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RESEARCH ARTICLE

Ecotourism as a mechanism for sustainable development: the case of Bhutan

CHHEWANG RINZIN¹, WALTER J. V. VERMEULEN², &
PIETER GLASBERGEN²

¹*Royal Institute of Management, Semtokha, Thimphu, Bhutan, and* ²*Utrecht University, Copernicus Institute of Sustainable Development and Innovation, Utrecht, The Netherlands*

Abstract

Over the last few decades, Bhutan has followed a controlled tourism policy, with a ‘high value, low volume’ strategy. This approach is based on the country’s sustainable development policy. In recent years, tourism has been identified as the backbone of private sector growth. To this end, a ‘high value, low impact’ strategy was adopted, which would allow for a doubling of the number of tourists in the next decade. Growing numbers of visitors could jeopardize the intended low impact on both nature and culture, which are the selling points of Bhutanese tourism. In this article, we examine the contribution of tourism to the sustainable development of Bhutan, focusing on the socio-economic, environmental and cultural impacts of present-day tourism. Information was gathered by conducting field surveys in the tourist sector and in rural communities, and by analysing financial data relating to tourism. The results indicate that tourism has the potential to stimulate private sector growth by producing spin-off effects in the related service sector and to transform the rural economy. The impact on culture and the environment is currently low. However, the expected growth may, if it is not managed properly, erode the unique nature of tourism in Bhutan.

Keywords: *Ecotourism, community impacts, nature conservation, cultural impacts*

1. Introduction

This article explores the effects of tourism development in Bhutan. The tourism policy is an essential element of the country’s explicit sustainable development policy: The development philosophy built on the premise that Gross National Happiness (GNH) is more important than Gross Domestic Product (GDP) (see also Rinzin et al. 2007b). This implied a policy of controlled tourism that was grounded on the firm belief that uncontrolled tourism would overburden Bhutan’s limited facilities and threaten the traditional culture, values and the environment. Impacts of mass tourism on both environment and culture in neighbouring countries were instructive in adopting this approach.

As a small, land-locked country, Bhutan tries to preserve the environment and Buddhist culture in its natural state. However, the country is going through an irreversible societal

Correspondence: Walter J. V. Vermeulen, Utrecht University, Copernicus Institute of Sustainable Development and Innovation, Utrecht, The Netherlands. E-mail: w.vermeulen@geo.uu.nl

transition. It is changing from a rural society based on subsistence farming to a society with a growing services sector that increasingly relies on tourism and the export of hydro-energy for economic growth. The country is also witnessing the first cultural impacts since opening up to globalization. Meanwhile, the government system is changing from a closed centralized monarchy into a democratic constitutional monarchy with a decentralized system of governance.

At the same time, Bhutan enjoys a special position in the international arena by explicitly taking sustainable development as the central objective of its development policy and thus embracing ecotourism as the national tourism development objective (Rinzin 2006).

Modern tourism in Bhutan began in the 1970s, when western Bhutan was opened to international visitors for the first time. Bhutan's tourism has since undergone a transformation. In 1991, the state monopoly ceased with the privatization of the tourism industry and the opening up of the business to Bhutanese entrepreneurs. This move was designed to kick-start private sector development and, at the same time, attract badly needed hard currency for the country's economic development. To minimize negative impacts on the national socio-cultural and ecological heritage, the country adopted ecotourism as the national tourism strategy and decided to pursue a 'high value, low impact' policy.

These developments bring us to our specific research question for this article. In light of the original ambitions of Bhutan's tourism policy and the recent change to the 'high value, low impact' principle, our *core question* for this article is: *What are the socio-economic, environmental and cultural impacts of the tourism policy of Bhutan and what can be expected from the anticipated growth of tourism in the next decade?*

The question relates to the debate in international literature on the potentials of ecotourism for generating wealth in developing countries. In section 2, we will briefly discuss the arguments for and possible threats of ecotourism in relation to developing countries. After presenting the research methods in section 3, we will discuss the main development in tourism policy and in the market in sections 4 and 5. Subsequently, we will present our empirical results on the socio-economic, environmental and cultural impacts in sections 6–8. In section 9, we will discuss the challenges of future growth of tourism and the last section contains the conclusions.

2. Ecotourism as a mechanism for sustainable development

Tourism is the fastest-growing economic sector in the world, especially in developed countries. This growth can be attributed to changing lifestyles in affluent societies, with people seeking more leisure and showing more concern for the quality of the environment (Veenhoven 1999). Travelling from rich countries to developing countries is a growing segment of this market. The need for leisure combined with the desire to enjoy serenity and pristine natural beauty and to experience different cultures forms the basis of overseas travel to exotic destinations. This rapid growth of tourism in the developing countries has raised expectations that tourism can be an agent of socio-economic development (Tapper 2001).

Two broad categories of tourism have been identified: Mass tourism and alternative tourism (Wood 2002). Over the years, alternative tourism has been further segmented into nature, rural community-based and cultural events-oriented tourism. Consequently, the concept of 'ecotourism' was born out of natural tourism (Srinakharinwirot University 1992; Lumsdon & Jonathan 1998; Wood 2002). Nowadays, according to Hall (2004), ecotourism is often viewed as an easy entry to niche tourism markets, drawing on a perceived 'inexhaustible' supply of natural products and gesturing towards ideals of sustainability and environmental awareness. However, Hall (2004) also stated that the specific meaning and implications of the

term are not clearly articulated. At least three elements of ecotourism can be distinguished: First, the experience of close contact with nature and people from different cultures; second, the choice of forms of tourism that maximize revenues for poorer people rather than large (international) tourism companies; and third, reducing the overall environmental impact of travel (Fennell & Dowling 2003). Different definitions of ecotourism place varying emphasis on each of these elements, but increasingly scholars tend to stress the combination of these three elements. In this sense, Bjork (2000) argues that ecotourism is not farm tourism, nature tourism or adventure tourism, but a unique form of tourism that recognizes the close relationship between good ecology and good economics (Bjork 2000). Wood (2002) speaks of 'Responsible travel to natural areas that conserves the environment and sustains the well being of local people.' (Buckley 1995; Wood 2002).

