family house, countryhouse, cottage
   2 semi-detached house or bungalow
   3 apartment
   4 Farm house (not in agricultural use)
   5 Farm house (in agricultural use)
   6 senior apartment
   7 old people’s home
   8 Recreational house on recreational complex
   9 Recreational house not on recreational complex
   10 other, ............................

270. Is house situated within or outside a village?
   1 within village
   2 outside village
   88 don’t know

275. Does house look-out on other houses or does it have an open view?
   1 view on other dwellings
   2 open view
   88 don’t know
## Annex 6

### Results of the primary data analysis

Table 1: Relative distribution in age groups and probabilities of distribution of incomers (settled between 1992-1996) and locals (for Doñana, also second home residents) in the five areas (age of oldest in household)

<table>
<thead>
<tr>
<th>Area</th>
<th>Incomers</th>
<th>&lt;=34</th>
<th>P-Chi</th>
<th>35-54</th>
<th>P-Chi</th>
<th>55-64</th>
<th>P-Chi</th>
<th>65+</th>
<th>P-Chi</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dwingelderveld</td>
<td>Incomers</td>
<td>31.4</td>
<td>6.29*</td>
<td>37.3</td>
<td>0.31</td>
<td>17.6</td>
<td>0.04</td>
<td>13.7</td>
<td>2.53</td>
<td>51</td>
</tr>
<tr>
<td></td>
<td>Locals</td>
<td>14.8</td>
<td></td>
<td>41.7</td>
<td></td>
<td>18.9</td>
<td></td>
<td>24.6</td>
<td></td>
<td>122</td>
</tr>
<tr>
<td>Weerribben</td>
<td>Incomers</td>
<td>25.0</td>
<td>1.18</td>
<td>36.9</td>
<td>0.29</td>
<td>22.6</td>
<td>0.02</td>
<td>15.5</td>
<td>0.31</td>
<td>84</td>
</tr>
<tr>
<td></td>
<td>Locals</td>
<td>18.6</td>
<td></td>
<td>40.8</td>
<td></td>
<td>22.0</td>
<td></td>
<td>18.6</td>
<td></td>
<td>118</td>
</tr>
<tr>
<td>Lauwersmeer</td>
<td>Incomers</td>
<td>34.4</td>
<td>5.54*</td>
<td>39.2</td>
<td>2.36</td>
<td>14.7</td>
<td>0.05</td>
<td>14.7</td>
<td>0.56</td>
<td>102</td>
</tr>
<tr>
<td></td>
<td>Locals</td>
<td>18.5</td>
<td></td>
<td>49.1</td>
<td></td>
<td>13.9</td>
<td></td>
<td>18.5</td>
<td></td>
<td>151</td>
</tr>
<tr>
<td>Northumberland</td>
<td>Incomers</td>
<td>13.0</td>
<td>2.79**</td>
<td>50.0</td>
<td>2.81**</td>
<td>18.5</td>
<td>0.11</td>
<td>18.5</td>
<td>9.46**</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>Locals</td>
<td>6.0</td>
<td></td>
<td>36.3</td>
<td></td>
<td>16.5</td>
<td></td>
<td>41.2</td>
<td></td>
<td>182</td>
</tr>
<tr>
<td>Doñana</td>
<td>Incomers</td>
<td>17.9</td>
<td>26.59*</td>
<td>15.4</td>
<td>14.07*</td>
<td>5</td>
<td>5.42*</td>
<td>0</td>
<td>10.70*</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Locals</td>
<td>17.9</td>
<td></td>
<td>61.8</td>
<td></td>
<td>14.7</td>
<td></td>
<td>5.9</td>
<td></td>
<td>151</td>
</tr>
<tr>
<td></td>
<td>Second-home</td>
<td>17.9</td>
<td></td>
<td>26.8</td>
<td></td>
<td>26.8</td>
<td></td>
<td>28.6</td>
<td></td>
<td>3456</td>
</tr>
</tbody>
</table>

* Significant difference (at 0.05 significance) between incomers and locals/for Doñana between incomers, locals and second home household groups

** Significant difference (at 0.1 significance) between incomers and locals/for Doñana between incomers, locals and second home household groups

hh = households
n = number of households
P-Chi = Pearson Chi-square
Source: Own Own survey, 1996/1997
Table 2: Relative number of family households with children and relative number of single-person households including probabilities of distribution for differences between incomers and locals

<table>
<thead>
<tr>
<th></th>
<th>Total family households</th>
<th></th>
<th>All households</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% hh children</td>
<td>n</td>
<td>P-Chi</td>
<td>% single</td>
</tr>
<tr>
<td>Dwingelerveld</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>51.1</td>
<td>47</td>
<td>0.98</td>
<td>11.8</td>
</tr>
<tr>
<td>Locals</td>
<td>59.6</td>
<td>109</td>
<td></td>
<td>16.4</td>
</tr>
<tr>
<td>Weerribben</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>46.5</td>
<td>71</td>
<td>0.81</td>
<td>15.5</td>
</tr>
<tr>
<td>Locals</td>
<td>53.4</td>
<td>103</td>
<td></td>
<td>15.1</td>
</tr>
<tr>
<td>Lauwersmeer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>53.0</td>
<td>83</td>
<td>3.36**</td>
<td>22.5</td>
</tr>
<tr>
<td>Locals</td>
<td>65.6</td>
<td>128</td>
<td></td>
<td>20.3</td>
</tr>
<tr>
<td>Northumberland</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>34.8</td>
<td>46</td>
<td>0.81</td>
<td>21.8</td>
</tr>
<tr>
<td>Locals</td>
<td>42.3</td>
<td>142</td>
<td></td>
<td>26.0</td>
</tr>
<tr>
<td>Doñana</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>40.0</td>
<td>5</td>
<td>***</td>
<td>53.3</td>
</tr>
<tr>
<td>Locals</td>
<td>89.7</td>
<td>29</td>
<td>2.9</td>
<td>34</td>
</tr>
<tr>
<td>Second-home</td>
<td>67.6</td>
<td>37</td>
<td>14.5</td>
<td>55</td>
</tr>
</tbody>
</table>

* Significant difference (at 0.05 significance) between incomers and locals for Doñana between incomers, locals and second home household groups

** Significant difference (at 0.1 significance) between incomers and locals for Doñana between incomers, locals and second home household groups

*** Number of cells with expected frequency below 5 is more than 20%, therefore no Pearson Chi-square could be determined

hh = households
n = number of households
P-Chi = Pearson Chi-square
Source: Own Own survey, 1996/1997
## Table 3: Relative distribution in education groups (of highest educated person in household) and probabilities of distribution

<table>
<thead>
<tr>
<th>Region</th>
<th>Education Group</th>
<th>No and lower education (1)</th>
<th>Middle education</th>
<th>Higher education (3)</th>
<th>P-chi</th>
<th>P-chi</th>
<th>P-chi</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>P-chi</td>
<td>P-chi</td>
<td>P-chi</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>n</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dwingelderveld</td>
<td>Incomers</td>
<td>15.7</td>
<td>1.15</td>
<td>49.0</td>
<td>0.00</td>
<td>35.3</td>
<td>0.94</td>
<td>51</td>
</tr>
<tr>
<td></td>
<td>Locals</td>
<td>23.0</td>
<td>48.8</td>
<td>27.9</td>
<td>0.00</td>
<td>2.79</td>
<td>0.00</td>
<td>122</td>
</tr>
<tr>
<td>Weerribben</td>
<td>Incomers</td>
<td>11.9</td>
<td>12.50*</td>
<td>55.5</td>
<td>0.33</td>
<td>32.1</td>
<td>9.23*</td>
<td>84</td>
</tr>
<tr>
<td></td>
<td>Locals</td>
<td>33.6</td>
<td>51.3</td>
<td>14.3</td>
<td>0.00</td>
<td>1.43</td>
<td>0.00</td>
<td>119</td>
</tr>
<tr>
<td>Lauwersmeer</td>
<td>Incomers</td>
<td>9.8</td>
<td>15.42*</td>
<td>53.2</td>
<td>1.15</td>
<td>34.3</td>
<td>6.97*</td>
<td>102</td>
</tr>
<tr>
<td></td>
<td>Locals</td>
<td>30.7</td>
<td>49.0</td>
<td>19.6</td>
<td>0.00</td>
<td>1.96</td>
<td>0.00</td>
<td>153</td>
</tr>
<tr>
<td>Northumberland</td>
<td>Incomers</td>
<td>20.4</td>
<td>10.86*</td>
<td>42.6</td>
<td>1.76</td>
<td>37.0</td>
<td>4.88*</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td>Locals</td>
<td>45.9</td>
<td>32.8</td>
<td>22.2</td>
<td>0.00</td>
<td>2.22</td>
<td>0.00</td>
<td>181</td>
</tr>
<tr>
<td>Doñana</td>
<td>Incomers</td>
<td>64.3</td>
<td>11.28*</td>
<td>30.8</td>
<td>6.8*</td>
<td>7.1</td>
<td>2.85**</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Locals</td>
<td>78.8</td>
<td>6.1</td>
<td>15.2</td>
<td>0.00</td>
<td>1.52</td>
<td>0.00</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>Second-home</td>
<td>45.3</td>
<td>28.3</td>
<td>26.4</td>
<td>0.00</td>
<td>2.64</td>
<td>0.00</td>
<td>53</td>
</tr>
</tbody>
</table>

