The usability of the environmental management system in the Rokua area

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Abstract. Environmental awareness is increasingly looked upon as one of the most important factors in the appealing nature of a tourist destination, tourist businesses and even whole tourist regions are now required more than ever to demonstrate the economic, social and environmental sustainability of their operations. This article focuses on assessing how usable a regional environmental management system (EMS) is in a tourism region spreading across regional (municipal) administrative frontiers, and what should be specially considered in the execution of the EMS programme as regards local tourism business. Rokua tourism area is the first ever EMS in the world set up fur such a large geographical area. It is necessary to work out proposals that would enhance EMS's and make them increasingly efficient in promoting actions and operations identified as more essential as regards environmental protection. This survey shows that the environmental management system succeeds in shaping the guidelines and recommendations of sustainable development, which all too often remain rather obscure and far too generalized.

Background

The growth of tourism and its effects – positive and negative – have unearthed a number of environmental, cultural and economic questions. While environmental awareness is increasingly looked upon as one of the most important factors in the appealing nature of a tourist destination, tourist businesses and even whole tourist regions are now required more than ever to demonstrate the economic, social and environmental sustainability of their operations. These sustainability requirements will have to include a future look into the needs of coming generations and the requirements of comprehensiveness and regionality (Berry & Ladkin 1997; Richards & Hall 2000).

Accounting for comprehensiveness sets new demands for the planning and development of tourism. The development of tourism is moving away from the traditional ways of developing individual actions or operations and towards proactive, comprehensive development strategies, with special focus on the co-operation between different actors and lines of operation – in accordance with the principles of sustainable development. Further important actors in modern tourism development are the authorities responsible for elements included in tourism (industrial development, environmental control, traffic and communi-

cations, marketing etc.), as well as investors and sponsors. Tourism is a branch of industry including a variety of different products, which often shows highly divergent control and guidance strategies due to the fact that tourism development involves a whole range of different public and private sectors (Fennel 1999; Saarinen 2001). As regards the participation of the different interest groups, the fact that the actions or different groups, societies and communities are governed by different values has to be taken into account. It is a fundamental element of sustainability to be able to offset the different goals, possible controversies and compromises brought about by the different values. Therefore, a balance is no longer sought between man and nature, but rather between different people and different interests of groups of people (Kinnunen 2001: 101).

Thus, tourism planning shall be founded on ecological, economic and social sustainability. One of the primary goals of planning is to minimize the negative effects of tourism. Most importantly, this viewpoint involves identifying the environmental issues affected by tourism. Regarding the protection of environment, this is essentially to do with the volume of visitors and how it can be controlled. Sustainable tourism has not so much to do with the "tourism or no tourism" issue, but rather "how much, and what kind of development" (Saarinen 2001: 70). Basically, however, tourism is a commercial business, which is to a great extent run by international hotel chains, tour operators and transportation firms. It will certainly not be easy to find a balance between the goal of commercial tourism to increase the number of visitors, and the need to adopt sustainable, environmentally aware means of operation. The great majority of the development in tourism is driven by self-interest rather than by genuine concern for environmental issues (Mastny 2002:146-147).

This research is concerned with the applicability of environmental management systems in the field of tourism, using the EN ISO 14001 environmental management system for the Rokua area as a sample case. The aim of the Rokua environmental management system, which involves both private and public actors, is to develop tourism in the Rokua region in an ecologically sustainable way, also taking into account the unique natural conditions of the area. The environmental management system (EMS) thus serves as a functional tool in the planning and execution of tourism development in the area.

Tourism region and environment

The effects of tourism on the environment can be assessed (and controlled) using various methods. These methods include the assessment of environmental influence and environmental support capacity, quality management, and regional environmental management systems. Further measures encompass guidelines on environmentally aware operations and pro-environmental behaviour codes compiled for tourist businesses and individual visitors respectively (see Matkailun edistämiskeskus 1995). Most of the tools mentioned above are mainly designed to be used in tourist businesses or focused on specific important issues concerning the whole region, such as environmental degradation. It is very illustrative of the interest shown for the relationship between tourism and environment that there

are more than 100 eco labels (or green labels) in use today. These eco labels are – together with various environmental prizes and environmental behaviour codes designed for visitors – examples of concrete results and achievements yielded by sustainable tourism strategies. However, there is still little research available on how the varying tools of sustainable tourism have succeeded in keeping in line with the principles of sustainable tourism at regional level (cf. Lee 2000; Font 2002; Loven 2003).