At the institutional level, it is this combination that is stressed by the International Union for the Conservation of Nature and Natural Resources (IUCN), which defines ecotourism as 'environmentally responsible travel and visitation to relatively undisturbed natural areas, in order to enjoy and appreciate nature (and any accompanying cultural features – both past and present) that promotes conservation, has low negative visitor impact, and provides for beneficially active socio-economic involvement of local population.' (Lascurian 1996).

Basically, ecotourism implies balancing needs and impacts, linking local economic benefits in the supply chain of tourism on the one hand with preservation of ecology and social and cultural impacts of development on the other (Welford 2000; Bramwell & Alletorp 2001; Tapper 2001). Experiences elsewhere, for example in Costa Rica, have shown that, although it is the benefits that are stressed, adverse impacts can still occur (Miranda 2003). At least four groups of actors play a pertinent role in achieving the required balance: Governmental authorities, the tourism business sector, tourists and local people (Bjork 2000).

In this article, we examine whether in the case of Bhutan this necessary balance has been achieved and can be maintained in the future. Bhutan presents a very interesting case study in the field of ecotourism as it combines promotion of high-value ecotourism with a very specific form of government policy, which, as we show in section 4, can be labelled 'controlled liberalization'.

3. Research methods

To answer the research question, we assessed the three types of impacts mentioned in the question and analysed the practical implementation of tourism policy in Bhutan. For this policy analysis, we used field study and interviews, as well as information in published and unpublished government documents. To assess the socio-economic impacts we analysed the added value in the tourism supply chain and the contribution of the tourism sector to the national economy. This analysis was based on data provided by businesses in the sector and on available statistics. We collected financial data about annual expenditures from a sample of six tour operators (two large, two medium-sized and two small). In addition, interviews were conducted with 46 tour operators and 45 hotel and restaurant owners.

The assessment of the economic and cultural impacts of tourism takes into account the perceptions of various stakeholders involved, including tour operators, hotel and restaurant owners and local communities. For this purpose, interviews were conducted with tour operators, hotel and restaurant owners and 97 households in various local communities that have been exposed to regular tourist visits. In addition, we used our own observations in the field in combination with available data.

The interviews with tour operators, hotel managers and members of local communities were carried out in August 2005. We used pre-designed, structured questionnaires. A group

of 20 interviewers was recruited. Although all had previous experience in data collection from remote rural locations, they were given a week's training in the techniques of interviewing and in translating the questionnaire into the relevant local dialects.

The districts and villages where the interviews would be held were selected in advance in relation to trekking routes and cultural sites. The interviewers were then selected on the basis of the region they came from, as they would be able to communicate in local dialects. The physical fitness of the interviewers was also a factor as the job required strenuous trekking for days without proper food and shelter. Other criteria included the mastery of the local dialect and being unafraid of insects, leaches, wild animals or of travelling through thick jungles. In the course of their work the interviewers conducted observations of pollution on trekking routes (covering six out of the approximately 13 trekking routes). The assistance of various state representatives working in remote rural areas was requested through government channels.

The interviews covered eight districts encompassing the major tourist destinations. Active tour operators were randomly selected and interviewed in the same period. Furthermore, the same members of the interview team simultaneously conducted interviews with hotel and restaurant managers in six districts with a separate questionnaire. We interviewed 45 hotel and restaurant owners randomly selected from the 86 that are approved by the Department of Tourism for both international and Indian tourists. The data was processed using SPSS.

4. Bhutan's tourism development policy

Bhutan started tourism in the 1970s with a deliberately cautious approach combining both the experience of nature and culture with having minimum impact. We can see this combined approach in the contemporary perception of Bhutan's government towards ecotourism, defining it as 'styles of tourism that positively enhance the conservation of the environment and/or cultural and religious heritage, and respond to the needs of local communities' (RGoB 2001). This combined approach is reflected in the 2001 Ecotourism Strategy, which encompasses six main features:

- *Guiding principle: 'high value, low impact'.* The belief that uncontrolled tourism will overburden Bhutan's limited facilities and threaten the country's traditional culture and values and its environment has instigated the government to adopt a 'controlled tourism' policy. Originally, this led to a 'high value, low volume' policy, which was implemented through a system of all-inclusive high tariffs (US \$200 per head per day for cultural tourist and trekking and \$120 for trekking) for tourists and a set of administrative regulations designed to restrict accessibility and ensure quality services. Since 1997, a flat tariff was introduced for both culture and trekking (US \$200 per day per head). Thus, the tariff has no effect on the type of tourism; the choice is left to the tourists themselves.
- It has developed from a *state monopoly* into a *semi-controlled/semi-liberalized market*. Initially, the tourism business was controlled by a state monopoly. Persistent pressure from the private sector led to a major shift in Bhutan's tourism policy in the 1990s, when the government decided to privatize the tourism business and open it up to Bhutanese tour operators. Despite the liberalization, the government still heavily controls the operating practices in the tourism industry and the monetary flows.
- *Tourism market is restricted to domestic entrepreneurs, who are usually small-scale operators.*
- *Tourism is restricted to specific regions.* Currently, tourist activities are concentrated in the Western and Central part of Bhutan, while the Eastern and Southern Bhutan are not officially open to foreign tourists.

- *Seasonal nature of tourism.* Tourism is seasonal due to climatic conditions and the schedule of traditional religious festivals. Thus, the peak tourist season coincides with religious festivals during April/May and September/October.
- *Tourism is focused on nature and culture.* Tourists visit Bhutan to witness Mahayana Buddhist culture, pristine mountains and natural beauty.

Tourism is viewed as the key to unlock national economic development. So, tourism is receiving more attention as a core element in the national development policy, as it has the potential to:

- increase the contribution of tourism revenue to the national economy;
- generate revenues, especially foreign currency;
- promote awareness of Bhutan's rich cultural, spiritual and ecological heritage elsewhere in the world; and
- increase employment opportunities and bring equitable distribution of income in the Bhutanese society.

