# *Environmentally sustainable tourism: international and Hungarian relations*

**Dávid, Lóránt – Baros, Zoltán**

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## SUMMARY FINDINGS, CONCLUSIONS, RECOMMENDATIONS

**Compliance with the principles of sustainability is now a general requirement with respect to any tourism strategy, tourism policy or management. Much has been written about the issue of sustainability and its relationship to tourism management and development. Still, their actual relationship is not always clear, and whilst a number of methodologies profess to be sustainable, there is no clear statement as to how that can be achieved.**

**It is generally accepted, irrespective of the sustainability model used, that there are three key components or strands to sustainability: economic, social and environmental. It is in working towards a balance between the competing demands of all three components that progress towards sustainability can be achieved. One should never forget that in the field of tourism, visitors also have a significant impact on all three strands.**

**For destination management to be sustainable, it needs to address all the economic, social and environmental issues of a particular area. A number of methodologies have been put forward in an attempt to ensure that tourism-related activities are carried out in a sustainable manner.**

**Destination management that follows an accepted process and/or deals effectively with a majority of the key components can be considered sustainable.**

**An action plan or process that does not clearly address the core components of economic, social and environmental well-being or does not pursue a majority of the process components identified in the process framework document presented on the website is unlikely to have sustainability as a core principle.**


## 'ENVIRONMENTALISM' IN THE SCIENCES AND TOURISM DEVELOPMENT

In the past few decades interest in the environment has reached a peak as popular opinion has become aware of the extent of the human impact on natural systems. A proliferation of degrees has followed this wave of 'environmentalism', their focus has been on natural areas and the damage caused by human impacts. Environmental science is the study of the interaction of humans with all elements of their environment, its physical/geological, atmospheric and biological components. This geographical environment can be investigated from several aspects

- in the biological (ecological) approach emphasis is put on the biotic factors of the environment or on the structure itself;
- in the geographical approach research concentrates on the abiotic factors and functions;
- the technological or planning trend focuses the analysis on the economical-technical background of impacts.

To distinguish between the first two trends and the related disciplines, the

terms (bio)ecology and geoecology are in use. The two concepts differ in handling the role of abiogenic and biogenic factors. In the past decade there was an intention to define geoecology as the study of abiotic factors and of issues concerning the functioning of the physical environment, while landscape ecology investigates the biogenic factors and problems of spatial organisation, structure. The far-reaching developments in the past one or two decades made landscape ecology become a wide theorethical-practical field of research, so the adaptation of international research results and educational experience is inevitable here too. Tourism is one of the fastest growing 'industry' in the world and we have to investigate it continuously. For instance, the emerging science of landscape ecology is a tool for such studies and will be the cradle for advanced studies in the future. Since the 1970s in the research of the physical environment two, frequently intertwining trends are prominent. One of them investigates the changes in the natural environment induced by human economic intervention (which are often undesirable) along with their counter effects. The other aims at the quantitative and qualitative survey of the resources and potentials of the physical environment and the evaluation of also regionally varying geographical potentials. The demand for complex environmental research has grown, since this is the only way to determine the loadibility of nature and the consequence of loading, to maintain the stable equilibrium of landscape, to preserve and develop the quality of life, and to give a long-term prognosis for the purposeful exploitation of environmental resources and potentials. Applying new methods and theories, the geography of today attempts to elaborate concepts and methods primarily novel in attitude to match the complex problems. As most of the problems of environmental management are, by their essence, interconnected by causal relationships, the solutions are justified, to be sought in the framework where the complex interrelationships of the human environment can be revealed in an integrated manner. All these, of course, do not mean to give up the investigation into the individual components of the environment, but these should be coordinated by one or several programmes which guarantee the study of the inner unity and multifarious nature of environmental factors and the detection of their interactions and development trends. The resulting environmental models may provide a uniform framework for basic (theoretical) and practical purpose research. We are convinced that any of the partical factors can only be studied in entirety and successfully if its relationships are known in the environmental systems. Tourism is a new challenge for researchers, since environmental problems have an effect on several branches of science. We teach tourism as an activity system, therefore, we believe in the equality ranks among the various fields of science in environmental sciences and we assign an important part to sustainable tourism development in the structure of our education.

