Workshop on Sustainable Tourism Indicators for the Islands of the Mediterranean

Kukljica, Island of Ugljan, Croatia
21-23 March 2001

Final report
Acknowledgements

The World Tourism Organization would like to thank the Ministry of Tourism of Croatia and the Municipality of Kukljica for their support in organizing and holding this workshop, the WTO consultants for the technical preparation and direction of the meeting, as well as the international and national participants for their active participation throughout the event.

The Workshop was inaugurated by H.E. Mrs. Pave Župan-Rusković, Minister of Tourism, Republic of Croatia.

This study was made possible as a result of efforts from many people. In particular, the authors acknowledge Ms. Milka Blagdan, Mayor of Kukljica, whose boundless energy and effort made the study and workshop possible. The authors also wish to recognize the major contribution of Mr. Claudio Rois of the Ministry of Tourism, whose support and assistance with organization was key to the workshop’s success and the preparation of this report. As well, the authors wish to acknowledge the officials and residents of Ugljan and Pasman, whose overwhelming hospitality and support for the initiative was both helpful and encouraging, and a real incentive to the authors and other participants to return as “tourists” to again sample the culture and cuisine of this charming archipelago.

The authors of this report are: Dr. Ted Manning and Mr. Gordon Clifford from Consulting and Audit Canada, Ottawa, Canada, Dr. Zoran Klaric from the Institute for Tourism, Zagreb, all of them acting as consultants to the World Tourism Organization (WTO); and Mr. Gabor Vereczi, Programme Officer of WTO, Madrid.

The complete list of participants and resource persons for the Workshop is attached as Annex 7.
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Summary</td>
<td>4</td>
</tr>
<tr>
<td>Part One: Introduction</td>
<td>12</td>
</tr>
<tr>
<td>Part Two: Characteristics and Use of Indicators</td>
<td>15</td>
</tr>
<tr>
<td>Part Three: Methodology for Indicators Identification</td>
<td>22</td>
</tr>
<tr>
<td>Part Four: The Ugljan-Pasman Study Area</td>
<td>28</td>
</tr>
<tr>
<td>Part Five: Issues and Indicators for Ugljan-Pasman</td>
<td>37</td>
</tr>
<tr>
<td>Part Six: Use of Indicators to deal with Complex Planning Concepts</td>
<td>60</td>
</tr>
<tr>
<td>References</td>
<td>62</td>
</tr>
<tr>
<td>Annex 1: WTO Core Indicators</td>
<td>63</td>
</tr>
<tr>
<td>Annex 2: WTO Supplementary Indicators</td>
<td>64</td>
</tr>
<tr>
<td>Annex 3: Indicators Worksheets</td>
<td>66</td>
</tr>
<tr>
<td>Annex 4: Additional Data for Croatian Tourism</td>
<td>68</td>
</tr>
<tr>
<td>Annex 5: IUCN Index of Level of Protection</td>
<td>74</td>
</tr>
<tr>
<td>Annex 6: Local Questionnaire</td>
<td>75</td>
</tr>
<tr>
<td>Annex 7: List of Participants</td>
<td>76</td>
</tr>
</tbody>
</table>
Executive Summary

This report presents the results of a case study and associated workshop held in Kukljica, on the island destination of Ugljan and Pasman, Croatia. The workshop primarily aimed at demonstrating the identification, evaluation and use of indicators of sustainable tourism development, based on a case study carried out for that destination. This workshop was in line with a series of WTO activities directed to the sustainable development of island and coastal destinations, as well as with a series of regional workshops in the framework of WTO’s sustainability indicators programme.

The Kukljica workshop on indicators brought together officials and experts from seven Mediterranean countries to both lend their expertise and to learn the indicators development process through a participatory process. Croatian participants represented all levels of tourism administration and management ranging from the Ministry of Tourism, county officials, municipal authorities and private entrepreneurs from the islands of Ugljan and Pasman, as well as from other Croatian islands.

This study is based on several sources of information: background data and prior feasibility studies relating to the tourism industry of Croatia and of the study area; interviews with key officials of planning, infrastructure, and protection bodies in the Zadar county, municipality officials and mayors, as well as private sector stakeholders on the islands of Ugljan and Pasman; discussions of the workshops; and analysis of information acquired during the field study period. The data have been used to build the specific framework for indicators which can respond to the risks to sustainable tourism for the study area.

The Ugljan-Pasman study revealed that most of the WTO core indicators were applicable to the study area, with those relating to social values, access, waste management, planning processes and development control being the most pertinent. The workshop was a success in creating dialogue about the tourism issues facing the archipelago and in bringing together the officials, residents and experts who could begin to contribute to providing sustainable tourism for the archipelago.

A. Use of the WTO Indicators Approach in Ugljan-Pasman

The core indicators and special indicators relating to islands and coastal zones provided a sound point of departure for the Ugljan-Pasman study, and the approaches to specialized indicators addressing the particular needs of the area were also found to be useful. (See Annexes 1 and 2 for the list of core and pertinent supplementary indicators). All of the core indicators were of potential value. However, data to support several of the indicators was limited as there is as yet no comprehensive approach to planning for Ugljan-Pasman, and there is no single authority which can oversee data collection at the scale of the destination. However, cooperation between municipalities on the islands is reasonably strong and could support the indicators development and implementation process.

For Ugljan-Pasman, the ecosystem-specific indicators which WTO had identified for use in coastal zones, small islands, and for impact on local communities were also found to be useful and were discussed in the workshops. The study identified a number of key indicators for the destination, focussing on the critical need for indicators of employment in tourism, benefits to the local economy, and the maintenance of the image of the islands as a clean and
relatively unspoiled Mediterranean destination. More detailed information and maps about the study area can be found in Part Four.

<table>
<thead>
<tr>
<th><strong>Ugljan and Pasman Facts</strong></th>
</tr>
</thead>
</table>
| **Location:** Ugljan and Pasman are the two most populated islands in the Zadar archipelago in Northern Dalmatia, located in the central part of the eastern Adriatic coast. The islands are connected by bridge and with the mainland with two ferry lines: from Preko on island Ugljan to Zadar (6 kilometers or 3.2 nautical miles) and from Tkon on island Pasman to Biograd, a town about 30 kilometers southeast from Zadar (2.8 kilometers or 1.5 nautical miles).

**Description:** Ugljan island with adjacent islets has an area of 71.2 sq km, Pasman 68.9 sq km and the whole Ugljan-Pasman archipelago 135.1 sq km. Both islands are hilly (close to 300 meters above sea) with relatively easy access to the northeastern coastline compared to the more inaccessible and steep southwestern coastline. All settlements are located on the northeastern shoreline facing the mainland. Although there are very few natural beaches on the archipelago, especially those that are sandy, a large part of the coast, including the many small islets, is suitable for bathing. Tourism is mostly sun-and-sea oriented.

**Settlement:** Ugljan is one of the most populated islands on the Adriatic, with 7,726 inhabitants according to the last census from the year 1991, or 109 persons per sq km. Pasman has 3,585 inhabitants or 52 persons per sq km, which is about average on Croatian islands. The whole Ugljan-Pasman archipelago has 11,075 inhabitants. The settlements on Ugljan, with the exception of Ugljan village are relatively compact with a typical Mediterranean structure of narrow shady streets and traditional stone houses in the central area, especially in the three major settlements Preko, Kali and Kukljica. The settlements on Pasman are less compact, showing a stronger agricultural tradition from the past. This is in comparison to Ugljan which has a long fishing tradition. On both islands there are many secondary residences, with the highest concentration in Zdrilac near the Ugljan-Pasman bridge. The houses on both islands are mostly large, in order to accommodate tourists.

**Tourism:** Tourism on the islands is concentrated in July and August and is based on sun and sea. Most tourism is in small guesthouses, with only one major resort, Zelea Punta at Kukljica. As of 2000, the islands could accommodate 7,000 tourists (Ugljan 3,747 and Pasman 3,253). From those 1,169 refer to hotels and similar establishments (mainly Zelea Punta resort in Kukljica), 1,020 to campsites, 234 tourist resthouses and the majority of 4,577 beds to rented rooms and flats. There are many non-registered rooms and flats, especially in secondary residences.

**Flora and Fauna:** Vegetation is typical Mediterranean, with some preserved pine forest, mostly on the uninhabited southwestern shore. The rest is mainly covered with Mediterranean scrub forest (makija) and partly with olive trees. Only a small part is used for agriculture, mainly vegetable production, especially on the far north of Ugljan, with only larger flat areas on the archipelago.

**Nearby Attractions:** The most attractive nearby destination is Komari Island National Park, the labyrinth of about 150 uninhabited islands and islets with many attractive bays, cliffs and seashore. Other attractions include historic town of Zadar with many monuments from Roman and Middle Age period, other islands of Zadar archipelago.

