Environmental Education and Ecotourism: A Case Study of Protected Areas in the Alps

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Key Words

environmental education, ecotourism, protected areas management, Alps, decision support system, multi attribute model

Abstract

Ecotourism presents a small segment of nature-tourism, which is understood as travelling to relatively undisturbed or uncontaminated natural areas (Gőssling, 1999). According to the World Wildlife Fund, in 1995 nature-tourism consisted of 15% of all tourism worldwide. The term ecotourism can be well described with the following five criteria: nature conservation, low impact, sustainability, meaningful community involvement and environmental education. Furthermore, according to the concept of sustainable development, the tourism can be "sustainable" if development meets the needs of present tourists and locals while protecting future opportunities.

It is well known from practice that tourism can be successfully used as a powerful tool for economic development on local and national scale. In view of the fact that the world is facing a global crisis due to global warming and other natural phenomena affecting the quality of life on different sides of the globe, the question arises: how to make tourism more environmental friendly and at the same time preserve it as an interesting and temptation's experience for the consumers. The answer may lie in ecotourism (ecologically sustainable tourism) which primary focuses on experiencing natural areas, which fosters environmental and cultural understanding, appreciation and conservation (Ecotourism Australia, 2008).

Environmental education is one of the five criteria that must be fulfilled in order to perform ecotourism and is the key step towards the process of understanding the natural ecosystems and our role in them. The aim of environmental education is to teach and educate the public about the function of natural environments and, particularly, how human beings can manage their behaviour and ecosystems in order to live sustainable. Implementation of environmental education to the society can be successfully achieved by lifelong learning, where all age groups are involved as well as special target groups (e.g. primary school children) and are taught by either official educational programs, workshops, media, past time activities, advertisements or some other way. Raising the

environmental awareness of society has become one of the primary goals for many international organisations (WWF, UNESCO, WCED, WCU, IES). Every natural environment provides live examples of biotic and abiotic parameters of nature, hence knowledge about trees, animals, ecosystems or habitats can be directly extracted on the spot. Feinsinger (1997) and Davis (2002) argue in favour of outdoor classrooms and teaching science in natural environment.

In this paper we take the standpoint that environmental education and ecotourism are highly related and depend on each other, and that ecotourism cannot be achieved without proper environmental education. Furthermore, in order to achieve quality ecotourism, a proper management strategy and regime has to be designed and implemented. The management strategy involves a number of crucial decision questions, for example as how to: (a) imply best biodiversity conservation actions, (b) balance natural resource exploitation, (c) arrange and manage the infrastructure, (d) achieve simultaneously the locals assistance and tourists satisfaction, (e) substitute the lack of finances?

Among these questions, we specifically address the problem of infrastructure management in protected mountain regions. We present a case study based on mountain huts in Slovenian Alps, for which we developed a decision support system. The system carries out an assessment of the current state-of-the-art and proposes possible management strategy improvements.

The **Alps** are great mountain range system that is stretching in seven central European countries (from east to west - Slovenia, Austria, Italy, Switzerland, Liechtenstein, Germany and France). Every year the Alps receive approximately 12 % of the world tourists, e.g., in 2001 alone more than 80 million tourists visited the Alps (World Tourism Organization). Basically stretching among seven countries in the centre of Europe, Alps benefit from the fact that industrialized countries are characterized by high and increasing demand for nature based vacations, as protected areas represent the first rate attractions (Gőssling, 1999). Mountain land has specific features that make it unique in a variety of potentials that it can offer.

The south-eastern section of the Alps is covering the north-western part of Slovenia. Most of the Slovenian alpine region is protected as the Triglav National Park, the only Slovenian national park, which was named after Triglav, the highest mountain in the heart of the park and also the highest summit in Slovenia (2864 m). Tourism presents the most developed economy branch of the alpine communities in Slovenia, in which 34 mountain huts are operating full time during the summer season.

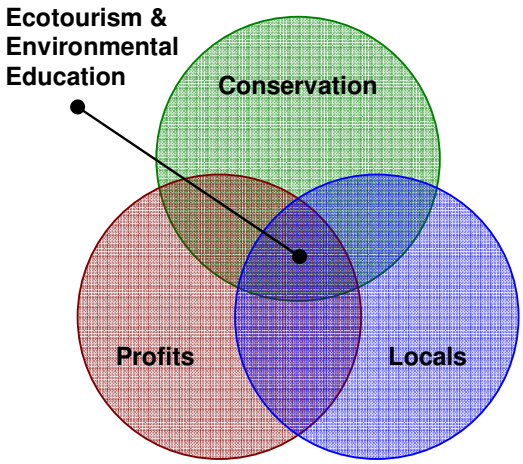
The decision support system that we developed is aimed at the evaluation of the management of mountain huts in Slovenian Alps. The goal is to offer an improvement tool for hut management and an implementation of environmental education in mountain ecosystems for achieving quality

ecotourism. Methodologically, the system is based on a model that includes an extensive set of parameters that provide a holistic view on the ecotourism in mountains. These parameters are organised in three submodels: management of mountain huts, management of outdoor alpine infrastructure and environmental education in alpine region. The model is hierarchical, multi-attribute and qualitative, and it offers a possibility of performing the assessment of present mountain huts operation. The assessment is carried out according to expert-defined decision rules. It provides a new methodology for objective evaluating of alternative management plans. The assessment results are of particular interest for decision makers in protected areas, such as alpine region managers.

In the paper, we will describe the model in detail and illustrate its practical applicability on the case of selected mountain huts in Slovenia.

The model is flexible in the sense that its hierarchical structure and rules enable small adjustments for other potential study cases in the Alpine region and extraction of know-how from the assessed examples. In this way, the contribution of the model is also trying to connect sustainable tourism infrastructure development and educational tools in order to offer a possibility of better understanding and hence better performance of ecotourism in the Alps.

Figure 1: The role of ecotourism and environmental education in tourism economy.



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