Workshop on Sustainable Tourism Indicators for Eastern and Central Europe

Keszthely Sub-Region, Lake Balaton, Hungary
17-19 February 1999

FINAL REPORT
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Introduction and Acknowledgements

As part of its efforts to disseminate more widely the principles and practice of Sustainable Tourism Development, the World Tourism Organization decided to conduct a series of Technical Workshops in different regions.

The purposes of these workshops are:

a) to test the applicability of the WTO indicators developed a few years ago at different types of tourism destinations;
b) to identify more site-specific indicators;
c) to disseminate their use in a more systematic fashion, and
d) through this process, to train senior tourism officials at the national and local levels in the use and application of sustainable tourism indicators.

The first of these Workshops was conducted at Lake Balaton, thanks to the hospitality of the Hungarian National Tourism Office. The Workshop attracted national and local officials and industry representatives, plus senior officials or advisers from Austria, Croatia, the Czech Republic, Poland, Romania, Slovakia and Slovenia. The complete list of participants is attached as annex.

An additional objective of the Workshop was to equip the national and local authorities at Lake Balaton with a complete battery of indicators specific to that area, to allow them to measure the progress towards a sustainable tourism sector.

The Section for Sustainable Development of Tourism of WTO and its consultants, Dr. Ted Manning and Mr. Gordon Clifford¹ were responsible for the organization and facilitation of this Workshop. The fieldwork and data gathering for the study for the Keszthely subregion was organized by Dr. Andrea Nemes of the Hungarian National Tourism Office, who participated with the consultants in the field work and site interviews. Credit is also due to Ms. Emoke Halassy for her considerable help in identifying key issues and data sources, and the other staff of the Hungarian National Tourism Office for their work to make this workshop a success.

WTO and its consultants are also grateful to the participants in the workshop at Balaton for their enthusiasm, free sharing of expertise, and constructive participation.

¹ The two consultants are from Consulting and Audit Canada, a special operating agency which provides consulting and auditing support to public agencies both in Canada and abroad.

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Study on Indicators for the Sustainable Management of Tourism:
Keszthely Sub-region, Lake Balaton, Hungary

Summary report and recommendations

This report presents the results of a study and related workshop conducted by the World Tourism Organization at Lake Balaton, Hungary, aimed at the development and testing of indicators of sustainable tourism in a Central European milieu. The project was undertaken in the Keszthely sub-region at the eastern end of Lake Balaton. The study was successful in obtaining information which supported several of the core indicators recommended in the World Tourism Organization (WTO) Guidebook "What Tourism Managers Need to Know: A Practical Guide to the Development and Use of Indicators of Sustainable Tourism", as well as several other indicators adapted to the specific needs of each destination. A key element in the indicators development process was a Technical Workshop which deliberated on the key risks to the study area, assisted in the selection and prioritization of key indicators, and discussed on how to best obtain and manipulate the information needed to implement the indicators programme for the study area.

The WTO Workshop on Sustainable Tourism Indicators, held on Lake Balaton near the study area, brought together experts from several ministries and agencies of Hungary, the host country, and experts from seven other Central and Eastern European states (Austria, Croatia, Czech Republic, Poland, Romania, Slovenia, and Slovakia) to both lend their expertise and to learn the indicators development process through participation.

Many of the WTO core indicators were applicable to the study region and data was available to support management decisions. However, data on tourist numbers, which is fundamental to several of the key indicators remains somewhat problematic due to the large quantity of unreported tourism accommodation, particularly during high season. For hotels and official lodging, as well as for targeted hot spots, work to monitor the numbers and concerns of tourists is well advanced.

The long history of concern for key environmental factors has yielded a rich body of useful information on the state of the Lake Balaton environment. As well, a strong monitoring programme is in place for both water quality and wildlife in the National Park. As the largest inflow of water into Lake Balaton is through the Kis-Balaton wetland (the Zala River), there is good information on potential pollution risk to lake water quality. In contrast, there is little systematic planning, control or regulation on areas outside the national park system, although some planning measures are now under consideration. Greater consideration of cooperation among agencies and jurisdictions around the Lake seems to be important for better monitoring, sharing of information, and collaboration in developing solutions to common problems.
**Key Conclusions relative to:**

1. **Use of the WTO Core Indicators**: The WTO core indicators were generally useful as a starting point to establish a basis for measurement of key changes. Most proved relevant to the Keszthely area and a majority could be supported with existing data sources, particularly those regarding levels of tourism (for specific sites), key stresses, key ecological factors and levels of measured impact. Less information existed to support indicators related to perceptions of tourists related to the study area.

2. **Impacted hot spots**. Particularly for hot spots (Heviz, public beaches, Keszthely castle, Kis-Balaton) additional site-specific indicators are needed to deal with the concentrated impacts at this local scale. This requirement is consistent with the findings at the previous case studies of implementation of indicators as reported in the WTO Guidebook, which have shown that for most destinations at least two levels/scales of indicators will likely be required.

3. **Data to support Indicators**: Data for baseline measurement was found to exist for a majority of the core and selected ecosystem specific measures appropriate to the Keszthely case, but time series information could be found for only a few - notably the ecological indicators (e.g., coliform, phosphorous loadings) and those pertaining to use levels at impacted sites. Some good baselines were found which could be the basis for future monitoring; for example, a valuable one-time survey had been done of attitudes of locals to tourism. This information could be the baseline for future monitoring of attitudinal changes. Overall, establishment of a set of officially recognized indicators could help in stimulating the creation or modification of monitoring programmes by various levels of government at appropriate scales to allow repetitive measurement, supporting most of the desired indicators.

4. **Tourist numbers**. A particular concern has been the identification of a means to measure the actual number of tourists in the study area, as this information is a central variable in several of the recommended indicators at the study area level. While excellent data exists for the registered accommodation, and is available by village and by type, time of year, etc., there is considerable “black market tourism” which uses private accommodation and is not counted. Because this is outside the “legal” system it is both hard to estimate and not readily subject to monitoring. As well, the definition of “black market” is very difficult because of the extent of private seasonal residences, which may accommodate family, friends, or paid guests. Which of these people are in fact non-registered tourists? All bring stresses to the region in season. Estimates of the extent of this non-registered tourism vary widely although there is consensus that it is a serious issue for the region and is “substantial” in peak season. This concern likely also affects counting of tourist numbers in other destinations, although it was not as clearly recognized as a constraint in other similar indicators applications such as Villa Gesell or Prince Edward Island.
Recommendations

A) Indicators for the Lake Balaton region (and study area)

It is recommended that:

1. A programme to support the recommended indicators set (Appendix A) be put in place using data from a variety of sources. It is suggested that this programme be coordinated by the regional tourism authorities, probably using the Western Balaton study area as the data unit, (Note that the study area corresponds closely to the Keszthely sub-region with the addition of parts of the Kis-Balaton Park area. Hot spots should be measured separately).

2. Measures be taken to enhance protection levels for areas rich in natural heritage. If, for example, further tourism is to be permitted in the Kis-Balaton protected area, it is recommended that means be sought to capture some of the potential revenues from tourism to assist in management of the site (protection, guiding, interpretation). Because of the current tension between park protection and tourism access, innovative means will be needed to develop non-zero-sum solutions which benefit both protection and tourism - likely through some separation of tourism use possibilities and creative zoning and control. A multi-stakeholder approach to establishing this separation in ways acceptable to all stakeholders may help to identify these opportunities. The dialogue which occurred in the workshops at Balatonoszod in conjunction with the preparation of this report may be a good point of departure for such a process.