**Transport:** Almost all tourists come to the island by car or bus using the ferry line from Zadar to Preko and from Biograd to Tkon. The only state road in the area and the whole Ugljan-Pasman archipelago is 41.5 kilometers long-road D-110, connecting all settlements on both islands.
B. Specific Sites of Current and Possible Tourism Activity

At present there is no significant concentration of tourism activities in the five municipalities covering the Ugljan-Pasman archipelago. The only important tourist facility is the "Zelena punta" ("Green cape") resort in Kukljica with maximum capacity of 1,530 beds (in 2000 only 762 beds). The remaining capacity is mainly rented rooms and flats scattered in all settlements in the archipelago. On both islands, there are nearly 10,000 secondary residences (weekend houses) which may be considered as housing for tourists, although the specific definition of tourist is subject to some debate. According to current plans there is no on-going or approved tourism project in the archipelago. The recently finished, but still non-approved Physical Plan for Zadar County, has not designated any specific tourism development zone.

There is a legacy of some tourism projects from the past which were not approved. The most important proposed development is "Southern Pasman" - a huge tourism resort on the southern coast of island Pasman planned as the possible main nautical gateway to Kornati islands archipelago, the key attraction on the Northern Dalmatian coast. Since this private project is predicated on building a bridge between Pasman and the mainland, which is unlikely to be realized in the near future, this project is on hold. There are some proposed smaller scale housing development projects proposed, especially in Kukljica and neighboring Zdrelac area, but these are early in the development process.

The only current development with potential short term impact is the recently finished tourism development plan for Kukljica-Zdrelac area, financed and approved by local authorities, and designed as a supplement to the upcoming detailed physical plan of the area. The tourism development plan is focused on Zdrelascica Bay near the Ugljan-Pasman bridge as one of the busiest nautical spots on the Adriatic sea and the central point on the archipelago. The plan has defined four zones in Kukljica-Zdrelac area designed for resort type tourism development with a maximum 8,500 beds altogether (including the extension of existing "Zelena punta" resort"), and two small transit marinas, each with approximately 200 berths. This is the only municipality level plan in the island.

C. Data to Support Indicators: Key data sources

As is done throughout Croatia, data on accommodation capacities, the number of tourists, and guest nights are collected locally (in municipalities) and transferred to the Central Bureau of Statistics in Zagreb. Therefore, it is possible to obtain very precise data for each municipality and settlement regarding all basic parameters, such as accommodation capacities by type, number of tourists and guest nights by months and by nationalities.

Data on accommodation capacities and the number of tourist nights in hotels and similar establishments and camp sites are generally reliable. Data on accommodation capacities in rented rooms and flats are also reliable. These data indicate levels of use similar to those in hotels and camps. The only relatively unreliable parameter is the number of tourist nights in rented rooms and flats, with significant underreporting, especially in peak season (July-August) and low season (November-April), due to the difficult logistics of tourist registration control. Since the fee for the tourist associations is collected per person from the owners of official accommodation, the data on the accommodation capacities are more precise and detailed for the number of beds than for the number of rooms/camp units. For other data
sources, specific data sets gathered by operators, the ferry company, the County, or through a questionnaire administered to exiting tourists and to local residents will supply the information for most of the indicators. Some can be gathered easily from the municipalities of the archipelago.

**Table 1. Ugljan-Pasman Indicators Summary List**
(Only indicators with a rating of 4 or 5 star are listed in this table. The complete list of indicators with their detailed description and evaluation can be found in Part 5)

<table>
<thead>
<tr>
<th>Issue Area</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>A) Cultural Integrity</td>
<td>Identification and protection of key cultural and historic sites</td>
</tr>
<tr>
<td></td>
<td>Inventory of cultural sites prepared and maintained</td>
</tr>
<tr>
<td></td>
<td>Number of visitors to cultural sites</td>
</tr>
<tr>
<td></td>
<td>State of cultural sites</td>
</tr>
<tr>
<td></td>
<td>Availability of information on sites</td>
</tr>
<tr>
<td></td>
<td>Local Attitude towards tourists and tourism</td>
</tr>
<tr>
<td></td>
<td>Local attitudes</td>
</tr>
<tr>
<td>B) Employment and Economic Welfare</td>
<td>Local involvement in tourism industry</td>
</tr>
<tr>
<td></td>
<td>Unemployment statistics</td>
</tr>
<tr>
<td></td>
<td>Local residents employed in tourism</td>
</tr>
<tr>
<td></td>
<td>Ratio of local employees to total</td>
</tr>
<tr>
<td></td>
<td>Ratio of jobs Men/Women</td>
</tr>
<tr>
<td></td>
<td>Quality of Accommodation</td>
</tr>
<tr>
<td></td>
<td>Complaints</td>
</tr>
<tr>
<td></td>
<td>Repeat visits to same accommodation (##/%)</td>
</tr>
<tr>
<td></td>
<td>Price of Accommodation (average Kuna/night)</td>
</tr>
<tr>
<td></td>
<td>Opinion of Quality</td>
</tr>
<tr>
<td>C) Stability and Seasonality</td>
<td>Low numbers of tourists out of peak season</td>
</tr>
<tr>
<td></td>
<td>Number of tourists over year</td>
</tr>
<tr>
<td></td>
<td>Level of tourism business in community</td>
</tr>
<tr>
<td></td>
<td>Number of bars and restaurants open</td>
</tr>
<tr>
<td></td>
<td>Garbage volume</td>
</tr>
<tr>
<td></td>
<td>Quality of tourism product</td>
</tr>
<tr>
<td></td>
<td>Perception of quality experience by tourists</td>
</tr>
<tr>
<td>D) Diversification of the Tourism Product</td>
<td>Lack of tourist services</td>
</tr>
<tr>
<td></td>
<td>Number and capacity of tourism-related services</td>
</tr>
<tr>
<td></td>
<td>Issue: Lack of variety of tourist activities and alternatives to sun-and beach tourism</td>
</tr>
<tr>
<td></td>
<td>Inventory of cultural and natural attractions and related alternative tourist activities</td>
</tr>
<tr>
<td></td>
<td>Information provided on alternative activities and related services</td>
</tr>
<tr>
<td></td>
<td>Number of tourists participating in alternative activities</td>
</tr>
<tr>
<td>E) Physical Planning and Control</td>
<td>Income sources for municipalities</td>
</tr>
<tr>
<td></td>
<td>Sources of income for the municipalities</td>
</tr>
<tr>
<td></td>
<td>State of planning for the islands</td>
</tr>
<tr>
<td></td>
<td>Planning of destination</td>
</tr>
<tr>
<td></td>
<td>Level of communication/coordination between authorities</td>
</tr>
<tr>
<td></td>
<td>Level of cooperation</td>
</tr>
</tbody>
</table>
Need for local involvement in the planning process | Number of locals in project teams  
Level of awareness among locals of planning initiatives  
% of local population aware of local planning initiatives  

Ease of access to the islands | Number of ferry trips per day  
Number and type of boats used to provide transport to and from islands  
Price of ferry trips  
Frequency of hourly crossings  

Access to sites | Volume of tourism  
Complaints to restaurants and accommodation re: access  
Signage  
Organized access  
Availability of information on sites  

| F) Management of Resources and the Environment  
Maintaining clean environment and image  
Amount of chemical compounds in seawater  
Presence, proliferation of certain marine species  
Tourist opinions on seawater quality  
Perception of level of cleanliness of beaches  
Garbage levels on shoreline  
Clean image of island  
Volume of sewage treated to secondary or tertiary levels |

D. Recommendations

Recommendations for the islands of Ugljan and Pasman

1. The Mayors of the municipalities of Ugljan-Pasman are advised to distribute this report widely (when translated to Croatian) and use it as a basis for discussion in the communities regarding the future of tourism on the archipelago. A meeting could be organized in Kukljica inviting tourism officials, experts and other stakeholders in the county level and from the two islands to officially present the findings and results of the workshop and the translated report, furthermore to discuss follow up activities.

2. It is recommended that the municipalities agree on the selection of a set of indicators to use on a regular basis derived from the list generated in the workshop and study. (See list and description of priority indicators which follows).

3. It is suggested that the municipalities in Ugljan-Pasman coordinate local efforts and planning processes for tourism development and consider the two islands together as a unit for tourism planning. The WTO team also considered the two islands together as the scope of the indicators study for a number of reasons: the common social, cultural and environmental characteristics, the geographical position and the infrastructure (especially the bridge connection) makes the two island together one destination. Treating the two islands together as a destination would help the development of a more diverse tourism product where the natural and cultural assets would aggregate to attract tourists, furthermore it would facilitate the comprehensive development of related infrastructure and services.
Recommendations for Croatia

1. The Ministry of Tourism in Croatia is advised to translate the report into Croatian and distribute it to interested participants in the tourism industry and to planners and officials at the county and municipal level.

2. It is recommended, that the Ministry of Tourism considers the facilitation of community level consultations similar to those held in Kukljica in other current and emerging tourism destinations - both to take advantage of the method and to increase participation in the tourism planning process.

3. The Ministry of Tourism in Croatia should consider translating the WTO publication “Guide for Local Authorities on Developing Sustainable Tourism” into Croatian. Besides the three official languages of the Organization, this book has been translated to other languages upon requests of WTO Member States. The Croatian translation would provide a valuable source of information on principles and practical tools for national local tourism planners, officials and experts ensuring a sustainable tourism development. In case an agreement is made, WTO can grant the rights for the translation.

Recommendations for Islands of the Mediterranean

1. The participants from other countries and authorities of Mediterranean islands are recommended to apply the participatory indicators development approach in suitable destinations.

