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# Professional farmer collectives for effective agri-environmental management: an assessment

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## ABSTRACT

In 2013 the EU Common Agricultural Policy (CAP) enabled groups of farmers to be applicants and final beneficiaries of Agri-environmental schemes (AES). The Dutch government went one step further, ruling that only groups of farmers (farmer collectives) could be beneficiaries of AES. The changing role of farmer groups or farmer collectives comes with a variety of challenges. Using the lens of professionalization, we investigated the professionalization of the Dutch farmer collectives after three years of coordinating AESs, with the aim of ascertaining how professional the collectives are and how any differences in professionalism can be explained. The experience of the Dutch collectives is relevant to other groups of farmers in Europe who are starting or are engaged in the process of self-organization and professionalization, as well as to the further development of the Dutch collectives. Our assessment revealed that there are different types of professional collectives, depending on the situation. Most of the collectives scored excellently on the organizational and occupational criteria with an internal focus. All the collectives have criteria that could be improved. There are differences in professionalization based on history, resources and scale.

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Governance; biodiversity; agri-environmental schemes; collective action; group of farmers

## 1. Introduction

Collaboration between groups of farmers, government and other organizations is important to increase the effectiveness of AESs at landscape scale (Franks, 2019; Runhaar et al., 2017). Because of this, farmer groups increasingly have a role in rural development, landscape governance and policy development – a trend that is actively promoted by European policies and subsidy schemes throughout the EU (Dik et al. 2022; Schomers et al., 2021; Westerink et al., 2017a). In line with this, in 2013 the EU Common Agricultural Policy (CAP) enabled groups of farmers to be applicants and final beneficiaries of agri-environmental payments (Regulation (EU) No 1305/2013, article 28,

sub-clause 2). The changing role of groups of farmers comes with a variety of challenges, such as more complex roles, additional tasks, cooperating with new partners, knowledge development.

The Dutch government seized the opportunity offered by Regulation (EU) No 1305/2013 and made farmer collectives (henceforth, collectives) the only eligible beneficiaries of payments within the context of agri-environmental schemes (AES) in the period 2016–2022 (Runhaar et al., 2017). This has meant that individual farmers can no longer participate in an agri-environmental subsidy scheme unless they are members of a collective. The Dutch government chose a collective approach

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to AES for two reasons. Firstly, to enhance effectiveness by benefiting from local knowledge to increase farmer involvement by building on the quality of social relationships within the farmer collective. The quality of these relationships (social capital) is based on trust, reciprocity and mutual obligations (Barghusen et al., 2022; de Vries et al., 2019; Pretty et al., 2020; Westerink et al., 2021). Therefore, working with farmer collectives was expected to increase the willingness of farmers to participate by building on local farming culture in terms of attitude towards biodiversity and collaboration, and this was expected to facilitate a better spatial coordination of the measures by the collectives (Barghusen et al., 2021; Josefsson et al., 2017; Runhaar et al., 2017; Westerink et al., 2020, 2017b). Secondly, working with collectives was expected to help reduce bureaucracy and increase efficiency (de Snoo et al., 2016; Dijkstra, 2013). As a consequence of the change in approach, many administrative tasks shifted from the government to the collectives (Westerink et al., 2020). To enhance the quality of the agri-environmental management, the collectives coordinate the implementation of management measures at landscape level, increase farmer involvement through local networking, stimulate learning, and improve monitoring, evaluation, sanctioning and payment (Dik et al. 2021; Westerink et al., 2017a). This means that the performance of farmer collectives is very important in enhancing effectiveness and efficiency in AES. The performance of farmer groups has rarely been studied (Dik et al., 2022; Runhaar et al., 2017; Westerink et al., 2020). To help to fill this knowledge gap, we used the concept of professionalization, which is often used to analyse and improve organizations (Dik et al., 2022; Dowling et al., 2014; Nagel et al., 2015). Our research question was: How professional are the Dutch farmer collectives and what could account for any differences in professionalization? To this purpose, we assessed the degree of professionalization of the Dutch farmer collectives after their first three years of coordinating AESs. This paper presents our findings. The experience of the Dutch collectives is relevant to other groups of farmers in Europe who are starting or are engaged in the process of self-organization and professionalization, as well as to the further development of the Dutch collectives themselves.

In the following section, we explain the analytical framework. After describing our methods, we present the results of the assessment. In the

subsequent sections, we reflect on the framework and the results of our analysis. The conclusions present the answer to the research question and recommendations for collective agri-environmental policy, the professionalization of farmer collectives and suggestions for further research.

## 2. Analytical framework

### 2.1. Assessment framework for professionalization of farmer collectives

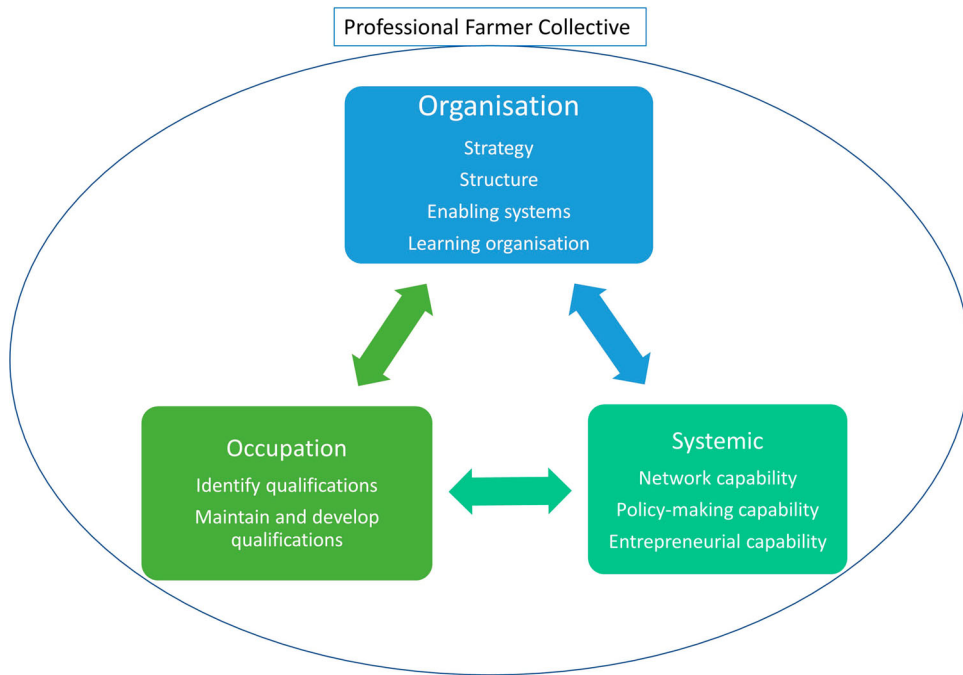
To characterize the degree of professionalization of the Dutch farmer collectives we used the assessment framework developed by Dik et al. (2022) (Figure 1 and Appendix 1). They based this framework on Dowling et al. (2014), who studied the development of volunteer sports organizations into more formal organizations. The framework distinguishes three related categories of professionalization: organizational, occupational and systemic. It includes criteria for each category to express the professionalism of collectives. In the assessment, scores are attributed to the various categories. The categories and the criteria are briefly explained below.

#### 2.1.1. Organizational professionalization

The category of organizational professionalization concerns the internal organization (Dowling et al., 2014) and addresses (a) the strategy translated into a strategic plan based on shared values (Shilbury & Ferkins, 2011), including what it means to be a group of farmers; (b) the organizational structure, including the relationship between board and executive organization in terms of shared leadership, which is about the balance of influence between board and the director of the executive organization (Shilbury & Ferkins, 2011), and segregation of duties (Ferkins et al., 2005); (c) the systems, rules and procedures needed to monitor and evaluate the organization and its work (Nagel et al., 2015); and (d) the learning culture for becoming a better organization (Serrat, 2017; Tsang, 1997).