The National Ecotourism Strategy implies that the marketing strategy for Bhutanese tourism will focus on the niche market of culture and nature without limiting the number of visitors. However, the new general tourism policy: 'low volume' to 'low impact', challenges tourism development planners to adopt new perspectives.

5. Development of the tourist market (1990–2004)

In this section, we will discuss the development of tourism over the last 15 years, with the emphasis on the most recent changes. We will look at the volume and composition of the tourism market on the supply side (the tourism business) and the demand side (the tourists).

5.1. Local market share

Starting with the supply side, the local market grew from 33 licensed tour operators in 1991 – 1994 in 2001 and then jumped to 169 in 2004. This indicates that the tourism sector is profitable and yet competitive. Bhutanese tour operators depend entirely on the co-operation of foreign travel agencies in the developed world for tourists. A few large tour operators have constantly dominated the top four positions in terms of market share since 2000. Together they have controlled over 44% of the total market until 2002. However, their combined market share has been declining in the last 3 years, due to new entrants in the market. The competition is expected to stiffen in the future with the liberalization policy of the government. New international firms in collaboration with local tour operators will penetrate the market and give stiffer completion to local operators.

Tourism provides a good basis for family enterprise. Some 78% of tour operators surveyed showed that they are family owned and majority (85%) of them depended on foreign tourists for their income, while some 15% were dependent on both foreign and Indian tourists.

5.2. Tourist arrival trends

Development of tourism on the demand side very much reflects the supply side. Figure 1 shows the trend over the last 21 years. Prior to liberalization (1991), the number of tourists visiting the country was small. After liberalization, there was a period of strong growth of over

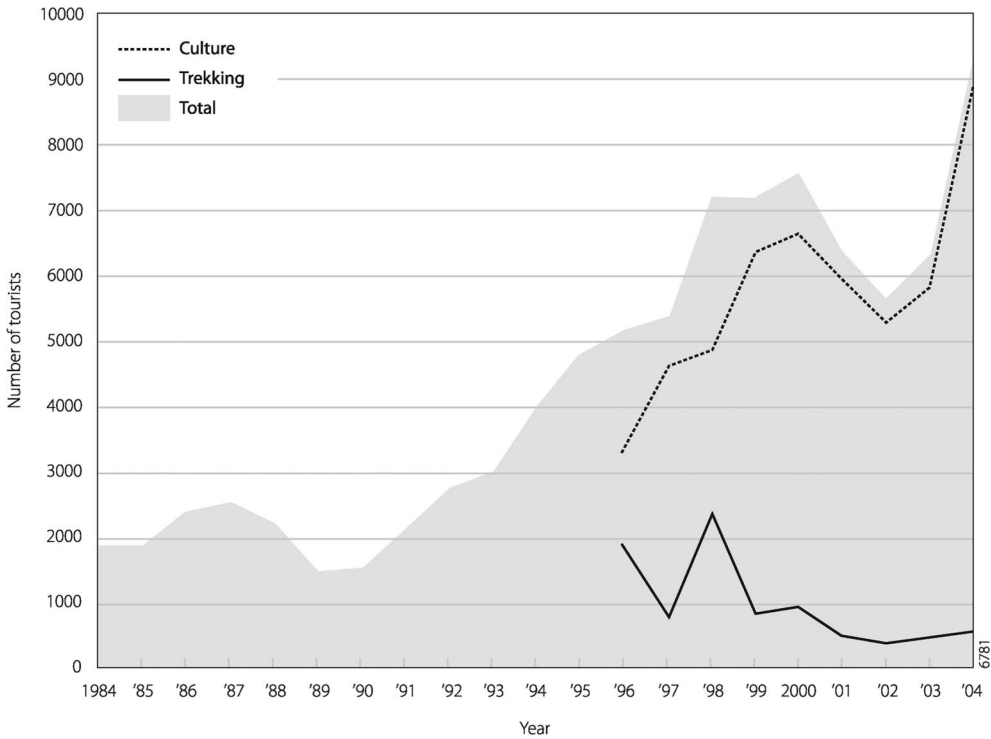


Figure 1. Development of tourists entering Bhutan (and main objectives) (Source: RGoB 1997; RGoB 2001; DoT 2004).

30% in the period from 1991 to 1992, followed by steady annual growth of over 11% on average. This growth slowed temporarily in 2001 following the 9/11 terrorist attacks in the USA. The recession in the Japanese economy was another partial explanation. Other contributing factors were increases in airline capacity and expansion of tourist infrastructure. But growth picked up again in 2003 and 2004. In 2004, the number of visitors increased by 48% compared with 2003. In 2005, it is expected to reach an all-time high. By the end of the third quarter, some 10 000 visitors had already entered the country.

Tourism in Bhutan consists of two main interest groups: Trekking and culture. Until 1997, the tariff structures for trekking and culture were different. In 1997, a uniform tariff of US \$200 per day was introduced for both trekking and culture. Since then there has been a decline in the trekking market segment in relation to the cultural segment.

In recent years, a few specialized Bhutanese tour operators have ventured into niche markets through product differentiation. The visitors are categorized as ‘special interest groups’ with interests including bird watching, fishing, botany, traditional medicine, mountain biking, rock climbing, religious study and meditation. Some individuals, particularly from the Asian and US markets, are attracted by the Buddhist culture.

5.3. Market distribution by geographical region

The North American and West European market segments dominate Bhutan’s tourism market. Table I shows that since 2000, the North American tourists started dominating the Bhutanese tourism market with over 38% on average. This market segment is still growing.

Table I. Distribution of the country of origin of tourists in Bhutan (1993–2004).

Country of origin	1993 (%)	1997 (%)	2000 (%)	2004 (%)
North America (USA and Canada)	23.4	19.6	39.9	37.9
Japan	21.3	21.9	11.6	11.8
Western Europe	48.1	44.5	36.8	35.5
Australia	1.9	2.3	2.4	3.4
Others	5.3	11.7	9.3	11.4
Total	100	100	100	100

Sources: RGoB (2001); DoT (2004).