3. The Blue Flag programme, or suitable equivalent, be considered for the beach areas to create a public indicator of beach quality. Use of this programme will result not only in a useful indicator but also may assist in integrating several data sources and can serve as a marketing tool for the region, showing that internationally recognized standards of beach quality have been met.

4. It is recommended that a forum be established to assist the various agencies and jurisdictions in the region to cooperate on common tourism problems and to join in use of their knowledge and capabilities for resolution. The Balatonoszod workshop was the first time many of the important stakeholders had met with each other and learned of their shared concerns.

5. The proposed set of indicators developed by the research team and the Balatonoszod workshop should be reviewed internally by an expert committee in Hungary to clarify the accuracy and availability of information sources to support the selected key indicators. It is also recommended that the committee provide further guidance regarding indicators implementation.
B) Indicators for Hungary

It is recommended that:

1. Wherever practical, Hungary proceed to put in place in the case study area the specific indicators which were developed in the workshop process; this can then serve as a demonstration leading to broader applications in Hungary.

2. Hungary seek means to replicate the indicators process and application at other impacted sites including the remainder of Lake Balaton.

3. Opportunities be pursued to engage members of jurisdictions or authorities in discussions to agree on the most effective means to involve the tourism sector in the regional and local planning process, possibly using the indicators approach as a means to identify shared risks and common goals.

C) Indicators for Central and Eastern Europe

It is recommended that:

1. Indicators identified at the Balaton Workshop (and the approach used) be considered for testing at tourism destinations elsewhere in Central and Eastern Europe that share similar pressures as those experienced at the Lake Balaton study area.

2. Distance learning/mentoring options be explored to enable the development and application of core, ecosystem and site specific indicators at tourism destination in Central Europe. In the workshops, several commonalities between countries were identified, and continuing links among the experts should be encouraged.

3. A key issue in Hungary, identified as well in other nations, was the difficulty of creating cooperation among the necessary stakeholder groups to deliver a sustainable tourism planning and management process. Further work on how to create positive consultative and stakeholder processes in the Central/Eastern European context is clearly needed.

4. Follow-up to identify the successes and key barriers in the actual implementation of the indicators be initiated for the Lake Balaton study area and continued.

D) The WTO Indicators Programme
It is recommended that:

1. The WTO make the Lake Balaton case and other indicators studies widely available as models for application of the indicators approach described in the Manual (*What Tourism Managers Need to Know*). In particular, the Balaton example reinforces the lessons found in the Prince Edward Island and Villa Gesell applications to seasonal beach destinations, with many commonalities related to ecological stresses, beach impacts, and community concerns.

2. The WTO consider further how the indicators programme can be applied both at regional and site specific scales. In applying the indicators to the Balaton case, as in previous studies, it was frequently necessary to target some of the indicators to specific, very local sites (hot spots), as well as to apply the core indicators at a destination or region wide level.

3. The WTO consider options for further activity in Central and Eastern Europe directed at bringing the application of the indicators development model to other nations of the region. All participants from Central European nations were supportive in principle of this and were able to identify potential opportunities/cases for indicator development in their nations. It may be useful to examine the ways in which the WTO can act as a catalyst for the practical hands-on enlargement of the indicators programme.

4. Distance mentoring options (e.g., Internet, email) be explored in conjunction with face-to-face training and more direct support in the indicators development and application processes. It is clear, at least in initial applications, that participants may require backup support to fully apply the process in other nations and new sites.

The combined regional pilot and training session is confirmed as a positive means to achieve its two objectives: application of foreign and local expertise in a productive problem solving environment and the use of the case study approach as a valuable training tool. This also had a further benefit - introducing several experts to one another in a forum which may lead to ongoing contact and exchange of information and support.
1. Introduction

In 1991, the World Tourism Organization began an initiative to develop indicators of sustainable tourism for global use. An international task force (WTO, 1992-95) produced a recommended list of indicators for use at the national level and a list for application to specific tourist destinations or hot spots. Based on several case studies (in Canada, Mexico, the Netherlands and the USA) a set of core indicators was developed. As well, recommended indicators were devised for specific types of destinations (e.g., coastal resorts, ecotourism sites, cultural tourism). Applications of the WTO indicator methodology to two sites in Argentina, as well as work by others to apply the approach in several other nations has helped to show the value of this approach in identifying and managing the risks to sustainable tourism.

The western Lake Balaton study and further regional workshops are the next building block in the WTO-led international effort to develop and implement indicators for the tourism industry which will enable managers to better control the interface between tourism and the environment.

This report leads to two types of conclusions:

- conclusions regarding the development and application of indicators for the study area of western Lake Balaton (Keszthely sub-region) itself, and

- conclusions regarding the potential for the WTO indicators approach as a tool for other parts of Central and Eastern Europe.

The objective was, first, to determine what indicators would respond best to the issues and risks to sustainable tourism in the study area. Second, the task was to examine if the data needed to calculate the values of the WTO core list of indicators were available. Once this was determined, it was necessary to derive certain ecosystem and destination specific indicators which were discovered to be important to local decisions through consultation with officials in each site. An assessment was also made of whether each indicator appeared useful as a tool to support management decisions that would affect the long-term sustainability of tourism activity at the study site. At the same time, if additional indicators appeared to be more available and/or relevant, they were also examined, both for local application and for possible addition to the WTO lists.

2. Methodology for Indicators Identification

The process of indicators identification consists of several steps, each of which has a number of elements. Once the key issues relevant to sustainable tourism at a destination or region have been identified, it is then necessary to select or develop those indicators that respond to these issues. The selection and evaluation of the indicators must be undertaken according to set criteria, including:
• relevance of the indicator to local decision-making strategies and goals, including key regional trends;
• data obtainability analysis of data, and existence of threshold values where pertinent;
• understandability and credibility for users of the data;
• comparability over time and across jurisdictions or regions; and
• prediction capability of the indicator to forewarn of significant problems.

It is also important to be aware of the different categories of indicators which may be useful for tourism managers. Specifically, indicators may be broken into the following groups.

• early warning indicators (e.g., species disappearance)
• indicators of stresses on the system (e.g., crime rates)
• measures of current state of industry (e.g., occupancy, satisfaction)
• measures of management effort (e.g., cleanup cost, damage repairs)
• measures of management effect (e.g., changed pollution levels, more returning tourists)

While all categories of indicator are of value in support of sustainable tourism, it is the early warning indicators which are most valuable to tourism managers. These indicators enable actions to be taken before serious threats to sustainability occur.

A set of indicators developed for a specific site can also be used to stimulate standards development with broad application. That is, once generally accepted, indicators can provide a basis for the preparation of standards in situations in which:

• repetitive problems are discovered
• where new risks are documented
• where many destinations share similar issues
• where it is strategic to show results

An example of such standards development and acceptance has been the Blue Flag Beach Campaign applied in Europe.

To establish a successful indicators selection and implementation process, there are several key steps that must be understood and followed.

• defining the destination boundaries: it is critical that those charged with indicators development be completely clear at the outset of an indicators identification process on the geographic boundaries and political jurisdictions that circumscribe the study area.

• defining destination assets: before indicators can be considered, it is important to identify the tourism destination’s tourism assets, what they mean economically, socially, ecologically and culturally to the destination, and what the risks are to these assets.