## SUSTAINABILITY: ROOTS AND DEVELOPMENT

In contemporary terms the term 'sustainable development' is usually credited to the Brundtland Report, officially the report of the World Commission on Environment and Development. It was due to the increasing concern in the 1980s over the effects of the pace of the rapid economic growth on the environment since the 1950s. The key environmental concerns of the United Nations were the high levels of unsustainable resource usage associated with development, and the role of pollution in major environmental problems such as global warming and depletion of

the ozone layer, which threatened human well-being.

Accompanying the heightened awareness of environmental problems was also a realisation that the environment and development are inexorably linked.

The term 'sustainable development' not only gained popularity following the publishing of the Brundtland Report but gained greater attention following the *United Nations Conference on Environment and Development* (held in Rio de Janeiro in June 1992). In the last decade of the 20th century, it became widely used by governments, international lending agencies, non-governmental organisations, the private sector and academia, thus a variety of perspectives is to be taken on sustainability.

Many people associate sustainable development with issues like energy use, pollution and waste. However, these are only the physical components of sustainability, and it is now recognised that the concept of sustainability addresses three equally important issues: environment, economy and society.

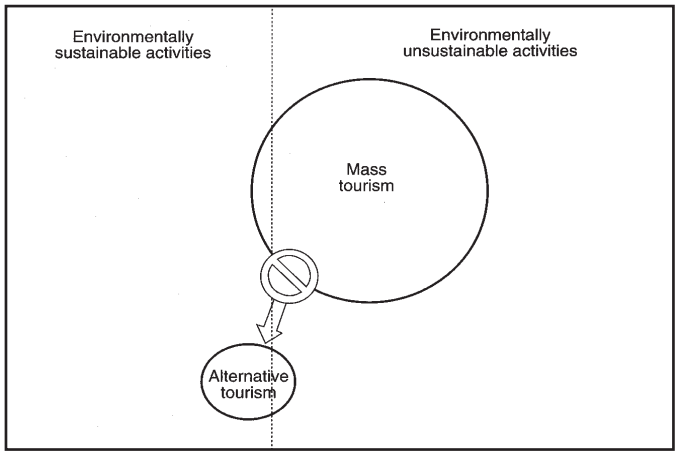
## TYPES OF SUSTAINABILITY IN TOURISM

As a consequence of the wide range of interpretation of sustainability mentioned earlier, in terms of the application of the concept to tourism, varying perspectives have been adopted. As far as 'sustainable tourism' is concerned, there the emphasis is placed on the customer and marketing considerations of tourism to sustain the tourism sector (Fig. 1).

Other authors identify a form of sustainable tourism which is oriented toward the viability of tourism industry, referred to as 'economic sustainability of tourism' or 'tourism imperative'.

Figure 1

**Relationship between mass and alternative tourism**




*Source:* Weaver, 2003

The aim of development is primarily concerned with satisfying the needs of tourists and players in the industry. However, in some cases, the environmental resources for tourism receive consideration, but are secondary to the growth of the tourism sector ('product-led tourism'). A third concept called 'environmentally led tourism' can also be mentioned where types of tourism would be promoted that are reliant upon a high-quality environment. In this respect, the main would be to make

the link between the success of the tourism industry and eenvironmental conservation so obvious to all the stakeholders that stewardship of the environment is a priority.

The focus is, in a number of work, the physical environment. The concept of sustainability should, however, be broadened to include cultural, political and economic dimensions.

In Britain, the guiding priciples for the sustainable development of tourism were developed in the early 1990s, some of which are as follows:

- The environment has an intrinsic valuewhich outweighs its value as a tourism asset.

- Tourism should be recognised as a positive factor with the potential to benefit the community and the place as well as the visitor.

- The relationship between tourism and the environment must be managed so that the environment is sustainable in long-term.

- In any location, harmony must be sought between the needs of the visitor, the place and the host community.

- The tourism industry, local authorities and environmental agencies all have a duty to respect the above principles and to work together to achieve their practical realisation.

Types of sustainability within the tourism agenda is an emerging concept of discussion. As illustrated below, four different approaches to sustainable development are introduced, based on the four types of sustainability, i.e. from the very weak to strong sustainability type scenarios (Table 1).