ISO 14 001, the standard on environmental management systems by the International Organization for Standardization (ISO), which was launched 1996, is one of the best-known environmental programmes in the world. The ISO 14 001 standard lends itself to use in a wide variety of domains. It is concerned with general environmental management issues in different organizations, such as environmental management systems, environmental auditing, lifespan assessments, and different environmental certifications (Nelson et al. 1993: 245).

Tourism business involves a whole range of different lines of activity, and as a result heterogeneity specific operational guidelines and codes have been prepared for tourism, such as the Blue Flag, which works towards sustainable development at beaches/marinas, and the ecological criteria of the Swan, the Nordic ecolabel for hotels (Pohjoismainen ympäristömerkintä 2002).

Problems with environmental management systems and ecolabels are claimed to arise from their relatively strict delimitation according to specific fields and also their rather general guidelines. In sustainable tourism development, the focus is on comprehensive approach, which involves a broader, regional perspective rather than looking at things from the viewpoint of an individual business or branch of business. Looking at sustainable development from the point of view of tourism business is, however, a controversial issue. On the one hand, the tourism industry is seeking to maximize the economic benefit, and on the other hand, public authorities are striving to protect regional environmental tourism resources by means of various strategies (Font & Ahjem 1999: 73). This controversy gives rise to an essential problem in tourism planning and development, namely the lack of co-operation between the public and private sectors (cf. Berry & Ladkin 1997; Gunn 1999: 84; Hall 2000).

If, however, the general aim is to boost the social, economic and environmental impacts of tourism – and especially to do it in a pro-environmental way – the co-operation between the public and private sectors will have to take on a key role, while the goals and operations of individual businesses will also have to be considered in the planning process (fig. 1).

The environmental awareness of travellers has increased at the same time as the increased spare time and the ageing of population have brought changes to the demand of tourism, forcing it to serve an increasing amount of individual needs than before. This development highlights the need for adopting general principles directed at sustainable tourism development. Regarding tourism areas, this clearly suggests taking a comprehensive regional approach, in which an attempt is made to harmonize the goals and aims of tourism business with those of sustainable development (Wahab & Pigram 1997; Fennell 1999; Saarinen 2001).

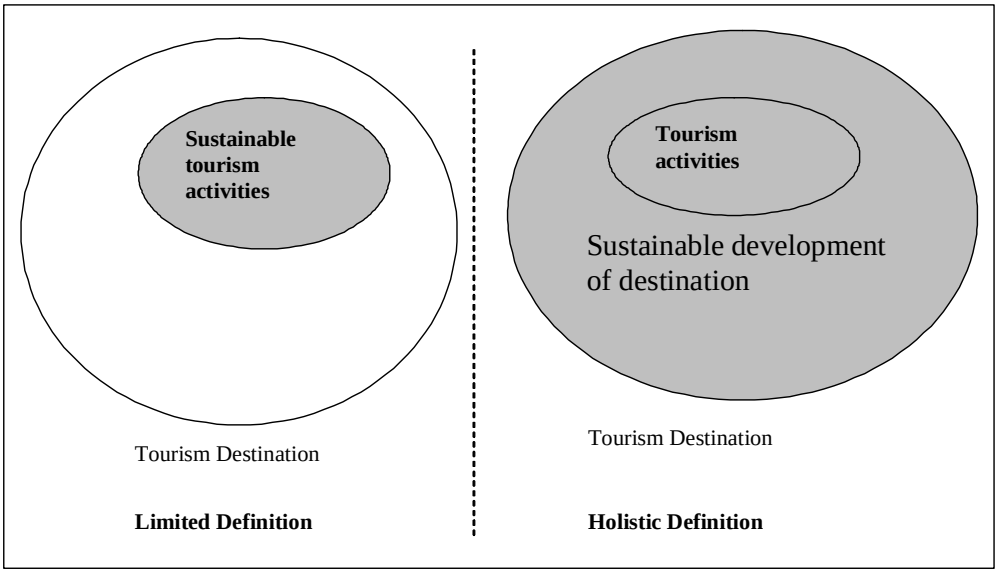

Figure 1. Definition of sustainable tourism area (Lee 2000).