#### 2.1.2. Occupational professionalization

Occupational professionalization is defined at the level of individuals operating in farmer collectives (the board, the executive organization and the farmers who participate in agri-environmental management) and focuses on the identification of qualifications and their maintenance and development (Dowling et al., 2014, Dik et al. 2022).



**Figure 1.** Framework: three categories and criteria of the professionalization of farmer collectives.

### 2.1.3. Systemic professionalization

The category of systemic professionalization focuses on coping with the external developments. Important capabilities to deal with these external developments are network capability (build, maintain and use a network) (Westerink et al., 2017a), capability for strategic policy-making (influencing the policy agenda) and entrepreneurial capability of the collective (innovation, build coalitions, exploit business opportunities and develop projects) (Laasonen & Kolehmainen, 2017).

The categories of professionalization are probably related. For example, the occupational professionalization is related to the learning culture, entrepreneurial collectives are likely to need additional enabling systems (for example, for managing projects), and the development of policy-making capabilities may require specific occupational qualifications. Strategy is likely to be aimed at (and influence) all other criteria.

Professionalization is a concept that encompasses multiple criteria that can all have various meanings for different people. In the assessment framework we aimed to be transparent about our own choice and interpretation of criteria. The framework enables all criteria to be assessed on a five-point Likert scale to express the degree of professionalization of a collective (Appendix 1). This way, the framework is a

tool for interpreting qualitative data expressed as comparable scores.

### 2.2. Differences in professionalization

To explain the differences in professionalization between the Dutch farmer collectives after three years of implementing the agri-environmental scheme we looked at history, scale and resources.

- (i) *History*: The first Local Environmental Cooperatives (LECs) in the Netherlands were founded around 1993 as self-organized groups of farmers. In 2015 there were about 144 LECs in the Netherlands (de Snoo et al. 2016, pp. 116–120). An important factor for their success was the good relationships between the LECs and their farmers (social capital) (Barghusen et al., 2022; Franks & McGloin, 2007; Westerink et al., 2020). These LECs were at the forefront of the establishment of the collectives; they founded most of the collectives and often continued as subgroups within the collective because of the existing social capital within these LECs (Westerink et al., 2020). Nineteen collectives disbanded the LECs or did not originate from LECs.

Because social capital is generally higher in smaller groups, we expected that the existence of LECs within the collective would be positively related to the professionalization of the collectives (Westerink et al., 2020). We wanted to explore whether collectives are more professional when LECs are still present.

- (ii) *Scale*: When the collectives were being set up, there was discussion about a scale requirement for them: should there be a minimum number of members? In the end, no requirements were set (de Snoo et al. 2016, p127). Today, the number of members in the collectives ranges widely. The largest collective has 1318 members, while the five smallest have less than 100 each. It seems likely that a collective with more members will have a clear strategy, more work to do and more financial resources and will therefore develop into a more professional organization (Heylen et al., 2020; Hwang & Powell, 2009 Nagel et al., 2015). We therefore investigated whether the number of members in the collective has affected the level of professionalization.
- (iii) *Resources*: The main resource of the collectives is the budget available in the form of the grants that the provinces have allocated to the AES. The budget available to a collective range from €210,000 to €6,900,000 or €3177 to €14,107 per member. A possible explanation for these large differences is that, in the past, more AES budget was available for areas with meadow bird protection than for areas with other types of landscape management. It seems likely that a collective with more resources (per member) has more budget to improve the professionalization of the organization (Lu, 2015; Maya-Jariego et al., 2020; Suarez, 2010). We therefore wanted to explore whether differences in the level of professionalization can be attributed to the availability of resources.

### 3. Methods

The research was carried out between March 2019 and April 2020. Below, we explain how we conducted an online survey among all 40 collectives, how we performed a qualitative content analysis of the data, how we carried out the assessment with the aid of the framework, and how we compared the 38 responding collectives.

#### 3.1. Online survey

In July 2019 we sent all 40 Dutch collectives a questionnaire in Dutch (see Appendix 2 for a translated version) about the current level of professionalization. The questionnaire consisted of multiple choice and open-ended questions (Cobanoglu et al., 2001; Dillman, 2017; Trochim, 2000). The collectives were not asked to score themselves based on the assessment framework, instead the research team scored them on the basis of their answers to the questionnaire (see Appendix 2 for how the questions related to the framework). Before the questionnaire was sent out, it was pilot tested with one of the collectives. To be able to reach the collectives properly and connect with their language, we collaborated with BoerenNatuur, the umbrella organization of all 40 farmer collectives in the Netherlands. BoerenNatuur helped improve the questionnaire (e.g. suggested improvements to make the questions easier to understand), sent the improved version to the collectives and in newsletters and various meetings stimulated the collectives to participate in the survey. Where appropriate, we also assisted the collectives to complete the questionnaire, e.g. by sending the questionnaire as a Word® document to collectives unable to complete the online version. All these actions resulted in a very high response rate: at the beginning of October 2019, 38 of the 40 collectives had completed and returned the questionnaires. BoerenNatuur contacted the remaining two collectives to persuade them to participate, but they declined because they had no time or had no interest in this survey.

To reduce the risk of biased answers resulting from personal interpretation, we asked the collectives to have a small group of people from the organization (e.g. board member, employee, farmer member) fill in the questionnaire. We also asked the collectives to send additional information, such as a strategy document, so we could complement the answers of the questionnaire: 29 of the 38 collectives did so.

#### 3.2. Qualitative content analysis

The questionnaire was prepared in consultation with various parties, making it a mix of multiple-choice and open-ended questions. This means that not every question counts equally towards each criterion of professionalization in the assessment framework. To systematically interpret the answers provided by the collectives in the online survey we performed a

qualitative content analysis (Schreier, 2014) by assigning codes to the answers (see Appendix 3). A coding framework reduces data and is systematic and flexible (Schreier, 2014). Our coding framework was based on the assessment framework (section 2.1, Appendix 1) and was gradually modified during the process of coding the data. The research team strove for high reliability and validity of the analysis by having one researcher check the data coded by another researcher and by regularly discussing the interim results, comparing interpretations and, if necessary, adjusting the coding framework. Hence, the qualitative content analysis consisted of the following steps: (1) preparation of the coding framework; (2) researcher A using the framework to code answers to questionnaires and additional information received; (3) adjustment of the coding framework (twice); and (4) second round of coding by researcher B using the final coding framework.

### 3.3. Assessment and comparison

Using the results of the content analysis and the assessment framework, the degree of professionalization of the collectives was established (Section 2 and Appendix 1). The researchers assigned each farmer collective 1–5 points for each criterion of professionalization in the assessment framework to express the performance of the farmer collective: (1) very poor; (2) poor; (3) fair; (4) good; (5) excellent. Again, the researchers reviewed each other's assessment, and we regularly discussed the interim results to compare interpretations.

The result of the assessment was based on categorical variables of professionalization (Appendix 1). To determine the central tendency in the results of the assessment we determined the mode, which is the only measure of central tendency that is appropriate for categorical data (Frost, 2021). In our case, it indicates the level of professionalization reached by the highest number of collectives. Subsequently, the mode was determined for the different professionalization criteria based on the results of all collectives for that criterion. Furthermore, to determine the degree of professionalization of each collective the mode was determined from the results of the assessment per collective. To explain the differences in professionalization we related the mode for each collective to the differences in history, scale and resources. For history, we looked at the presence of LECs. To determine the presence of LECs we used the information

given in the online survey (Appendix 2, question 15). The scale was based on the number of members reported in the online survey (Appendix 2, question 12a). The resources available were determined based on the grant agreements for AES made with the provinces in 2016, 2017, 2018 and 2019 combined.

## 4. Results

To answer the research question, we first present the overall results of the assessment and then try to explain the differences in professionalism based on history, scale and resources.