Table 1

**Types of sustainability in tourism**

| Types | Characteristics | |
|---|---|---|
| Very weak<br><br>Tourism imperative scenario | Status:<br>Criteria:<br>Benefits:<br><br><br>Costs: | Tourism at its early stages<br>Tourism activities do not generate more degradation<br>Tourism is an alternative form of development<br>Creates more employment<br>Increase environmental protection<br>Creates certain antagonistic impacts |
| Weak<br><br>Product-led tourism scenario | Status:<br>Criteria:<br>Benefits:<br><br><br>Costs: | Tourism is developed<br>Sustain tourism activities and develop new products<br>Improvement of the local economy and employment<br>Assist preservation practices of surrounding destinations<br>Expansion and diversification of tourism planning<br>Conserve only existing infrastructure and products |
| Strong<br><br>Environmental-led tourism scenario | Status:<br>Criteria:<br>Benefits:<br><br><br>Costs: | Tourism at its early stages<br>Environmental management utilization<br>Environmental quality<br>Economic and employment growth<br>Specialized tourism destination<br>Only in circumstances lacking focus and commitment |
| Very strong<br><br>Neotenous tourism scenario | Status:<br>Criteria:<br>Benefits:<br><br>Costs: | Tourism at its exploitation and involvement stages<br>Absolute preservation of resources<br>Protection of renewable and non-renewable resources<br>Long-term environmental attractivity<br>Tourism growth is limited<br>Tourism development is abolished to minimize generation of negative environmental impacts<br>Tourism development is sacrificed in cases where other sectors employ better environmental practices |

*Source:* Knowles – Diamantis – El-Mourhabi, 2001

## THE POSITION OF SUSTAINABLE TOURISM PRODUCTS

The concept of consumption surpasses the idea of merely buying something to meet basic physiological needs. Using social and human physiological perspectives associated with consumer behaviour studies, it is recognised that by purchasing a certain good or service, a range of needs may be met that go beyond our most basic biological requirements. These include social needs, the need for self-development, etc.

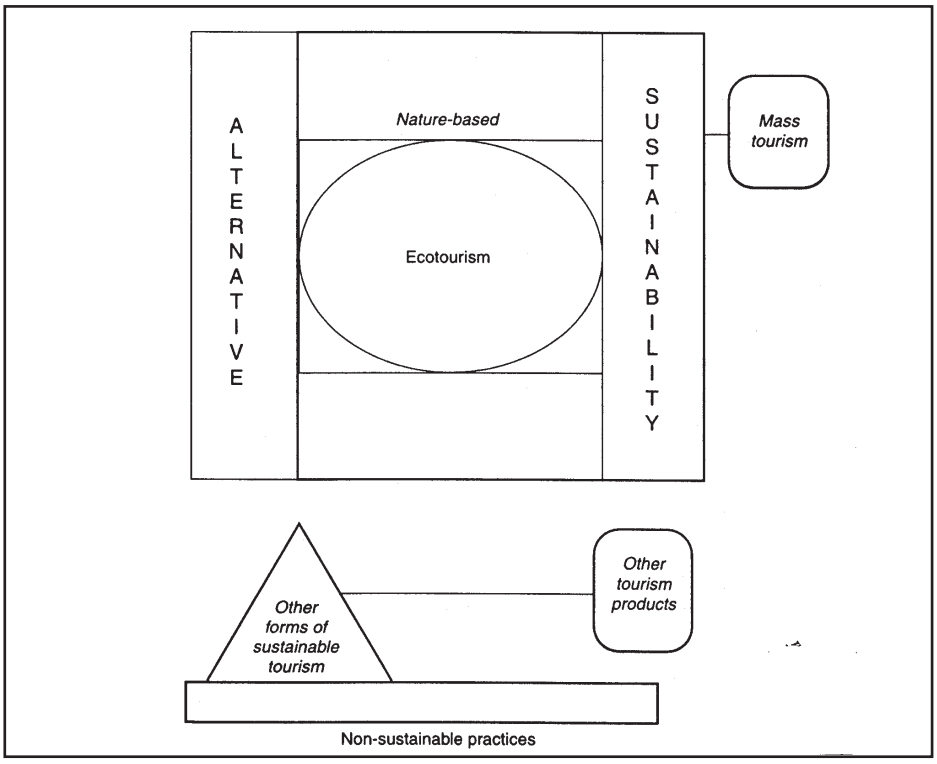
Sociologists emphasise that through the process of consumption it is possible to differentiate oneself from the crowd, and subsequently gain a sense of identity. Using tourism as a means to achieve social differentiation has become increasingly prevalent in western society.