* Significant difference (at 0.05 significance) between incomers and locals/for Doñana between incomers, locals and second home household groups

** Significant difference (at 0.1 significance) between incomers and locals/for Doñana between incomers, locals and second home household groups

(1) Dutch areas: primary school (lagere school), lower vocational training (LBO)
    English area: no education, Primary school, secondary school
    Spanish area: no education, primary school, secondary school (graduado escolar)

(2) Dutch areas: Secondary school (MVO, HVO), Middle vocational training (MBO)
    English area: O-levels, A-levels, OND, C&G, Secretarial courses, Teaching diplomas, other courses
    Spanish area: Bachillerato, Middle vocational training (Formación Profesional), Diplomatura

(3) Dutch areas: Higher vocational training (HBO), Degree (Universiteit)
    English area: HND, Degree
    Spanish area: Licenciatura, Doctorado

hh = households
n = number of households
P-Chi = Pearson Chi-square
Source: Own survey, 1996/1997
TABLE 4  Relative distribution in income groups (household income per month after tax) and probabilities of distribution for the Dutch case study areas

<table>
<thead>
<tr>
<th>Monthly hh income after tax:</th>
<th>&lt;= 2000 guilder</th>
<th>2001-3000 guilder</th>
<th>3001-5000 guilder</th>
<th>&gt; 5000 guilder</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>P-Chi</td>
<td>%</td>
<td>P-Chi</td>
</tr>
<tr>
<td>Dwingelderveld</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>15.0</td>
<td>1.00</td>
<td>25.0</td>
<td>2.88**</td>
</tr>
<tr>
<td>Locals</td>
<td>22.5</td>
<td>40.2</td>
<td>27.5</td>
<td>9.8</td>
</tr>
<tr>
<td>Weerribben</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>18.0</td>
<td>1.62</td>
<td>29.5</td>
<td>0.09</td>
</tr>
<tr>
<td>Locals</td>
<td>27.1</td>
<td>31.8</td>
<td>28.2</td>
<td>12.9</td>
</tr>
<tr>
<td>Lauwersmeer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>27.7</td>
<td>1.28</td>
<td>30.1</td>
<td>2.40**</td>
</tr>
<tr>
<td>Locals</td>
<td>35.2</td>
<td>40.6</td>
<td>20.3</td>
<td>3.9</td>
</tr>
</tbody>
</table>

* Significant difference (at 0.05 significance) between incomers and locals
** Significant difference (at 0.1 significance) between incomers and locals
*** Number of cells with expected frequency below 5 > 20%, therefore no Pearson chi-square can be determined

Exchange rate at time of survey: 1 pound=3.40 guilders
Exchange rate at time of survey: 1000 pts (pesetas)= 15 guilders

hh = households
n = number of households
P-Chi = Pearson Chi-square
Source: Own survey, 1996

TABLE 5  Relative distribution in income groups (household income per month after tax) and probabilities of distribution for Northumberland study area

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>P-Chi</td>
<td>%</td>
<td>P-Chi</td>
</tr>
<tr>
<td>Northumberland</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>15.6</td>
<td>0.22</td>
<td>25.0</td>
<td>0.12</td>
</tr>
<tr>
<td>Locals</td>
<td>19.4</td>
<td>28.4</td>
<td>38.8</td>
<td>13.4</td>
</tr>
</tbody>
</table>

* Significant difference (at 0.05 significance) between incomers and locals
** Significant difference (at 0.1 significance) between incomers and locals
*** Number of cells with expected frequency below 5 > 20%, therefore no Pearson chi-square can be determined

Exchange rate at time of survey: 1 pound=3.40 guilders

hh = households
n = number of households
P-Chi = Pearson Chi-square
Source: Own survey, 1996/1997

Annex 6
### Table 6
Relative distribution in income groups (household income per month after tax) and probabilities of distribution for the Doñana case study area

<table>
<thead>
<tr>
<th>Monthly hh income after tax:</th>
<th>&lt;= 100,000 pesetas</th>
<th>100,001-200,000 pesetas</th>
<th>200,001-300,000 pesetas</th>
<th>&gt; 300,001 pesetas</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% P-Chi</td>
<td>% P-Chi</td>
<td>% P-Chi</td>
<td>% P-Chi n</td>
</tr>
<tr>
<td>Doñana</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>18.2  2.38</td>
<td>81.8  16.09*</td>
<td>0  ***</td>
<td>0  ***  11</td>
</tr>
<tr>
<td>Locals</td>
<td>47.6  33.3</td>
<td>4.8  14.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-home</td>
<td>38.2  14.7</td>
<td>35.3  11.8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Significant difference (at 0.05 significance) between incomers and locals and second home household groups

** Significant difference (at 0.1 significance) between incomers and locals and second home household groups

*** Number of cells with expected frequency below 5 > 20%, therefore no Pearson chi-square can be determined

Exchange rate at time of survey: 1 pound=3.40 guilders

Exchange rate at time of survey: 1000 pts (pesetas)= 15 guilders

hh = households

n = number of households

P-Chi= Pearson Chi-square

Source: Own survey, 1996/1997

### Table 7
Relative number of working households of which one or two members work in white collar jobs (scientists, professionals, managers and administrators) and probabilities of distribution

<table>
<thead>
<tr>
<th></th>
<th>% in white collar jobs</th>
<th>n</th>
<th>P-Chi</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dwingelderveld</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>25.0</td>
<td>36</td>
<td>0.30</td>
</tr>
<tr>
<td>Locals</td>
<td>20.5</td>
<td>83</td>
<td></td>
</tr>
<tr>
<td><strong>Weerribben</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>13.6</td>
<td>59</td>
<td>***</td>
</tr>
<tr>
<td>Locals</td>
<td>4.7</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td><strong>Lauwersmeer</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>15.5</td>
<td>58</td>
<td>0.88</td>
</tr>
<tr>
<td>Locals</td>
<td>10.5</td>
<td>105</td>
<td></td>
</tr>
<tr>
<td><strong>Northumberland</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>34.3</td>
<td>35</td>
<td>2.45  **</td>
</tr>
<tr>
<td>Locals</td>
<td>20.9</td>
<td>91</td>
<td></td>
</tr>
<tr>
<td><strong>Doñana</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>0</td>
<td>13</td>
<td>***</td>
</tr>
<tr>
<td>Locals</td>
<td>16.7</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>2-home</td>
<td>35.0</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