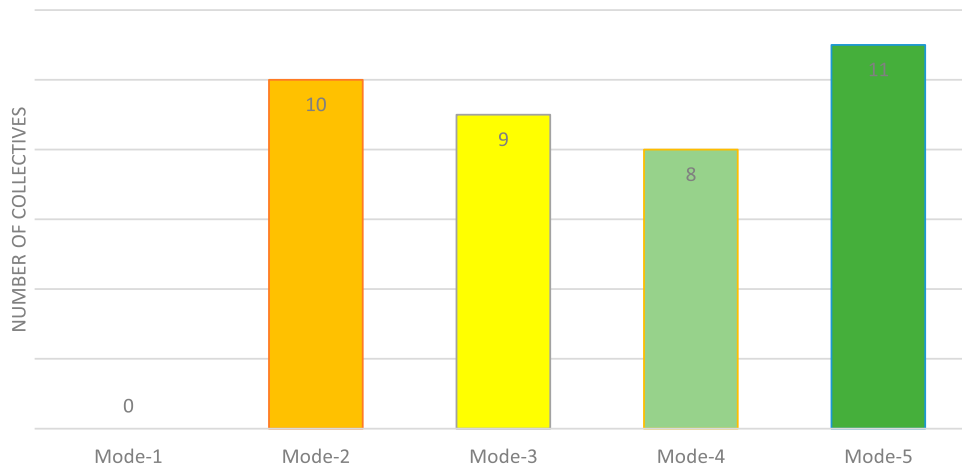
### 4.1. How professional are the Dutch farmer collectives?

Figure 2 shows that the degree of professionalization differs between the 38 collectives. All the collectives, including the 11 who overall scored a mode of 5, have criteria where improvement is possible. For example, one has room for improvement on a common and shared strategy (score 2), using the business support systems (score 2), and the development of collective's members' qualifications (score 2).

Table 1 identifies results of the professionalization criteria for all collectives. The criteria for which most collectives scored 'excellent' are shared leadership, segregation of duties and the presence of qualifications. These criteria were an important part of the quality assurance manual developed by the collectives at the start of the professionalization process to become a certified organization (Westerink et al., 2020, de Snoo et al. 2016).

One of the criteria that most collectives need to work on is establishing a clear strategy that is shared throughout the organization (see Section 2). This strategy is the basis for the professionalization that the collectives undergo and it determines the choices made. Most collectives (20 of the 38) have parts of a strategy, but these have usually only been drawn up by the board in consultation with the director of the executive organization and have not been discussed with or are known by the collective's members or employees. In addition, the information that emerges from the enabling systems is not always used for learning lessons from the results of choices made in the strategy. Many collectives (15) have limited business support systems and make little use of the information available. The collectives have a good ICT system that





**Figure 2.** The degree of professionalization of the 38 farmer collectives. The number of collectives rated in mode-1) very poor (red); mode-2) poor (orange); mode-3) fair (yellow); mode-4) good (light green); mode-5) excellent (dark green) based on the assessment framework.

supports their administration and finance, but most collectives have limited information, e.g. about capacity planning and project progress.

Work also needs to be done to improve the quality of board and ordinary members in the AES. The quality assurance manual developed when the collectives were established to aid their certification includes a list of qualifications for board members and executive organization staff. Most collectives were initially particularly occupied with establishing the executive organization, which is reflected in the score for maintaining and developing qualifications. The score is high for employees, but is low for board members (25 collectives) and members of the collective (15 collectives). The few collectives that do pay attention to maintaining the qualifications of the board do so by assessment interviews, self-reflection or by organizing a workshop for the entire board. The larger collectives indicated that they do not have time to discuss the quality of environmental management with the individual farmers. Most collectives discuss environmental management in group sessions as part of member development activities. However, attendance at such meetings is low, so many farmers are not reached.

Finally, the policy-making capacity of many collectives is poor (6 collectives) or very poor (11 collectives). Most collectives indicated that they are not involved in awareness raising activities or influencing the political agenda, as this is not their role or aspiration. Other collectives make some effort to set political agendas in the context of AES, for example, to raise awareness with policy makers for predation control, landscape development or additional budget for AES.

#### 4.2. Differences in professionalism based on history

Most collectives (35 out of 38) were established by Local Environmental Cooperatives (LECs) around 2016. Sixteen collectives have since dissolved the LECs.

Nineteen collectives have maintained the LECs as independent associations and in these cases the collectives are only responsible for implementing AES – other activities such as rural development projects and citizen outreach have remained the responsibility of the LECs. Because the LECs have strong links with farmers in the area, many of the farmer collectives hired the field coordinators from the LECs to recruit members and to coordinate spatial relations and on-farm measures (Westerink et al., 2020). Figure 3 shows that the collectives without LECs score higher on professionalism than the collectives that kept their LECs.

Although social capital in the sense of the quality of the external network was part of the assessment framework, social capital in the sense of strong ties and good relations within the group was not. In another study comparing two collectives, Barghusen et al. (2022) found higher social capital in the collective which was founded by LECs than in the collective that was founded ‘top-down’. The collectives without LECs indicated that they have found other ways to maintain relations with and among farmers, such as through regional coordinators or by working with regional and thematic groups (Westerink et al., 2020). Most likely, collectives without LECs can focus more on the execution of the work and the quality of employees, without having to invest time and

**Table 1.** The average results of the assessment of the professionalization criteria for all 38 collectives expressed as the mode of scores: (1) very poor (red); (2) poor (orange); (3) fair (yellow); (4) good (light green); (5) excellent (dark green).

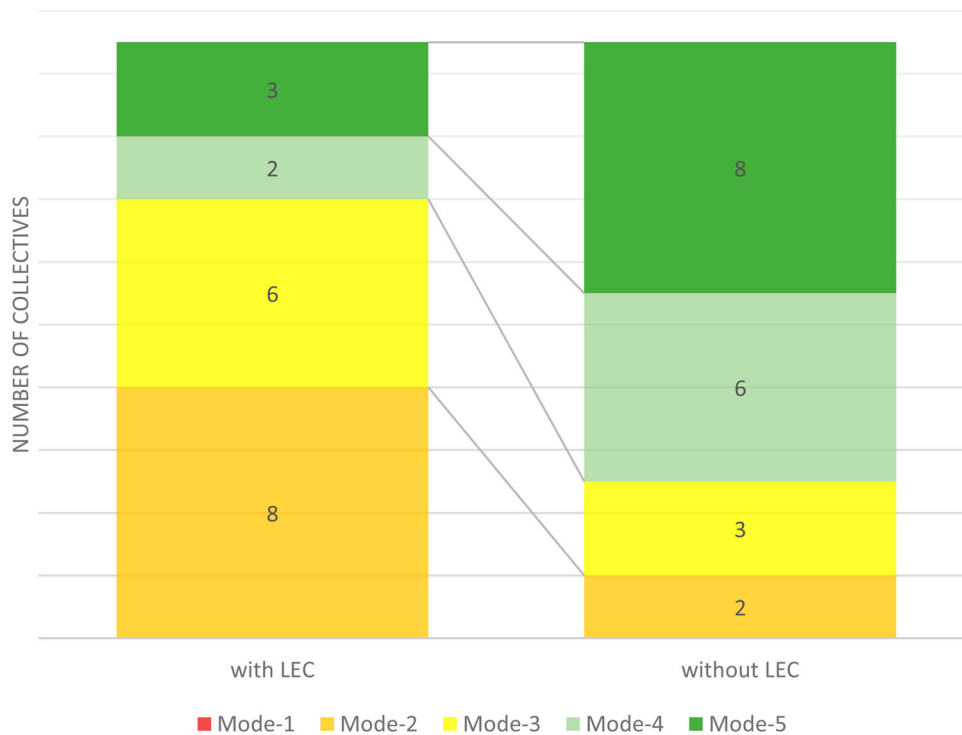
Organisational professionalisation		Mode
A common and shared strategy that has been worked out in aspirations, goals and strategy	What agro-biodiversity do we want to achieve in the long term?	2
	What kind of farmer collective do we want to be?	2
Organisation structure	Organisation structure of the primary process is in line with the strategy	3
	Leadership shared between board and executive organisation	5
	Duties of board and executive organisation are segregated	5
Presence and use of the enabling systems for	Agro-biodiversity (e.g. location of agricultural nature management contracts, monitoring)	3
	Business support systems (e.g. finance, HR)	2
Learning organisation	Presence of a knowledge programme	4
	Is there experimentation and innovation?	4
Occupational professionalisation		Mode
Description of qualifications and people meet the qualifications	Board members	5
	Executive organisation	5
	Participants	5
Maintenance and development of qualifications	Board members	2
	Executive organisation	5
	Participants	2
Systemic professionalisation		Mode
Network capability	Build, handle and exploit relationships based on trust and reciprocity	4
Policy-making capability	Ability to identify opportunities and active in agenda setting and raising awareness in line with the strategy	1
Entrepreneurial capability	Ability to 1: Create opportunities for innovation; 2: Build coalitions and collaborate; 3: Exploit financial business opportunities and 4: Execute actions	3

effort in the relationship with LECs. This is in line with the expectations the collectives had who disbanded the LECs. They disbanded the LECs because of the opportunity to create a more efficient and high-quality organization, for example by developing a more professional work organization, keeping authority within one organization, only one membership required for participants and fewer board members.