• gaining local participation: those who know the destination most intimately tend to be
those who live within or in close proximity to the study area. As these people often have clear insight into those indicators will work and those that will not, their support in providing information to assist in key issues identification and indicators selection is invaluable.

- **agreeing on key risks, values**: discussion is necessary to agree on the values and expectations which both tourists and local residents hold concerning the destination. With this knowledge, it is then possible to identify and prioritize the risks to the economic, social and ecological sustainability of tourism in the study area.

- **accessing suitable data**: indicators selection must be undertaken with a clear view of not only data requirements, but of whether the data is both relevant and reliable and valid and where it can be obtained on an ongoing and affordable basis.

- **obtaining information on thresholds and system sensitivity**: integral to the concept of sustainability is a recognition of the carrying capacity of the destination. Hence, any information which can be obtained which tells tourism managers about the biophysical and social dimensions of sustainability can assist in identifying thresholds beyond which tourism may no longer be sustainable at that destination.

- **following up with monitoring**: indicators selection is only part of the first phase of sustainable tourism management. Once identified and implemented, a monitoring regime must be kept in place to gauge success in managing tourism at a destination in ways that continue to be sustainable and which can be compared to specific objectives. Clearly this process is critical to sustainable tourism management, but because it requires an ongoing commitment of resources, it can be difficult to maintain over the long-term. This reality needs to be acknowledged and, as far as possible, addressed during the indicators development process.
3. The Keszthely Study Area

**Area Delimitation:** The study area is a beach, park and cultural destination situated at Lake Balaton in Hungary. The specific study area for which indicator data is being developed is the Keszthely sub-region. The Keszthely sub-region is located at the western end of Lake Balaton, and contains the destinations of the spa community of Heviz, Keszthely castle, and the wildlife refuge/national park area of Kis-Balaton. As well, the sub-region contains several intensively used beaches on Lake Balaton, and some sections of the Balaton Uplands National Park. For the purposes of this study, the statistical boundaries used consist of those of the Keszthely sub-region. The one exception to this delimitation is the Kis-Balaton area; the entire protected area within Kis-Balaton is considered part of the study area although the eastern part is outside the Keszthely boundaries.

For many decades, the study region has been an important summer destination for tourists. Lake Balaton is a popular summer destination for tourists from Hungary, Germany, and other neighbouring countries due to its large expanse, warm water, and sandy beaches. The Lake (particularly the picturesque north shore), is a traditional destination for Germans, and evidence of their importance is seen in the many signs of services in German. Signs of “Zimmer Frei” outnumber vacancy signs in Hungarian for accommodation.
The Lake, particularly the northern and western parts, was also a traditional meeting place for Germans when Germany was divided - the only place accessible to residents of both East and West Germany. The German connection remains strong with many visitors from that nation and German speaking tourists making up the majority of visitors year round at the spa in Heviz.

The peak season for tourism is short, comprising only eight weeks corresponding to the summer vacation period for schools in the source countries, and to the period when the Lake is warm and amenable to swimming. In practice, depending on the weather, the period of intense use is often shorter, only four or five weeks. The lake is about an hour’s drive from Budapest (two hours from Budapest to Keszthely) and draws large numbers of day and weekend visitors to the shores. Many of these people stay with friends, relatives, or in unauthorized paid accommodation, rather than in the officially licensed hotels and guest houses. The magnitude of this unofficial tourism is very difficult to estimate but is considered to be substantial and may skew official numbers of tourists.

The principal attractions of the Keszthely study area include the beaches, Heviz, and Keszthely castle in the principal community of Keszthely. As well, picturesque smaller villages, vineyards, and the wildlife of Kis-Balaton complement the region’s main attractions.

The region has no comprehensive development control, although a programme is in preparation for the shore zones. Due to the shallow nature of the lake and the sandy shores, shore erosion has been a problem, particularly due to strong storm/wave activity and also due to ice action in winter. Reed planting and conservation of existing reed beds has largely controlled the most serious erosion in many areas, and considerable building of concrete and rock walls has contained erosion.

Water quality is an ongoing concern for the Lake, and measures have been taken to reduce loadings of phosphorus and to control direct pollution from urban areas. As well, all rural residents have some form of septic system. Contamination from waterborne waste is not considered to be a major problem as all waste from sewers is treated and much of the treated water is not returned to the lake. Turbidity remains a concern to many tourists, although most is natural due to the shallow nature of the lake. Algae is a major concern, with eutrophication and blooms causing distress to beach users in late summer, particularly in warm years.

The main artery for the region is the highway around the lake which goes through the centre of most communities. There is little break between villages in the study area and around the entire lake.

Overall, the region is a well-maintained tourism destination, despite the lack of explicit or coordinated planning control and continuing concern for dumping and garbage in highly used areas. Much of the new building is sensitive to local design and there are few high density developments. The indicators programme may be able to generate information which can complement current planning and management activity and serve to highlight emerging problems so that they can receive timely attention.
4. Impact Management Issues

The WTO study and the workshop conducted at Balatonoszod identified the following potentially important issues for sustainable tourism in the Keszthely sub-district:

- **Water quality - lake water**
  The two main aspects of water quality concern eutrophication and faecal coliform levels. There are no indications that water quality is diminishing or is compromising the tourism industry around the study area. Indeed, quality appears to be generally improving with the increasing levels of sewage treatment and the contribution of the Kis-Balaton wetland function. At the same time, perception of water quality remains a concern of tourists who may object to turbidity and eutrophication (algae blooms have occurred in several summers). Major fish kills (attributable to extremely high water temperatures) have occurred in some recent years and this also contributes to a perception of risk by tourists and locals.

- **Environmental education**
  Some of the environmental problems of the region may be related to a lack of environmental knowledge among residents and tourists - both through the formal education system and through the interpretation and information available to tourists regarding Lake Balaton and its assets.

- **Preservation of special natural/historical areas**
  The western sections of Balaton Uplands National Park are in the study area. The Kis-Balaton lake/wetland is a fragile habitat, with much of the area under protection with access controlled and hunting banned. The area is a Ramsar site. Poaching, unauthorized access, and disturbance of nesting birds are issues for the Park management. There is a tension between the concern for preservation and the emerging demands for tourist access. In the uplands area, there is little control of access in this new park, and many tourists use the hills and trails for recreation.

- **Overcrowding in accessible beach areas and access roads**
  During peak season, overcrowding on the beach during fair weather days and on the roads during rainy or cool days is an issue because it detracts from the enjoyment of tourists and is also the subject of concern by locals. On peak days parking can be nearly impossible near the beaches. In season, particularly on days when beach use is not possible due to the weather, the same cars clog the only road around the lake. Closely tied to seasonality, this issue is subject to several indicators that can help determine both changes in crowding over time and the effects of overcrowding on the social and ecological environment within the study area.

- **Social impact**
  The Ratz study identified a concern by local residents related to the loss of sense of community, as well as the loss of younger people from the communities in the off season. Several other issues were also raised regarding exposure of the communities to different values, and loss of uniqueness or identity in the communities.
• **Image of the region**
Many in the tourism industry are concerned that the image of the region is not as good as it could be among actual or potential tourists, or is insufficiently known.