* Significant difference (at 0.05 significance) between incomers and locals

** Significant difference (at 0.1 significance) between incomers and locals

*** Number of cells with expected frequency below 5 > 20%, therefore no Pearson chi-square can be determined

hh = households

n = number of households

P-Chi = Pearson Chi-square

Source: Own survey, 1996/1997
<table>
<thead>
<tr>
<th>Study Area</th>
<th>Incomers</th>
<th>Locals</th>
<th>Incomers</th>
<th>Locals</th>
<th>Incomers</th>
<th>Locals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>P-Chi</td>
<td>%</td>
<td>P-Chi</td>
<td>%</td>
<td>P-Chi</td>
</tr>
<tr>
<td>Dwingelderveld</td>
<td>11.4</td>
<td>***</td>
<td>6.8</td>
<td>***</td>
<td>81.8</td>
<td>1.39</td>
</tr>
<tr>
<td>Locals</td>
<td>3.3</td>
<td></td>
<td>7.6</td>
<td></td>
<td>89.1</td>
<td>92</td>
</tr>
<tr>
<td>Weerribben</td>
<td>14.1</td>
<td>6.82*</td>
<td>4.2</td>
<td>***</td>
<td>81.7</td>
<td>1.56</td>
</tr>
<tr>
<td>Locals</td>
<td>3.1</td>
<td></td>
<td>8.3</td>
<td></td>
<td>88.5</td>
<td>96</td>
</tr>
<tr>
<td>Lauwersmeer</td>
<td>8.0</td>
<td>***</td>
<td>24.1</td>
<td>5.12*</td>
<td>67.8</td>
<td>8.22*</td>
</tr>
<tr>
<td>Locals</td>
<td>3.3</td>
<td></td>
<td>12.2</td>
<td></td>
<td>84.6</td>
<td>123</td>
</tr>
<tr>
<td>Northumberland</td>
<td>9.1</td>
<td>***</td>
<td>2.2</td>
<td>***</td>
<td>90.9</td>
<td>1.86</td>
</tr>
<tr>
<td>Locals</td>
<td>11.3</td>
<td></td>
<td>7.5</td>
<td></td>
<td>82.1</td>
<td>106</td>
</tr>
<tr>
<td>Doñana</td>
<td>0</td>
<td>***</td>
<td>13.3</td>
<td>***</td>
<td>86.7</td>
<td>***</td>
</tr>
<tr>
<td>Locals</td>
<td>6.1</td>
<td></td>
<td>6.1</td>
<td></td>
<td>87.9</td>
<td>33</td>
</tr>
<tr>
<td>2-home</td>
<td>35.7</td>
<td></td>
<td>16.1</td>
<td></td>
<td>48.2</td>
<td>56</td>
</tr>
</tbody>
</table>

* Significant difference (at 0.05 significance) between incomers and locals/for Doñana between incomers, locals and second home household groups

** Significant difference (at 0.1 significance) between incomers and locals/for Doñana between incomers, locals and second home household groups

*** Number of cells with expected frequency below 5 > 20%, therefore no Pearson chi-square can be determined

hh = households
n = number of households
P-Chi = Pearson Chi-square
Source: Own survey, 1996
### Table 9: Relative number of working households of which one or two members are self-employed and probabilities of distribution

<table>
<thead>
<tr>
<th></th>
<th>% self-employed</th>
<th>n</th>
<th>P-Chi</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dwingelderveld</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>23.5</td>
<td>34</td>
<td>0.78</td>
</tr>
<tr>
<td>Locals</td>
<td>31.7</td>
<td>82</td>
<td></td>
</tr>
<tr>
<td><strong>Weerribben</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>28.8</td>
<td>59</td>
<td>0.01</td>
</tr>
<tr>
<td>Locals</td>
<td>27.9</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td><strong>Lauwersmeer</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>22.4</td>
<td>58</td>
<td>0.58</td>
</tr>
<tr>
<td>Locals</td>
<td>27.9</td>
<td>104</td>
<td></td>
</tr>
<tr>
<td><strong>Northumberland</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>30.8</td>
<td>39</td>
<td>0.10</td>
</tr>
<tr>
<td>Locals</td>
<td>28.0</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td><strong>Doñana</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>0</td>
<td>13</td>
<td>6.12*</td>
</tr>
<tr>
<td>Locals</td>
<td>31.0</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>2-home</td>
<td>14.8</td>
<td>27</td>
<td></td>
</tr>
</tbody>
</table>

* Significant difference (at 0.05 significance) between incomers and locals for Doñana between incomers, locals and second home household groups.

** Significant difference (at 0.1 significance) between incomers and locals for Doñana between incomers, locals and second home household groups.

hh = households; n = number of households.
P-Chi = Pearson Chi-square.

### Table 10: Relative number of working households of which one or two members work at home and probabilities of distribution

<table>
<thead>
<tr>
<th></th>
<th>% work at home</th>
<th>n</th>
<th>P-Chi</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dwingelderveld</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>19.4</td>
<td>36</td>
<td>0.20</td>
</tr>
<tr>
<td>Locals</td>
<td>23.2</td>
<td>82</td>
<td></td>
</tr>
<tr>
<td><strong>Weerribben</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>18.6</td>
<td>59</td>
<td>0.03</td>
</tr>
<tr>
<td>Locals</td>
<td>17.4</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td><strong>Lauwersmeer</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>15.5</td>
<td>58</td>
<td>1.25</td>
</tr>
<tr>
<td>Locals</td>
<td>22.9</td>
<td>105</td>
<td></td>
</tr>
<tr>
<td><strong>Northumberland</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>15.4</td>
<td>39</td>
<td>0.45</td>
</tr>
<tr>
<td>Locals</td>
<td>20.4</td>
<td>93</td>
<td></td>
</tr>
<tr>
<td><strong>Doñana</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>n.a</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Locals</td>
<td>n.a</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

* Significant difference (at 0.05 significance) between incomers and locals for Doñana between incomers, locals and second home household groups.

** Significant difference (at 0.1 significance) between incomers and locals for Doñana between incomers, locals and second home household groups.

hh = households; n = number of households.
P-Chi = Pearson Chi-square.
n.a. = no data available.
Table 11  Relative number of working households of which one or two members of household commute and probabilities of distribution

<table>
<thead>
<tr>
<th></th>
<th>% commuting (1)</th>
<th>n</th>
<th>P- Chi</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dwingelderveld</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>53.1</td>
<td>32</td>
<td>8.22*</td>
</tr>
<tr>
<td>Locals</td>
<td>24.3</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td><strong>Weerribben</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>64.7</td>
<td>51</td>
<td>3.71**</td>
</tr>
<tr>
<td>Locals</td>
<td>47.4</td>
<td>78</td>
<td></td>
</tr>
<tr>
<td><strong>Lauwersmeer</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>49.0</td>
<td>49</td>
<td>9.95*</td>
</tr>
<tr>
<td>Locals</td>
<td>22.7</td>
<td>88</td>
<td></td>
</tr>
<tr>
<td><strong>Northumberland</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>48.8</td>
<td>41</td>
<td>4.64*</td>
</tr>
<tr>
<td>Locals</td>
<td>29.8</td>
<td>104</td>
<td></td>
</tr>
<tr>
<td><strong>Doñana</strong></td>
<td></td>
<td></td>
<td>***</td>
</tr>
<tr>
<td>Incomers</td>
<td>7.7</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Locals</td>
<td>27.6</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>2- home</td>
<td>n.a.</td>
<td>n.a</td>
<td></td>
</tr>
</tbody>
</table>

(1) In the three Dutch case study areas commuting is defined as: working in other municipality than municipality of residence and home-work travel distance>=20 km

In the Northumberland case study commuting is defined as: working in other district than district of residence

* Significant difference (at 0.05 significance) between incomers and locals/for Doñana between incomers, locals and second home household groups

** Significant difference (at 0.1 significance) between incomers and locals/for Doñana between incomers, locals and second home household groups

*** Number of cells with expected frequency below 5 > 20%, therefore no Pearson chi-square can be determined

hh = households

n = number of households

P-Chi = Pearson Chi-square

Source: Own survey, 1996/1997
### Table 12: Average number of moves for incomers and local households and t-test for equality of means

<table>
<thead>
<tr>
<th>Location</th>
<th>Incomers Average number of moves/hh</th>
<th>Locals Average number of moves/hh</th>
<th>T-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dwingelderveld</strong></td>
<td>3.59</td>
<td>2.10</td>
<td>3.96*</td>
</tr>
<tr>
<td><strong>Weerribben</strong></td>
<td>4.14</td>
<td>1.42</td>
<td>4.84*</td>
</tr>
<tr>
<td><strong>Lauwersmeer</strong></td>
<td>3.78</td>
<td>2.05</td>
<td>5.09*</td>
</tr>
<tr>
<td><strong>Northumberland</strong></td>
<td>4.54</td>
<td>2.84</td>
<td>5.27*</td>
</tr>
<tr>
<td><strong>Doñana</strong></td>
<td>n.a.</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

* Significant difference (at 0.05 significance) between incomers and locals/for Doñana between incomers, locals and second home household groups.

** Significant difference (at 0.1 significance) between incomers and locals/for Doñana between incomers, locals and second home household groups.

hh = households; n = number of households; T-value = equal or unequal t-value for test on equality of means; n.a. = no data available.

Source: Own survey, 1996/1997

### Table 13: Households divided over migration distance categories in two periods and probabilities of distribution (Pearson-Chi-square-test).