#### 4.3. Differences in professionalism based on scale

The collectives varied in size (67–1318 members). Nineteen collectives had less than 250 members (5 of these had less than 100 members) and 19 had over 250 members. As already noted, all farmers participating in the AES must be members of a collective. The more members a collective has, the more coordination





**Figure 3.** Differences in the degree of professionalism of the 38 collectives based on history (presence of Local Environmental Cooperatives (LECs)) expressed in terms of the mode: (1) very poor (red); (2) poor (orange); (3) fair (yellow); (4) good (light green); (5) excellent (dark green).

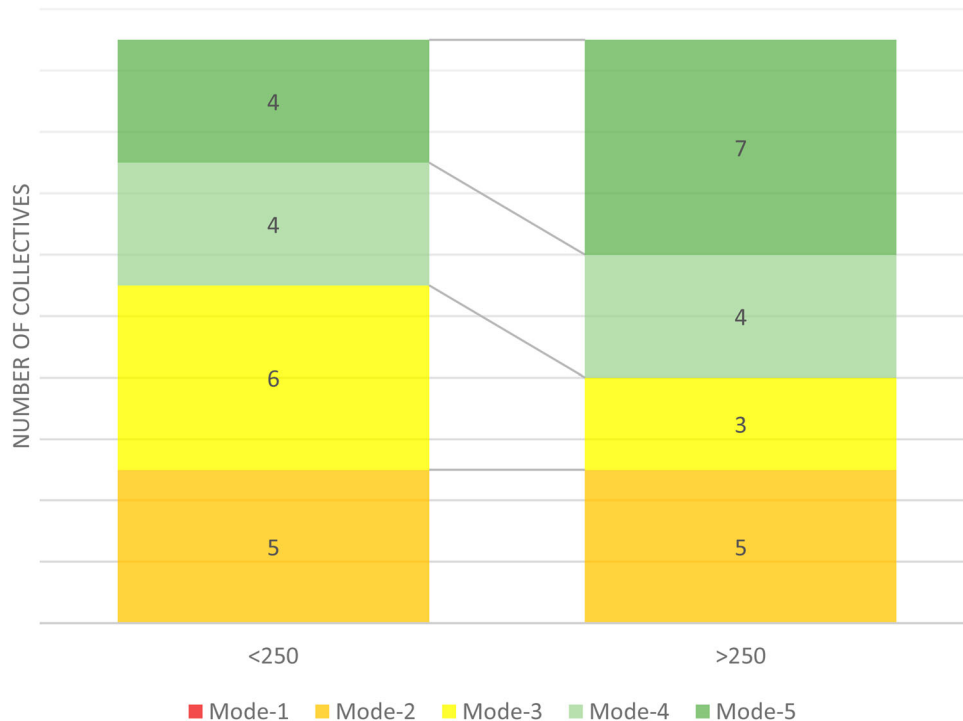
and overview of the work and the results is required. Therefore, we expected collectives with larger memberships to score better on professionalism than smaller collectives. Indeed, Figure 4 shows that collectives with over 250 participants had higher scores than smaller collectives. It seems likely that larger collectives benefit from economies of scale, which makes the coordination of activities more efficient. The budget of collectives is also related to the number of members, so the benefits mentioned in 4.3 have an influence on the organizational professionalization of larger collectives: they allow a board and a team with complementary capabilities and specialism to be established and time to be invested in developing the quality of the collective's members.

#### 4.4. Difference in professionalism based on resources

Figure 5 shows the differences in professionalization based on available budget and Figure 6 the differences based on available budget per member. The annual available budget ranged from €210,000 to €6,900,000 in total and from €3177 to € 14,107 per member. Half of the collectives that participated in the study had an

annual available budget of less than €1.65 million and €5750 per member. Therefore, we used these amounts as the limit for comparison. Figures 4 and 5 show that collectives with a higher available budget or budget per member scored better on professionalism. This is to be expected because professionalized non-profit organizations are more likely to meet governments requirements for funding (Lu, 2015). But also funding history, diversification and network capacity (relationship building process) are important to get funding (Lu, 2015). So professionalization of the organization helps in acquiring more resources (Maya-Jariego et al., 2020; Suarez, 2010). In addition, a higher budget creates opportunities to recruit more people and to recruit people who meet higher quality standards, to create a team with complementary qualities and to invest in developing individuals' capabilities. More capacity means more time to work on a strategy and makes it possible to segregate duties between board and executive organization. More budget also makes it easier to invest in supporting systems, and to build and maintain the collective's network based on trust and reciprocity. All this is likely to lead to more professionalism.

To avoid resource dependence (Lu, 2015), most collectives try to diversify their resources through acquisition of



**Figure 4.** Differences in professionalism of the 38 collectives based on scale (number of members) expressed in terms of the mode: (1) very poor (red); (2) poor (orange); (3) fair (yellow); (4) good (light green); (5) excellent (dark green).

funding for projects in addition to the regular agri-environment scheme. Such projects may involve the management of landscape elements or nature areas or advising farmers on nature-inclusive farming, for example, and can be proposed to a variety of stakeholders, including municipalities and waterboards.

## 5. Discussion and conclusion

### 5.1. Reflection on results

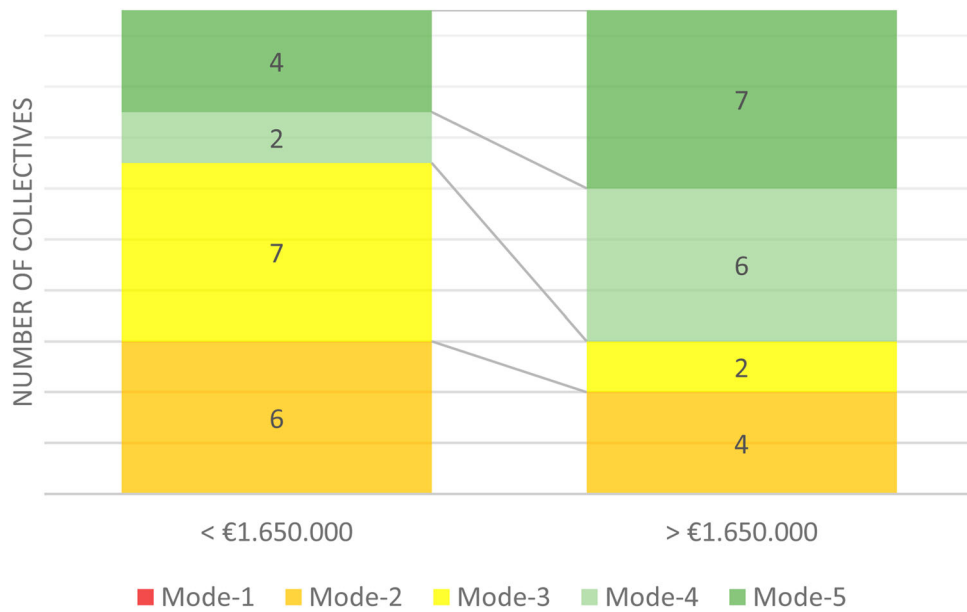
The collectives are independent private legal entities. Most of them have succeeded LECs in their area. Different pathways of professionalization are unavoidable, despite the collectives' cooperation in SCAN (Stichting Collectief Agrarisch Nederland, the temporarily umbrella organization) and later in BoerenNatuur. Moreover, differences between collectives may be desirable because their working areas and local networks are different. The local embedding of agri-environmental management is one of the reasons for the collective approach.