Prior to this, Western Europe dominated the market from 1993 to 1997 with 45% market share on average, while the Japanese market segment has showed a declining trend since the mid 1990s.

In general, the average length of a stay is approximately 8 days; the Swiss and Austrians stay longer (11 and 10 days) and the Japanese stay for a shorter period (6 days). No official data exist for Indian leisure visitors. Indian tourists can enter Bhutan as free and independent travellers either with Druk Air or by road with their own transport.

5.4. Distribution of bed nights

The wider distribution of bed nights¹ could lead to a more even distribution of income in more remote parts of the country. But rough terrain and difficult access by road are major obstacles to tourism development. As a result, most tourists stay in Thimphu, the capital city, Paro, the site of the international airport, and the Punakha triangle. As Figure 2 shows, tourist visits were concentrated in only eight of the country's 20 districts. Among those eight districts, most bed nights were spent in Thimphu and Paro, which together accounted for 54% in 2004. The other two districts close to the capital (Punakha and Wangdi) accounted for 22% of all bed nights in 2004. In central Bhutan (Trongsa and Bumthang) the share of bed nights declined from 19% in 2000 to 17% in 2004. More remote regions in the east and the south attract few visitors because they are not officially open to tourists.

5.5. Seasonality of tourism

Tourism in Bhutan is strongly influenced by climatic conditions and cultural festivals. Figure 3 shows that March to May and September to November are the most popular tourist seasons. In terms of bed nights, April and October account for almost half (46%) of all annual bed nights. These two months are not only congenial for trekking but also coincide with religious festivals. The seasonality of tourism causes serious problems in view of the limited facilities and limited number of trekking routes. Tour operators first encountered this problem during the October season in 2005 at the Bumthang cultural festival and on the half-day trek to Tiger's Nest in Paro. The seasonal nature of tourism has been a cause of concern for the government, so efforts are being made to attract visitors in all seasons.

Until now it was assumed that the seasonal nature of tourism was due to the timing of major religious festivals and weather conditions during the four seasons. However, a survey conducted by the Department of Tourism (DoT) in October 2004 revealed that for 30% of respondents the timing of the visit was based on a recommendation by the agent, 17% based it

10% Percentage in 2000
 10% Percentage in 2004

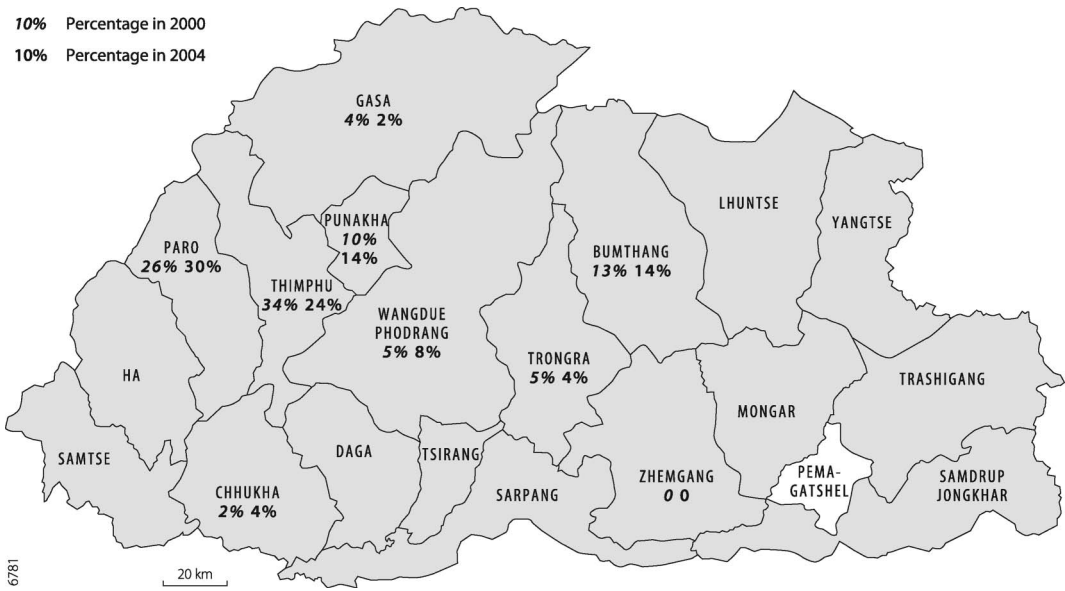


Figure 2. Percentage of bed nights spent in regions.

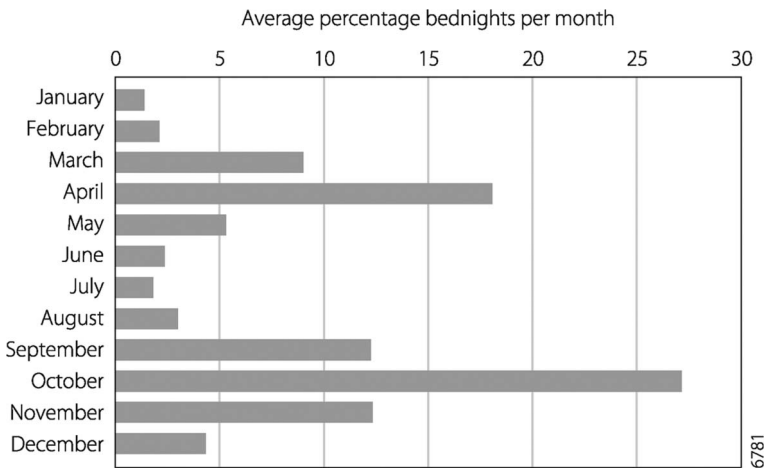


Figure 3. Average % bed nights spend per month (2000–2004) (Source: DoT 2004; RGoB 2005).

on the schedule of religious festivals and only 14% based it on the expected weather (DoT 2004). This suggests that agents need to be provided with better information about the religious festivals.