When illustrating the current state of the sustainable tourism products and the importance of ecotourism as a core element of sustainable tourism, it is seen that ecotourism is treated both as a sub-component of alternative tourism and as nature-based tourism, being mainly part of the concept of sustainability. In addition, other forms of sustainable tourism claimed to have similarities with ecotourism as well as being part of both nature-based travel and alternative system.

At the other end of the spectrum, both mass tourism and other forms of tourism such as conference and business tourism are searching for sustainability in their practices and as such are placed outside the sustainability borders (Fig. 2).

Figure 2

**The position of sustainable tourism and ecotourism products**




*Source:* Knowles – Diamantis – El-Mourhabi, 2001

## EXAMPLE OF POSSIBLE INDICATORS OF SUSTAINABLE TOURISM DEVELOPMENT

As sustainability can not be precisely defined, it is difficult to evaluate different project in this respect.

There are many examples of the idea of using indicators as an environmental management tool. The main weakness of these is that they are environmental assessment tools that do not address sustainability in its full sense. In addition to conventional economic indicators that are relevant to the environment (e.g. environmental protection expenditure as a percentage of GDP), social, environmental ones must also be included.

According to a critical review, the usefulness, i.e. the ability to secure a more sustainable future of any development in the field of indicators on environmental management systems, the general environment and tourism will ultimately be determined by the political views and the wills of those in power (Table 2).

Table 2

**Example of possible indicators of sustainable tourism development**

| Topic | Component or target | Indicator | Critical value |
|---|---|---|---|
| Population | Preserving the population's prosperity | Population dynamics<br>Unemployment rate<br>Per capita income | If there is a continuous and major migration of the working population<br>If greater than national average and/or increasing long term<br>If lower than the national average |
| Tourism | Retaining satisfaction of guests and tour operators | Maintenance of quality and monitoring ecology | Persistent and/or significant criticism of destination's condition with special reference to: *quality* of accommodation , restaurants, service, leisure infrastructure; *overcrowding* of transport, beaches and sights; ecological *condition* of nature, the landscape and amounts of waste; *aesthetics* of townscape, landscape and cultural assets. |
| Ecology | Carrying capacity | Airport<br>Tourist attractions<br>Drinking water supplies<br>Sewage<br>Protection of species, use of protected areas<br>Pollution and emission | If maximum capacity exceeded<br>If roads and parking lots are continuously overcrowded at peak times<br>If there is:<br>- water shortage in peak season<br>- long term danger of salinity, floods, forest fires and other ecological damage<br>If European Union Standards for sewage disposal are mostly neglected<br>If, due to exploitation by tourists, flora and fauna is becoming imperilled or being destroyed<br>If due to tourist use:<br>- water<br>- soil<br>- air<br>- health<br>are continuously being threatened by pollution and/or noise |
| Politics | Effective tourism and ecologically oriented legislation | Not applicable | Existence of ecologically oriented quality standards |