The development of the certification process, including the quality assurance manual, was the first step in the professionalization process (Westerink

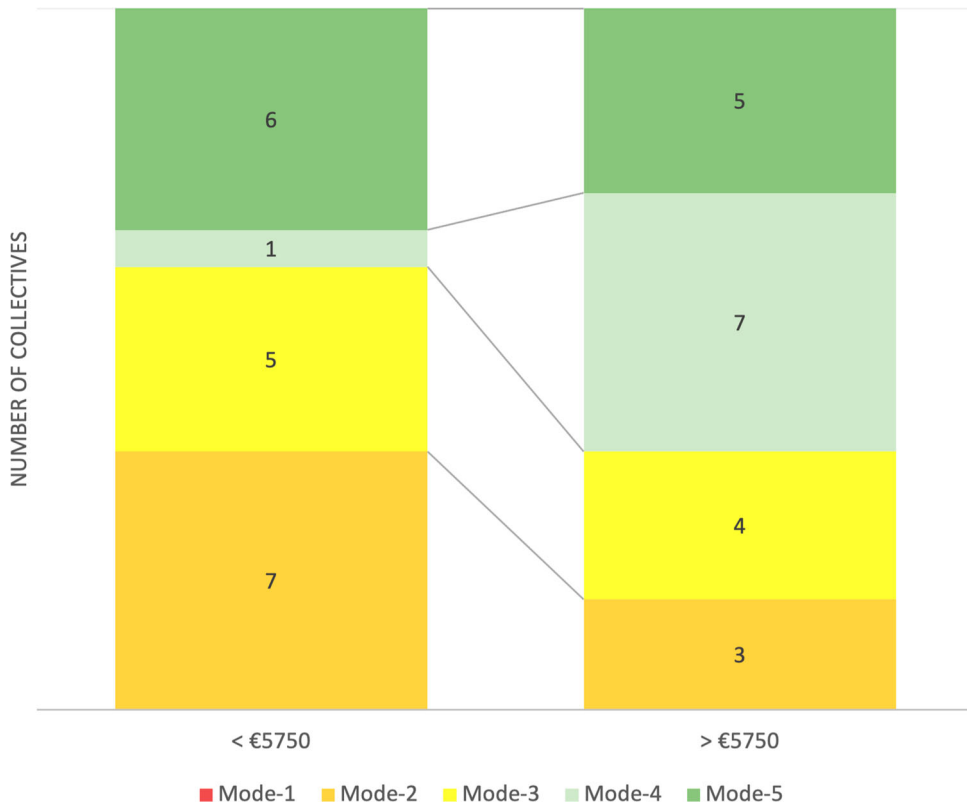
et al., 2020). The emphasis put on organizational and occupational aspects in this certification has resulted in excellent professional collectives in terms of shared leadership (19 collectives), segregation of duties (21 collectives), and the presence of qualifications (board: 10 collectives; executive organization: 25 collectives; members: 21 collectives) (see Table 1). However, this internal focus implied less attention was paid to aspects of systemic professionalization, particularly to policy-making and entrepreneurial capabilities. This is reflected in lower scores for these aspects. It may be expected that the policy-making and entrepreneurial capabilities will gain importance when collectives mature and broaden their scope. Currently (2023), various collectives are being requested to become involved in all kinds of agri-environmental and rural development projects, for example, by local and regional governments.

All 38 collectives, including the 11 with an overall excellent score, have criteria where improvement is possible: a common and shared strategy; making better use of the available information; and investing in the development of board members and ordinary members.

There are differences in professionalization based on history, resources and scale. The 19 collectives



**Figure 5.** Differences in professionalism of the 38 collectives based on resources (available budget) expressed in terms of the mode: (1) very poor (red); (2) poor (orange); (3) fair (yellow); (4) good (light green); (5) excellent (dark green).



**Figure 6.** Differences in professionalism of the 38 collectives based on resources per member expressed in terms of the mode: (1) very poor (red); (2) poor (orange); (3) fair (yellow); (4) good (light green); (5) excellent (dark green).

with no LECs in their organization scored better on professionalization than the collectives that kept their LECs. Collectives without LECs can probably focus more on the organization, people in the organization and the external developments. The collectives that had more budget available probably scored better because they could employ more people of better quality. And the larger collectives presumably scored better because they benefit from the economies of scale.

## 5.2. Reflection on methodology

### 5.2.1. Assessment framework

The assessment framework used in this study provides a useful insight into the degree of professionalization of the Dutch farmer collectives after three years of coordinating AESs. It allowed us to detect differences in professionalization and the variation between aspects of professionalism among collectives. We did not examine the relationship between the framework's categories, although it is likely that the three categories of professionalization are interrelated (Dik et al. 2021). Choices made in one category have consequences for other categories. For example, the elaboration of a knowledge programme has consequences for the maintenance and development of qualifications, and requests from the network can have consequences for the strategy chosen.

### 5.2.2. Online survey

The structure of the questionnaire and the answers of the collectives were decisive for the assessment and the results of the study. This meant, for instance, that not every question counted equally towards the score of a criterion of professionalization of the assessment framework. Furthermore, for several questions, the answers and the background information available were very limited, which may have influenced the assessment. A follow-up study with in-depth interviews (on sub-questions) could yield more complete results. Assurance of confidentiality probably benefited the quality of the responses to the questionnaire.

### 5.2.3. The assessment

The assessment of the collectives was based on the research team's interpretation and appreciation, on the basis of various sources of information that were provided by the collectives.

Despite applying a sound methodology and in an attempt to reduce bias and differences of interpretation, the assessment remains normative. In the

overall assessment, all criteria had equal weight, but some may be considered more important for professionalism than others. For example, having a strategy may have more impact on professionalism than other criteria because having a strategy is important for making choices in relation to the other criteria. Giving different weight to the various criteria is a normative choice that can be made when applying the assessment framework. Such choices should be explained and made transparent.

## 5.3. Scope of the research

Giving a role to professional collectives in the implementation of the AES was expected to contribute to increasing effectiveness and to reducing bureaucracy (de Snoo et al., 2016; Westerink et al., 2020). Our study did not aim to establish the impact of professionalization of farmer collectives on the ecological effectiveness of AES, but it can be expected that a shared strategy on agrobiodiversity, monitoring and evaluation of results, learning and development of ecology knowledge will contribute to farmer collectives achieving more agrobiodiversity (Dik et al., 2022).

One of the aims to improve the quality of AES by professional farmer collectives was to increase farmer involvement by building on the quality of social relationships within the farmer collective (Barghusen et al., 2021; Pretty et al., 2020; Westerink et al., 2021). Our study did not investigate the impact of professionalization on social capital and the willingness of farmers to participate. Westerink et al. (2021) feared that a specific interpretation of 'professional' could create a distance between a collective and its farmers. This suggests that a professional collective that remains close to its identity as self-governing farmer group can also be effective in recruiting farmers (see also Barghusen et al., 2022). Indeed, we would expect that working on a shared strategy, network capacity and investing in the learning culture together can enhance farmer involvement and will have a positive impact on the effectiveness of AES.

In addition, external factors can also influence effectiveness of AES, such as other policies, the market and climate change (Bareille et al., 2021).