<table>
<thead>
<tr>
<th>Location</th>
<th>&lt;= 50 km P-Chi</th>
<th>51-100 km P-Chi</th>
<th>&gt;100 km P-Chi</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dwingelderveld</strong></td>
<td>45.1</td>
<td>17.6</td>
<td>37.3</td>
</tr>
<tr>
<td>&lt;= 5 years</td>
<td>1.12</td>
<td>***</td>
<td>2.97**</td>
</tr>
<tr>
<td>6-20 years</td>
<td>31.8</td>
<td>9.1</td>
<td>59.1</td>
</tr>
<tr>
<td><strong>Weerribben</strong></td>
<td>42.9</td>
<td>25.0</td>
<td>32.1</td>
</tr>
<tr>
<td>&lt;= 5 years</td>
<td>0.36</td>
<td>***</td>
<td>0.14</td>
</tr>
<tr>
<td>6-20 years</td>
<td>50.0</td>
<td>13.6</td>
<td>36.4</td>
</tr>
<tr>
<td><strong>Lauwersmeer</strong></td>
<td>44.1</td>
<td>15.7</td>
<td>40.2</td>
</tr>
<tr>
<td>&lt;= 5 years</td>
<td>1.39</td>
<td>***</td>
<td>0.19</td>
</tr>
<tr>
<td>6-20 years</td>
<td>55.6</td>
<td>8.3</td>
<td>36.1</td>
</tr>
<tr>
<td><strong>Northumberland</strong></td>
<td>16.4</td>
<td>49.1</td>
<td>34.5</td>
</tr>
<tr>
<td>&lt;= 5 years</td>
<td>0.02</td>
<td>0.14</td>
<td>0.11</td>
</tr>
<tr>
<td>6-20 years</td>
<td>16.1</td>
<td>40.4</td>
<td>37.5</td>
</tr>
<tr>
<td><strong>Doñana</strong></td>
<td>60.0</td>
<td>6.7</td>
<td>33.4</td>
</tr>
<tr>
<td>&lt;= 5 years</td>
<td>***</td>
<td>***</td>
<td>***</td>
</tr>
<tr>
<td>6-20 years</td>
<td>40.0</td>
<td>40.0</td>
<td>20.0</td>
</tr>
</tbody>
</table>

* Significant difference (at 0.05 significance) between incomers and locals/for Doñana between incomers, locals and second home household groups.

** Significant difference (at 0.1 significance) between incomers and locals/for Doñana between incomers, locals and second home household groups.

*** Number of cells with expected frequency below 5 > 20%, therefore no Pearson chi-square can be determined.

hh = households
n = number of households
P-Chi = Pearson Chi-square

Source: Own survey, 1996/1997
### Table 14: Households divided over urbanisation level categories of former places of residence in two periods and probabilities of distribution (Pearson-Chi-square-test).

<table>
<thead>
<tr>
<th>Settlement</th>
<th>&lt;= 5 years</th>
<th>Urban P-Chi (1)</th>
<th>Moderately Urban P-Chi (2)</th>
<th>Rural P-Chi (3)</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dwingelderveld</td>
<td>37.3</td>
<td>1.47</td>
<td>33.3</td>
<td>1.81</td>
<td>51</td>
</tr>
<tr>
<td></td>
<td>6-20 years</td>
<td>22.7</td>
<td>50.0</td>
<td>27.3</td>
<td>22</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Settlement</th>
<th>&lt;= 5 years</th>
<th>Urban P-Chi (1)</th>
<th>Moderately Urban P-Chi (2)</th>
<th>Rural P-Chi (3)</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weerribben</td>
<td>35.7</td>
<td>3.96*</td>
<td>38.1</td>
<td>1.03</td>
<td>84</td>
</tr>
<tr>
<td></td>
<td>6-20 years</td>
<td>13.6</td>
<td>50.0</td>
<td>36.4</td>
<td>22</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Settlement</th>
<th>&lt;= 5 years</th>
<th>Urban P-Chi (1)</th>
<th>Moderately Urban P-Chi (2)</th>
<th>Rural P-Chi (3)</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lauwersmeer</td>
<td>38.2</td>
<td>0.89</td>
<td>26.5</td>
<td>0.71</td>
<td>102</td>
</tr>
<tr>
<td></td>
<td>6-20 years</td>
<td>47.2</td>
<td>19.4</td>
<td>33.3</td>
<td>36</td>
</tr>
</tbody>
</table>

(1) Address density > 1500 addresses/km²
(2) Address density 500-1500 addresses/km²
(3) Address density < 500 addresses/km²
* Significant difference (at 0.05 significance) between incomers and locals/for Doñana between incomers, locals and second home household groups
** Significant difference (at 0.1 significance) between incomers and locals/for Doñana between incomers, locals and second home household groups
*** Number of cells with expected frequency below 5 > 20%, therefore no Pearson chi-square can be determined
** hh = households
n = number of households
P-Chi = Pearson Chi-square
Source: Own survey, 1996

### Table 15: Households divided over OPCS categories of former places of residence in two periods and probabilities of distribution (Pearson-Chi-square-test).

<table>
<thead>
<tr>
<th>Settlement</th>
<th>&lt;= 5 years</th>
<th>Urban P-Chi (1)</th>
<th>Moderately Urban P-Chi (2)</th>
<th>Rural P-Chi (3)</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northumberland</td>
<td>56.6</td>
<td>1.62</td>
<td>11.3</td>
<td>0.77</td>
<td>53</td>
</tr>
<tr>
<td></td>
<td>6-20 years</td>
<td>46.2</td>
<td>17.3</td>
<td>36.5</td>
<td>52</td>
</tr>
</tbody>
</table>

(1) OPCS categories: Urban, Mining and Industrial areas and Inner London
(2) OPCS category Rural
(3) OPCS category Maturer and Prospering areas
* Significant difference (at 0.05 significance) between incomers and locals/for Doñana between incomers, locals and second home household groups
** Significant difference (at 0.1 significance) between incomers and locals/for Doñana between incomers, locals and second home household groups
*** Number of cells with expected frequency below 5 > 20%, therefore no Pearson chi-square can be determined
** hh = households
n = number of households
P-Chi = Pearson Chi-square
Source: Own survey, 1997

Annex 6
Table 16: Two main disadvantages mentioned for former place of residence as given by incomers of which former place of residence was urban (1) or rural (2) and Z-score for significant differences in distribution (Z-score)

<table>
<thead>
<tr>
<th></th>
<th>Dwingelderveld</th>
<th></th>
<th>Weerribben</th>
<th></th>
<th>Lauwersmeer</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Urban (n=54)</td>
<td>Rural (n=24)</td>
<td>Z-score</td>
<td>Urban (n=85)</td>
<td>Rural (n=34)</td>
<td>Z-score</td>
</tr>
<tr>
<td>1) Too urbanised (too densely populated, too much traffic/noise, pollution)</td>
<td>65</td>
<td>38</td>
<td>2.25*</td>
<td>54</td>
<td>21</td>
<td>3.32*</td>
</tr>
<tr>
<td>2) Crime/drugs/unsafe</td>
<td>9</td>
<td>8 **</td>
<td>14</td>
<td>0</td>
<td>2.31*</td>
<td>12</td>
</tr>
<tr>
<td>3) House/garden did not satisfy wishes</td>
<td>6</td>
<td>13 **</td>
<td>21</td>
<td>35</td>
<td>-1.60</td>
<td>18</td>
</tr>
<tr>
<td>4) Social (no friends/not nice neighbours)</td>
<td>13</td>
<td>38</td>
<td>-2.48*</td>
<td>7</td>
<td>15</td>
<td>-1.30</td>
</tr>
<tr>
<td>5) Lack of natural amenities</td>
<td>6</td>
<td>0 **</td>
<td>11</td>
<td>9</td>
<td>0.29</td>
<td>6</td>
</tr>
<tr>
<td>6) Location (away from work/services)</td>
<td>6</td>
<td>8 **</td>
<td>6</td>
<td>21</td>
<td>-2.41*</td>
<td>3</td>
</tr>
<tr>
<td>7) Don’t like city/prefer to live in countryside</td>
<td>6</td>
<td>4 **</td>
<td>1</td>
<td>0</td>
<td>0.64</td>
<td>9</td>
</tr>
<tr>
<td>8) Other</td>
<td>9</td>
<td>0 **</td>
<td>4</td>
<td>0</td>
<td>1.11</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>-</td>
<td>100</td>
<td>100</td>
<td>-</td>
</tr>
</tbody>
</table>

(1) Address density >= 500 addresses/km²
(2) Address density < 500 addresses/km²
n = number of answers
* Significant difference between incomers residents originating from an urban and rural place in proportion of disadvantages mentioned for this answer category (Z-score +/- 1.96)
** Not a normal distribution; total answers and cell filling too small (N< 30 and cell filling < 5) to determine Z-score.
Source: Own survey, 1996
Table 17. Relative distribution over answer categories of two main disadvantages mentioned for former place of residence as given by incomers of which former area of origin was urban (1) or rural (2) and Z-score for significant differences in distribution (Z-score)