Usable of regional EMS in Rokua area

The environmental management system (EMS) implemented for the Rokua Natura area is the first ever EMS in the world set up fur such a large geographical area. The ISO 14001 certification from the Finnish Standards Association (SFS) was received on year 2000. At present, neither the award grantors nor those in operation at the tourism destinations have an adequate enough picture of how they should go about their administrative and building practices and other everyday routines so that the certificate criteria are fulfilled. According to the acquired experience, EMS's are, generally speaking, not too effective as regards their guidance-related impact. It is therefore necessary to work out proposals that would enhance EMS's and make them increasingly efficient in promoting actions and operations identified as more essential as regards environmental protection. Although several administrative sectors and public actors do have their own specific environmental instructions and codes, there has been hardly any research on the cooperative action or combined effects of the operations of the actors named above.

This article focuses on assessing how usable a regional EMS is in a tourism region spreading across regional (municipal) administrative frontiers, and what should be specially considered in the execution of the EMS programme as regards local tourism business. This survey is part of the EU-funded LIFE ENVIRONMENT project entitled "Ecological Tourism Environment of Rokua". The general aim of the project is to demonstrate the operations of an ecologically sustainable tourism region. A further goal is to work out new methods of reducing the controversy between tour-

ism and the vulnerability of nature and to develop new ways of repairing environmental damage. Developing administrative practices, construction guidance systems and everyday routines complying with the environmental certificate for public and private actors operating in the area is also one of the central tasks of this program.

Rokua tourism region

Rokua is situated 70 kilometres east of Oulu, in Northern Finland, and is marked by its 20 km long and 4 to 6 km wide formation of eskers and sand hills, a post-glacial land formation, which stands out clearly from the surrounding plains of Northern Ostrobothnia. The region of Rokua crosses the borders of three municipalities: Muhos, Utajärvi and Vaala. Rokua includes the smallest national park in Finland (with an area of 4 km^2).

The landscape typically consists of barren rolling lichen heaths with an extremely vulnerable shallow peat-layer, clear lakes and kettle holes, possibly with a small lake or a small open bog at the bottom. The nature of Rokua is extremely vulnerable, especially the ground surface as it cannot cope with continuous wear by visitors. The current 'touristic use' of the region is limited to some smaller areas, and seasonally to the relatively short peak periods of summer and winter.

Rokua is a renowned holiday resort with outstanding opportunities for trekking and other outdoor activities. The combined total of overnight stays of accommodation service providers in the area amounts to approx. 84,000 per year. The overall total number of visitors, including day trippers and those staying overnight, is estimated to be some 30,000. There are a total of 5 businesses providing year-round accommodation in the area, with beds numbering approx. 600. The Rokua area with its various facilities and activities offers employment to 150 people.

The environmental management system of Rokua

The Rokua Environmental Management System commenced during the period 1998-2000 in connection with the overall development programme of the area, called the "Rokua Strategy". Up until now, the land use in Rokua has been based on separate decisions concerning individual cases, denoting that no-one has been carrying the responsibility for a comprehensive strategy on the use of the area or planning its future use. As tourism and tourism-related building activities, in general, and the number of holiday homes, in particular, are increasing, the use of the area has to be viewed in connection with its environmental tolerance capacity (Suunnittelukeskus 2001:5,12).

The Rokua EN ISO 14001 compliant environmental management system has four primary goals: sustainable use of the Rokuan landscape (eskers and sand hills), environmentally sustainable building practices, the management and control of light traffic (trails etc.), waste management, and the protection of water areas (lakes and brooks). The geographical delimitation of the Rokua EMS is the same as that of the corresponding Rokua Natura area, covering a total area of 4224 ha.

The nature in Rokua fulfils the criteria set for the Finnish conservation programme on glacifluvial esker formations and some parts of it match those set for shoreline protection areas. The Rokua national park is also

located in the area. The conservation of these areas is carried out in accordance with Finnish nature reserve legislation and the eskers in accordance with the act on soil excavation. Shoreline areas are protected in accordance with the Planning and Construction Act (Suunnittelukeskus 2001: 7).

The environmental management system involves 13 different actors: 3 municipalities, 7 businesses offering tourism services, the fishery association in charge of the fishing district, a representative of the holiday homers and a representative of the Forest and Park Service. The total land area governed by the businesses involved in Rokua EMS is 1435 ha, making up 34% of the total area. The remaining 66% of the land area are owned by private landholders and leisure home proprietors. The environmental contribution of these privately owned areas is of minor importance, as they lack standard year-round housing and are mainly used for forestry and leisure purposes. Furthermore, the leisure homes are primarily used only a few weeks each year. The number of landholders totals 60 and there are 70 leisure homes in the area.