*Source:* abridged and adapted from IFTO, 1994; Holden, 2000

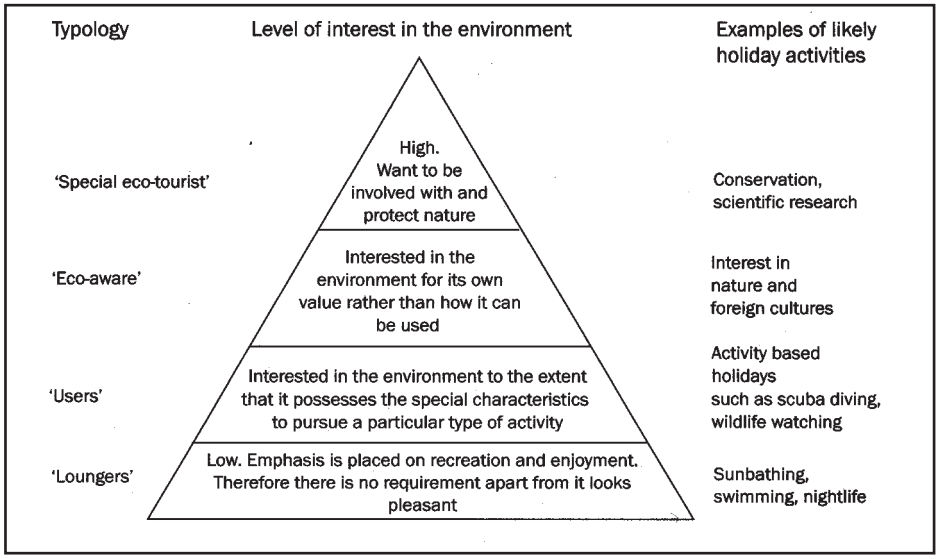
## THE FUTURE: TYPES OF TOURIST, BASED UPON THEIR LEVEL OF INTEREST IN THE ENVIRONMENT

Given the complexity of what motivates people to become tourists, it is unsurprising that tourists choose to visit different types of destinations and display different types of behaviour within the destination environment. Differences in behaviour are compounded by a range of interrelated factors, such as demographics, culture, lifestyle, level of education, and beliefs and attitudes. This means that their interaction with the cultural and physical environment of the destinations they visit will vary.

This individual behaviour has an impact on the tourists' relationship with the environment, according to which 4 typologies of tourists can be distinguished: lounger, user, eco-aware and special ecotourists. This order indicates the increasing level of interest in the environment, with the last two categories showing a high level of interest or commitment not for how they can use the environment but also for its own sake. In the last case, tourist want to actively protect the environment by e.g. participation in a conservation holiday (Fig. 3).

Figure 3

**Types of tourist, based upon their level of interest in the environment**




*Source:* Cleverdon, 1999; Holden, 2000

## GREENING TOURISM

Green tourists are not a homogeneous group; there are various 'shades of green'. They suggest how the level of environmental commitment of tourist will be influenced by different factors, including their awareness and knowledge of the issues associated with tourism and the environment, attitudes towards the environment in their life.

Darker shades, in general, reflect major sacrifices by the tourists made because of their views as well as deep interest in all green issues, possibly very deep interest in one issue especially. However, this catego-

ry includes only a small proportion of the population.

Studies on ecotourists are rather limited. One suggests that ecotourists have higher than average incomes and level of education, and are also willing to spend more than the normal tourists. They possess an environmental ethic, and are biocentric rather than anthropogenic in orientation (Table 3).

Table 3

**Shades of green in tourism**

| Not at all green | Light green | Dark green | | | | Totally green |
|---|---|---|---|---|---|---|
| Read what brochures say about green issues and sustainable tourism | Think about green issues and try to re-duce normal water consumption in destinations where water is scarce, for example | Consciously seek to find out more about a particular issue and to become more actively involved in the issue, by joining a pressure group, for example | Use public transport to get to des-tinations and to travel around, while on holiday | Boycott hotels and resorts which have a poor reputation on environmental issues | Pay to go on a holiday to work on a conservation project | Not take holidays away from home at all so as not to harm the environ-ment in any way, as a tourist |

*Source:* Swarbrooke – Horner, 1999; Holden, 2000

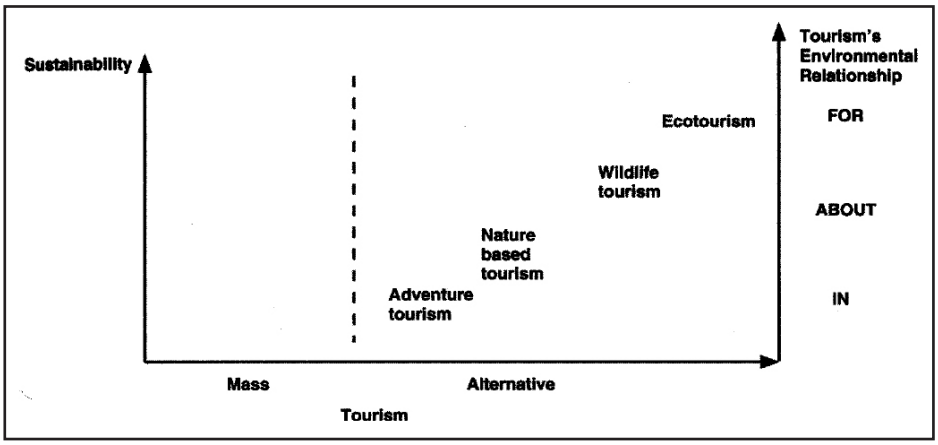
## TOWARDS THE NEW SUSTAINABLE ECOTOURISM DEVELOPMENT

At present, in general terms, what seems to be occurring within the application of sustainability within tourism is the creation a variety of niches either representing products, forms of development or consumers (Fig. 4).