2. The network begun in Capri and continued in Kukljica of active planners of island destinations in the Mediterranean should be continued on an active basis as a resource for each other in dealing with issues of sustainable island destinations.

Conclusions and considerations regarding further development of the WTO Indicators Programme

1. WTO will make the result of the Kukljica workshop and Ugljan-Pasman study widely available.

2. WTO will examine the possibilities for follow up activities related to the study site of the workshop. The subsequent implementation process and use of the identified indicators would be an important experiment and demonstration for the further advance of the indicators methodology.

3. WTO will advance the indicators program with a revision and strengthening of the indicators manual to incorporate the results of the various regional applications, to refine the specific instruments to be used in the indicators process, and to expand the methods for the more effective integration of the results of indicators and monitoring into the destination planning process.

4. WTO will continue to take an active role in helping planners and managers of impacted destinations to share experiences (both positive and negative) through workshops, networks and exchanges.
The workshop provided an opportunity for all in attendance to discuss and experience the indicators development process and to meet others with similar problems. This effort could lead to future collaboration within the region toward the promotion of sustainable tourism. Several in attendance were extremely interested in the opportunity of using enhanced participatory processes to address tourism planning processes in the region. The recommendations above reflect the discussions on application and next steps, and recognize the opportunity for sharing of information which the participatory approach provided.
Part One: Introduction

The islands of Ugljan and Pasman are an emerging tourism destination on the Dalmatian coast of Croatia. Like other destinations worldwide, the residents are concerned about their future, and anxious to take advantage of the benefits which tourism can bring while avoiding any negative impacts on their community. The World Tourism Organization study and workshop at Kukljica on the island of Ugljan in March 2001 had the objective of assisting the archipelago to respond to the risks and opportunities associated with tourism, and to help participants from Croatia and other Mediterranean nations understand the application of the WTO indicators program to these islands.

In 1991, the World Tourism Organization (WTO) began an initiative to develop indicators of sustainable tourism for global use. An international task force (WTO, 1992-95) met to develop first a long list of potential indicators, which was tested through pilot projects in local destinations in four countries (Canada, Mexico, Netherlands, and U.S.A.). Based on the empirical experience in these destinations, the task force then produced a report on indicators use and development, entitled: “What Tourism Managers need to Know: A Practical Guide to the Development and Use of Indicators of Sustainable Tourism” (WTO, 1996). A set of core indicators was identified which would be of potential use in all destinations. As well, supplemental indicators were devised for specific types of destinations (e.g., coastal resorts, small islands, urban-, cultural-, and ecotourism sites) which could be used to augment the core indicators.

Subsequently, the indicators development approach has been refined, and expanded into learning workshops which expose managers from many nations to the logistics of indicator development through hands-on case studies. Based on the above guide WTO has been organizing a series of regional workshops that were developed on case studies at the Lake Balaton, Hungary (1999), the island of Cozumel, Mexico (1999), Beruwala, Sri Lanka (2000) and Villa Gesell, Argentina (2000).

The Balaton Hungary study (WTO, 1999) was integrated with a workshop involving representatives from Central and Eastern European nations who assisted in the deliberation of key issues for Balaton and in the selection of key indicators for the destination. In Cozumel, representatives from seven Spanish speaking nations of the Caribbean and Central America participated in the indicators study (WTO, 1999) which identified limits to water supply and the growing impact of cruise ship traffic as key factors in the consideration of sustainability of the small island destination. The Beruwala Sri Lanka study (2000) illustrated the importance of planning and local organization to the ability to create a sustainable tourism destination. In Villa Gesell, Argentina (2000) a workshop for South American nations showed the importance of greater integration of the results of indicators studies into the planning and evaluation process. These workshops are building blocks in the international effort to develop and use indicators to promote better planning and management of the global tourism industry-at a local scale. The WTO indicators programme designed to enable tourism planners and managers worldwide to better control the interface between tourism and the environment and reduce the risks both to the industry and to the destinations it uses.

The prime objective of the Kukljica study and workshops was to determine, in collaboration with representatives from the major stakeholders in the destination, the key current and potential risks to the sustainability of the tourism industry of this emerging tourism destination. The working groups were formed to define the key areas of concern, develop
potential indicators to respond to these areas, and discuss the availability of data needed to make the indicators operational. The workshop considered the WTO core indicators, appropriate ecosystem-specific indicators and the need for original indicators to respond to specific needs of the islands.

Global Tourism Trends

The pressures for development of Ugljan-Pasman, and other Mediterranean islands for tourism, must be understood within the context of the global growth in tourism, much of it focused on small island and coastal destinations. Tourism has been one of the major economic and social phenomena of the twentieth century. In 1999, the number of international tourist arrivals globally reached 664 million, while receipts from international tourism for all nations totalled $455 billion. During the 1990s, international arrivals grew at an average annual rate of 4.2 per cent, while international tourism receipts, (at current prices and excluding international transport costs) had an average annual growth rate of 7.3 per cent. It is important to consider domestic tourist movements as well; in most nations these are higher than international tourist arrivals, though more difficult to quantify, and add to the pressures deriving from the international market.

In addition to strong overall expansion, the development of tourism is characterised by continuing geographic spread and diversification of tourist destinations. Some key qualitative development trends in tourism include: increased market segmentation; development of new forms of tourism, especially those related to nature, wildlife, rural areas and culture; and introduction of new programmes in traditional package tours. Consumers’ motivations and behaviour are increasingly characterised by a more selective choice of destination, greater attention to the tourism experience and its quality, and a greater sensitivity to the environment, traditional culture and local people at the destinations. Within this framework, Ugljan-Pasman is experiencing growth in family oriented tourism focused on the community ambience, climate and seashore of the island destination.

Tourism is expected to continue to grow in the future owing to population growth, improved living standards, improvement and expansion of transportation systems, increasing free time and other factors. According to forecasts by the World Tourism Organization, international tourist arrivals are likely to almost triple over the next two decades, with nearly 1.6 billion tourists visiting foreign countries by the year 2020. This leads to significant growth potential for those destinations which can provide the desired products.

Sustainable Tourism Development

Traditional and emerging tourism destinations are facing an increasing pressure on their natural, cultural and socio-economic environments as tourism grows. There is now a recognition that uncontrolled growth in tourism aiming at short-term benefits often results in negative impacts, which can harm the environment and societies, and destroy the very basis...
on which tourism is built and thrives. Host societies have become progressively aware of such problems, as have some layers of consumers who are now demanding higher environmental standards from tourism suppliers, as well as a more decided commitment from suppliers and intermediaries (tour operators and travel agents) towards local economies. In parallel, it has been recognised that tourism has the potential to bring economic benefits to host communities and serve as a tool for poverty alleviation, conservation of natural and cultural assets and other benefits, provided it is properly planned and managed with a long-term vision.

The 1987 report, Our Common Future, prepared by the World Commission on Environment and Development for the United Nations defined a sustainable development policy as one that “meets the needs of the present without compromising the future generations to meet their own needs”. At the Earth Summit, held in Rio de Janeiro in 1992, the sustainable development approach was further elaborated and expressed in the Agenda 21 document, that was adopted by the conference. Tourism was cited specifically in the Agenda documents as a potential means of diversification for regions and a generator of employment in rural and natural regions. Since then, sustainability has been generally accepted as the critical component in development to ensure a more human, equitable and enduring development of society, assuring the minimisation of negative impacts on the natural environment and maximising socio-economic benefits for all sectors, including tourism.

WTO has adopted a sustainable approach as key to tourism’s long term future and defined sustainable tourism as follows:

“Sustainable tourism development meets the needs of present tourists and host regions while protecting and enhancing opportunities for the future. It is envisaged as leading to management of all resources in such a way that economic, social and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems.”

In other words, sustainable tourism should maintain, and improve where needed, the overall quality of environment, natural and cultural heritage of tourism destinations, ensure long-term profitability for tourism ventures and a wide distribution of economic benefits among local community members. The development and use of indicators, and the application of these in specific destinations is a critical building block towards a more sustainable tourism industry, locally, and ultimately globally.
Part Two: Characteristics and Use of Indicators

What are indicators?

Indicators are information which can be used to support decisions. The 1996 document *What Tourism Managers Need to Know: A Practical Guide to the Development and Use of Indicators of Sustainable Tourism* focused on how to develop useful indicators for the planning, management and monitoring in tourism development. Properly defined, indicators can serve to provide timely, accurate and reliable information on changes in environmental, social and economic conditions at tourism destinations.

Indicators are signals of upcoming situations or problems, measures of the existence or severity of current issues, measures of risk and potential need for action, and means to identify and measure the results of our actions.

At each tourism destination there exist certain data and information that can serve as sustainability indicators if their relevance is understood

Tourism professionals work regularly with indicators. The most commonly used and understood indicators are of economic aspects like tourism revenues and expenditures, tourism base line data and statistics like tourist arrivals, overnights spent, accommodation capacities, etc. These are reference points for business decisions. There are many existing indicators that can be used as sustainability indicators, when their relevance to sustainability issues is understood. For example, the number of tourists, a baseline figure, can be considered a sustainability indicator, when it is related to use levels of a certain destination or to known limits of capacity. As part of a carrying capacity assessment or estimate of limits to acceptable change, tourism numbers (in particular peak use figures) can be related to the sustainable use of natural resources (e.g., average water use per tourist) used to indicate potential level of stress on the system. When these same tourist numbers are compared with the number of local residents, a ratio is formed that can serve as an indicator of potential social stress - one indicator of the socio-cultural sustainability of tourism.