<table>
<thead>
<tr>
<th>Disadvantage Description</th>
<th>Urban (1)</th>
<th>Northumberland Rural (2)</th>
<th>Z-score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Too urbanised (too densely populated, too much traffic/noise, pollution)</td>
<td>37</td>
<td>44</td>
<td>-0.54</td>
</tr>
<tr>
<td>2) Crime/drugs/unsafe</td>
<td>43</td>
<td>0</td>
<td>**</td>
</tr>
<tr>
<td>3) House/garden did not satisfy wishes</td>
<td>2</td>
<td>17</td>
<td>**</td>
</tr>
<tr>
<td>4) Social (no friends/not nice neighbours)</td>
<td>0</td>
<td>11</td>
<td>**</td>
</tr>
<tr>
<td>5) Lack of natural and outdoor amenities</td>
<td>2</td>
<td>28</td>
<td>-3.34*</td>
</tr>
<tr>
<td>6) Location (further away from work/services)</td>
<td>4</td>
<td>0</td>
<td>**</td>
</tr>
<tr>
<td>7) Don’t like city/prefer to live in countryside</td>
<td>12</td>
<td>0</td>
<td>**</td>
</tr>
<tr>
<td>8) Other</td>
<td>0</td>
<td>0</td>
<td>**</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>-</td>
</tr>
</tbody>
</table>

(1) Urban areas consist of the OPCS classes: Urban areas, Mining and Industrial areas and Inner London, Maturer and Prosperous areas

(2) Rural areas consist of the OPCS class rural areas

* Significant difference between Incomers residents originating from an urban and rural place in proportion of disadvantages mentioned for this answer category (Z-score +/- 1.96) 

** Not a normal distribution; total answers and cell filling too small (N< 30 and cell filling < 5) to determine Z-score.

n = number of answers

Source: Own survey, 1997

Annex 6
Table 18: The two most important reasons(1) to choose the case study area as a new place of residence as given by younger and elder incomers and Z-score for significant differences in proportion per answer category

<table>
<thead>
<tr>
<th></th>
<th>Dwingelderveld</th>
<th></th>
<th></th>
<th>Weerribben</th>
<th></th>
<th></th>
<th>Lauwersmeer</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt; 55 (n=56)</td>
<td>&gt;=55 (n=26)</td>
<td>Z-score</td>
<td>&lt; 55 (n=80)</td>
<td>&gt;=55 (n=54)</td>
<td>Z-score</td>
<td>&lt; 55 (n=111)</td>
<td>&gt;=55 (n=48)</td>
</tr>
<tr>
<td>1) Job related</td>
<td>27</td>
<td>0</td>
<td>**</td>
<td>23</td>
<td>13</td>
<td>1.39</td>
<td>30</td>
<td>0</td>
</tr>
<tr>
<td>2) Characteristics (physical) environment:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Beautiful/landscape/remote</td>
<td>11</td>
<td>23</td>
<td>-1.47</td>
<td>10</td>
<td>9</td>
<td>0.14</td>
<td>11</td>
<td>15</td>
</tr>
<tr>
<td>b. tranquility</td>
<td>14</td>
<td>4</td>
<td>**</td>
<td>10</td>
<td>9</td>
<td>0.14</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>c. clean/healthy air/no pollution</td>
<td>0</td>
<td>0</td>
<td>**</td>
<td>0</td>
<td>0</td>
<td>-1.73</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>d. presence nature/wildlife</td>
<td>16</td>
<td>15</td>
<td>**</td>
<td>15</td>
<td>22</td>
<td>-1.07</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>e. presence water/beach</td>
<td>0</td>
<td>0</td>
<td>**</td>
<td>13</td>
<td>6</td>
<td>1.33</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>f. rural/countryside</td>
<td>2</td>
<td>0</td>
<td>**</td>
<td>4</td>
<td>7</td>
<td>-0.83</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>3) Characteristics house/garden</td>
<td>0</td>
<td>0</td>
<td>**</td>
<td>3</td>
<td>0</td>
<td>1.17</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>4) Price of house</td>
<td>2</td>
<td>4</td>
<td>**</td>
<td>3</td>
<td>2</td>
<td>0.25</td>
<td>11</td>
<td>17</td>
</tr>
<tr>
<td>5) Availability house</td>
<td>2</td>
<td>4</td>
<td>**</td>
<td>3</td>
<td>7</td>
<td>-1.35</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6) Back to roots</td>
<td>7</td>
<td>23</td>
<td>**</td>
<td>10</td>
<td>11</td>
<td>-0.21</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>7) Knew area already (holidays)</td>
<td>0</td>
<td>8</td>
<td>**</td>
<td>0</td>
<td>4</td>
<td>-1.73</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>8) Social relations (family/friends)</td>
<td>7</td>
<td>4</td>
<td>**</td>
<td>1</td>
<td>6</td>
<td>-1.44</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>9) Near services/centrally located</td>
<td>7</td>
<td>4</td>
<td>**</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>10) Possibility outdoor activities</td>
<td>2</td>
<td>4</td>
<td>**</td>
<td>4</td>
<td>0</td>
<td>1.44</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>11) No crime/not crowded</td>
<td>0</td>
<td>0</td>
<td>**</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>12) Other</td>
<td>4</td>
<td>8</td>
<td>**</td>
<td>4</td>
<td>0</td>
<td>1.44</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>-</td>
<td>100</td>
<td>100</td>
<td>-</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

(1) Every respondent was asked to give two reasons, if only one reason was given, the reason is counted twice.
* Significant difference between older and younger Incomers resident group in proportion of motivations given for this answer category (Z-score +/- 1.96)
** Not a normal distribution; total answers and cell filling too small (N< 30 and cell filling < 5) to determine Z-score.
< 55: eldest in household < 55 years old
>= 55: eldest in household >= 55 years old
n = number of answers
Source: Own survey, 1996
Table 19: Two most important reasons(1) to choose the case study area as given by lower and higher educated incomers and Z-score for significant differences in proportion per answer category

<table>
<thead>
<tr>
<th>Reason</th>
<th>Dwingelderveld Low (n=52)</th>
<th>High (n=30)</th>
<th>Z-score</th>
<th>Weerribben Low (n=86)</th>
<th>High (n=48)</th>
<th>Z-score</th>
<th>Lauwersmeer Low (n=100)</th>
<th>High (n=58)</th>
<th>Z-score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Job related</td>
<td>15</td>
<td>23</td>
<td>-0.90</td>
<td>20</td>
<td>17</td>
<td>0.44</td>
<td>10</td>
<td>40</td>
<td>4.42*</td>
</tr>
<tr>
<td>2) Characteristics environment:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Beautiful/landscape/remote</td>
<td>17</td>
<td>10</td>
<td>0.90</td>
<td>10</td>
<td>8</td>
<td>0.40</td>
<td>9</td>
<td>16</td>
<td>-1.24</td>
</tr>
<tr>
<td>b. tranquility</td>
<td>12</td>
<td>10</td>
<td>0.21</td>
<td>9</td>
<td>10</td>
<td>-0.21</td>
<td>11</td>
<td>5</td>
<td>1.24</td>
</tr>
<tr>
<td>c. clean/healthy air/no pollution</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>1</td>
<td>2</td>
<td>-0.42</td>
<td>2</td>
<td>2</td>
<td>0.12</td>
</tr>
<tr>
<td>d. presence nature/wildlife</td>
<td>15</td>
<td>17</td>
<td>-0.15</td>
<td>14</td>
<td>25</td>
<td>-1.80</td>
<td>8</td>
<td>2</td>
<td>0.67</td>
</tr>
<tr>
<td>e. presence water/beach</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>8</td>
<td>13</td>
<td>-0.82</td>
<td>0</td>
<td>5</td>
<td>-2.20*</td>
</tr>
<tr>
<td>f. rural/countryside</td>
<td>0</td>
<td>3</td>
<td>-1.32</td>
<td>6</td>
<td>4</td>
<td>0.41</td>
<td>3</td>
<td>5</td>
<td>-0.89</td>
</tr>
<tr>
<td>3) Characteristics house/garden</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>2</td>
<td>0</td>
<td>1.06</td>
<td>2</td>
<td>2</td>
<td>0.12</td>
</tr>
<tr>
<td>4) Price of house</td>
<td>2</td>
<td>3</td>
<td>-0.40</td>
<td>1</td>
<td>4</td>
<td>-1.13</td>
<td>18</td>
<td>3</td>
<td>2.65*</td>
</tr>
<tr>
<td>5) Availability house</td>
<td>2</td>
<td>3</td>
<td>-0.40</td>
<td>7</td>
<td>0</td>
<td>1.87</td>
<td>4</td>
<td>2</td>
<td>0.79</td>
</tr>
<tr>
<td>6) Back to roots</td>
<td>13</td>
<td>10</td>
<td>0.46</td>
<td>9</td>
<td>13</td>
<td>-0.58</td>
<td>15</td>
<td>7</td>
<td>1.51</td>
</tr>
<tr>
<td>7) Knew area already (holidays)</td>
<td>4</td>
<td>0</td>
<td>1.09</td>
<td>1</td>
<td>2</td>
<td>-0.42</td>
<td>2</td>
<td>2</td>
<td>0.12</td>
</tr>
<tr>
<td>8) Social relations (family/friends)</td>
<td>8</td>
<td>3</td>
<td>0.79</td>
<td>3</td>
<td>2</td>
<td>0.46</td>
<td>9</td>
<td>5</td>
<td>0.88</td>
</tr>
<tr>
<td>9) Near services/centrally located</td>
<td>8</td>
<td>3</td>
<td>0.79</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>1</td>
<td>0</td>
<td>0.76</td>
</tr>
<tr>
<td>10) Possibility outdoor activities</td>
<td>0</td>
<td>7</td>
<td>-1.89</td>
<td>3</td>
<td>0</td>
<td>1.31</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>11) No crime/not crowded</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>6</td>
<td>2</td>
<td>1.26</td>
</tr>
<tr>
<td>12) Other</td>
<td>4</td>
<td>7</td>
<td>-0.57</td>
<td>3</td>
<td>0</td>
<td>1.31</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>-</td>
<td>100</td>
<td>100</td>
<td>-</td>
<td>100</td>
<td>100</td>
<td>-</td>
</tr>
</tbody>
</table>