Each of the different actors involved in the programme has nominated a person responsible for environmental issues, and the collective body of the delegated persons is called the environmental division of Rokua. The environmental division and the whole of the Rokua EMS fall within the authority of Rokuan Seura (Rokua Society), cherishing the traditions and history of the region. The environmental division is responsible for maintaining, developing and monitoring the EMS operations. A part-time environmental manager works as the EMS contact person, who is in charge of co-ordinating, planning and reporting environmental division operations.

The environmental management system of Rokua is founded on a joint agreement of long-term environmental policy, which has served as a basis for determining regional and actor-specific environmental goals and measures (fig. 2). The efficiency and serviceability of the EMS is evaluated through annual internal assessments and also through external evaluations, according to the certificate guidelines.

A detailed description of the Rokua EMS can be found in the Rokua environmental handbook, which has been designed to provide guidance in environmental issues to public and private actors operating in the area. The environmental handbook is an essential tool for the EMS, including a detailed description – in accordance with the certificate requirements – of regional environmental policy, goals, concrete environmental measures and documentation requisites.

Research material and method

In order to enhance the existing EMS, a survey was conducted in spring 2003, to collate detailed data on the benefits and problems of the EMS, and also to fathom out development opportunities for common regional environmental issues. The questionnaire was sent to all actors involved in the environmental management system and also to other authorities and people in charge of developing the area and tourism in Rokua. Consequently, the questionnaire was sent to a total of 33 authorities working in the three municipalities (Utajärvi, Muhos and Vaala), and also to another 24 focal actors operating in the area. The questionnaire was also sent to all of the 66 holiday home owners. In addition, winter visitors to the area were interviewed (table 1).

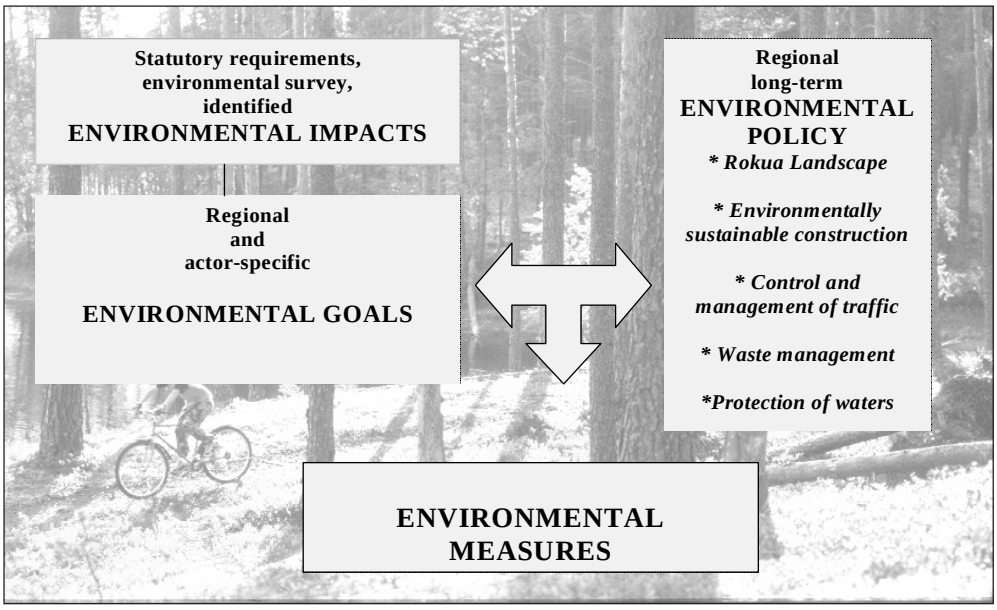

Figure 2. Rokua environmental management system.

Benefits of EMS

To begin with, the opinions expressed on the Rokua EMS were viewed through the benefits yielded by it. The greatest merit was ascribed to the PR benefit and the increased public awareness of the area through the coverage of the project in various media (table 2). The publicity boosted by the adoption of EMS has in fact contributed

Table 1. Research material.