Why use indicators in the support of sustainable tourism development?

Tourism sector decision-makers need to know the links between tourism and the natural and cultural environments, including the effects of environmental factors on tourism (possibly expressed as risks to tourism) and the impacts of the industry on the environment (which may also be expressed as risks to the product).

Responsibility requires knowledge. Using existing and newly gathered data, changes in environmental, social and economic conditions can be detected. This information, in turn, enables the status of issues relevant to a destination's sustainability to be gauged on an ongoing basis. Decision making in tourism planning and management can, therefore, be improved. The objective is to reduce future risks to the tourism industry and to destinations.

Some of the benefits from good indicators are:

- better decision-making - lowering risks or costs
- identification of emerging issues - allowing prevention
- identification of impacts - allowing corrective action when needed
• performance measurement of the implementation of plans and management activities – evaluating progress in the sustainable development of tourism
• reduced risk of planning mistakes - identifying limits and opportunities
• greater accountability - credible information for the public and other stakeholders of tourism fosters accountability for its wise use in decision-making
• constant monitoring can lead to continuous improvement - building solutions into management

How Information Can Help Improve Planning

Villa Gesell, a coastal municipality in Argentina, served as the study site for a WTO workshop on indicators. Here special attention was given to the most intensive tourist use zone, the sandy beach-line and its traditional bathing houses which provide shade and catering services. The concentration of these facilities reached a level in the centre beach area that generated argument about their impacts on beach environment, aesthetic values and profitability. When the WTO experts interviewed the leaders of the association of bathing house concessionaires to gather information on the spatial occupation of the facilities, they admitted that they had lacked exact information; the only available data was an estimate from an earlier study. Now aware of the importance of improved information the entrepreneurs presented a table documenting the % of beach area occupied by the bathing facilities. Their calculation was based on available measurements of total beach surface, registered surface areas of concessionaire and the actual use surface of the facilities.

The indicators exercise had stimulated them to develop measures to help clarify both use and risk, and to reduce the risk to their enterprises related to the perception that they occupied most of the beach area.

Their calculations showed a lower percentage of occupancy of the central beach area than had previous estimates based on linear occupancy. The development and improvement of better and issue-specific data will assist in the deliberation of use of the beach area and contribute to the planning process. Which indicators are chosen, and how they are used can also affect the decisions taken.

Types of indicators

There are different types of indicators, each with different utility to decision-makers. While the most directly useful may be those which help to predict problems, several other genre exist:

• early warning indicators (e.g., decline in numbers of tourists who intend to return)
• indicators of stresses on the system (e.g., water shortages, or crime indices)
• measures of the current state of industry (e.g., occupancy rate, tourist satisfaction)
• measures of the impact of tourism development on the biophysical and socio-economic environments (e.g. indices of the level of deforestation, changes of consumption patterns and income levels in local communities)
• measures of management effort (e.g., cleanup cost for coastal contamination)
• measures of management effect, results or performance (e.g., changed pollution levels, greater number of returning tourists)

While all categories of indicators are of value in supporting sustainable tourism, the early warning indicators are frequently most valuable to tourism managers. In the case of Ugajan-
Pasman, this category of indicator may provide the ability to anticipate serious negative effects on the island, or on the overall tourist experience, even though the level of tourism on the island is still low. These indicators, therefore, enable actions to be taken well before serious threats to sustainability occur.

**Measurement and expression of indicators**

An indicator can be applied in practice only if there is a feasible mechanism to measure it. To find the adequate measures is critical in the design and use of indicators, considering that the data gathering and processing must be technically and economically feasible. A certain indicator can have different alternative and complementary methods of measurement (use of different instruments) and can be portrayed in different forms:

The different means to be used to portray indicators include the following:

*Quantitative measurements: (where comparable numbers can be obtained over time)*

- **raw data** (e.g., number of tourists visiting a site/year/month, or volume of waste generated/month/week expressed in tonnes)
- **ratios**, where one data set is related to another showing a relationship (e.g. ratio of the number of tourists to local residents in high season - showing whether tourists outnumber locals, and if so by how much)
- **percentage**, where data is related to total, a benchmark or an earlier measure (e.g., % of waste water receiving treatment, % of local population with educational degrees of different levels, % change in tourist arrivals and expenditures over last year)

*Qualitative/normative measurements:*

- **Category indices** - which describe a state or level of attainment on a graded list (e.g., level of protection of natural areas according to the IUCN Index, Grades in the scales of environmental certification systems)
- **Normative indicators** - related to Existence of certain elements of tourism management and operation (e.g., existence of tourism development plan, or plan with tourism components at local, regional and national levels, “Yes or No” questionnaires of evaluation in certification systems, like existence of beach clean-up programmes, beach zoning, first aid booths, pet control etc.)
- **Nominal indicators** which are in essence labels (e.g., Blue Flag certification which is based on an extensive independently applied checklist in beach management and safety but which appears to users as a single Nominal Yes/No indicator.
- **Opinion-based indicators** (e.g., Level of tourists’ satisfaction or level of satisfaction of local residents relative to tourism or specific elements.) These are normally based on questionnaires and may be expressed as numbers, percentages as above - where essentially qualitative data is quantified.

Note that often, where good data is not readily obtainable at affordable cost, an alternative indicator may be available to measure the same risk or issue indirectly, but at lower cost.
**Approximate measures**

In some cases a measurement that does not provide precise data but indicates approximately the seriousness of an issue can be useful, especially if there are no other viable options.

For example, the most precise method to monitor seawater quality at beaches is through periodic laboratory tests which cover such elements as heavy metal content, coliforms, turbidity, biological oxygen demand (BOD) or chemical oxygen demand (COD), etc. However, if at certain destinations lab analysis is impossible due to lack or high cost of skilled personnel or equipment, there are alternative indicators which can be used as surrogates to give an idea of the existence and level of problems:

- Number and type of skin irritations or other cases caused by seawater, reported or treated
- Complaints about seawater quality registered at local authorities or beach facilities
- Incidents of algae growth or excessive turbidity reported to local officials
- Depletion of fish stocks, or changes in success rates for fishermen

These measures are approximate because not all cases are reported or registered, furthermore tourists’ reactions are individual and subjective. Nevertheless significant changes in these measures can be signals of emerging problems with water quality - and may be the stimulus for the initiation of the scientific tests noted above.

**The Use of Indicators**

Indicators support information-based decision making in all levels of tourism planning and management:

- **national level** - to detect broad changes to tourism at the national level, compare with other nations, provide a baseline for the identification of changes at more localized levels and support broad level strategic planning;
- **regional level** - as input into regional plans and protection processes, to serve as a basis for comparison between regions and to provide information for national level planning processes;
- **specific destinations** (e.g. coastal zones, local municipalities and communities) to identify key elements of assets, state of the industry, risks, and performance;
- **key tourist use sites within destinations** (e.g. protected areas, beaches, historic districts within cities, areas of special interest) where specific indicators may be key to decisions on site control, management and future development of tourist attractions (e.g., national parks, theme parks) where management level indicators can support site planning and control;
- **tourism companies** (e.g. tour operators, hotel, transport and catering companies) who may access indicators to feed their strategic planning process for the destinations;
- **individual tourism establishments** (e.g. hotels, restaurants, marinas) to monitor the impact and performance of their operation.

Indicators used at different levels are strongly interrelated and can be used to create higher-level indicators or for comparative analysis. For example indicators of environmental performance or specific impacts registered at individual tourism establishments are normally reported to the central management of hotel and restaurant chains, transportation companies and tour operators as a part of normal business and can be important inputs to company level decision making planning processes. Sustainability indicators for a destination are often based
on data collected at a more specific level from key tourist use sites, specific tourist attractions, and individual tourism establishments among others. Destination level indicators are essential inputs for regional level planning processes that further cumulate information to support the development of indicators at the national level.

---

**Indicators and the Planning Process for Tourism Destinations**

The sustainable development of tourism destinations requires a sound planning process, as well as continuous management of the key elements which support tourism. Indicators are an intrinsic component of the planning process.

**Where no Integrated Plan Currently Exists**

- Where no current plan exists which includes tourism, the procedure by which indicators are developed is analogous to the first step in plan development. Both involve the identification of the key assets and key values associated with the destination. Both normally involve the assessment of the actual problems, potential impacts or risks associated with development. (Identification of the key cultural or natural assets, documentation of the major current or expected trends which may affect these)
- An indicators study can be the catalyst for development of a formal plan or planning process. The indicators process identifies potential issues (pollution, loss of access, impacts of development in other sectors). The most effective solution will likely mean creation of a holistic planning process which includes tourism.
- The indicators exercise can help identify key elements which must be included in plan development.
- Performance indicators should be defined relative to the specific goals and targets of the plan at the objective setting phase. Each specific development project should integrate performance indicators in order to measure the success of management actions in the implementation phase. This information will serve to decide whether corrective actions are needed and provide a tool for continuous monitoring.
- Indicators defined to analyse actual environmental and socio-economic conditions at the initial phase of the planning process can became performance indicators in the implementation phase. E.g. indicators determining the actual state of seawater quality at beaches or actual levels of community income from tourism will serve later on to measure the rate of the progress resulted of management actions.