(1) Every respondent was asked to give two reasons, if only one reason was given, the reason is counted twice.
(2) primary school (lagere school), lower vocational training (LBO); Secondary school (MVO, HVO), Middle vocational training (MBO)
(3) Higher vocational training (HBO), Degree (Universteit)
* Significant difference between older and younger Incomers resident group in proportion of motivations given for this answer category (Z-score +/- 1.96)

n = number of answers
Source: Own Survey, 1996
Table 20: The two most important reasons(s) to choose the case study area as given by younger and elder incomers and Z-score for significant differences in proportion per answer category

<table>
<thead>
<tr>
<th>Reason Description</th>
<th>&lt; 55 years (N=60)</th>
<th>&gt;= 55 years (N=37)</th>
<th>Z-score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Job related</td>
<td>28</td>
<td>8</td>
<td>2.39*</td>
</tr>
<tr>
<td>2) Characteristics environment:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Beautiful/landscape/remote</td>
<td>18</td>
<td>22</td>
<td>-0.40</td>
</tr>
<tr>
<td>b. tranquility</td>
<td>10</td>
<td>14</td>
<td>-0.53</td>
</tr>
<tr>
<td>c. clean/healthy air/no pollution</td>
<td>3</td>
<td>0</td>
<td>1.12</td>
</tr>
<tr>
<td>d. presence nature/wildlife</td>
<td>2</td>
<td>3</td>
<td>-0.35</td>
</tr>
<tr>
<td>e. presence water/beach</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>f. rural/countryside</td>
<td>7</td>
<td>11</td>
<td>-0.72</td>
</tr>
<tr>
<td>3) Characteristics house/garden</td>
<td>5</td>
<td>3</td>
<td>0.55</td>
</tr>
<tr>
<td>4) Price of house</td>
<td>5</td>
<td>5</td>
<td>-0.09</td>
</tr>
<tr>
<td>5) Availability house</td>
<td>2</td>
<td>5</td>
<td>-1.03</td>
</tr>
<tr>
<td>6) Back to roots</td>
<td>7</td>
<td>5</td>
<td>0.25</td>
</tr>
<tr>
<td>7) Knew area already (holidays)</td>
<td>3</td>
<td>5</td>
<td>-0.50</td>
</tr>
<tr>
<td>8) Social relations (family/friends)</td>
<td>3</td>
<td>11</td>
<td>-1.48</td>
</tr>
<tr>
<td>9) Near services/centrally located</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>10) Possibility outdoor activities</td>
<td>2</td>
<td>0</td>
<td>0.79</td>
</tr>
<tr>
<td>11) No crime/not crowded</td>
<td>3</td>
<td>0</td>
<td>1.12</td>
</tr>
<tr>
<td>12) Other</td>
<td>2</td>
<td>8</td>
<td>-1.55</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>-</td>
</tr>
</tbody>
</table>

(1) Every respondent was asked to give two reasons, if only one reason was given, the reason is counted twice.
* Significant difference between older and younger Incomers resident group in proportion of motivations given for this answer category (Z-score +/- 1.96)
** Not a normal distribution; total answers and cell filling too small (N < 30 and cell filling < 5) to determine Z-score.
< 55: eldest in household < 55 years old
>= 55: eldest in household >= 55 years old
n = number of answers
Source: Own survey, 1997
### Table 21: Two most important reasons(1) to choose the case study area as given by lower and higher educated incomers and Z-score for significant differences in proportion per answer category

<table>
<thead>
<tr>
<th>Reason</th>
<th>Low (2)</th>
<th>High (3)</th>
<th>Z-score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Job related</td>
<td>21</td>
<td>13</td>
<td>1.13</td>
</tr>
<tr>
<td>2) Characteristics environment:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Beautiful/landscape/remote</td>
<td>16</td>
<td>23</td>
<td>-0.77</td>
</tr>
<tr>
<td>b. tranquility</td>
<td>7</td>
<td>18</td>
<td>1.73</td>
</tr>
<tr>
<td>c. clean/healthy air/no pollution</td>
<td>2</td>
<td>3</td>
<td>-0.30</td>
</tr>
<tr>
<td>d. presence nature/wildlife</td>
<td>2</td>
<td>5</td>
<td>1.76</td>
</tr>
<tr>
<td>e. presence water/beach</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>f. rural/countryside</td>
<td>7</td>
<td>10</td>
<td>-0.63</td>
</tr>
<tr>
<td>3) Characteristics house/garden</td>
<td>2</td>
<td>5</td>
<td>-0.97</td>
</tr>
<tr>
<td>4) Price of house</td>
<td>8</td>
<td>0</td>
<td>1.86</td>
</tr>
<tr>
<td>5) Availability house</td>
<td>2</td>
<td>5</td>
<td>-0.97</td>
</tr>
<tr>
<td>6) Back to roots</td>
<td>8</td>
<td>3</td>
<td>1.18</td>
</tr>
<tr>
<td>7) Knew area already (holidays)</td>
<td>7</td>
<td>0</td>
<td>1.65</td>
</tr>
<tr>
<td>8) Social relations (family/friends)</td>
<td>10</td>
<td>5</td>
<td>0.88</td>
</tr>
<tr>
<td>9) Near services/centrally located</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>10) Possibility outdoor activities</td>
<td>0</td>
<td>3</td>
<td>-1.24</td>
</tr>
<tr>
<td>11) No crime/not crowded</td>
<td>7</td>
<td>8</td>
<td>-0.18</td>
</tr>
<tr>
<td>12) Other</td>
<td>5</td>
<td>3</td>
<td>0.61</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>-</td>
</tr>
</tbody>
</table>

(1) Every respondent was asked to give two reasons, if only one reason was given, the reason is counted twice.
(2) primary school, lower vocational training; Secondary school and Middle vocational training
(3) Higher vocational training and Degree (University)
* Significant difference between older and younger Incomers resident group in proportion of motivations given for this answer category (Z-score +/- 1.96)

n = number of answers
Source: Own survey, 1997
Table 22: Type of residents by nature of housing and probabilities of distribution