	Sent	Answers	Answer rate %
Actors involved in the environmental management system	14	12	85
Municipal actors (heads of municipal councils, members of municipal executive board, municipal managers)	33	12	36
Other actors (The Finnish Environment Institute, North Ostrobothnia Regional Council, local forestry society and sports clubs)	24	11	45
Holiday home owners	66	32	48
Total	137	67	49
Visitor interviews		60	
Total		127	

Table 2. Respondents opinions on the benefits of the EMS in Rokua 2003.

Regional benefits of EMS	
PR/publicity/marketing	-Improved image of Rokua, exploitability in marketing -Rokua information to other travel destinations -Possibility of comparing Rokua with other areas -Increased awareness of Rokua among the actors in the field of tourism
Methodicalness	-Defines target and desired state -Exactness -Everything is put down black and white, which makes it easy to control what is happening -Practical measures taken -Controlled construction of routes for outdoor activities -Focus on sustainable development solutions
Co-operation	-Enhanced co-coperation -Common goals and operation guidelines
Level of knowledge/know-how	-Increased familiarity with environmental issues among actors -Increased quality-awareness -Guidance/information also for visitors -Improved course signals and signs
Environmental protection	-Increased environmental awareness -Increased awareness of vulnerability of ground surface -Trails and cross-country routes are laid so that they fit the landscape -Tidiness
OTHER	-LIFE funding -Improved sewage systems

to the positive image of Rokua. About 50% of the interviewed visitors were aware of the environmental management system thanks to the media. Only five out of more than sixty claimed that the programme had brought no benefit at all.

In addition to the improved public image, numerous respondents made reference to increased awareness of the environment and nature itself, enhanced information on environmental issues, and improved co-operations. The methodicalness and common desired/target state regarding activities and operations were pointed out as further positive issues. The awareness and knowledge of the vulnerability of local nature had clearly increased, and maintaining the EMS is regarded as an unconditional prerequisite for the future and for expanding tourism activities.

Several respondents highlighted the fact that pro-environmental measures have also been taken without the environmental system, yet the EMS has reinforced the operations with increased credibility and importance. The SFS certificate was considered to make operations more co-ordinated and consistent. Furthermore, the EMS has provided the actors with new information on the environmental impacts of different operations, and contributed to improved co-operation. The benefits of cost-efficiency are yet to be seen.

Problems with EMS

The lack of transparency was referred to as one of the negative points of the environmental management system. At present, the EMS is hard to maintain, and the terminology and concepts covered in the environmental handbook still appear partly blurred to the actors involved. These problems can be – to a great extent – ascribed to the instructions laid down by SFS. The SFS guidelines are primarily designed to be applied in industrial businesses, which makes it problematic to employ them in the field of tourism, and especially so in regional operations. As such the SFS instructions are not suitable for use in regional tourism operations.

The organization of the EMS was referred to as highly bureaucratic. The system lacks certain concreteness and it was felt not to suit other operations of the respondents. The fact that not all of the actors operating in the area were involved in the system was considered a further problem. It was felt that the idea of regionality and the overall efficiency of the system were suffering as a result of this problem.

The EMS was also considered rather expensive, as the benefits gained from it could not be seen. The assessment of the benefits yielded by the system was regarded as one of the most important development needs. Providing concrete evidence of the benefits would also boost the motivation of the actors and make them more committed to the system.

The documentation of the actions and operations, which is a fundamental part of any certified system, was felt to take up too much time, which could be ascribed to the fact that the actors were not used to recording the events with the precision required by the system. The SFS documentation is fundamentally used as a means of verifying that the system is in use. Yet it may also be noted that although the documentation and compilation of various reports do require quite a lot of time in the preliminary phases, actually constituting quite a great share of all operations, the relative rate of documentation is likely to decrease in the future.

The usability of environmental management system in tourism regions

The general applicability of environmental management systems in tourism areas is assessed through the Rokua case sample. For evaluation purposes, three levels are distinguished:

- Regionality
- Actors involved in EMS
- The EMS itself

Regionality

In the application of EMS, the geographical features of the area will have to be con-

sidered, the most essential points being the geographical delimitation of the EMS application area and the region-specific natural conditions. As the system applied is a regional one, there will always be the issues of who / which actor is going to be executing environmental measures regionally? In the end, the system has to do with measures carried out jointly by the actors in the area. The case of Rokua shows a strong contribution from the public sector; the municipalities involved play an essential role in the overall project, since the authorities are in charge of the general development, land use and infrastructure of the area.