• **Extreme seasonality of tourism**
During the summer months, in particular a four to five week period during July and August, extremely high numbers of people visit the lake. While some 2.5 million visitors arrive every year, at Balaton (the entire lake) the bulk of these visits occur during the peak season. As a result, many commercial establishments are only economically viable during this short period or are only marginally viable during the shoulder season. Seasonality, therefore, puts pressure on the infrastructure, facilities and establishments around the lake for a short time and leads to poor economic prospects during the off-season. The challenge is to smooth demand into other months, in part by providing or encouraging the use of tourism attractions other than those associated with the beach. While tourism brings some jobs to the region, many cease at the end of the season. Most officials contacted in the research were interested in means to extend the season and to stimulate services etc. to be open for more of the year.

• **Variety of attractions**
West Balaton provides a very wide range of experiences to tourists, in addition to the primary draw - the beach. With vineyards, local cuisine, the largest thermal lake in Hungary, health spas, attractive villages, birdwatching, nature trails, boating, several heritage properties, and a variety of cultural experiences in season, the region has a varied offering. Many are seeking additional attractions which will serve other niches, and provide variety, particularly in the shoulder seasons and for wet days in summer.

• **Solid waste management**
Due to the influx of tourists during peak season, increases in garbage production are experienced and can cause stress among residents and tourists alike. The volumes of garbage on the beaches, streets and illegal (and often highly visible) dumps can reduce the amenity value of the area, and have negative impacts on tourists and locals alike.

• **Consumer satisfaction**
The experts generally agreed that the levels of satisfaction of tourists was a concern, particularly since there had been some loss of custom from other countries after the withdrawal of the Soviet Union, and that many of the tourists from former East Bloc countries now had options which had enlarged the competition.

• **Public health**
Public health concerns occur wherever large numbers of people concentrate. For the tourism industry, the key issues relate to food contamination and to waterborne diseases associated with swimming. The authorities of the region are very sensitive to this and have a comprehensive inspection programme in place.

• **Crime**
The study by Tamara Ratz showed concern by locals over increasing crime (mainly car theft and burglary), which many associated with the tourists. Concern was also expressed over general rowdiness and potential negative effects on behaviour of local youth.

- **Pricing**
  Pricing of accommodation and services during peak season is a concern from the vantage of both foreign tourists and Hungarians. With regard to tourists, there has been some customer dissatisfaction due to a dual price regime: one for tourists and one for local residents. The extent of this dissatisfaction is not documented. From the point of view of Hungarians, the increase in prices can serve as a barrier to entry such that many Hungarians are not able to afford to come to the region during the peak season.

- **Public Access to Beaches**
  During peak season, parking can be very difficult for those seeking to access the beach. The congestion around the beaches is an annoyance for tourists and local residents alike.

- **Regional planning coordination**
  Many jurisdictions and agencies are involved with the planning and management of Lake Balaton and the tourism industry. There is an apparent lack of coordination between these agencies to permit ready action on sustainable tourism issues. At a site specific level, the intense building in the beachfront and immediate foreshore (mainly private seasonal dwellings) is an issue. While the quality of dwellings is generally good, there is no current plan of site control to eliminate inappropriate uses.

- **Black market accommodation**
  Many of the visitors to the Lake stay in private unlicensed accommodation. Some are family, others are friends, or tourists sold rooms on the street. The lack of licensing for these “black market” accommodation is an issue because some of the accommodation may be substandard, because it is not subject to taxation, and because it is assumed to be significant but unmeasurable, adding to the stress on the lake and on infrastructure.

- **Funding for Protection**
  Both natural (e.g., Kis-Balaton) and cultural (e.g., Festetics Castle) assets can be found in the study area. As use grows, so do expenses for control and rehabilitation/maintenance. A central issue is the recapture of funds from users to assist in this control and management. Several cultural assets are found in the study area, including the tourist magnets of Festetics (Keszthely) castle, the baths at Heviz, several picturesque villages, and numerous churches and other historic buildings. The levels of use, maintenance, and the mobilization of tourist dollars to aid in preservation are all issues of concern.
5. Data Sources for Lake Balaton and the Study Area

The study team had a preparation visit to the study area prior to the Balaton workshop. With the assistance of the Hungarian counterparts, it was possible to visit and interview some key sources of information in the region and in Budapest, and to confirm the state of information available to support many of the indicators. Virtually all of the people with whom the study team had contact were very co-operative, as they saw the potential value of the indicators exercise for tourism and its relevance to their management practices. Initial contacts led to many referrals to other people who were expected to have information of value to the study. Several of these participated in the Balaton workshop.

No attempt was made to collect specific data for the aggregate indicators (Destination Attractivity Index, Carrying Capacity Index and Site Stress Index) separately from the core and site-specific indicators. This effort was not made, since the composite indicators were to be calculated by the study team based on other indicators or site factors. In a later section of this report, recommendations regarding the specific components of a destination attractivity index and a site stress index which appear to best suit the situation in the Keszthely sub-district and its hot spots are presented. Data appear generally available to support these areas of concern. In fact, some of the site-specific data (e.g., levels of beach use) are more readily available and useful than regional/sub-regional information.

During the study, data were collected or sources of data identified for all of the specific indicators. (See Appendix 4 for a summary of data sources) It was confirmed that data or useful information in some form exist for nearly all of the core indicators. For instance, it was confirmed that there is as yet no comprehensive planning process, although one is in development and soon the status may change.

Most of the needed data could be readily calculated or assessed, (see notes for each proposed indicator - Appendix 1) although the validity of regional and village level tourism data is suspect because of the significant part of the “black market” tourism accommodation not covered in the comprehensive data. A further concern is the plethora of associations, authorities, jurisdictions, etc. who are involved in the tourism industry of the region. Gyorgy Moldova (The Stealing of the Balaton, 1995) found over 50 organizations involved in Balaton issues, plus local councils for 40 communities who had some interest or jurisdiction over aspects of Lake Balaton. He suggests that the sheer number of and lack of coordination among these many stakeholders is the principal barrier to good management of the lake.

6. Criteria for Indicator Evaluation

The evaluation of the indicators is made according to the following criteria:

- **relevance** of the indicator to local decision-making strategies and goals, including key regional trends;
• **data** obtainability analysis of data, and existence of threshold values where pertinent;
• **understandability** and credibility for users of the data; and
• **comparability** over time and across jurisdictions or regions
• **prediction** - capability of the indicator to forewarn of significant problems.

**Rating the Indicators for Use¹**

***** Critical indicator for the management of the site
**** Important for management decisions
*** Very useful for certain aspects of site management
** Some use for specific management issues
* Limited utility for management of the site

**APPENDICES**

**Appendix 1** contains a specific detailed review of each of the proposed indicators for the Keszthely sub-district study area.

**Appendix 2** contains the IUCN² classification of levels of site protection.

**Appendix 3** contains selected available information for Lake Balaton to support key indicators.

**Appendix 4** indicators worksheet

¹Note that for the purposes of this study, only those indicators that we recommend (i.e., those having 3, 4 or 5 stars) are included.

²International Union for the Conservation of Nature
APPENDIX 1: EVALUATIONS OF POTENTIAL INDICATORS OF SUSTAINABLE TOURISM: KESZTHELY SUB-REGION

Evaluations of each potential indicator are provided below. These evaluations are based on the materials gathered by the study team, the interviews in the region, and the deliberations of the Balatonoszod workshop. For each indicator, where applicable, the formula to be used is indicated and the specific sources found for the data is also listed. The study examined indicators regarding the key issues in the destination, the type of data needed and available, potential data sources, and the adequacy of the data to support the indicator. As well, the suitability of each of the core indicators from WTO is also assessed in terms of the relevance to the needs of the destination.