6. Socio-economic impacts

In assessing the socio-economic impacts of tourism, we will first look at the distribution of the benefits from tourism in the value chain in the related service sector before discussing tourism’s importance for national economic development.

Figure 4 shows the inflows and outflows of revenue from tourism in Bhutanese society and beyond. Using financial data from tour operators, hotels, Druk Air Corporation, national statistics and the national budget and accounts, we were able to create this flow chart showing the transaction movements of major expenses incurred by tour operators and tourists. The figure gives an indication of the extent to which the fixed tariff of \$200 a day and the additional charges (taxes and air ticket) contribute to the development of the country and improving the material well-being of the people.

The foreign agencies abroad deduct 10% commission from the gross tariff paid by tourists (\$200). Of the remaining 90%, the government takes 35% in royalties and 2% in tax. Another \$10 per tourist per visit is deducted at source as a contribution to the Tourism Development Fund (TDF), which is managed by the Association of Bhutanese Tourist Organizations (ABTO). The net balance of approximately \$113 (53%) is available to tour operators to meet the costs of their business. Analysis of financial statements of 10 tour operators showed that they spend an average of \$39 on hotels and food and a smaller amount (\$11) on administration and overheads.

In the service sector business, transactions follow a circular path: One party's expenditure forms the basis of another party's income. We asked tour operators to rank the top five items of expenditure each year in descending order. A large majority (72%) of the respondents ranked hotel expenses as the highest expenditure, followed by vehicle expenses (54%), marketing (9%) and salaries and rent (26%). Animal transport, which is directly beneficial to local people, is ranked the seventh highest item of expenditure (9%). These figures give an idea of the pattern of distribution of tourism revenues in Bhutan.

A similar survey was conducted simultaneously across the country among hotels and restaurants for foreign and Indian tourists. The survey covered 46 of the 68 DoT- approved

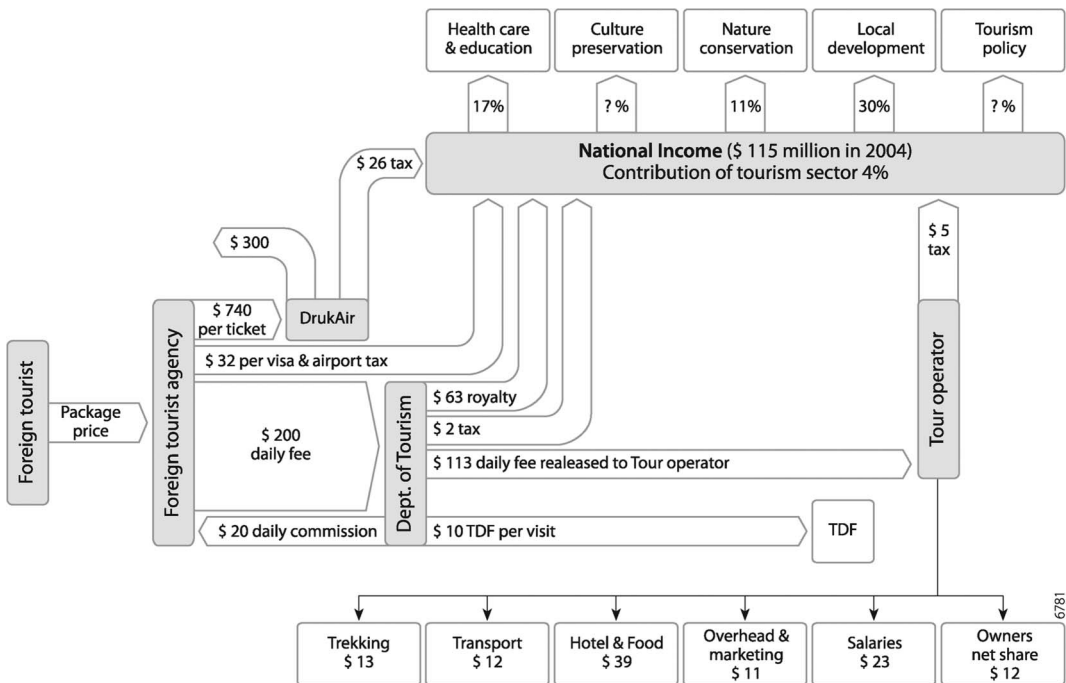


Figure 4. Flowchart of revenues from tourism in the Bhutanese society.

hotels and restaurants. They were asked to rank the visitor categories in terms of importance to their income. The results are shown in Table II. Local guests constituted a very important source of income for most hotels (49%). Foreign tourists were considered only the second most important source of income (38%). At the same time, 51% said foreign tourists were not important as a source of income, indicating that most small hotels depend on local tourists as their main source of income. This is typical of controlled tourism, where the operators arrange food and lodging in standard hotels and restaurants prescribed by the DoT.

Hoteliers were also asked to list expenditures on the five most expensive items in descending order of cost. As the highest expenditure in most cases meat was named most often (60%). As the second highest expenditure vegetables were mentioned the most (40%). As the third highest expenditures the most frequent named were groceries (87%). Staff salaries were only mentioned in the lowest ranks.

Our analysis shows that most of the edible items such as meat and meat products, groceries, vegetables, beverages, etc. are imported from India, as Bhutan does not have the capacity to produce these items. Through this supply chain a substantial amount of tourism revenue ends up in the Indian economy and more recently other countries in the region. The negative balance of trade has increased from €62.5 million in 2000 to €199.0 million in 2004.

Cottage crafts are another important sector of the economy, which is directly affected by tourism. The survey showed that most tour operators purchase Bhutanese paintings and handicrafts as gift items to be sold to tourists. Similarly, tour guides observe international visitors buying handicrafts and souvenirs. Many of these craft products are produced locally in the rural areas and as such provide a good basis for self-employment.