The environmental goals and measures of businesses should optimally complement the more general regional goals and measures. To achieve optimal results, special attention has to be paid to defining the most important problems regarding both businesses and the whole area, which will then be tackled by the environmental management system.

The wide variety of different actors poses a special challenge to the EMS – all the more when the parties involved include major actors, such as municipalities, and small businesses employing just one person simultaneously. Furthermore, there are a number of other important actors operating in the area that are not directly involved in the environmental programme, but the operations of which have an indirect influence on the goals defined in the system (e.g. landscape and control of visitor traffic).

It is to be noted that although co-operation has increased along with the adoption of the environmental system, its development remains to be given important consideration. On this issue, the focus will have to be laid on giving special attention to promoting the co-operative activities of the nominated environment representatives. In this co-operation, the roles of planning, preventive measures and developing follow-up activities were considered particularly important. The development of environmental issues should focus on practical measures considering the special geographic character of the area and also paying special attention to issues that can be influenced through concrete measures, such as the management and control of visitor traffic and developing routes and trails. The awareness of the vulnerability of the nature in Rokua, together with the protection of areas subject to degradation and the repair of the damage already inflicted on the environment are among the most important issues to be considered when developing the district of Rokua.

Actors involved in EMS

The Rokua environmental management system involves different kinds of actors showing remarkable differences in their ways of operation and resources alike. The parties involved are private persons, tourism service providers, non-commercial actors and municipal organizations. The development measures can be viewed on the level of the individual and also on that of the organization, in which attention is drawn to how to make and keep actors motivated (fig. 3).

The development of environmental issues in Rokua has been partly started at the top end of the organizations, as "orders" given down the organizational chain of command. In this case, the commitment of the management and an efficient linking of environmental issues to the organizations may easily remain unresolved in practice. This is what is likely to have happened with

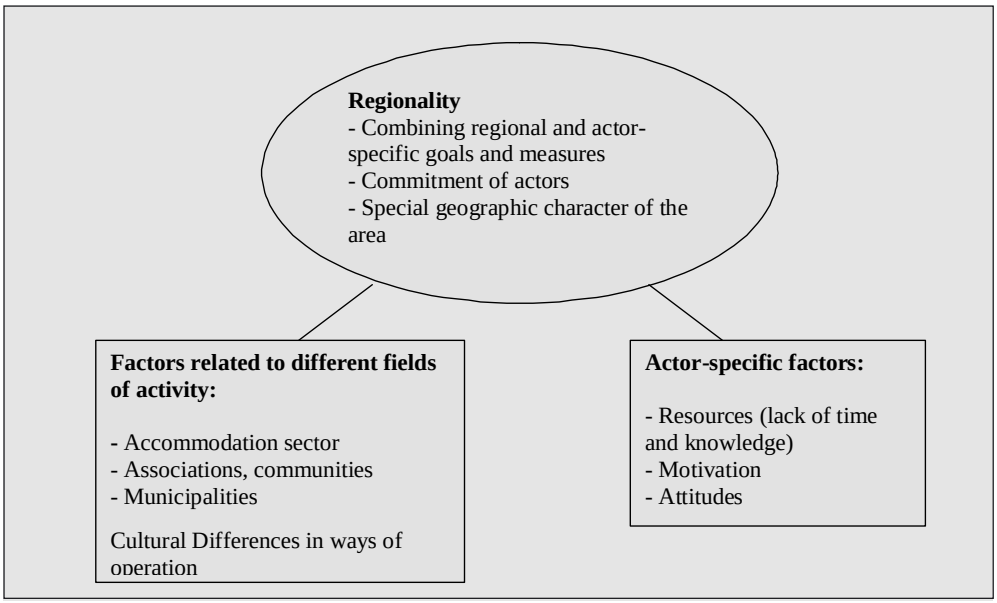

Figure 3. Regional and actor-specific development needs of EMS in Rokua.

the environmental issues in Rokua regarding regional goals and measures. Concerning the regionality aspects of the EMS, these common regional goals will have to be considered in addition to business-specific operations. The discussion about who is responsible for the development and furthering of common issues is still in motion. Genuine commitment can be achieved by directing the discussion to practical matters of common interest. Accordingly, in order to consolidate commitment, the roles and responsibilities of the actors in regional matters will have to be concretized.