**Where there is a Plan**

- An indicators study can assist in evaluation of current regional or tourism plans to determine whether all of the key risks to sustainable development of tourism are covered.
- The indicator identification exercise can be applied to already defined problems, issues and objectives to improve the provision of accurate data and information where needed.
- Where no monitoring system or performance measures are included in an existing plan, the indicators development process can assist in identifying and clarifying key areas where performance measures are needed.

**Indicators as tools for public information and education**

- Within and outside of the planning process, indicators are a form of education tool - helping to highlight key concerns for public information
- The results of indicators use may well foster demands for action - and lead to public support for more inclusive planning procedures to protect and sustain the key values in any destination.
Indicators and Standards

Indicators are related conceptually and practically to standards. Where standards exist (e.g., concerning water quality) indicators are used to measure compliance to the standard. Where no standards exist, important indicators can lead to standards being put into place. A set of indicators developed for a specific site can also be used to stimulate the development of standards for broader application, particularly where the risks measured are likely to occur more broadly. That is, once generally accepted, indicators can provide a basis for the preparation of standards in situations where:

- repetitive problems are discovered (many non-licenced tourist services, bogus use of “green” labels for inappropriate products);
- new risks are documented (garbage washing up on the beach);
- many destinations share similar issues (congestion of vehicles in village centre);
- it is strategic to show results (image of the community for tourists, variety of experiences available).

An example of such standards development and acceptance is the Blue Flag Beach program which is an important benchmark in Europe regarding beach quality. Based on a number of measures which encompass such factors as water quality, level of control and cleanup, and level of services, the Blue Flag itself is an “indicator” of quality - with widespread recognition, and impact upon tourist decisions of where to visit.

Examples for the Use of Indicators

Indicators are becoming more widely used as a management support tool. The results of the 1999 WTO Cozumel Workshop have been cited in subsequent planning of tourism for that region of Mexico. Agenda 21, stimulated the development of indicators systems worldwide, and countries such as Canada have comprehensive indicators systems for public reporting of state of the environment. Chile has developed and put in place a system of regional indicators for each of its regions, covering key stresses and responses; these are the foundation of integrated planning (including tourism in some regions) for the nation. A number of certification systems (e.g., the Blue Flag and the Costa Rican system) have established a series of criteria (which could be called indicators) which must be satisfied for certification. In various forms, business indicators are in use worldwide (ISO 9000, 14000, and the emerging 18000 in essence establish key required criteria which must be measured). The ISO 9002 and14001 standards are increasingly applied for the environmental certification of tourism establishments. Tourism must follow this lead if it is to remain sustainable in the coming decades.
Indicators for Community Decision-Making - a Canadian Example

In the early 1990's, Canada (as with many other countries) established a program to report to citizens on the state of their environment. In major reports (the last were 1991 and 1996) benchmarks were established regarding the key measures of the state of the environment - forests, fisheries, air quality, water quality, and other industry specific measures and used to inform Canadians of the state of key elements of their environment. At the local level, similar indicators were developed, with the national ones as benchmarks. Over time, many (air quality, water quality, level of reforestation are examples) have been adopted by the press and NGOs who produce report cards on how well governments, industry and citizens have responded to the key issues. At the local level, the citizenry is keen to use these indicators in local context, calling for action whenever their own environment, relative to any of the indicators is reported to be deteriorating or failing to improve. The indicators are now in use broadly as a form of public accountability for environmental quality in communities, many of which are also tourist destinations. At the more local level, many jurisdictions are now using the same or related indicators to report on their performance - in terms of, for example, percentage increase in parkland in the city, increase in air quality in the central city, or reduction in contamination events in the lakes and rivers. For instance, in the City of Hamilton, in Ontario, Canada, there is a comprehensive indicators system, developed through a consultative process, which is used widely both in the official decision-making process (planning, program reviews) and in local media to highlight issues and results. Good information, from reputable sources is fuelling public debate on what is of value, and what needs action - the key objective of any viable indicators exercise.
Part Three: Methodology for Indicators Identification

The methodology for indicators development can be defined as a phased approach which will result in operational indicators for a destination. The methodology features a participatory workshop process which, in itself, produces benefits for the destination and for the participants, and is used as a training tool.

The WTO indicators development process has seven phases, each logically leading to the next. In the regional and national workshops, the participants are taken through the first five phases, and encouraged to consider the steps necessary to carry out the remaining phases based on their work.

Phase 1: Research and Organization

The initial phase involves the collection of key information on the site, tourism conditions, stakeholders, past concerns, and studies which can be used to support the definition and implementation of indicators. As well, initial contact is made with key local experts at the destination who can act as resources for the workshops. This contact is largely done before the workshop, although additional discussion and elaboration can occur at the workshop. Elements include:

- **Defining the destination’s 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. In the case of Ugljan-Pasman, the islands can be described as a destination, with each of the five Municipalities on the islands (Precko, Kali, Kukljica, Pasman and Tkon) as the administrative components. Kukljica is the centre of current and proposed tourism development in the study area. As well, tourism on the islands may also involve visits to Kornati to see the islands, visits to Zadar, and extensive use of the waterways which surround the islands.

- **Identifying the destination’s assets:** What are the priority tourist use areas and current/potential attractions such as the beach areas, picturesque villages and monasteries. These assets are the key reasons why tourists visit a destination such as Ugljan-Pasman and they deserve, therefore, particular attention, both in indicator development and in subsequent planning and protection initiatives.

- **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 the indicators that will work and those that will not, their support and participation in providing information to assist in key issues identification and indicators selection is invaluable. In particular, local authorities, planners, and the tourism industry are important.

- **Identification of key values:** At this phase it is necessary to explore the key values of all stakeholders to determine which tourism assets are critical to the needs of both tourists and local residents. How sensitive are these to changing demands by the tourism industry and to the impacts of other changes which can alter their attractiveness to tourists? As
well, how sensitive are the values of local residents to the changes which tourism can bring?

- **Obtaining information on thresholds and system sensitivity:** integral to the concept of sustainability is a recognition of the potential limits to use (or carrying capacity) of the destination. Hence, any information which can be obtained which documents the biophysical and social dimensions of sustainability for the destination is useful. It serves as benchmarks and can assist in identifying thresholds beyond which tourism may no longer be sustainable at that particular destination. Past or current studies are often key. Where there is no plan, the indicators process may itself be the initial survey which can help to at least identify these sensitivities.

- **Documentation of tourism at the destination:** Who comes, when, where and for what purpose? What is the typical experience? What are the trends in tourism for the destination?

- **How is tourism managed?:** Who has the mandate to deal with tourism issues and with the planning and management of the destination. For the Ugljan-Pasman study area, jurisdiction is split between five municipalities and broad planning authority rests at the county level (Zadar County).

**Phase 2: Risk and Issue Identification**

Primarily through the vehicle of a participatory workshop, with local and visiting experts, agreement is sought concerning the principal social, economic, cultural and ecological risks to the destination and to the tourism which it supports. Discussion focuses on the values and expectations which both tourists and local residents hold concerning the destination. With this knowledge, it then becomes possible to identify and prioritize the risks to tourism in the study area. These risks may be both within the management purview of the tourism industry (e.g., control of waste from the industry), or beyond its ability to affect (e.g., climate change). In this application, an assessment of key risks to the sustainability of current and potential tourism in the islands was undertaken, on the basis of materials provided by the local government, the government of Croatia, and interviews with key resource persons in the tourism industry and in general planning and management on the island. The workshop developed a list of key risks for which indicators would be useful. This assessment was the basis for discussion of the needed information to improve the ability of tourism managers to respond effectively to the risks.

**Phase 3: Development of Candidate Indicators**

Based on the risks and issues identified, a participatory procedure is used to define a long list of possible indicators which might be of use in understanding the issues/risks, and in helping to manage them. What are the needed pieces of information to allow managers at the destination level and at the site specific level to understand the changes which may affect the key assets and the industry as a whole? In the Ugljan-Pasman case, three working groups addressed different issue areas which related to a range of risks and opportunities defined for the destination. The mix of expertise, ranging from local officials and politicians, industry participants, academics, consultants with studies in the region, national-level officials, experts
from many countries, and specialists brought a range of perspectives which led to a good dialogue reflecting many complementary areas of knowledge.

**Phase 4: Selection of Priority Indicators**

The identification of priority indicators is done in groups charged with assessing each candidate indicator relative to five criteria: relevance, feasibility, credibility, clarity, and comparability (i.e., potential to be used for comparison over time and between destinations). (See following section for elaboration of these criteria) Participants also consider long and short-term utility of the indicators. Ultimately a prioritization is done using a star rating system (one to five) to assign priorities to the indicators, based on these and other considerations related to the key issues of the site. A key consideration is the practicality of the indicators - facilitators asked “Who will use it and for what purpose?”