The theme of sustainable tourism is still an evolutionary paradigm that is seen as a goal to be achieved for small-scale deve-

Figure 4

**Natural area tourism and sustainability**

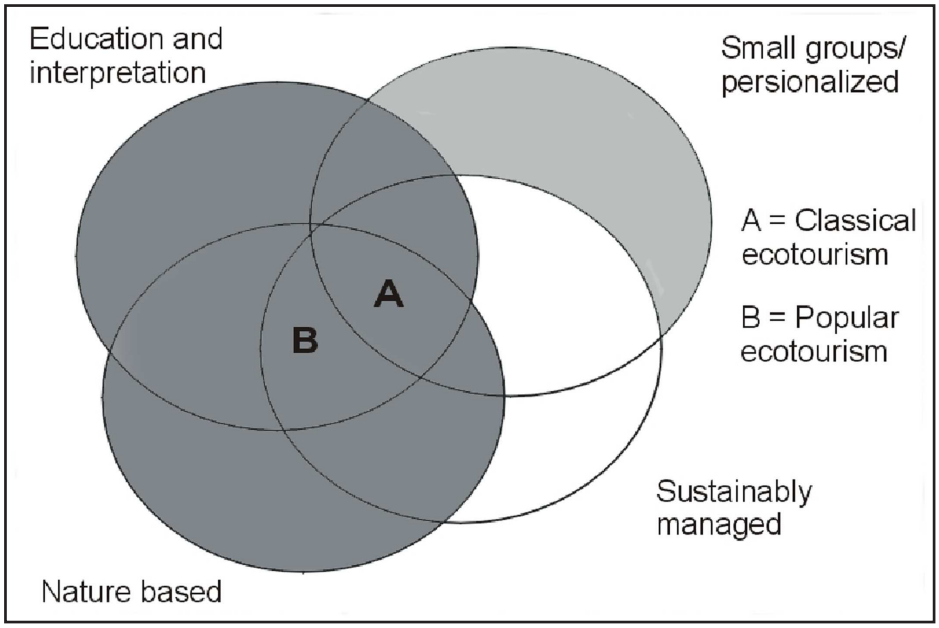



*Source:* Newsome – Moore – Dowling, 2002

lopment in the supply environment and research enhancement on the niche characteristics in the demand and supply sides of the tourism system (Fig. 5 and 6).

Figure 5

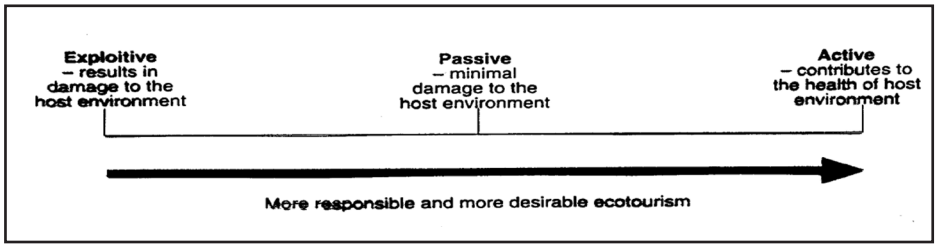
**Dimensions of ecotourism**




*Source:* Weaver, 2003

Figure 6

**The continuum of ecotourism types**




*Source:* Orams, 1995

## APPLYING A SUSTAINABILITY VALUE MAP IN HUNGARY

There are some books (*Puczkó – Rátz, 2002; Dávid – Jancsik – Rátz, 2007; Szabó – Könyves – Tikász, 2008*) and papers (*Szlávik – Csete M., 2005; Csete M., 2006; Baros – Dávid, 2007*) from Hungarian authors which deal with sustainable tourism, indicators and rural areas relating to sustainable development.