In developing actor-specific environmental issues, the optimal perspective is from bottom up, which makes the connection with everyday routines clear. Although there is a lot of will to develop operations, the linking of these with everyday routines involves prioritizing the actions. Therefore, the critical factor in actor-specific development can be found in the volume of resources (e.g. time, know-how, and economic resources).

Environmental management system

Environmental management systems have traditionally been designed to fulfil the needs of a single firm or line of business, which makes the maintenance of the system straightforward, as roles and responsibilities can be defined within the single organization. One of the basic problems with regional development systems is the absence of a single, clearly defined organization, which would allow linking with the EMS. In Rokua, an attempt is being made to connect environmental issues so closely to the actors' normal operations that it would lend the environmental management system a "self-organizing" capacity. However, it requires a considerable amount of

time to make the environmental routines work and have them documented in accordance with the requirements of the certificate.

Although the granting of the environmental certificate is one of the fundamental parts of the environmental management system, it does not necessarily mean that the environmental issues of the respective region would automatically be in order. Quite the reverse, a certified system requires continuous improvement and development of the different operations involved. During the implementation of the EMS in Rokua, there has been a lot of critical discussion concerning the importance and meaning of the maintenance for the certificate. The economic investments in the environmental system and its upkeep have not yet been balanced by the benefits gained from the system in the early phases of the programme implementation. Yet, in the case of Rokua, bringing EMS into fruition is considerably facilitated by the fact that some of the individual actors already have their own quality systems in place (The Spa and Wellness hotel Rokua, the Municipality of Utajärvi and the Forest and Park Service).

To be able to see the benefits brought by the environmental system, appropriate evaluation tools are needed, which are still in the process of being developed. The results yielded by EMS cannot be assessed simply by monitoring the consumption of water or energy; the starting point of the assessment is formed by target states or goals which are often relatively difficult to evaluate (such as landscape conservation and protection of waters), and the assessment of which requires the use of quality-related indicators in addition to – or instead of –quantity-related ones. The evaluation of the benefits gained from EMS can be looked upon as one of the key tasks within the development process.

The implementation of an environmental management system involves executing annual routines regarding actor-specific environmental issues, denoting a set of environmental tasks essential for the operation of the environmental management system. Systematic documentation of environmental events helps the actors to develop their work processes, yields a certain synergy-related benefit and ties environmental issues closely to normal routines. Further motivation for EMS adoption is provided by prospects of cost savings, and boosting staff commitment through improving the level of know-how.

The share of EMS utilization in other regional operations, such as marketing, is still small, but future plans include a broader use of the environmental system for various PR purposes. The development of ecological tourism will help in creating a more positive image and gaining a competitive edge vis-à-vis other tourism destinations.

Discussion

The Rokua environmental management system succeeds in meeting the principles of sustainable development, which justifies its application in various kinds of tourism areas. Sustainability is also brought to life in the joint long-term environmental policy, which represents the basis for the implementation of the entire EMS programme. A further strength of the system can be found in the way that environmental issues are pursued both on the level of individual actors or businesses, and in regional operations; this point has been highlighted in several research reports concern-

ing sustainable development (cf. Berry & Ladkin 1997, Lee 2000). Furthermore, the co-operation between private and public sectors is clearly visible in the EMS implementation process, and the role of the public sector – in this case, that of the municipality – can be regarded as essential for the success of the implementation process. The aims and goals of the environmental management system are closely connected with the NATURA 2000 area of Rokua. The conservation of the Rokua landscape – the geomorphologically unique formation of eskers and sand dunes and the distinctive characteristics of local flora – is among the top priority goals of the Rokua EMS programme. Finally, it can be noted that the environmental management system succeeds in shaping the guidelines and recommendations of sustainable development, which all too often remain rather obscure and far too generalized.

In all, the recommendation given by the actors involved in the implementation process, and also that of SFS, is to simplify the environmental system to suit the respective needs. Even if the system itself were of a regional nature, the development stance should be taken as that of the individual actor. This approach would allow system operations to be developed from a predominantly actor-oriented starting point, which would also help make the system more palpable and improve the level of commitment. Rokua is a piloting region as regards the development of regional environmental management systems. This is also reflected in the problems encountered, which can largely be looked upon as a standard occurrence in a pilot scheme. The development of the different operations and making them part of standard processes is bound to require a certain amount of time – and a lot of persistent effort.

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