Rating the Indicators for Use

Critical indicator for the management of the site
Important for management decisions
Very useful for certain aspects of site management
Some use for specific management issues
Limited utility for management of the site

Issue: Lake Balaton Water Quality

***** Faecal coliform count at beaches

Particularly during periods of intense use, the lake is subject to increases in faecal coliform. This contamination is due to a combination of animals and tourists defecating in the water and an unspecified degree of improperly treated sewage released into the lake.

| relevance   | HIGH | Water quality in the Lake is a key determinant of the economic sustainability of tourism in the study area. Coliform counts are a reliable measure of water quality and, therefore, are relevant to decisions taken to address water quality issues. |
| data        | HIGH | Data is obtained on a systematic and frequent basis |
| understandability | HIGH | Simple to understand |

3Note that for the purposes of this study, only those indicators that we recommend (i.e., those having 3, 4 or 5 stars) are included.
comparability HIGH The measure is universally accepted and can be used as a basis for comparison between different locations and to track changes in water quality at a site over time.

predictive capability HIGH Key early warning indicator of unacceptable beach/swimming conditions which can have serious implications for future economics of the tourism industry.

***** Chlorophyll-A: measure of algae count

Due to combinations of both heat and nitrate and phosphorous loading, the lake has periodically experienced algae blooms with commensurate damage to living organisms (namely fish) and negative aesthetic effects affecting tourist enjoyment of the water.

relevance HIGH This indicator measures directly the algae content of the water and, therefore, is a reliable current measure of lake eutrophication.

data HIGH Data is obtained on a systematic and frequent basis by the lake authorities.

Understandability HIGH Simple to understand - relates to visible phenomenon

comparability HIGH The measure is universally accepted and can be used as a basis for comparison between different locations and to track changes in lake eutrophication over time

predictive capability HIGH A useful predictor of water quality and, therefore, of impacts on fish and other organisms and whether tourists may avoid the lake or parts thereof

*** Tourist complaints about water at beaches

relevance HIGH Complaints, while subjective in terms of their content, can provide decision makers with information on both the actual and perceived water quality.

data MED Complaints are registered at beaches and hotels. These are taken seriously and are ultimately reported to the Balaton Water Authority with little cost to tourism decision makers. No consistent controlled collection.

understandability HIGH Simple to understand - relate to perception of contamination

comparability LOW The measure is highly subjective and may relate more to perceived water quality rather than actual water quality.
predictive capability  MED  As a proxy for water quality, this indicator can be useful and as an indicator of perceived water quality it can suggest the degree of tourism satisfaction with their beach experiences.

**Issue: Environmental Education**

***  Number of environmental modules offered by schools in the region in conjunction with a count of the number of students who receive the modules

Because the state of the natural environment is critical to the tourism industry’s success in the study region, it was determined that a degree of environmental awareness on the part of residents and tourists alike is important and could lead to long term actions which would help in establishing a more sustainable environment and tourism industry.

- **relevance to decisions**  HIGH  Environmental awareness has a direct bearing on people’s behaviour with respect to the environment. (Lower in short term)
- **data obtainability**  HIGH  Data can be readily and cheaply obtained from school sources
- **understandability**  MED/LOW  Simple to understand, although the content of courses and means by which they are taught can vary
- **comparability**  HIGH  The absolute numbers of modules and students can be compared over time and across jurisdictions
- **predictive capability**  MED  Environmental knowledge is correlated with behaviour affecting the environment - primarily in the medium to long term

**Issue: Preservation of Nature**

*** Critical Ecosystems  (WTO core indicator 8). **Number of rare/endangered species**

Kis-Balaton is a high quality wetland and a critical migratory habitat for many species. Among the region’s key tourism assets, particularly in the Kis-Balaton, are some 220 bird species and a fragile wetland. The wetland is not only the habitat for the bird (and other) species, but plays a critical role in the cleaning of water entering Lake Balaton through the Zala River

- **relevance**  HIGH  Habitat for endangered fauna is within the area. (22 listed species are present)
**data** HIGH  Population count estimates are regularly undertaken by parks staff

**understandability** HIGH  Easily understood by tourists and managers

**comparability** HIGH  International standard method of collection

**predictive capability** HIGH  Central to the mandate of the protected area of Kis-Balaton and may relate to future desirability of the site to specific niches of the region’s tourism (e.g. birdwatchers)

**Issue: Overcrowding and Congestion in the Beach Area**

The growing intensity of beach use is a major concern with potential to degrade the experience sought by many, and perhaps most, tourists if it is not well controlled.

***** Use Intensity (WTO core indicator 3, Intensity of use - peak period [persons/sq/metre])

Two measures are pertinent:

1. persons per linear metre of accessible beach *(in season average and peak day)*
2. persons per square metre of beach. *(in season average and peak day)*

Data should be used for the area of publicly accessible beach.

**relevance** HIGH  Beaches are very crowded in peak season

**data** HIGH  Data for numbers of tourists are regularly collected at the entry to the beach where fees are collected. Beach area can be determined from recent air photography or from concession records. Length of beach is known. Data is not available for open shoreline or private areas which are mostly subject to less intensive use

**understandability** HIGH  The indicator is evocative of levels of potential crowding and easily understood

**comparability** HIGH  Simple standard

**predictive capability** HIGH  A key indicator for local use in decisions regarding future levels of development and need for controls. If either ecological or sociocultural capacity levels are exceeded, problems may occur and tourists may leave
**Issue: Social Impact**

As a seasonal tourism destination the study area has extreme tourism peaks in July and August. At this time, the tourists greatly outnumber locals in the region. This number relates to many of the stresses which Ratz identified and is a good indicator of potential problems.

*** Ratio of tourists to locals in peak period (WTO core indicator 4)

The number of permanent residents in the Keszthely Subregion (i.e., roughly the study area) is 46,185. (1997). The number of domestic and foreign registered guests at commercial accommodation in the subregion was 197,063 in 1997. The area experiences a significant influx for two months each year, particularly during a four-five week period in July and August. Much of the infrastructure and services are tailored to the summer maximum, although overcrowding is reported; many hotels and other services close for the other months. Some maintain a season as short as two months. In some of the lakeside communities insufficient establishments remain open to serve local needs.

| relevance | HIGH | Overcrowding and seasonality are key issues, particularly in the lakeshore and beachfront areas |
| data | H/M | Directly available from census data and from annual data on tourists in legal accommodation. Data known to lack unofficial accommodation which may be substantial |
| understandability | HIGH | Indicator is easily understood but may not reflect true levels due to illegal accommodation |
| comparability | H/M | Reasonable comparability from year to year as long as rules/enforcement of registration do not change. Not useful to compare with other sites which may have no/different levels of hidden accommodation |
| predictive capability | HIGH | Relates to stress levels and employment stability/social stress. Ratios may be even higher when numbers of tourists using unregistered accommodation are added |

**Issue: Image of the Region**

*** Community opinion (WTO core indicator 10.) Local Satisfaction - Level of satisfaction by locals (questionnaire based)

From conversations with local operators, officials and others, and from the studies of community concerns done in the region it is clear that many residents have concern over the growing numbers of tourists and intensity of development. While a 1997 study documents
these areas of concern (Ratz 1997), it is a one-time study, but provides a good baseline for replication as an indicator.