Trekking activities reach deeper into the rural areas. According to tour operators, they support rural communities by hiring transport services, buying vegetables and dairy products and paying for food and lodging. We also interviewed 97 households in areas throughout the country most frequently visited by tourists about the benefits of tourism. A majority of those surveyed (80%) said they benefited from tourism either by providing transport (68%), porter services (56%), arts and crafts (35%), vegetables (30%), entertainment (29%), food and lodging (25%) and dairy products (16%). In addition to these interviews, we analysed the income earned from horses, yaks and porter charges during the period 2002–2004. The results show an average annual income from the hiring of horses and yaks amounting to an equivalent of US \$527 and from porter charges of US \$298 per family. The combined average household income in rural communities from tourism-related activities amounted to the equivalent of US \$876 in 2004, representing a 16% rise compared with the income earned in 2003. Our data also reveals a negative correlation between the two sources of income in the same family, indicating that those families that were engaged in hiring horses or yaks were not available for porter services, and vice versa.

In assessing the overall contribution of tourism to the national economy, the impact of domestic producers supplying goods and services to tourists cannot be identified in the national accounting system of the government, as the figures are included in aggregated sectors like agriculture, manufacturing, wholesale, consumption, transport, etc. However, a

Table II. Ranking importance of income by source ($n = 46$) (% of hotels).

Visitor categories	Very important	Important	Not important
Foreign tourist	37.7	11.1	51.1
Indian tourists	13.3	15.6	71.1
Local guests	48.9	11.1	40.0

closer study produces a more specific classification of foreign and domestic providers of goods and services to tourists, including foreign travel agencies, hotels, guest houses and restaurants, souvenir shops, freelance guides, communication service providers, private cab owners, Druk Air, gas stations and duty-free shops.

These service providers contribute revenues to the government through direct and indirect taxation. Direct taxation comes from two sources: royalties² and business and corporate income taxes. Sales taxes are categorized as non tax revenue.

In the fiscal year 2004/2005, the national tax revenue collection was €116.3 million, of which the total of direct and indirect taxes paid by service providers constituted 56% (€61.496 million). Of this, the royalties and sales tax from hotels accounted for 4.85%, royalties 4% (Euro 4.7 million) and sales taxes from hotels were 0.85% (€0.526 million), respectively.

Business and corporate income taxes from tourism sector could not be segregated, but the total contribution during the fiscal year 2004/05 was €26.277 million (42%). Tourism is also an important source of income for Druk Air Corporation, the national airline. During the financial year 2004, Druk Air's total revenue earning from sale of tickets to tourists was €4.85 million, representing 49% of its total income.

From the above analysis and Figure 4, it can be said that government expenditures on the promotion and preservation of cultural heritage, nature conservation, tourism policy and local development are directly related to the promotion of tourism. At the same time, they help to promote and maintain the spiritual as well as material well-being of the people, thus adding to Gross National Happiness, the overarching development philosophy of Bhutan.

7. Environmental impacts

The second category of impacts from tourism analysed were environmental impacts. We concentrated on the possible impacts from more intensive high mountain trekking activities (erosion, energy, waste) and from travelling. We base our findings on local observations by our team, on government data and on interviews with tour operators and local people.

Trekker's behaviour in the mountains can lead to adverse environmental consequences in the long term. In Bhutan the trekking market segment has declined by 73%, from 1851 trekkers in 1996 to 507 in 2004. However, this number is likely to pick up again due to the renewed overall growth of tourism in recent years. The number of trekking-related tourists in 2004 increased by 42% over 2001.

Trekking activities are a special concern for the government. Most trekking activities take place at altitudes ranging from 1500 m to 7500 m above sea level. Although detailed trekking regulations and monitoring mechanisms exist, some form of environmental degradation is inevitable as the intensity of trekking increases. Thirteen trekking routes are currently in use, most of which are situated in the north-western region. Of the 507 trekkers who visited Bhutan in 2004, 85% used only five³ of the 13 trekking routes currently open. These trekkers spent an average of 6.4 days on these routes, with a range from three to 13 days, which is shorter than the overall average stay in Bhutan of 8 days. Other trekking routes are used less often but for more days⁴ as they require physical strength and endurance.

In order to assess the intensity of use of these trekking routes, we studied the ratio of trekkers to horses/yaks, since additional use of transport animals is important for estimating the impact. The short trekking routes are covered in 3–4 days, while the longest trekking routes take up to 24 days. The tour operators prepare differently for treks, depending on the number of trekking days required, their past experience and government trekking regulations. Generally speaking, for trekking routes taking 4–9 days the ratio of tourists to horses/yaks was 1:3, while the trekker to horse requirement ratio for treks ranging from 10 to 24 days was 1:6.

This information can be combined with data on the number of trekkers on each route in 2004. Knowing that the peak trekking season is limited to approximately 8 weeks around April and 8 weeks around October, we can calculate the average number of trekkers and animals on a day's section of a trekking route on any one day (Table III). This analysis indicates that the Chomolhari, Laya and Lunana treks are the most intensely used routes; they are all high mountain routes in vulnerable environments.

It is possible to observe during a trek, as our interview team did, that investment in maintenance and development of trekking routes is negligible. As a result, some original tracks have already changed into deep gorges, making it difficult for animals to pass easily. Erosion of delicate vegetation is a visible problem associated with tourism. Although tourism activities are not solely responsible for soil erosion in the high mountain areas, the use of horses and yaks for trekking has a significant impact.

Other possible impacts relate to food and the use of energy for cooking. The shopping list for trekking groups reveals that tinned food, bottled juice and water account for 90% of edible items. We did not have the resources to inspect trekking routes to assess the waste disposal problem. However, our survey team members observed clean trekking routes at the selected trekking routes they covered and found scarcely any signs of environmental pollution caused by trekking activities at the sites they visited. Also, 35 of the 45 tour operators interviewed in our survey (78%) believe that the adverse environmental impact from trekking is minimal. According to trekking guides and tour operators, three main factors contribute to this positive result. Firstly, the trekking rules and regulations are stringent and are monitored by the DoT⁵. Secondly, most visitors are educated and older than 40 years. Thirdly, their main objective for visiting Bhutan is to witness the pristine natural environment and the beauty of the landscape. Hence, they are unlikely to be negligent with the environment.