<table>
<thead>
<tr>
<th></th>
<th>Ownership</th>
<th>Rent</th>
<th>Family property</th>
<th>Tight housing</th>
<th>n</th>
<th>P-Chi</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dwingelderveld</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>70.6</td>
<td>29.4</td>
<td>o</td>
<td>n.a.</td>
<td>51</td>
<td>4.25*</td>
</tr>
<tr>
<td>Locals</td>
<td>84.3</td>
<td>15.7</td>
<td>o</td>
<td></td>
<td>121</td>
<td></td>
</tr>
<tr>
<td><strong>Weerribben</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>82.1</td>
<td>17.9</td>
<td>o</td>
<td>n.a.</td>
<td>84</td>
<td>1.97</td>
</tr>
<tr>
<td>Locals</td>
<td>73.7</td>
<td>26.3</td>
<td>o</td>
<td></td>
<td>118</td>
<td></td>
</tr>
<tr>
<td><strong>Lauwersmeer</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>69.3</td>
<td>30.7</td>
<td>o</td>
<td>n.a.</td>
<td>101</td>
<td>0.24</td>
</tr>
<tr>
<td>Locals</td>
<td>72.2</td>
<td>27.8</td>
<td>o</td>
<td></td>
<td>151</td>
<td></td>
</tr>
<tr>
<td><strong>Northumberland</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>63.6</td>
<td>25.5</td>
<td>o</td>
<td>10.9</td>
<td>55</td>
<td>4.01**</td>
</tr>
<tr>
<td>Locals</td>
<td>65.5</td>
<td>30.5</td>
<td>o</td>
<td>4.0</td>
<td>177</td>
<td></td>
</tr>
<tr>
<td><strong>Doñana</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>5.3</td>
<td>89.5</td>
<td>5.3</td>
<td>n.a.</td>
<td>19</td>
<td>***</td>
</tr>
<tr>
<td>Locals</td>
<td>70.6</td>
<td>5.9</td>
<td>23.5</td>
<td>n.a.</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>2-home</td>
<td>73.2</td>
<td>0</td>
<td>26.8</td>
<td>n.a.</td>
<td>56</td>
<td></td>
</tr>
</tbody>
</table>

* Significant difference (at 0.05 significance) between incomers and locals/for Doñana between incomers, locals and second home household groups
** Significant difference (at 0.1 significance) between incomers and locals/for Doñana between incomers, locals and second home household groups
*** Number of cells with expected frequency below 5 > 20%, therefore no Pearson chi-square can be determined
n.a. = not applicable
hh = households
n = number of households
P-Chi = Pearson Chi-square
Source: Own survey, 1996/1997
### Table 23: Type of residents by type of housing and probabilities of distribution (Pearson-Chi-square)

<table>
<thead>
<tr>
<th></th>
<th>Detached 1-family house</th>
<th>Semi-detached 1-family house</th>
<th>Farmhouse (not in agricultural use)</th>
<th>Farmhouse (in agricultural use)</th>
<th>Other</th>
<th>n</th>
<th>P-Chi</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dwingelerveld</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>23.5</td>
<td>39.2</td>
<td>15.7</td>
<td>5.9</td>
<td>15.7</td>
<td>51</td>
<td>8.34**</td>
</tr>
<tr>
<td>Locals</td>
<td>26.2</td>
<td>29.5</td>
<td>27.9</td>
<td>10.7</td>
<td>5.7</td>
<td>122</td>
<td></td>
</tr>
<tr>
<td><strong>Weerribben</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>28.6</td>
<td>41.7</td>
<td>10.7</td>
<td>7.1</td>
<td>11.9</td>
<td>84</td>
<td>3.98</td>
</tr>
<tr>
<td>Locals</td>
<td>38.7</td>
<td>37.0</td>
<td>10.1</td>
<td>8.4</td>
<td>5.9</td>
<td>119</td>
<td></td>
</tr>
<tr>
<td><strong>Lauwersmeer</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>28.4</td>
<td>37.3</td>
<td>16.7</td>
<td>7.8</td>
<td>9.8</td>
<td>102</td>
<td>7.40**</td>
</tr>
<tr>
<td>Locals</td>
<td>41.2</td>
<td>31.4</td>
<td>9.2</td>
<td>11.1</td>
<td>7.2</td>
<td>153</td>
<td></td>
</tr>
<tr>
<td><strong>Northumberland</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>38.2</td>
<td>43.6</td>
<td>0</td>
<td>1.8</td>
<td>16.4</td>
<td>55</td>
<td>***</td>
</tr>
<tr>
<td>Locals</td>
<td>28.9</td>
<td>55.6</td>
<td>2.8</td>
<td>5.0</td>
<td>7.8</td>
<td>180</td>
<td></td>
</tr>
<tr>
<td><strong>Doñana</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomers</td>
<td>n.a</td>
<td>n.a</td>
<td>n.a</td>
<td>n.a</td>
<td>n.a</td>
<td>n.a</td>
<td>n.a</td>
</tr>
<tr>
<td>Locals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Significant difference (at 0.05 significance) between incomers and locals/for Doñana between incomers, locals and second home household groups

** Significant difference (at 0.1 significance) between incomers and locals/for Doñana between incomers, locals and second home household groups

*** Number of cells with expected frequency below 5 > 20%, therefore no Pearson chi-square can be determined

n.a. = data not available
hh = households
n = number of households
P-Chi = Pearson Chi-square

Source: Own survey, 1996/1997
### Table 24: Type of housing for incomers and local residents and probabilities of distribution for differences between the three Dutch case study areas

<table>
<thead>
<tr>
<th></th>
<th>Dwingelderveld</th>
<th>Weerribben</th>
<th>Lauwersmeer</th>
<th>Average</th>
<th>P-Chi</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Incomers</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Detached 1-family house</td>
<td>23.5</td>
<td>28.6</td>
<td>28.4</td>
<td>27.4</td>
<td>2.99</td>
</tr>
<tr>
<td>Semi-detached 1 family house</td>
<td>39.2</td>
<td>41.7</td>
<td>37.3</td>
<td>39.2</td>
<td></td>
</tr>
<tr>
<td>Farm (not in agricultural use)</td>
<td>15.7</td>
<td>10.7</td>
<td>16.7</td>
<td>14.3</td>
<td></td>
</tr>
<tr>
<td>Farm (in agricultural use)</td>
<td>5.9</td>
<td>7.1</td>
<td>7.8</td>
<td>7.2</td>
<td></td>
</tr>
<tr>
<td>Other (senior) apartment</td>
<td>15.7</td>
<td>11.9</td>
<td>9.8</td>
<td>11.8</td>
<td></td>
</tr>
<tr>
<td><strong>Locals</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Detached 1-family house</td>
<td>26.2</td>
<td>38.7</td>
<td>41.2</td>
<td>35.8</td>
<td>25.15*</td>
</tr>
<tr>
<td>Semi-detached 1 family house</td>
<td>29.5</td>
<td>37.0</td>
<td>31.4</td>
<td>32.5</td>
<td></td>
</tr>
<tr>
<td>Farm (not in agricultural use)</td>
<td>27.9</td>
<td>10.1</td>
<td>9.2</td>
<td>15.2</td>
<td></td>
</tr>
<tr>
<td>Farm (in agricultural use)</td>
<td>10.7</td>
<td>8.4</td>
<td>11.1</td>
<td>10.2</td>
<td></td>
</tr>
<tr>
<td>Other (senior) apartment</td>
<td>5.7</td>
<td>5.9</td>
<td>7.2</td>
<td>6.3</td>
<td></td>
</tr>
</tbody>
</table>

* Significant difference (at 0.05 significance) between incomers and locals/for Doñana between incomers, locals and second home household groups

** Significant difference (at 0.1 significance) between incomers and locals/for Doñana between incomers, locals and second home household groups

*** Number of cells with expected frequency below 5 > 20%, therefore no Pearson chi-square can be determined

n = number of households

P-Chi = Pearson Chi-square

Source: Own survey, 1996/1997
**Table 25: Type of residents by location of dwelling and probabilities of distribution (Pearson-Chi-Square)**

<table>
<thead>
<tr>
<th>Location</th>
<th>Type</th>
<th>% of dwellings outside village</th>
<th>n</th>
<th>P-Chi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dwingelderveld</td>
<td>Incomers</td>
<td>35.3</td>
<td>51</td>
<td>0.99</td>
</tr>
<tr>
<td></td>
<td>Locals</td>
<td>43.4</td>
<td>122</td>
<td></td>
</tr>
<tr>
<td>Weerribben</td>
<td>Incomers</td>
<td>38.1</td>
<td>84</td>
<td>2.86**</td>
</tr>
<tr>
<td></td>
<td>Locals</td>
<td>26.9</td>
<td>119</td>
<td></td>
</tr>
<tr>
<td>Lauwersmeer</td>
<td>Incomers</td>
<td>27.5</td>
<td>102</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>Locals</td>
<td>26.8</td>
<td>153</td>
<td></td>
</tr>
<tr>
<td>Northumberland</td>
<td>Incomers</td>
<td>48.1</td>
<td>54</td>
<td>1.47</td>
</tr>
<tr>
<td></td>
<td>Locals</td>
<td>38.9</td>
<td>180</td>
<td></td>
</tr>
<tr>
<td>Doñana</td>
<td>Incomers</td>
<td>n.a.</td>
<td>n.a.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Locals 2-home</td>
<td>n.a.</td>
<td>n.a.</td>
<td></td>
</tr>
</tbody>
</table>