**relevance**  MED  May aid in decisions regarding the future levels and types of tourism development

**data**  MED  1997 baseline exists - would require a new questionnaire for repeat monitoring

**understandability**  HIGH  Direct opinion available for decision-makers

**comparability**  H/M  Good internal comparability. Useful for comparisons with other Hungarian destinations if same sampling approach and questions used. Limited comparability with other similar measures used elsewhere

**predictive capability**  HIGH  May identify emerging resistance to pace or type of tourism development (key sensitivities)

### Local Satisfaction

This indicator measures the level of satisfaction of locals who are potentially affected (positively or negatively) by the tourism industry. It is obtained through a questionnaire of local (year round) residents of the tourist destination or adjacent thereto. The following question is asked: "What is your opinion of the tourism in your community?"

```
Excellent ------------------------------ Satisfactory ----------------------------- Very Unsatisfactory
10        9        8         7       6            5            4             3             2           1        0
```

This standard question assures interregional comparability and may be supplemented by other questions on attitude towards specific elements of the impacts (as in the Ratz study), or to reactions from specific community cohorts.

### Issue: Seasonality

***** Stress (WTO core indicator 2) Tourist numbers visiting site (per annum/peak month)

**relevance**  HIGH  Key indicator of the effects of intense tourism pressure over a short time period

**data**  MED  Annual data collection identified 297,200 tourists (1997) with registered accommodation in Zala County
annually with a maximum of 46,100 in August (1998). Data on legal accommodation is excellent and detailed. Data on illegal accommodation is lacking.

understandability: HIGH
Simple to understand

comparability: HIGH
Easy to compare numbers over time to see trends or the effects of action to smooth seasonal tourism pressures

predictive capability: HIGH
Responds to the most local concerns and to issues from foreign tourists in the border exit questionnaire

**Issue: Variety of attractions**

***** Percentage of service establishments open year round.
Important to the economic sustainability of the study area is the availability of non-traditional and off-peak season attractions. The greater this variety, the less the pressure will be upon the tourism industry during the short summer peak tourism load, and the more the tourism will be spread amongst sites and beneficiaries. Number of establishments, therefore, may be a measure of health of the community.

relevance: MED
May be early warning of changes in market or community impact

data: HIGH
Municipal licences - regularly counted

understandability: HIGH
Easy to understand

comparability: HIGH
Objective indicator- easily related to other communities.

predictive capability: MED
May provide good measure of potential community concern - also relates to adequacy of services in peak season

**Issue: Solid waste management**

*** % households using official garbage removal (voucher purchase)
Illegal dumping has been an ongoing concern, brought on in large part, although difficult to precisely measure, by people wishing to avoid having to pay for garbage removal. While anecdotal evidence

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4Number of registered guests at commercial accommodation in the Keszthely Subregion (within Zala County) is not available. Although the area contained within the subregion is only about 13% of that of Zala county, the number of tourists in August as a proportion of the total annual number in Zala is noteworthy and may be extrapolated into the study area.
on the number of illegal dumping incidents may be helpful, the following indicator is directed at obtaining a more systematic view of the problem and any attempts to resolve it. This indicator can be a useful proxy of the extent to which illegal dumping is increasing or decreasing.

| relevance | HIGH | Responds to a major concern of tourists and of municipal decision makers alike |
| data      | MED  | Data from municipality garbage collection is readily and cheaply available. Assumption is that those without vouchers dump illegally |
| understandability | HIGH | Easy to understand - shows potential for negative impacts |
| comparability | HIGH | Readily comparable over time and across regions or jurisdictions where voucher system in use |
| predictive capability | MED | Because of the negative aesthetic effects of illegal dumping on tourists - and their willingness to stay or return - the indicator can be used to suggest probable impacts on the economic sustainability of the tourism sector |

*Note: an alternative is to look at variability of volume of collection and to also examine volume collected from non-voucher sites, roadways etc. for comparison.

**Issue: Consumer Satisfaction**

**** exit questionnaire
As repeat business and word of mouth are successful to the survival of any tourism enterprise, this is a key issue with respect to economic sustainability. The indicator can consist of a variety of questions directed at determining satisfaction, including those concerning cleanliness and aesthetics, aspects of the visit most liked/least liked, sites visited, activities undertaken, and expectations of returning. Note that this indicator can also be useful to address the concern of some operators and regional representatives who feel there is insufficient access to information about the region (outside Hungary) and about attractions within the region once tourists arrive. It is perceived that such information may spread tourism among attractions and perhaps aid in lengthening the season, as well as generating custom in peak seasons.

| relevance | HIGH | Allows specific feedback from the consumer that can be used as a basis for taking action to enhance the environmental and economic sustainability of the tourism sector |
| data      | LOW  | Can be costly and time consuming |
understandability  HIGH  Readily understood and is a direct measure of tourism attitudes
comparability  LOW  Experiences which are often very personal or unique can be difficult to capture for comparison purposes and depend on the structure of the questionnaire
predictive capability  HIGH  People’s reaction to a tourism destination/experience is a strong predictor of whether they will return or recommend a destination/experience to others

**Issue: Health - cleanliness of beach water and bushes**

***** Number of toilets per tourist on beach (peak times)
Closely allied with water quality, the issue of health relating to people’s swimming or accidentally drinking small amounts of lake water arose during the session. While the health risks tend to be minor (e.g., gastroenteritis) the perception of risk and of water quality is of greater concern to tourism managers. Note that the tendency to charge for use of toilets which already charge entrance fees at beach sites may cause non-use and enlarge the problem. This may be resolvable by including toilet use fees in the beach fees.

relevance  HIGH  Directly associated with crowding and access to public facilities
data obtainability  HIGH  A simple count (numbers accessible)
understandability  HIGH  Readily understood
comparability  MED  Easily compared over time and across jurisdictions or among beaches on Lake Balaton where paid access is counted (all public controlled beaches)
predictive capability  HIGH  Can aid in beach use policy by highlighting risks to water quality and, therefore, health

**Issue: Health - cleanliness of restaurants**

***** Number of tourists with reported salmonella poisoning from local restaurants or eating outlets

relevance  HIGH  Food poisoning can affect the tourism industry’s viability in general and can close establishments in particular
data  HIGH  Standard reporting and investigation procedures in place
for salmonella food poisoning

**understandability**  HIGH  Readily understood by public to relate to safety and health

**comparability**  HIGH  Easily compared over time and across jurisdictions

**predictive capability**  HIGH  Can aid in implementing more rigorous quality inspections and can indicate effects on tourism industry based on experience with salmonella poisoning experiences at the Lake and elsewhere. Leading indicator of perception of quality of destination.

**Issue: Crime**

***** Number of crimes reported by non-residents/residents
Crime in the study area tends not to be attacks on the person, but instead consist largely of car thefts and, primarily during the off-season, home break-ins. There are no suggestions that this problem is becoming worse, but because of the serious impact crime levels (and even well publicized individual criminal events) can have on the overall level of tourism it is an issue that cannot be taken lightly.