Once the key issues relevant to sustainable tourism at a destination or region have been identified, it is necessary to select or develop the specific indicators that respond to the issues (Phases 3 and 4). The selection and evaluation of the indicators must be undertaken according to the following set criteria:

- **relevance** of the indicator to local decision-making strategies and goals, including key regional trends - does the indicator respond to the key risks and issues and provide information which will aid in their management?
- **feasibility** of obtaining and analysing the needed information - how can the information be obtained? Is it already available or will it require special collection or extraction?
- **credibility** of the information and reliability for users of the data - is the information from a reputable/scientifically sound source, is considered it objective (will it be believed by users)?
- **clarity** and understandability to users - if they receive the information will they be able to understand it/act on it; and
- **comparability** over time and across jurisdictions or regions; can the indicator be used reliably to show changes over time, relative to standards or benchmarks, or relative to other destinations?

The five review criteria have been used as a means to review the acceptability of potential indicators (see Annex 3 for the worksheet used for each indicator). (Note: the worksheets used for the Ugljan-Pasman study (and the Beruwala study) are slightly different from those used in the earlier Peninsula Valdes, Lake Balaton and Cozumel studies. These changes reflect the evolution of the analytical instruments developed for this program.) In addition, as in previous workshops, it was suggested that indicators be screened on two dimensions: importance to decisions and urgency of need. The application of these two criteria to the initial screening phase helped in the categorization, according to priority, of the long list of indicators deemed to be potentially useful. These were then subjected to the rating criteria listed above. To further supplement the evaluation, each indicator was then rated by the study team overall in terms of importance using a five-star rating system -- with the indicators which were deemed “essential” given five stars, whether or not they would be easy to implement.
Phase 5: Refinement of Key Indicators

Once a list of key indicators is identified, each is reviewed relative to the logistics of implementation. A review sheet is used to assess who will use the information, who will provide it, how it will be treated/analysed, how detailed, how often, how accurate and how current must the information be to affect decisions. Key considerations are whether data is relevant, reliable and valid and where it can be obtained on an ongoing and affordable basis. (Note this can also result in some of the priority indicators being dropped or deferred). This exercise is often best done by a small working group after the more formal workshops and training sessions have ended. (A worksheet for this purpose is included in Annex 3.)

Phase 6: Implementation

The key to implementation is commitment. Ideally the indicators become part of a planning process for the destination - helping to define what is important and ultimately used to develop performance measures for the planning and management of the destination. To assist in this, normally the final phase of the workshops attempts to identify who will lead and who will participate in the actual implementation of the indicators in the destination. Logically, the provider of information is the agency who collects it or similar information. A key step is to identify an overall coordinator for the process, ideally in the destination itself, or associated with a government body with a mandate for improved tourism management. The final sessions of the Ugljan-Pasman workshops focussed on next steps in implementation, and the role of the key jurisdictions and institutions on the island in building towards an enhance planning process.

Phase 7: Monitoring and Evaluation of Results

The indicators development process is the first step in providing ongoing information which will improve decisions, and build collaboration to deal with the principal issues of the destination. 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. In particular, it is useful to have defined targets as part of a planning process - the indicators can then be the vehicle by which changes can be compared to specific objectives. 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 much as possible, addressed during the indicators development process. Ideally, monitoring systems are put in place to repeatedly gather and disseminate the priority indicators to those who need to know the information. As well, it is useful to monitor the overall process itself, to ascertain whether the right information is getting to the right people, and ultimately whether tourism at the destination is more sustainable as a result.

The process of indicators development, from obtaining the information through to indicators development and agreement on implementation, can normally take several weeks. This process includes discussion with the local authorities and key stakeholders in the destination. For the Kukljica workshop, these stages were collapsed to allow much of the process to be done by the working group in three days as a demonstration of the steps and procedures. This exercise would not have been possible without the preparatory work and ongoing support provided by the staff working for the Croatian government and the help from the Mayor of Kukljica and the discussions with the mayors and tourism directors of the other
municipalities on the islands. This discussion process was central to the research phase. The results of these discussions have been incorporated into this report.

## The Participatory Workshop Approach for Indicators Development and Training

The WTO has adopted a participatory approach to indicators development. Access to local knowledge and the consideration by experts of the full range of values and risks to them, has become a cornerstone of the WTO approach to creating indicators of sustainable tourism. In Ugljan-Pasman, a case study was done using a workshop approach to both assist in the consideration of indicators, and as a vehicle to expose participants to the indicators development process; encountering all of the issues, obstacles, and different opinions which make the development of indicators both interesting and at times difficult.

### Workshop Logistics

**A) Site visits and presentations by local officials and experts in order to familiarize participants with the study area.** In the Ugljan-Pasman case, as with the earlier applications in Lake Balaton, Hungary, Beruwala Sri Lanka Villa Gesell Argentina, and Cozumel Mexico, the participants (including both local and foreign experts) were presented with some key material on the destination, and on the indicators development process. A field trip took the participants to the key areas of concern on the island and along the coast and showed them both the assets and potential changes envisioned.

**B) Participation in the definition of Key Risks and Opportunities.** After an initial introduction to the process, the attendees were divided into three working groups, each having both local and foreign representatives. Each group were first set the task of creating a long-list of issues or risks to the destination (e.g., loss of jobs, crowding of villages, impact on sensitive sites).

**C) Participatory identification of priority issues.** In small groups the long list was deliberated and priorities established where information was useful and needed to respond to the risks. The prior analytical work of the workshop consultants was added, where useful, to assist in these deliberations. A form of nominal group technique was used to select the key areas of concern for the active development of indicators by the working groups.

**D) Indicator Development.** Each group was given a set of priority issue areas as a focus for the selection of potential indicators. The updated WTO criteria for indicator selection was used. Each small group was tasked with assessing and fleshing out a set of potential indicators responding to the key issue areas - and doing an initial ranking using the evaluation worksheets. The presence of a wide range of knowledgeable local and other specialists assisted in the identification of potential information sources to power the indicators. The results from each group were then presented to the plenary for discussion.

**E) Participation in the development of recommendations for next steps.** The Kukljica workshops used an open participatory session to develop the recommendations for follow up activities and subsequent application of sustainability indicators at the study area, at other island destinations of Croatia and at other Mediterranean countries of the participants.

The indicators identified in this report strongly reflect the input from the workshops. Each of the participants was guided through the actual process of identification of indicators, faced with the problems of prioritization, and able to work through the practical process of choosing which indicators are most important to implement for the improved management of islands.

The process is as important as the result, both as a procedure for identifying concerns, and as a means to develop responses. The Kukljica workshops began with the development of a comprehensive list of risks to the destination, then proceeded to consider a long list of potential indicators to respond to them, following by an evaluation and selection process. Participants discussed information available from local sources, studies, from government agencies and other stakeholders involved in the destination. While the relatively brief workshops are not intended as a substitute for the more thorough analysis of risks and areas of decision which the indicators are designed to serve, the workshops are an essential complement to the indicators development process, and both a learning and decision-support tool. The broad range of participants in the Kukljica case provided a rich source of information and stimulated lively debate on both the issues and the indicators to be used.
Data Sources

One of the key data sources for this study was the recently finished study “Koncepcija dugoročnog razvoja turizma za općinu Kukljica i mjesto Zdrelac – Osnovna turistička studija za izradu odgovarajućih prostornih planova za općinu Kukljica i mjesto Zdrelac (Long term tourism development concept for Kukljica municipality and Zdrelac settlement – Basic tourism study for the preparation of the physical plans for Kukljica municipality and Zdrelac settlement)”. The study was produced by the Institute for tourism in Zagreb and ordered by the Kukljica and Pasman municipality with the main goal to define the most suitable zones for future tourism development as the key source of the economy in the area before starting with the official planning procedure. The study has collected much information covering the Ugljan-Pasman archipelago, especially regarding traffic position, infrastructure, planning issues (review of existing plans for the area), tourism resources/attractions and basic environmental, social and economic indicators.

Other important sources were data from the Central Bureau of Statistics in Zagreb, processed by the Institute for Tourism Zagreb, because they include very precise information on local level, especially regarding demographical/social issues and accommodation capacities, the number of tourists and guest nights by months and by nationalities etc. Missing data include mainly environmental indicators such as water (sea) quality. It should be noted, however, that measurements were not taken mainly because the area is considered not to be seriously threatened in environmental terms, although there are no designated protected areas in the Ugljan-Pasman archipelago.
Part Four: The Ugljan-Pasman Study Area

Area Delimitation

The Ugljan-Pasman study area comprises the joined islands of Ugljan and Pasman. For practical purposes, the surrounding waterways, widely used by vacationers are also included in the study area. While the workshop itself was held in the community of Kukljica, the community with the greatest current involvement in tourism, the study area is considered to encompass both islands, and associated smaller islands within the jurisdiction of the five municipalities on the islands. It should also be noted that tourists visiting the archipelago also tend to visit Zadar, as well as nearby islands (particularly Kornati National Park) and attractions.

Characteristics of Ugljan and Pasman as a Destination

Map of the Study Area
Ugljan and Pasman are the two most populated islands in the Zadar archipelago in Northern Dalmatia, located in the central part of the eastern Adriatic coast. Both islands are separated from the mainland by the 2.5 kilometer wide Zadar channel, representing “first” island line to Zadar (other two are Iz and Dugi otok, further from the mainland). The central part of the island of Ugljan is about 10 kilometres air distance from Zadar as the county seat and the biggest city in the Northern Dalmatia region in Southern Croatia. The two islands are connected by bridge and are, therefore one spatial entity. They are connected with the mainland with two ferry lines: from Preko on island Ugljan to Zadar (6 kilometres or 3.2 nautical miles) and from Tkon on island Pasman to Biograd, a town about 30 kilometres southeast from Zadar (2.8 kilometres or 1.5 nautical miles).