## 5.4. Conclusions

Collaboration between groups of farmers, government and other organizations is important to increase the effectiveness of AESs at the landscape scale (Franks, 2019;

Runhaar et al., 2017). This is actively promoted by European policies and subsidy schemes all over Europe (Dik et al. 2021; Schomers et al., 2021; Westerink et al., 2017a). The Netherlands opted to implement a collective Agri-environmental scheme in 2016. Our assessment, based on the research question ‘How professional are the Dutch farmer collectives and how can the differences in professionalization be explained after three years of coordinating agri-environmental schemes?’ revealed that the collectives have not developed in the same way but have addressed different criteria in their process of professionalization. Collectives with more members and/ or more budget were found to be more professional. In addition, a simple organizational structure without sub-organizations (LECs) benefitted professionalism. Overall, the process of professionalization has succeeded, but all collectives have aspects with room for improvement.

European policies and subsidy schemes throughout the EU encourage groups of farmers and civilians (collectives, cooperatives) to collaborate with public agencies. Such groups can learn from this study that professionalization implies paying due attention to various aspects and that pathways to professionalism can differ. In addition, they can learn that a simple organizational structure and having size in terms of budget and number of members support professionalism. Public agencies can learn from this study that farmer groups can differ in specific qualities, level of professionalism and phase in the professionalization process. Awareness of this can help prevent an ineffective one-size-fits-all approach to collaboration.

Repeating this research in the future to monitor the development of the collectives could yield additional insights. Examining collectives’ longevity, the threats and opportunities they encounter and the way that they adapt will improve understanding of the factors that make a farmer collective succeed or even collapse (De Moor, 2021). For such monitoring, the same method and assessment framework could be used. However, the assessment framework has been composed with the knowledge of today. As both the collectives and the conceptions of professional organizations are continuing to evolve, it may be necessary to adjust the criteria in future.

Follow-up research could dig deeper into the relations between the categories of professionalization and the relation with recourse, scale and organization for example by using more statistical correlations analysis. Furthermore, new research could compare the results of this study with the results of research into the ecological effectiveness of the Dutch collective AES, to test the

hypothesis that professional farmer collectives are well equipped to enhance the effectiveness of AES, for example by means of a Qualitative Comparative Analysis.

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No potential conflict of interest was reported by the author(s).

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## Appendix 1. Assessment framework

Category	Characteristics	Indicators				
		1	2	3	4	5
The assessment framework for characterizing the degree of organizational professionalization of farmer collectives (Dik et al., 2022).						
Organizational Strategy	A shared strategy (i.e. aspiration, goals and strategy) of which agrobiodiversity to achieve.	No strategy.	One or two parts of the strategy are partly common and shared.	One or two parts of the strategy are common and shared.	A complete strategy is partly common and shared.	A complete strategy is common and shared.
	A shared strategy (i.e. aspiration, goals and strategy) of the type of collective aspired to in order to realize the above.	No strategy.	One or two parts of the strategy are partly common and shared.	One or two parts of the strategy are common and shared.	A complete strategy is partly common and shared.	A complete strategy is common and shared.
Structure	The organization structure of the primary process of the organization follows the strategy.	No clear structure.	Part of the farmer collective has partly a clear structure that does not follow the strategy.	The farmer collective has a clear structure not following the strategy.	Structure of the organization partly follows the strategy.	Structure of the organization follows the strategy.
	Shared leadership.	No shared leadership.	Shared leadership in 25% of the activities of the farmer collective.	Shared leadership in 50% of the activities of the farmer collective.	Shared leadership in 75% of the activities of the farmer collective.	Shared leadership.
Enabling systems	Segregation of duties between board and executive organization.	No segregation of duties	For 25% of the board members there is a segregation of duties.	For 50% of the board members there is a segregation of duties.	For 75% of the board members there is a segregation of duties.	Complete segregation of duties.
	Presence and use of systems to monitor and evaluate the agrobiodiversity.	No systems to monitor and evaluate the agrobiodiversity.	Has some systems and doesn't or only partly reflects and adjusts in light of the monitoring and evaluation of the collective's performance vis-à-vis its strategy.	Has some systems and regularly reflects and adjusts in light of the monitoring and evaluation of the performance vis-à-vis its strategy.	Has all systems and doesn't or only partly reflects and adjusts in light of the monitoring and evaluation of the collective's performance vis-à-vis its strategy.	Has all systems and regularly reflects and adjusts in light of the monitoring and evaluation of the collective's performance vis-à-vis its strategy.
	Presence and use of systems to monitor and evaluate the	No systems to monitor and evaluate the	Has some systems and doesn't or only partly reflects and adjusts in	Has some systems and regularly reflects and adjusts in light of the	Has all systems and doesn't or only partly reflects and adjusts in	Has all systems and regularly reflects and adjusts in light of the

(Continued)

Continued.

Category	Characteristics	Indicators				
		1	2	3	4	5
	performance of the organization.	performance of the organization.	light of the monitoring and evaluation of the collective's performance vis-à-vis its strategy.	monitoring and evaluation of the collective's performance vis-à-vis its strategy.	light of the monitoring and evaluation of the collective's performance vis-à-vis its strategy.	monitoring and evaluation of the collective's performance vis-à-vis its strategy.
Learning organization	Knowledge programme.	No programme for the transfer of knowledge within the organization and for learning from others.	Minimal programme for the transfer of knowledge within the organization and for learning from others.	Limited programme for the transfer of knowledge within the organization and for learning from others.	Standard programme for the transfer of knowledge within the organization and for learning from others.	Extensive programme for the transfer of knowledge within the organization and for learning from others.
	Experimentation and innovation.	No experimentation and innovation.	Minimal experimentation and innovation.	Limited experimentation and innovation.	Standard experimentation and innovation.	Extensive experimentation and innovation.

The assessment framework for characterizing the degree of occupational professionalization of farmer collectives (Dik et al., 2022).

Occupational	Identification of qualifications	Qualifications identified for the various activities within the collective (members, board and employees) and people meet accordingly.	No identified qualifications available.	Identified qualifications are not adequately described and difficult to obtain.	Identified qualifications are not adequately described and obtained.	Identified qualifications are adequately described and difficult to obtain.	Identified qualifications are adequately described and obtained.
	Maintenance and development of qualifications	HR strategy available with follow-up interviews and the opportunity for personal development in order to maintain and develop qualifications. All participants, board members and employees participate.	No HR strategy.	Has a limited HR strategy. Members, board members and employees do not participate or participate only to a limited extent.	Has a limited HR strategy. Members, board members and employees all participate.	Has a clear HR strategy. Members, board members and employees participate only to a limited extent.	Has a clear HR strategy. Members, board members and employees all participate.

Category	Characteristics	Indicators					
		1	2	3	4	5	
The assessment framework for characterizing the degree of systemic professionalization of farmer collectives (Dik et al., 2022).							
Systemic	Network capability	Build, handle and exploit relationships based on trust and reciprocity.	Not able to build, handle and exploit relationships.	Able to build relationships based on trust.	Able to build and handle relationships based on trust.	Able to build, handle and exploit relationships based on trust.	Able to build, handle and exploit relationships based on trust and reciprocity.
	Policy-making capability	Identify opportunities and developments, active in setting the political agenda and awareness-raising, all in line with the strategy.	No policy-making capability.	Limited ability to identify opportunities and developments in line with the strategy.	Able to identify opportunities and developments in line with the strategy.	Able to identify opportunities and developments in accordance with the strategy but has limited activity in setting the political agenda and raising awareness.	Able to identify opportunities and developments in accordance with the strategy and is active in setting the political agenda and raising awareness.
	Entrepreneurial capability	1. Create opportunities for innovation, 2. Build coalitions and collaborate, 3. Exploit financial business opportunities and 4. Execute actions based on mutual understanding between a network of individuals and organizations.	No entrepreneurial capabilities.	Entrepreneurial capabilities in one of the four entrepreneurial capabilities.	Entrepreneurial capabilities in two of the four entrepreneurial capabilities.	Entrepreneurial capabilities in three of the four entrepreneurial capabilities.	Entrepreneurial capabilities in all four entrepreneurial capabilities.