**relevance**  HIGH  Security (and perceived security) is key to tourist well-being

**data**  HIGH  Police records readily available. Slight time lag in reporting in official statistics (two months)

**understandability**  HIGH  Readily understood to relate to personal security

**comparability**  HIGH  Easily compared over time and across jurisdictions (subject to same categorization of types of crime)

**predictive capability**  HIGH  Crime rates are inversely related to numbers of tourists and tourism satisfaction. Increases in crime events involving tourists is a predictor of decline in destination reputation and reduced tourism revenues.

**Issue: Pricing**

***** monthly average price of rooms
During peak season there are two concerns regarding pricing: first, that prices are inflated often making it difficult for Hungarians to come to the area, and second, that tourists are charged different prices than local residents for the same goods and services.
| relevance | MED | Room prices are a useful proxy for changes in prices charged for a variety of goods and services in the region, notably those targeted at tourists |
| data | HIGH | Information is readily available from accommodation venues and is published in guidebooks |
| understandability | HIGH | Readily understood - relates also to attractiveness through value for money criteria |
| comparability | HIGH | Easily compared over time and across jurisdictions |
| predictive capability | MED | Can suggest degree to which prices may dissuade tourists (particularly Hungarians) from visiting the study area. However, if rooms are full, (particularly in season) this suggests that economically the pricing has not compromised the sustainability of the accommodation sector although equity issues may arise. |

**Issue: Public Access to Beaches**

**** Percentage of usable beach open to public
Crowding during the peak season can diminish the enjoyment of those on the beach and those attempting to get to the beach (e.g., parking problems). The better beach access is managed, the higher the level of consumer satisfaction. An unknown percentage of the total swimmable beach water front is public and private. An accurate identification of this percentage along with information on the prices (if any) charged to beach users would be necessary information to fully support this indicator.

| relevance | HIGH | Crowding and private use - relates to demand management |
| data | MED | No accurate measure of beach area, but could be easily obtained from photos and local records. |
| understandability | HIGH | Readily understood - clearly both indicators show limits to access to desired sites |
| comparability | MED | The experiences at Lake Balaton beaches are not dissimilar from those at other high use beach environments; hence, comparison of this indicator may be made both with other beach destinations and over time at Balaton beaches. |
| predictive capability | HIGH | Can aid in beach use policy and can help gauge consumer satisfaction with the beach experience - price and crowding |
**Issue: Protection of Biological Resources**

**** Site Protection (WTO core indicator ). Category of site protection according to IUCN index.

<table>
<thead>
<tr>
<th>relevance</th>
<th>MED</th>
<th>Shows that some key areas are protected and have access limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>data</td>
<td>HIGH</td>
<td>Site protection under Parks is defined</td>
</tr>
<tr>
<td>complexity</td>
<td>HIGH</td>
<td>Simple to understand as % of area under some level of designation/protection (protected, accessible)</td>
</tr>
<tr>
<td>comparability</td>
<td>HIGH</td>
<td>Easily compared as standard applies universally</td>
</tr>
<tr>
<td>predictive capability</td>
<td>HIGH</td>
<td>Good to demonstrate that assets will still be intact (Subject to adequate enforcement)</td>
</tr>
</tbody>
</table>

( See Appendix 2 for details of IUCN classification of levels of protection.)

***** Critical Ecosystems (WTO core indicator 8.) Number of rare/endangered species

<table>
<thead>
<tr>
<th>relevance to decisions</th>
<th>HIGH</th>
<th>Fauna is the central attraction of the region</th>
</tr>
</thead>
<tbody>
<tr>
<td>data obtainability</td>
<td>MED</td>
<td>Some studies exist which can form the baseline for consistent monitoring. Twenty-two species in Kis-Balaton are listed, many in the Red Book.</td>
</tr>
<tr>
<td>comparability</td>
<td>HIGH</td>
<td>Species count and mix can be compared over time</td>
</tr>
<tr>
<td>understandability</td>
<td>HIGH</td>
<td>Simple to understand - internationally accepted.</td>
</tr>
<tr>
<td>predictive capability</td>
<td>HIGH</td>
<td>Central to the sustainability of Kis-Balaton as a habitat for nesting birds and tourist attraction</td>
</tr>
</tbody>
</table>

**** Planning Process - existence of organized regional plan for tourist destination region (including tourism component)

The simple existence or non-existence of comprehensive and formal planning processes involving...
different stakeholders is important to know. While this information does not tell us about the actual outcomes of the planning process, it does suggest whether a means to address regional and often conflicting issues surrounding sustainable tourism is in place.

| relevance       | MED  | Existence of such a plan enables (but does not assure) the making of decisions which are supportive of sustainable tourism in the study region |
| data            | HIGH | Simple: the planning process exists or it doesn’t |
| understandability | HIGH | Readily understood |
| comparability   | HIGH | Easily compared over time and across jurisdictions or regions |
| predictive capability | MED | The presence of a plan is simply a basis for helping ensure economic and environmental tourism; however, the actual contents of the plan and the success that has had in its implementation is not apparent |

**Issue: Black market accommodation**

***** survey of visitors**

It is presently very difficult to obtain an accurate count of the number of visitors coming to the region, in large part because of the use of black market accommodation. This is an issue because it is difficult to make decisions concerning tourism management in the absence of complete tourists’ profile information.

| relevance       | HIGH | Information from the indicator can provide tourism planners with a reliable estimate as to the total number of tourists. This information can be captured in conjunction with the customer satisfaction survey. |
| data            | LOW  | Can be expensive and time consuming. Because the accommodation is illegal, data will not be easy to get and may rely on estimates from secondary sources (e.g. car numbers, water use) which are not directly related. |
| understandability | HIGH | Readily understood by tourism management decision makers |
Comparability  MED  Depends on the consistency of both the questions asked across jurisdictions and the means by which the questionnaire is applied.

Predictive capability  M/H  Key indicator of both numbers and level of control

**Issue: Funding for Protection**

**** % of hot spot revenues that are dedicated to protection

Both natural (e.g., Kis-Balaton) and cultural (e.g., Festetics Castle) assets can be found in the study area. As use grows, so do expenses for control and rehabilitation/maintenance. This indicator enables a determination to be made as to the extent to which the recapture of funds from users is used to assist in hot spot control and management.

Relevance  HIGH  Very relevant as one means to gauge the economic sustainability of specific assets.

Data  M/H  May be difficult to determine precisely whether revenues collected are those that reappear as funding for asset protection.

Understandability  HIGH  Readily understood by tourism management decision makers

Comparability  MED  Should be highly comparable provided it is clear that revenues collected are then recycled for asset protection

Predictive capability  M/H  Helpful in determining ongoing economic sustainability in the context of other revenue provision mechanisms

**Issue: Overall attitude towards destination**

Consumer Satisfaction (WTO core indicator 9). Level of satisfaction by visitors (questionnaire based)

This appears to be a very useful indicator to warn of changing tourist attitudes which may be a signal of danger to the industry due to environmental or other risks.
This indicator measures the quality of the tourism experience and thus, reflects many of the changing conditions at the destination and the changing expectations of the tourists. The indicator is obtained through a questionnaire and sampling approach, where a random selection of tourists are asked the following question: "In your last (current) visit to Lake Balaton which best describes your experience?"