However, environmental concerns in the context of the Bhutanese trekking programme must also be understood from the perspective of rural development and its impacts on the related service sector. Greater demand for transport animals, such as horses and yaks, encourages people to increase the size of domestic herds for transport contracts with the tourism industry (Dorji 2001). This in turn adds to the limited carrying capacity of the fragile

Table III. Intensity of use of trekking routes in Bhutan in 2004.

	No. of trekkers	Days	Days on route	People per day on a day's section	People: horse/yak ratio	Numbers of horses/yak per day on track
Druk Path	324	4	1296	11.6	1 to 3	35
Chomolhari	289	8	2312	20.6	1 to 6	124
Bhunthang Cultural Trek	236	4	944	8.4	1 to 3	25
Laya	202	13	2626	23.4	1 to 6	141
Gangtey	129	3	387	3.5	1 to 3	10
Lunana Snowman Trek	64	24	1536	13.7	1 to 6	82
Wild East Rodungla Trek	47	9	423	3.8	1 to 3	11
Samtegnang	42	4	168	1.5	1 to 3	5
Gangkar Phunsum Trek	17	8	136	1.2	1 to 3	4
Sinchula	5	4	20	0.2	1 to 3	1
Snowman via Nikachu	3	22	66	0.6	1 to 6	4
Dur Spring Trek	1	7	7	0.1	1 to 3	0
Dagala	1	5	5	0.0	1 to 3	0

Sources: Jordans (2005); DoT (2004).

mountain ecosystem (Gyamtscho 1996). It should also be noted that one of the major causes for the loss of biodiversity is overgrazing by livestock. The camping and grazing by the transport animals may very well lead to additional environmental degradation. According to Dorji (2001), tourism is causing a shift from the original sustainable farming and crop-growing patterns towards more profitable and less sustainable livelihoods to meet the needs of affluent tourists. Further scientific research in this area is therefore required to assess the long-term environmental impacts.

8. Cultural impacts

The third relevant category of impacts we assessed were cultural impacts. We used local observations by our team and interviews with tour operators and local people. Tourism in Bhutan is also highly regulated with respect to conserving local culture, including dress codes and rules for access to important Dzongs, monasteries and local festivals depending on the sensitivity of the local community. The Department of Cultural Affairs implements these regulations by issuing entry permits to specific restricted areas. They also certify cultural artefacts that are allowed to be taken out of the country. In construction, the architectural design of buildings, including tourist hotels and lodges, must be Bhutanese or the municipal authority will reject the construction plan. Tourists are forbidden from entering Dzongs and monasteries if the guide is not in proper Bhutanese attire. It is also forbidden to take pictures of statues, images and paintings inside the monasteries. It is the responsibility of the guide to brief his guests; instances of improper behaviour by tourists, if reported by the residents, could lead to the tour operator being fined. The Road and Safety Transport Authority (RSTA) has made it compulsory for all taxi drivers to wear Bhutanese dress everywhere and at all times. All these actions illustrate the government's attempts to minimize or avert western influence on Bhutanese traditions.

According to our survey, 79% of the tour operators believe the negative impact on culture is minimal for the reasons discussed above. They argue that the fact that tourists are highly qualified and mature individuals who stay for only a short period, and above all that the tourists are guided and follow approved itineraries, makes it difficult for them to mingle with local people.

Tour operators actually believe that tourism has a positive effect on traditional culture as it is helping to revive Bhutanese traditional arts and crafts. Some people produce large quantities of Bhutanese arts and crafts as a source of income, while young Bhutanese follow courses in arts and crafts as a professional occupation. A few examples of these activities are painting, wood carving, tailoring, cloth weaving and bamboo basket weaving. In addition, personal contributions from tour operators and some generous tourists have helped to restore monasteries, revive and revitalize local mask dances and improve visitor gallery and sanitary conditions. In another study we found growing attention to these crafts (Rinzin et al. 2007a).

Finally, we also asked local people who come into contact with tourists whether they appreciate foreign visitors. To this, 94% of the respondents answered that they like foreign visitors visiting their villages. We also asked them how they feel when they meet foreign visitors (happy, disturbed, embarrassed or indifferent). To this 72% said they felt happy, 3% felt disturbed, 2% said they felt embarrassed and 23% replied that it made no difference to them. When asked whether foreign visitors influence their way of life a large majority (80%) said tourists do not have an influence on their way of life. However, according to a tour operator, the October 2005 tourist season produced a disturbing scenario that could recur in the future, when festival venues, hotels and lodges and some trekking routes were seen to be crowded with visitors.

The results presented in this section indicate that the impacts on culture are minimal at the moment. This could be due to open-mindedness of Buddhist culture. Meeting strangers is considered part of the karmic cycle and therefore viewed as an essential element of the journey of life. However, with modern education and the development of virtual technology, the individual worldview is changing fast. Hence, a cautious approach is still the best option.

9. Discussion: Combining low impacts with future growth?

The above analysis shows that the 'high value, low impact' policy is fairly successful, but in some places the intensity of tourism in the high season is felt to be creating some incidental problems. This can be attributed to the high growth rates in 2004 and 2005. Problems mentioned relate to logistics, with overbooked hotel accommodation, congestion at cultural festivals, and crowded campsites due to a shortage of camping grounds on some trekking routes. These types of problems strike at the very heart of Bhutan's tourism: The image of remoteness, exclusivity and serenity due to low volumes appears to be diminishing. So the question is: How can low-impact tourism be achieved while at the same time increasing the number of tourists.