## Appendix 2. Questionnaire

### Questionnaire to gain insight into the own organization

You hereby receive a questionnaire with the aim of gaining more (self) insight into where you stand as a farmer collective compared to other farmer collectives and whether you are ready for the future.

We ask you to complete the questionnaire with a few representatives from your collective. Answer the questionnaire by following the link <https://forms.gle/VTZNnL12sKt5ev5T9> [now invalid] and submit by 1 October at the latest, but earlier if possible because of the processing of data.

In the annex to the letter are the points of attention for completing this questionnaire. If you want to say more or give an explanation when answering the questions, you can do so at the end of the questionnaire. Or you can email the researchers ([onderzoekboerenatuur@gmail.com](mailto:onderzoekboerenatuur@gmail.com)).

All parties involved will treat the information provided as confidential. Each collective decides for itself whether their report can be shared with the other collectives (question 76) and whether it can be used for Lyda Dik's PhD research (question 75). No information traceable to individual collectives will go to BIJ12 or the provinces.

Email address: (must be filled in so the information can be saved in the meantime)

1. What is the name of the farmer collective? (Fill in required)

### Organizational – Strategy

The first questions of the questionnaire are about the collective's strategy for the future.

2. Has your collective drawn up a strategy statement (mission, ambition document, etc.)?
  - Yes
  - No
  - Still working on it
  - Other:
3. Do you use this strategy in considering the activities you do? Please explain.
4. What are you doing, or have you done to gain support for this strategy throughout the organization (among the board, executive organization and participants)?
5. What kind of collective are you now? (Multiple answers possible)
  - Executive organization for AES
  - Project organization for projects that have to do with increasing biodiversity through agriculture
  - Project organization for projects related to improving soil and water quality through farming
  - Project organization for projects related to the improvement of agriculture (e.g. development of sustainable energy on farms, replacement of asbestos roofs, transition to another form of agriculture, etc.)
  - Organization aimed at improving the income position of the farmer
  - An interest group for farmers in this area, which tries to influence policy and politics

- Other:
6. What kind of collective do you want to become in the future? (Multiple answers possible)
    - Executive organization for AES
    - Project organization for projects related to increasing biodiversity through farming
    - Project organization for projects related to the improvement of soil and water quality through farming
    - Project organization for projects related to the improvement of agriculture (e.g. development of sustainable energy on farms, replacement of asbestos roofs, transition to another form of agriculture, etc.)
    - Organization aimed at improving the income position of the farmer
    - An interest group for farmers in this area, which tries to influence policy and politics
    - Other:
  7. What are the most important species or habitats of species that you want to improve or conserve?
  8. What is the collective doing to improve or conserve these species habitats? (Multiple answers possible)
    - Using ecological knowledge
    - Building up network
    - Approaching new participants
    - Developing participants' knowledge
    - Innovative development
    - Other:

### Organizational – Organizational Structure

The organizational structure is how the collective is organized at the administrative level, in the implementation and the input of the members. But it is also about how the decision-making process is handled, the cooperation between the board and the executive organization, the role of the LECs and the input of the members.

9. Is there a general board and if so, what does it consist of? (Farmers, citizens, other organizations and number of people)
10. Is there a day-to-day board and if so, what does it consist of? (Functions and number of people)
11. Which organization is responsible for carrying out the tasks/projects of the collective? (Multiple answers possible)
  - LECs
  - Executive organization within the collective
  - Executive organization cooperating with other organizations
  - Other:
12.
  - a. How many members and donors does the collective have? And how is the membership built up (number of donors, citizen members, agricultural participants, private participants, landowners, other members)?
  - b. How is the member input into the organizational structure of your collective designed? (Multiple answers possible)
    - Council of Members
    - General Meeting of members (GM)
    - Other:

13. Has the organizational structure changed since its establishment? If so, how and why?
14. Do you plan to reorganize your organization in the next three years? If so, how and why?
15. When the collective was established, why was the decision made to maintain or not maintain LECs? And do you want to maintain or review this situation?
16. What are the board's duties and responsibilities of the board?
17. What are the duties and responsibilities of the executive organization?
18. How are the duties and responsibilities distributed in the executive organization, and is it mutually clear who does what?
19. Where do proposals and plans for new projects within the collective come from? (Multiple answers possible)
  - From the board
  - From the executive organization
  - From the members
  - Otherwise:
20. If board members are also part of the executive organization, how is the separation of responsibilities handled?

### Organizational – enabling systems

Enabling systems are the systems, rules and procedures used to monitor and evaluate the functioning of the collective.

21. What systems/procedures/protocols does the collective currently use?
  - a. Agrobiodiversity
    - Management monitoring protocol
    - Inspection protocol
    - Species monitoring
    - NDFF (National Flora and Fauna Databank)
    - Customized management (BOM)
    - Other
  - b. Business support systems
    - SCAN-ICT [a *BoerenNatuur* ICT system]
    - HRM
    - Project planning
    - Capacity planning
    - Shared email system
    - Other
22. What systems/procedures/protocols does the collective wish to use in the future?
  - a. Agrobiodiversity
    - Management monitoring protocol
    - Inspection protocol
    - Species monitoring
    - NDFF
    - Customized management (BOM)
    - Other
  - b. Business support systems
    - SCAN-ICT
    - HRM
    - Project planning
    - Capacity planning
    - Shared email system
    - Other

	Board members	Executive organization	Participants
Excursion			
Study circles			
Workshops			
Courses			
Sharing knowledge via newsletter and/or website			

23. Are there any other systems that the collective uses or desires to use, if so, which ones?
24. Do you use the information from these systems to evaluate your goals from the vision, both ecologically and organizationally?
  - a. Ecologically:
    - Yes
    - No
    - Sometimes
  - b. Organizationally:
    - Yes
    - No
    - Sometimes
25. Please explain your answer to the previous question here and indicate what you did with the results of the evaluation.

### Organizational – Learning Organization

A learning organization is one that enables its members or employees to adapt operations to the constantly changing environment by learning from each other, through training, and by encouraging creativity and innovation.

26.
  - a. What opportunities does the collective provide for people in the organization (board members, executive organization and participants) to learn from each other and others? (Multiple answers possible)

	Board members	Executive organization	Participants
Excursion			
Study circles			
Workshops			
Courses			
Sharing knowledge via newsletter and/or website			

- a. Do you offer any other opportunities to learn from each other?
27. How often does the collective invite members to meetings and gatherings?

- 1 time per year
  - 2 times a year
  - 3 times a year
  - 4 times per year
  - Other:
28. Are there any initiatives for innovation from within the collective? And how are these handled?
29. Are there also informal activities organized within the collective to strengthen the ties with and between the members, such as organizing excursions, a barbecue, or other activities?
30. How and where does learning from the experiences of other collectives occur?
- Excursions
  - Collaboration
  - Consultation at national or provincial level
  - BoerenNatuur Intranet
  - Knowledge circles
  - Monthly reports
  - Boerenatuur Day
  - Other:

### *Occupational – board members – Identification of qualifications*

Depending on their function, specific qualifications are set for board members. Board members serve voluntarily and are appointed by the ALV. The requirements for board members depend on the organization's strategy (what kind of organization do you want to be), but also how the board is composed and what role the board has.

31. What qualifications are included in the job description for the board?
32. What role do the job descriptions play in finding new board members?
33. Should a representative from an LEC on the board meet the job requirements, or is representation from an LEC more important?
34. How often have board members changed since the collective was established? (2016)
35. Is it difficult to find new board members, if so, why?

### *Occupational – Board members – Maintenance and development of qualifications*

36. How often are performance reviews conducted with board members?
- Once per year
  - Once every two to four years
  - Less than once every four years
  - Never
37. Who conducts these performance reviews (position)?
38. Are opportunities offered to board members for further development?
- Yes
  - No
39. How many board members participate in these?
- Everyone
  - Three quarters
  - Half

- One quarter
  - No one
40. How does the board wish to develop further in terms of knowledge and skills?