* Significant difference (at 0.05 significance) between incomers and locals/for Doñana between incomers, locals and second home household groups

** Significant difference (at 0.1 significance) between incomers and locals/for Doñana between incomers, locals and second home household groups

*** Number of cells with expected frequency below 5 > 20%, therefore no Pearson chi-square can be determined

n.a. = data not available; n = number of households; P-Chi = Pearson Chi-square

Source: Own survey, 1996/1997

**Table 26: Type of residents by type of view from dwelling and probabilities of distribution (Pearson-Chi-Square)**

<table>
<thead>
<tr>
<th>Location</th>
<th>Type</th>
<th>% of dwellings with open view</th>
<th>n</th>
<th>P-Chi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dwingelderveld</td>
<td>Incomers</td>
<td>45.1</td>
<td>51</td>
<td>0.47</td>
</tr>
<tr>
<td></td>
<td>Locals</td>
<td>50.8</td>
<td>122</td>
<td></td>
</tr>
<tr>
<td>Weerribben</td>
<td>Incomers</td>
<td>53.6</td>
<td>84</td>
<td>1.61</td>
</tr>
<tr>
<td></td>
<td>Locals</td>
<td>44.5</td>
<td>119</td>
<td></td>
</tr>
<tr>
<td>Lauwersmeer</td>
<td>Incomers</td>
<td>51.0</td>
<td>102</td>
<td>0.38</td>
</tr>
<tr>
<td></td>
<td>Locals</td>
<td>47.1</td>
<td>153</td>
<td></td>
</tr>
<tr>
<td>Northumberland</td>
<td>Incomers</td>
<td>69.1</td>
<td>55</td>
<td>1.55</td>
</tr>
<tr>
<td></td>
<td>Locals</td>
<td>59.8</td>
<td>179</td>
<td></td>
</tr>
<tr>
<td>Doñana</td>
<td>Incomers</td>
<td>..</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td></td>
<td>Locals 2-home</td>
<td>..</td>
<td>..</td>
<td>..</td>
</tr>
</tbody>
</table>

* Significant difference (at 0.05 significance) between incomers and locals/for Doñana between incomers, locals and second home household groups

** Significant difference (at 0.1 significance) between incomers and locals/for Doñana between incomers, locals and second home household groups

*** Number of cells with expected frequency below 5 > 20%, therefore no Pearson chi-square can be determined

n.a. = data not available; n = number of households; P-Chi = Pearson Chi-square

Source: Own survey, 1996/1997

Annex 6
Table 27: Proportion of incomers and local residents that stated to find it pleasant to live near a protected natural area

<table>
<thead>
<tr>
<th>Area</th>
<th>Incomers</th>
<th>Locals</th>
<th>Incomers</th>
<th>Locals</th>
<th>Incomers</th>
<th>Locals</th>
<th>Incomers</th>
<th>Locals</th>
<th>Incomers</th>
<th>Locals</th>
<th>Incomers</th>
<th>Locals</th>
<th>Incomers</th>
<th>Locals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dwingelderveld</td>
<td>90</td>
<td>4</td>
<td>6</td>
<td>100</td>
<td>51</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weerribben</td>
<td>92</td>
<td>1</td>
<td>7</td>
<td>100</td>
<td>84</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lauwersmeer</td>
<td>91</td>
<td>3</td>
<td>7</td>
<td>100</td>
<td>102</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northumberland</td>
<td>91</td>
<td>0</td>
<td>9</td>
<td>100</td>
<td>152</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doñana</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>100</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>20</td>
<td>0</td>
<td>100</td>
<td>33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

n = number of households
Source: Own survey, 1996/1997

Table 28: Relative distribution over type of recreational activity performed (i) when visiting the Dutch protected natural areas

<table>
<thead>
<tr>
<th>Activity</th>
<th>Dwingelderveld</th>
<th>Weerribben</th>
<th>Lauwersmeer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Incomers (n=86)</td>
<td>Locals (n=200)</td>
<td>Incomers (n=148)</td>
</tr>
<tr>
<td>Walking/running</td>
<td>48</td>
<td>45</td>
<td>35*</td>
</tr>
<tr>
<td>(motor)biking</td>
<td>42*</td>
<td>47*</td>
<td>40*</td>
</tr>
<tr>
<td>Swimming/fishing/</td>
<td>0*</td>
<td>0*</td>
<td>22*</td>
</tr>
<tr>
<td>sailing/visit beach</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Horseback riding</td>
<td>5*</td>
<td>4*</td>
<td>0*</td>
</tr>
<tr>
<td>Bird/wildlife watching</td>
<td>5</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Total: 100 100 100 100 100 100

(1) Every respondent was asked to mention two activities, if only one activity was mentioned, the reason is counted twice
# Incomers and locals within the case study areas score significantly different (Z-score => or <= +/- 1.96, significance at 0.05) for this answer category (s).
* Incomers or locals between the case study area score significantly different (Z-score => or <= +/- 1.96, significance at 0.05) for this answer category (only comparisons were made between incomers and incomers and locals and locals)

n = number of answers given by total respondents
Source: Survey 1996

---

n = number of households
Source: Own survey, 1996/1997
Table 29 Relative distribution over type of recreational activity performed (1) when visiting the Northumberland protected natural area

<table>
<thead>
<tr>
<th>Activity</th>
<th>Incomers (n=86)</th>
<th>Locals (n=220)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Walking/running</td>
<td>63*</td>
<td>67*</td>
</tr>
<tr>
<td>2) (motor)biking</td>
<td>12*</td>
<td>7*</td>
</tr>
<tr>
<td>3) Swimming/fishing/sailing/visit beach</td>
<td>5*</td>
<td>8*</td>
</tr>
<tr>
<td>4) Horseback riding</td>
<td>13 #*</td>
<td>5 #*</td>
</tr>
<tr>
<td>5) Bird/wildlife watching</td>
<td>5</td>
<td>6*</td>
</tr>
<tr>
<td>6) Other</td>
<td>3*</td>
<td>7*</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

(1) Every respondent was asked to mention two activities, if only one activity was mentioned, the answer is counted twice
# Incomers and locals within Northumberland case study areas score significantly different (Z-score => or <= +/- 1.96, significance at 0.05) for this answer category (s).
* Incomers or locals between the case study area score significantly different (Z-score => or <= +/- 1.96 significance at 0.05) for this answer category (only comparisons were made between incomers and incomers and locals and locals)

n = number of answers given by total respondents

Source: Own survey 1997

Table 30 Relative distribution over type of recreational activity performed (1) when visiting the Doñana National Park area

<table>
<thead>
<tr>
<th>Activity</th>
<th>Incomers (n=8)</th>
<th>Locals (n=40)</th>
<th>2-home (n=85)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Guided bus tour</td>
<td>100</td>
<td>50</td>
<td>47</td>
</tr>
<tr>
<td>2) Visit visitors centres of NP</td>
<td>0</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>3) Bird watching</td>
<td>0</td>
<td>23</td>
<td>22</td>
</tr>
<tr>
<td>4) Walk on beach or footpaths in the NP</td>
<td>0</td>
<td>10</td>
<td>17</td>
</tr>
<tr>
<td>5) Horseback riding</td>
<td>0</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>6) Other</td>
<td>0</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

(1) Every respondent was asked to mention two activities, if only one activity was mentioned, the answer is counted twice
n = number of answers given

Source: Own survey, 1997

Annex 6
Table 31: Relative distribution over type of recreational activity performed (1) when visiting the Doñana Entorno Park

<table>
<thead>
<tr>
<th>Activity</th>
<th>Incomers (n=8)</th>
<th>Locals (n=56)</th>
<th>2-home (n=44)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Walking</td>
<td>25.0</td>
<td>32.1</td>
<td>56.8</td>
</tr>
<tr>
<td>2) Horseback riding</td>
<td>0</td>
<td>8.9</td>
<td>4.5</td>
</tr>
<tr>
<td>3) Bird watching</td>
<td>75.0</td>
<td>23.2</td>
<td>20.5</td>
</tr>
<tr>
<td>4) Hunting</td>
<td>0</td>
<td>17.9</td>
<td>0</td>
</tr>
<tr>
<td>5) Picnic</td>
<td>0</td>
<td>16.1</td>
<td>11.4</td>
</tr>
<tr>
<td>6) Other</td>
<td>0</td>
<td>1.8</td>
<td>6.8</td>
</tr>
</tbody>
</table>

(1) Every respondent was asked to mention two activities, if only one activity was mentioned, the answer is counted twice
n = number of answers
Source: Own survey, 1997