Both the government and the tourism sector are discussing possible options for addressing the volume of tourists, including:

- opening up the eastern regions, thus promoting economic development in other remote areas;
- reducing seasonality (including Christmas holidays in lower regions);
- expansion of existing trekking routes and development of new routes, including some in other regions;
- development of new cultural events for tourists;
- development of new special interest products (like community-based tourism and fostering domestic tourism, trout fishing, traditional medicine and hot springs, river running, etc.); and
- increasing the number of entry points (allowing tourists to enter and exit along the eastern border – Samdrup Jongkhar).

All of these solutions could further contribute to the distribution of benefits to more remote local areas. But they all require investment by both private entrepreneurs and the government to develop the infrastructure, including hotels, roads and the development of trekking routes. They may also require new regulations, such as allowing entry to restricted areas or to national parks or permission to build hotel facilities. In this respect, various governmental agencies are dependent on each other and both private and public actors are waiting for others to take the first step.

The ABTO and the DoT are rethinking future tourism development along these lines. Some large tour operators have already started exploring new trekking routes at their own expense. Our interviews and the survey results revealed some concerns about the pace of effective concerted action. With a growing number of visitors every year, 67% of tour operators felt that more investment was needed from the government in roads, promotion, guide training and trekking routes. The tourist exit survey in 2004 echoed the suggestions for road improvements (15%), improvement in hotel standards (beds, services and water) (14%) and better air services (11%) (DoT 2004).

A second category of solutions is somewhat in line with the 'controlled liberalization' policy. Focusing on the main problems mentioned above (logistics, crowded religious

festivals, crowded trekking routes) forms of regulation, either government regulation or self-regulation, may be needed. The ABTO is now developing a computerized hotel booking system to improve hotel bookings. The number of tourists attending a religious festival may be limited and planned. This could be arranged among the tour operators themselves. Similarly, joint planning and scheduling of trekking programmes may be needed for trekking routes to avoid overcrowding at campsites. Further regulation of tourism activities may seem highly undesirable at first but a closer look reveals that if visitors are charged high prices they also expect a correspondingly high level of service. The assumption that tourists visit Bhutan to experience unique culture, nature and exclusiveness and therefore do not demand quality service may be unfounded. In this respect, the tourist sector requires elaborate operational regulation and human resource development in the related service sector.

10. Conclusions

In this article, we analysed the tourism policy of Bhutan. That policy is guided by the overarching principle of 'high value, low impact'. In Bhutan, tourism is expected to contribute to a wider and more equitable distribution of income in the Bhutanese society. Bhutan has therefore chosen a tourism development policy that can be labelled as 'controlled liberalization'. Liberalized because it aims to contribute to the socio-economic development of a free private sector; and controlled because it is intended to prevent negative impacts on the unique nature and culture of the country. In this article we analysed the economic, environmental and cultural impacts. Our main conclusions are as follows.

- (1) The tourism sector is a fast-growing service sector in Bhutan, with growth expected to continue for the coming decade. A large majority of businesses in the tourism sector are owned and run by families. A small number of large tour operators dominate the market but their control is declining due to new market entrants and innovative product development by some operators. Hence, the tourism sector has created a fair and healthy playing field for competition.
- (2) Government exercises strong control over tourism, with detailed operational guidelines, rules and regulations for tour operators and guides and for tourists themselves. Many government departments are involved in the tourism market with their own sectoral agenda. This may be detrimental to the overall tourism development policy. A comprehensive integrated policy is still lacking and various stakeholders stress the need for a stronger and clearer government policy.
- (3) The revenues from tourism constitute an important source of income for the nation and a fair amount reaches small family businesses and local communities, although much of it does not reach the most remote areas. Rural communities benefit from the trickle-down effect of tourism revenue by selling local produce, goods and handicrafts and providing food and lodging. In 2004, the annual average local income from tourism was US \$874. Tourism provides additional income and generates self-employment. Hence, tourism development has the potential to avert urban migration from rural areas and to keep alive the local culture, arts and crafts.
- (4) The 'high value, low impact' policy can be judged a success in the last few decades. To prevent environmental impacts, detrimental activities like the use of wood as fuel for cooking and leaving litter are tightly regulated and monitored. Local communities respond very positively to tourists visiting their communities and say that negative impacts on their culture are generally non-existent. However, in the high season some

problems of congestion have been reported recently at some of the most intensively visited cultural events and on some trekking routes.

- (5) There is a general feeling both in the tourism sector and in government that continued growth, eventually up to double the volume of 2004, needs to be carefully managed in order to prevent adverse effects. The position of tourism in national policy appears to be weak. The tourism sector is ready to enter a niche market with new products, but concerted action together with the relevant authorities is needed to successfully adhere to the 'high value, low impact' principle.

Bhutan holds a very special position in international tourism with unique attractive features and the unusual policy of the country. The combination of serene natural beauty with a tremendous diversity of plants and animals living in a range from subtropical to high alpine ecosystems and a vibrant traditional Buddhist culture attracts visitors from all developed countries who are trying to escape from the 'rat race' of western consumer society. Without doubt, tourism is an indispensable component of the sustainable development policy of Bhutan. Using a very special form of 'controlled liberalization' of tourism, the government is able to bring economic progress to the country and share the benefits with the more remote areas. However, the contemporary challenge is to facilitate further growth while at the same time maintaining the attractive features (nature, culture, and exclusiveness) and enhancing wider distribution of the economic benefits.

Notes

1. The number of 'bed nights' describes the tourism volume by multiplying the number of people by the number of nights at a specific place.
2. Royalties are the fixed amount paid to the government for commercial use of state-owned properties such as mining, tourism, etc.
3. Druk Path (4 days), Chomolhari (8 days), Bumthang Cultural Trek (4 days), Laya Trek (13 days), Gangtey Trek (3 days).
4. For example, Lunana Snowman Trek (24 days), Wild East Rodungla Trek (9 days), Gangkar Phunsum Trek (8 days), Snowman via Nikachu (22 days), Dur spring Trek (7 days).
5. At the exit points of trekking routes the DoT official will randomly check the waste brought back by the guides and cooks and compare it with the shopping list and the unused items. If some waste is found to be missing a fine equivalent to US \$120 is imposed immediately.

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