Ugljan island, with adjacent islets, has an area of 71.2 sq km, Pasman 68.9 sq km and the whole Ugljan-Pasman archipelago 135.1 sq km. Ugljan island includes three inhabited islets – larger Sestrunj and Rivanj on the northwest and Osljak close to Preko. The archipelago is divided into five municipalities – Preko, Kali and Kukljica on Ugljan and Pasman and Tkon on Pasman. Kali, Kukljica and Tkon are small municipalities consisting of only one settlement with the same name, representing all together less than 25 per cent of the archipelago. The municipality of Preko includes eight settlements covering the majority of the island of Ugljan. The municipality of Pasman includes also eight settlements covering the majority of the island of Pasman.

**History:** Both Ugljan and Pasman have relatively undeveloped tourism compared with other islands in Croatia, with accommodation mainly in rented rooms and flats. Kukljica is the most important tourist site with “Zelena Punta” (“Green Cape”) tourist resort as the largest hotel type capacity on Ugljan-Pasman archipelago. It was built at the end of the1960s, which was a booming period of Croatian tourism. Besides rented rooms and flats, there are also two small hotels – one in Preko and one in Ugljan, both on Ugljan. For tourism and overall development the most significant year is 1974, when the 42 km Ugljan-Pasman island road was finished and boat transport between all island settlements and Zadar was replaced by ferry lines. Tourism development on the islands has followed overall Croatian trends with a peak in late 1980’s and a strong drop in the 1990’s caused by the war. Although the study area was not touched by war, tourism recovery has been relatively slow, still at only 40 per cent of the peak year 1987.

**Physical description:** Both islands are stretched from the northwest to the southeast parallel to the coastline for about thirty kilometres. Both islands are hilly (close to 300 metres above sea) with relatively easy access to the northeastern coastline compared to the more inaccessible and steep southwestern coastline. All settlements are located on the northeastern shoreline facing the mainland, with the only exceptions being a few hamlets belonging to Ugljan village on the far north and Podgladusa secondary residences (i.e., weekend homes) and a settlement (part of Zdrelac village) near the Ugljan-Pasman bridge. The total coastline of both islands with adjacent islands is 222.6 kilometres, a consequence of the very indented coastline. Although there are very few natural beaches on the archipelago, especially those that are sandy, a large part of the coast, including the many small islets, is suitable for bathing. Tourism is mostly sun&sea oriented, although the archipelago, especially its most important resort Kukljica, is well-known as one of the main gateways to Kornati Islands National Park, the most famous nautical destination on the whole Adriatic sea.
**Climate:** The islands have a typical Mediterranean climate with hot and dry summers and mild and humid winters. Average temperature lies between 7 degrees C in January and 24 C in July. The bathing season starts in June and finishes in September. The area is not exposed to strong winds, especially in summer, with predominant western moderate steady wind maestral very suitable for sailing.

**Flora and Fauna:** Vegetation is typical Mediterranean, with some preserved pine forest, mostly on the uninhabited southwestern shore. The rest is mainly covered with Mediterranean scrub forest (makija) and partly with olive trees. Only a small part is used for agriculture, mainly vegetable production, especially on the far north of Ugljan, with only larger flat areas on the archipelago.

**Population:** Ugljan is one of the most populated islands on the Adriatic, with 7,726 inhabitants according to the last census from the year 1991, or 109 per sq km. Pasman has 3,585 inhabitants or 52 per sq km, which is about average on Croatian islands. The whole Ugljan-Pasman archipelago has 11,075 inhabitants. The settlements on Ugljan, with the exception Ugljan village are relatively compact with a typical Mediterranean structure of narrow shady streets and traditional stone houses in the central area, especially in three major settlements Preko, Kali and Kukljica. The settlements on Pasman are less compact, showing a stronger agricultural tradition from the past. This is in comparison to Ugljan which has a long fishing tradition. On both islands there are many secondary residences, with the highest concentration in Zdrelac near the Ugljan-Pasman bridge with 2,056 secondary residences in 1991. The houses on both islands are mostly large, in order to accommodate tourists.

**Education:** About one third of the adult population has secondary or high school education, about one third full eight-year primary education, the remaining third unfinished or only four year primary education, but, as in the rest of Croatia, there are almost no illiterate people. Most islanders that liaise with tourists speak English and/or German, with many capable in other languages spoken by tourists (e.g. Italian & Czech).

**Tourism in Ugljan-Pasman**

The peak tourism season for Ugljan-Pasman is July and August. Over the past decade, the pattern of growth has been dominated by the collapse of tourism due to the hostilities surrounding the creation of Croatia and the war (1991-3) which saw a rapid drop from the 1990 arrivals of 8 million to Croatia,( 482,000 to Zadar county) to a low of near 2 million for Croatia (10,000 for Zadar county) in 1992. Peak season is July and August, with considerably fewer in other months, even June and September. Foreign overnights represent more than three quarters of total overnights. Since the end of the war, there has been a constant growth, with arrivals building back to 6.6 million nationally in 2000 and nearly reaching about 50 percent of the pre-war levels in Zadar county (451,000). Arrivals in Ugljan-Pasman have reflected this broader trend. In the year 1989 as the last “normal” tourism year there were 399,000 overnights in Kukljica, dropping to less than 50,000 between 1991 and 1995, and recovering to 185,000 in 2000. (See following table).
### Data for Kukljica municipality and Ugljan-Pasman archipelago

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of beds operated</th>
<th>Total Guest Nights</th>
<th>Foreign Guest Nights</th>
<th>Room Occupancy rate (%)</th>
<th>Highest occupancy (%)</th>
<th>Lowest occupancy (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>798</td>
<td>2244447277</td>
<td>2444447277</td>
<td>7.68</td>
<td>50.42 (Aug)</td>
<td>0.00 (Feb)</td>
</tr>
<tr>
<td>1997</td>
<td>2149</td>
<td>67939</td>
<td>50780</td>
<td>6.01</td>
<td>44.83 (Aug)</td>
<td>0.00 (Feb)</td>
</tr>
<tr>
<td>1998</td>
<td>1446</td>
<td>152370</td>
<td>106491</td>
<td>12.87</td>
<td>55.59 (Aug)</td>
<td>0.00 (Feb)</td>
</tr>
<tr>
<td>1999</td>
<td>1302</td>
<td>62043</td>
<td>43695</td>
<td>10.64</td>
<td>62.57 (Aug)</td>
<td>0.00 (Feb)</td>
</tr>
<tr>
<td>2000</td>
<td>1322</td>
<td>59039</td>
<td>46599</td>
<td>13.06</td>
<td>74.65 (Aug)</td>
<td>0.00 (Feb)</td>
</tr>
<tr>
<td></td>
<td>7243</td>
<td>85715</td>
<td>72468</td>
<td>14.43</td>
<td>49.39 (Aug)</td>
<td>0.01 (Feb)</td>
</tr>
</tbody>
</table>

Tourism demand is influenced by the “Ferragosto” (custom of spending holidays only in August) in neighboring Italy. In the low season period (November to April) there is usually no tourism in the area except sometimes during Christmas and Easter holidays normally in hotels and similar establishments, but those figures are very low. The extremely low occupancy rate in off-peak season is caused both by the small share of hotels and similar establishments as a portion of total accommodation, and by lack of attractions and facilities besides the sun&sea tourism product available during peak season.

**Tourism Accommodation:** As of 2000, the islands could accommodate 7,000 tourists (Ugljan 3,747 and Pasman 3,253). From those 1,169 refer to hotels and similar establishments (mainly “Zelena punta” resort in Kukljica), 1,020 to camp sites, 234 to union rest houses and the majority of 4,577 beds to rented rooms and flats. There are many non-registered rooms and flats, especially in secondary residences.

**Beaches:** All beaches are public property, with free access to everyone.

**Infrastructure** (water and sewage): Pipe borne potable water is provided to all households and hotels. Recently the pipe system has been upgraded to bring an increased capacity of high quality water from the mainland (Zrmanja river for the whole Ugljan and Pasman) was finished, with connections soon to be completed to all residences. Kukljica has a sewage disposal system which will soon serve all its residences, that transports primarily treated sewage 200 metres out to sea. For other settlements, there are no sewage facilities. The current lack of sewage treatment is, at the moment, considered relatively acceptable due to the low amounts of waste water and because there is little reliance on ground water for irrigation or drinking purposes.

**Roads:** The only state road in the area and the whole Ugljan-Pasman archipelago is 41.5 kilometres long State road No.110, connecting all settlements on both islands. The road is in good condition and well planned, so that it avoids the central zones of the particular settlements. There are, however, poor connections between the main road and the settlements, often due to the narrowness of the streets. Some distant secondary residences are connected only with macadam or dirt roads.
The Principal Attractions

Ugljan-Pasman archipelago is almost exclusively a sun and sea destination, and for the majority of tourists the most important holiday activity is spending time on the beaches. Although the area is relatively well preserved, picturesque and suitable for walking, cycling and some other sport and recreational activities, there are no significant attractions with broad recognition. Two monasteries on southern Pasman (Benedictine in Tkon and Franciscan in Kraj) are the only cultural monuments of national value in the Archipelago and are suitable only for a single visit each. The most important local festivities like “Gospa od Sniga in Kukljica or ‘Prijeska legrica” in Preko are also oriented to one to two day long periods during the short summer season.