In this paper we try to apply a special method to tourism projects. In order to select an adequate method of integrated approach of planning, a useful tool would be the Sustainability Value Map (SVM), deve-

loped by Chris Butters, originally for buildings and urban development projects, although it can also be applied to the evaluation of any other sustainable products. The SVM visualises the three core elements of sustainability and the degree of what any product fulfils its goal. A summary of the main features of SVM (Urban Ecology: Projects in Europe – visions for Oslo?) is as follows. For each of the three main areas, eight parameters are defined, thus a product is benchmarked by 24 parameters in a complex way. The scale is set from 0 to 5 where 5 means what is seen as fully sustainable today. The values are scaled so that the outer rim, corresponding to a "horizon" of full sustainability, is clearly shown to be off.

The selection of parameters is, though provisional, systematic. Considering that sustainability is a dynamic process, the model can be used in relation to time, to assess how the sustainability of the product develops from year to year. Also, by applying the same indicators, it can be a tool for comparing different projects. However, as pointed out earlier in this paper, impacts may vary locally, it is important to bear it in mind that the indicators used can and should vary to some extent depending on local conditions and on project scale. Also, as some of the components are rather complex, for a full assessment most will need a more detailed breakdown. Applying the Value Map for tourism development projects may be relevant from the point of view of key elements often associated with sustainable tourism, i.e. preservation of the current resource basis for future generations, maintaining the productivity of the resource basis, maintaining biodiversity and avoiding irreversible environmental changes. In its simplified form, it provides a checklist and framework for designers, and for discussion amongst participants in a planning process. In its detailed form, ideally, it gives a complete qualitative and quantitative picture of the condition of a project. Visualisation is further promoted by having the mean value of indicators all three areas calculated, and also added to the original version of SVM.

## SELECTING THE RIGHT SET OF INDICATORS

As pointed out by *Newsome and Moore (2002)*, the degree and extent of any negative impacts, however, will depend on where the development is located, building design and adaptation to existing natural conditions, waste treatment systems, recycling and pattern of resource consumption as well as approaches to the recreational activities that take place in association with the development. Due to both the great variety of tourism activities and that of the local endowments, questions may be raised on the relevance and general applicability of a given indicator. One might be used restricted only for certain local or regional issues. Furthermore, there is a necessity to distinguish qualitative and quantitative parameters; and finally two more questions are raised as (a) whether the selected indicator can be quantified, and (b) selecting the right set of indicators is possible at all (*Puczkó – Rátz, 2002*). For the latter one, an integrated approach of planning is required that takes the project scale and local endowments and the variables created on the basis of these into consideration. In a full assessment most variables also need a more detailed breakdown.

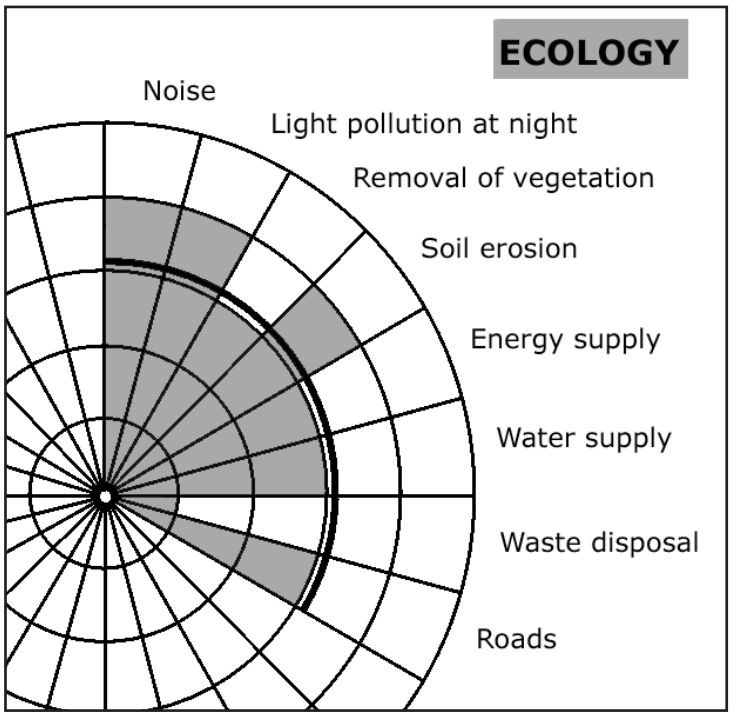
## EXAMPLES

As a first step, the SVM is used to evaluate the environmental aspects of tourism development. Taken as an example, environmental impacts of a fictitious hotel development are discussed hereby and the SVM is applied in Fig. 7. The average conditions of the receiving environment are