Excellent ------------------------------- Satisfactory ------------------------------- Very Unsatisfactory

10 9 8 7 6 5 4 3 2 1 0

In administering this questionnaire, managers may also wish to ask an open question to know why a particular rating is chosen. For individual sites, this information would aid in the interpretation of the answers to the above question. Those administering the questionnaire are advised to follow appropriate sampling methodologies to obtain a large enough random sample for analysis. (Usually over 100 people must be surveyed). If there are clearly different segments of the market they may have to be sampled separately (e.g., summer tourists to the beach vs. spa users, hotel visitors vs. Campers). Attention must be given to ensure that each segment is adequately represented in the survey, and repeat monitoring must replicate the original sampling methodology.

relevance HIGH Leading indicator

data M/L Questionnaire required - best done at exit or as part of nation-wide survey using sampling methodology

understandability HIGH Simple to understand - can contain questions to supplement information (e.g., why they liked/hated it)

comparability HIGH Answers to same questions can be compared over time and across jurisdictions or regions

prediction HIGH Addresses sustainability of the product - early warning indicator of changing attitude to the area or its products

Composite Indices

Composite indices consist of an amalgamation of selected core indicators and ecosystem-specific indicators. These indicators, each of which is assigned a relative ranking of significance, are then combined to yield a single measure that can be monitored over time. While necessarily subjective, familiarity with both the site and with the individual indicators used in determining the composite, enable a reliable and valid estimate to be made of composite indicator valuation

A  Carrying Capacity

In the case of Keszthely sub-region this composite indicator should consist of the following
indicators with associated weightings:

(a) accessible beach area: 30%  Note: use current value as baseline with late readings expressed in terms of current value. (1999=100)
(b) # of official beds 20%
(c) parking and road capacity 20%
(d) local attitude (scale+/-) 30%

relevance  HIGH  Can be leading indicator for planning

data  LOW  Need to modify this derived indicator through a process of public consultation linked to long-term planning process to validate weightings.

understandability  MED  General - may highlight significant cumulative changes

comparability  MED  Allows comparability at the same site overtime, but is difficult to compare different sites as each has its unique attributes and unique components to the index.

predictive capability  HIGH  Can become a standard for management - an overview derived index which suggests limits.

B  **** Site stress index

For specific hot spots (Festetics Castle, Heviz, beaches) this index needs to cover the following indicators and weightings: (Apply individually at each hot spot)

(a) # of tourists 30%
(b) # tourists/m² 30%
(c) local response 20%
(d) damage measures 20%

relevance  HIGH  Measurements of site stress are of direct concern to the ongoing management and strategic decision-making exercises pertaining to the site. Without effective site stress management, the tourism potential of the site can be seriously impaired.

data  MED  Most of the elements are measured and can be indexed.

understandability  MED  Available information is easily understood, but the determination of stress levels and types is made difficult
by the lack of benchmarks against which levels of stress can be reliably measured. It is difficult, for example, to say exactly when particular stress thresholds have been crossed, because there is often no definitive measure of where such thresholds lie. However, on the basis of objective measures of various indicators, a determination can be made on whether the site as a whole is under stress and whether stress is being experienced with respect to particular indicators (e.g., crowding).

**comparability** MED

Can be usefully compared across time at the same destination provided the same indicators are used and are applied in a consistent way.

**predictive capability** HIGH

As the main problems experienced at each of the hot spots have to do with large and intensive numbers of tourists, measurements of stress tend to be associated with the effects of such numbers. As a result, the management of site stress is tied directly to the handling of large and growing numbers of tourists.

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**C  **** Destination attractivity index**

The indicators and associated rankings which appear to be central to a site attractivity index for the region are:

(a) water quality  30%
(b) water access  20%
(c) variety of attractions 30%
(d) visitor response  20%

**relevance to decisions** HIGH

Ongoing concern by tourism industry to maintain the reputation of the destination despite changes in types of development

**data obtainability** M/L

Difficult to construct

**complexity** LOW

May mask specific changes - but these are covered by other core indicators.

**predictive capability** HIGH

Key leading indicator re perception of the quality of the site for tourism
As site "attractivity" has a direct bearing on tourist enjoyment, it is an important consideration in the making of decisions which affect both site development and tourist management issues. The effects of large numbers of people on the site (e.g., crowded beaches, traffic jams, line-ups) is, for instance, a problem that reduces the perception of site "attractivity" experienced by tourists. This index may correlate well with the recommended core indicator which measures tourist response. In the weighting, it may be useful to deliberate the relative importance of each element. One option is to examine separate attractivity indices for different niches of the market - creating different ones for beachgoers, wine tourists, birdwatchers etc. as a management tool.

APPENDIX 2: INDEX OF LEVEL OF PROTECTION PROPOSED BY THE INTERNATIONAL UNION FOR THE CONSERVATION OF NATURE, IUCN, (THE WORLD CONSERVATION UNION)
The IUCN descriptive categories have been selected to relate to site-specific management objectives. It should be noted that within each category there may be a variety of areas, including those which support some tourist uses, and those which are maintained as totally off-limits to human access. It may be worthwhile to treat these as separate areas.

**Category 1**  
Strict protection (nature reserve or wilderness park) - limited human access.

**Category 2**  
Ecosystem conservation and recreation (e.g. national park)

**Category 3**  
Conservation of natural features (i.e. natural monument -managed access)

**Category 4**  
Conservation through active management (e.g. management of specific habitats or species, some control of access where negative impacts predicted)

**Category 5**  
Landscape or seascape conservation and recreation (e.g. controlled access beach)

**Category 6**  
Sustainable use of natural systems(some use of resources permitted but certain natural resources [e.g. fauna] protected)

Note: Some service areas within protected areas should be considered to be outside the protected area - e.g.; hotels, restaurants, tourist villages in national parks)
APPENDIX 3: LAKE BALATON FACT SHEET

- largest lake in Central Europe
- study area: Keszthely-Heviz-Kis Balaton region at western end of lake
- lake size: 77 km long/14 km wide at widest point
- mean water depth: 3.2 metres
- deepest point: 12.4 metres
- water turnover: 2 years
- fed mainly by Zala River flowing through Kis Balaton wetland
- largest industry: tourism
- second largest tourism destination in Hungary after Budapest
- 2.5 million visitors per year on the entire lake
- 4-5 weeks of intensive use in July and August
- twice as many official foreign visitors (especially German, Austrian and Dutch) as Hungarian in the Keszthely region
- socio-economic and ecological problems largely associated with seasonality and intensity of use
- beaches often private/public beaches normally require fees and often difficult to access
## APPENDIX 4: INDICATORS WORKSHEET

**ISSUE:**

___________________________________________________________________________

___________________________________________________________________________

**POTENTIAL INDICATOR:** ________________________________________________

___________________________________________________________________________

**relevance of the indicator** (to local decision-making strategies and goals, including key regional trends) Who will use the indicator and how will they use it?

___________________________________________________________________________

___________________________________________________________________________

**data obtainability** (Is data easily obtainable when needed, affordable, available in time series? What analysis or compilation is needed to make it useful?)

___________________________________________________________________________

___________________________________________________________________________

**understandability and credibility** (Is the indicator easy to understand and is it supported by valid and reliable data?)

___________________________________________________________________________

___________________________________________________________________________

**comparability** (Is the indicator likely to be useful to compare to other areas or to set standards?)

___________________________________________________________________________

___________________________________________________________________________

**predictive capability** –Is the indicator able to serve as an early warning for the most significant problems of the area? Can we use it to manage risk?

___________________________________________________________________________

___________________________________________________________________________

**H = high**  **M = moderate**  **L = Low**
Bibliographic References


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