### *Occupational – Executive organization – Identification of qualifications*

41. What functions does the executive organization consist of?
42. What qualifications are included in the various job descriptions?
43. Are there different qualifications for people depending on whether they are hired, employees or volunteers? If so why?
44. How many people in the executive organization are volunteers (number of people and fte)?
45. How many people are employed (number of people and fte)?
46. How many people are hired (number of people and fte)?

### *Occupational – Executive organization – Maintenance and development of qualifications*

47. How often are performance reviews conducted with people in the executive organization?
- Once a year
  - Once every two to four years
  - Less than once every four years
  - Never
48. Who conducts these performance reviews?
49. Are there opportunities for people in the executive organization to develop further to continue to meet quality standards?
- Yes
  - No
50. How many people from the executive organization participate in this?
- Everyone
  - Three quarters
  - Half
  - One quarter
  - None
51. How do people from the executive organization wish to develop further in terms of knowledge and skills?

### *Occupational – AES Participants – Identification of qualifications*

52. What requirements are set for the selection of participants?
- Location of the site, spatial coherence, where management is needed
  - Ecological quality of the landscape elements, edges, or plot
  - Had previously done AES
  - Participant's motivation and commitment
  - Willingness for heavier management
  - Other:



53. How and by whom are potential participants approached?  
 54. Is it difficult to find new participants who meet the requirements? If so, why?

### *Occupational – AES participants – Maintenance and development of qualifications*

55. Is the quality of management discussed with the participant annually? If so, how is it dealt with?  
 56. What does the collective do to increase the knowledge level of the participants?  
 57. How many participate in this?  
 Everybody  
 Three quarters  
 Half  
 One quarter  
 No one

### *Systemic – Network capability*

The network of the agricultural collective (including the LECs) consists of various parties at local, regional and even national scale.

58. How is the relationship with other parties? Rate as none, moderate, sufficient, good or very good.  
 Municipality  
 Water board  
 Province  
 Government (RVO)[Netherlands Enterprise Agency]  
 Staatsbosbeheer [National Forestry Service in the Netherlands]  
 Natuurmonumenten [Society for the Preservation of Nature Reserves in the Netherlands]  
 Provincial Landscape  
 Federation for Land in Private Ownership (FPG)  
 Local chain parties  
 Local citizens' initiatives  
 Other agricultural collectives  
 59. How are these relationships maintained? Why does or doesn't this work well?  
 60. Which organizations are still interesting for the collective to approach?

### *Systemic – Policy-making capability*

61. Have you used your network to get relevant issues onto the political agenda? If so, what have you tried to get onto the political agenda? And how did you go about it?

### *Systemic – Entrepreneurial capability*

62. What projects are you currently working on with other parties? For example, sustainable dairy chain, landscape projects for municipality, pilot CAP.  
 63. Do you work together with other collectives, organizations or the business community?  
 64. What is/was your role in the establishment of the collaboration?  
 65. What is/was your role in the implementation of the projects?

66. Do you evaluate the projects after they are completed?  
 Yes  
 No  
 67. What will you do differently next time you collaborate on projects?  
 68. Are there plans to do more projects in the future?  
 69. How financially important for your collective are external projects?

### *Future of the Collective*

Now that you have answered the questions in this survey, we would like to ask you a few more questions about the future of your collective.

70. Where do you see the most opportunities for growth of the collective in the next 4–8 years?  
 more AES  
 more interpretation of the eco regulations  
 more projects on sustainable agriculture  
 more projects on biodiversity  
 Other:  
 71. In the past three years have you as an agricultural collective achieved more biodiversity with agricultural nature and landscape management? Award yourself a mark from 1–10 (nothing–super much).  
 72. What are the most important things that the agricultural collective will start working on in the short term to have even more impact on achieving more biodiversity?

### *Documents*

The documents you append here will be treated confidentially. Add documents:

- Strategy document
- The latest version of your quality assurance manual
- Reports of the certification audits
- Your organizational chart (if not included in the quality assurance manual)
- The budgets and annual accounts 2016–2022
- The job descriptions (if not included in the quality assurance manual)
- An overview of opportunities provided by the collective to those in the organization (directors, executive organization and participants) to learn from each other, training plan, training activities, knowledge development, etc.
- Reports of the annual conversations with the province (2016–2019)
- Other files that you think are relevant to the questions.

### *Closing questions*

73. What is the function of the people who completed this questionnaire (executive organization/board/participant)?  
 74. Who can the researchers contact for questions about the answers to this questionnaire (name, phone number, email address)?

75. Do you consent to these data being used for Lyda Dik's PhD research? The data will be anonymized and treated confidentially.
- Yes
  - No
76. May the answers from this questionnaire be shared with other collectives to learn from each other?
- Yes
  - No
77. Do you have any additional comments in response to this questionnaire?

Thank you very much for completing this questionnaire!

The collectives have until October 1st to complete the questionnaire. After this the data will be analyzed. At the end of April 2020, you will receive a report with the results.

### Appendix 3. Final coding framework

Final coding framework based on the characteristics of the assessment framework for characterising the degree of professionalization of the Dutch farmer collectives (Dik et al., 2022) (Appendix 1) and the questions of the questionnaire (Appendix 2).

Code I	Code II	Code III	Code IV	Code V	Questions	
Organization	Strategy	Agrobiodiversity	Aspiration	Not shared	2, 4, 7, 8, 71,72, reports, website	
			Goals	Partly shared		
	Structure	Kind of collective	Organization structure	Strategy	Shared	2, 4, 5, 6, 70, reports, website
				Aspiration	Not shared	
		Goals	Partly shared	9,10,11, 44,45,46		
		Strategy	Shared			
		No clear structure	Doesn't follow strategy			
		Partly clear structure	Partly follows strategy			
	Clear structure	Follows strategy	12, 19			
	Shared leadership (SL)	No SL				
		Partly 25% SL				
		Partly 50% SL				
Enabling systems	Learning organization	Segregation of duties (SD)	Partly 75% SL	16, 17, 18, 20		
			Complete SL			
			No SD			
			Partly 25% SD			
			Partly 50% SD			
			Partly 75% SD			
	Agrobiodiversity	Performance of the organization	Complete SD	21, 22, 23, 24, 25		
			No systems			
			Some systems			
			All systems			
			No systems			
			Some systems			
Knowledge Programme	Innovation	All systems	21, 22, 23, 24, 25			
		Don't use to monitor and evaluate the strategy				
		Partly use to monitor and evaluate the strategy				
		Regularly use to monitor and evaluate the strategy				
		Partly use to monitor and evaluate the strategy				
		Regularly use to monitor and evaluate the strategy				
Occupational	Identify qualifications	Board members	No	25,26,27,30		
			Minimal			
maintenance and development of qualifications		Board members	Limited	28		
			Standard			
			Extensive			
			No			
			Minimal			
			Limited			
		Board members	Standard	31, 32, 33, 34,35		
			Extensive			
			No			
			Some			
			Complete			
			No			
		Board members	Some	41,42, 43,		
			Complete			
			No			
			Some			
			Complete			
			No			
		Board members	Complete	52, 53, 54		
			No			
			Some			
			Complete			
			No			
			Some			
		Board members	Complete	36, 37, 38, 39		
			No			
			Some			
			Complete			
			No			
			Some			

(Continued)

Continued.

Code I	Code II	Code III	Code IV	Code V	Questions
		Employees	No Some		47, 48, 49, 50, 51
				Complete	
Participants	No Some Complete		55, 56, 57		
Systemic	Network capability	Build	No Some Yes		58, 60, 65, 66
		Handle	No Some Yes		59
		Exploit	No Some Yes		63, 64
	Policy-making capability	Identify opportunities	No Some Yes		19, 28, 65
		Agenda setting	No Some Yes		61
		Raising awareness	No Some Yes		58, 60
	Entrepreneurship	Create opportunities for innovation	No Some Yes		19, 28, 64, 65
		Build coalitions	No Some Yes		58, 60, 63, 64, 65, 66
		Exploit financial business opportunities	Not Some Yes		66, 68, 69
		Joint execution of actions	No Some Yes		63, 64, 66