well-indicated in the figure and can be marked as 'average' (with a sustainability value of 3125). It can also be seen, however, that waste management, being a major issue elsewhere too, is the main problem source. Due to the large amount of volumes proceeded (average tourists tend to produce more waste than local people), the low application level of recycling, waste prevention strategies and the nature of the receiving environment here, it is an unsolved problem. On the other hand, demands for further development in fields such as noise prevention or soil prevention can now be held back as probably adequate measures have already been taken to fulfil these goals.

Figure 7

**Environmental impacts of infrastructure and support facilities in the development of tourism (Urban Ecology, after Butters)**

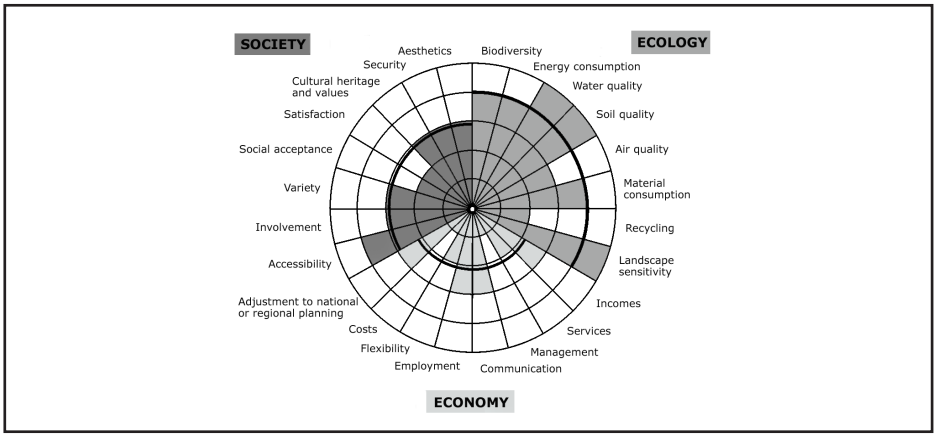



*Source:* Baros – Dávid, 2007

In cases when the goals of sustainability are neither accomplishable from the point of view of the society nor reasonable from the point of view of the economy these issues must receive more attention. At this stage, this development does not meet the demand of the local population at all. Without public involvement and the support of the local economy by fundamental financing for infrastructure among others, the outcome of this project is rather doubtful. From the point of view of tourists, it can be considered to be on a somewhat average level. On the one hand, certain aspects (accessibility) indicate a higher level of development whereas on the other, most of the components (aesthetics, security, variety) are just average (Fig. 8). This method will be applied for tourism projects in the near future in Hungary.

Figure 8

**An example of the Sustainability Value Map applied for tourism development projects (Urban Ecology, after Butters)**




*Source:* Baros – Dávid, 2007

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ADDRESS:

**Dr. Dávid Lóránt,** főiskolai tanár, tanszékvezető, Károly Róbert Főiskola, Gazdálkodási Kar, Turizmus és Területfejlesztési Tanszék
college professor, head of department, Károly Róbert College, Faculty of Economics, Department of Tourism and Regional Development
3200 Gyöngyös, Mátrai út 36., Tel.: +36-37-518-180, Fax: +36-37-518-177, E-mail: davidlo@karolyrobert.hu

**Baros Zoltán,** adjunktus, Károly Róbert Főiskola, Agrár- és Vidékfejlesztési Kar, Regionális és Vidékfejlesztési Tanszék
associate professor, Károly Róbert College, Faculty of Agriculture, Department of Regional and Rural Development
3200 Gyöngyös, Mátrai út 36., Tel.: +36-37-518-494, Fax: +36-37-518-279, E-mail: zbaros@karolyrobert.hu