There are no marinas in the archipelago, although there is a high concentration of marinas on the neighbouring and easily reachable mainland. The very high nautical attractivity surrounding the study area has not been evaluated in terms of its possible economic contribution to the area.

Nevertheless, there are many natural and cultural attractions of high value in the neighbourhood, as indicated earlier. The most attractive is Kornati Island National Park, a prime nautical destination, which is perhaps the most indented island group in the whole Mediterranean. Therefore excursions to Kornati NP represents the most important excursional activity on the archipelago, especially in its most developed resort Kukljica. Other relatively easy to reach important natural attractions on the mainland are two national parks (Krka and Paklenica), one nature park (Velebit mountain World Biosphere Reserve), Zrmanja river canyon and Cerovacke caves. The most important cultural attractions are the historic town of Zadar and nearby Nin with many monuments from the Roman and Middle Age period, and three not so far located World Heritage Sites in the Sibenik city (cathedral), the town of Trogir (old town on small island) and the biggest Dalmatian city of Split (old town and unique palace of Roman emperor Diocletian). At the moment the most popular is Krka National Park with its waterfalls, lakes, canyons and other limestone features. All before mentioned natural and cultural attractions are within easy reach for day trips from Ugljan-Pasman or can be combined at the beginning or end of visits.
Below is a SWOT analysis done for the Kukljica area which illustrates the implications for strategy for one community in the study area - the site of the workshop.  

### SWOT ANALYSIS FOR KUKLJICA

#### Strengths
- Big concentration of yachts in Zdrelascica strait
- Proximity to Kornati national park and to the other attractive natural areas in the wider Zadar region
- Clean sea and relatively preserved environment
- Good status of infrastructure (water and sewage systems)
- Well arranged promenade in Kukljica

#### Weaknesses
- Island position and lack of direct boat connections with Zadar
- Unlicensed construction, especially on shore zone (and in Zdrelac area)
- (Weak rural infrastructure in Zdrelac)
- No distinctive tourism product label
- Lack of tourist services, such as sport and recreational facilities, restaurants, souvenir shops

#### Opportunities
- Proximity to Zadar as an important traffic, trade and cultural center
- Possibilities for the development of nautical tourism
- Ecologically relatively preserved area suitable for tourism development

#### Threats
- Unrestored crude waste disposal close to the most important tourist zone
- Lack of “strong” attractions
- Lack of strong urban center on both Ugljan and Pasman island
- Local road infrastructure
- Manpower, especially management

### Transport Access

The main access to Ugljan and Pasman islands is via the city of Zadar city, the biggest city in the Northern Dalmatian region in the central eastern Adriatic coast. Almost all tourists come by car or bus using the ferry line from Zadar to Preko on the island of Ugljan (6 kilometers) and from Biograd (small town about 30 kilometers southeast from Zadar) to Tkon on the island of Pasman (3 kilometers). The majority of tourists come to the area by roads to Zadar via Rijeka on the Northern Adriatic coast and Zagreb in the northern interior of Croatia, and Italian tourists use also the international ferry line from Ancona to Zadar. There is an airport and railway station in Zadar, but the airport is not a major access point due to low frequency of flights caused by the relative proximity of the more important Zagreb and Split airports and general orientation of the destination towards nearby (automobile or bus accessible) markets. The railway is almost not used at all due to poor rail connections with the remainder of continental Croatia.

Ugljan and Pasman island are divided from the mainland by the 2-5 kilometres wide Zadar channel, and are connected between one another by a bridge. The ferry lines are relatively frequent and reliable, but ferries do not operate in late evening hours. The main traffic problem is a bad road connection from Zadar to the rest of Croatia, because there are no motorways for more than 200 kilometres and the roads are usually crowded during the

---

summer season, especially the main road from Zadar to Zagreb. The upgrading of the road (including a tunnel which will bypass the most difficult section) is under way.

**The Planning and Decision making Process**

The following overviews the local government decision-making process. It is important to be aware of this process as it guides tourism development - and therefore the application of indicators of sustainable tourism - on Ugljan and Pasman.

At the community level, there exists the community council. Of the five municipalities on the island, Kukljica and Korn have a community council of 20 people, while the others have 16, with the remark that this number will become smaller according to the newly proposed changes of local government in Croatia. Council members are elected. Elections to council occur by party, through a proportional representation process; the party with the majority of council members may approve the choice of mayor, who is chosen for a four-year term. The council, as well, nominates the president of the council, and approves the rules concerning the organization of council meetings and determines what its specific duties will be during its term.

Each municipality has its own tourism board which reports to the national tourism authority in Zagreb. Each municipal tourism authority is responsible for collecting taxes on a per occupant basis from tourists, and for managing its own tourism development. Registration of guests is, therefore, essential. (It is expected that up to 30% of guests on the islands are not registered). Members of the Tourism Board must pay a membership fee and are collectively responsible for organizing local events for the tourism season.

Taxes are collected by proprietors which are then paid to the Council. The money is allocated as follows:

- 25% to the Croatian Tourism Board of the Republic of Croatia. The Board is autonomous from the Ministry of Tourism; the Ministry is responsible for making the rules regarding environment, planning, etc. The Minister is honorary president of the Board. The Board is focused on promotion and marketing of tourism.
- 10% to Tourism board of the County, with the remainder going to the Tourism Board of the town.
- 30% of the remaining 65% goes to pay for tourism maintenance and development in the town and its settlements.
- 20% of the remaining 65% goes for salaries of Tourism Board representatives, with the remainder going to other tourism development requirements.

Major infrastructural improvements occur under the auspices of the Ministry of Reconstruction and Development, but are paid for collectively by all levels of government. Meanwhile, the Mayor may grant concessions (e.g., for anchorages, recreational facilities) with negotiated responsibilities of the concessionee. The leverage ensuring that these responsibilities are upheld and that taxes are paid is that essential services can be disconnected.

The six metres of property from the water belong to the national government. While there are no officially protected areas, there is legislation to protect coastal areas. This legislation,
however, is often neither obeyed nor enforced. In part, the problem results from the difficulty in obtaining a building license, with the result that people simply build anyway. Moreover, the Minister of Building and Environment takes the position that existing buildings that are clearly not causing problems will be left alone.

An unofficial tourism development plan, but prepared partly in a form of input to local official planning concept (A Concept of Long-term Tourism Development for the Municipality of Kukljica and Zdrelic) has been developed and is available for use as a basis for the official plan surrounding these communities.

The national government owns lands that would be useful for tourism development, but will not free them for such use; in part this is because it is not always clear which Ministry has jurisdiction over these lands. When the tourism development plan (unofficial) was prepared, the proposed zoning structure was posted in a public place for one month for comment by the public.

**Strategy for Croatian Tourism**

There are many documents related to national strategy for Croatian tourism. Key documents include the “Strategy for Development of Croatian Tourism” (1993) which contained detail to the local level, and the 1998 “A concept for the Long Term Development of the Croatian Tourist Industry”. The 1998 document is based on the 1993 strategy, but with revised objectives reflecting the lack of the realization of the plans from 1993 due to the war, political problems and lack of investments. The main objectives of the national strategy are:

- the protection of tourist resources,
- the building of a new identity of Croatian tourism on the principles of sustainable tourist development,
- the increase of Croatia’s share in the Mediterranean tourism market, especially in revenues,
- meeting the needs of the local population, especially in depopulated rural areas and islands,
- the stimulation of local production and employment and
- the development of small and medium-size enterprises.

The long term vision sees Croatia as a country changing direction from a mass tourism destination into “destination as a product”; this transition implies a need for the constant improvement of the quality of the tourism product and pursuit of a sustainable development strategy based on the relatively high quality of the tourism resources. The basic developmental policies in the tourism industry are focused on managing tourist industry development, development of the privatisation process, improvement of the managerial superstructure of the Croatian tourism industry, and especially restructuring and further development of the tourist product. Governmental legal and fiscal support is planned for hotels that can operate most of the year, for the small family hotels and similar local structures (more adaptable to seasonality), for the introduction of new concepts linking real estate business and commerce, and for the special additional facilities improving the quality and

---

2 note that due to lack of money, detailed plans on local level in Croatia are prepared only for cities and larger towns, and in other areas only if it is evident that a large scale investment/building is going on)
diversification of the tourism product such as theme areas/parks, clubs, rural tourism, wine roads etc. The policies include also a review of macroeconomic, planning, ecological, and cultural policy in tourism, with special emphasis on transportation infrastructure.

It should be noted that the new Government elected in 2000 has added some new elements to the strategy, and has commissioned a “Strategic marketing plan of the Croatian Tourism 2001-2005” from THR Barcelona; this was under way at the time of the Ugljan Pasman study (first public reactions on the draft proposal presented were relatively negative, because it proposes huge changes with much stronger involvement of private sector and foreign investors. This was seen as endangering the roles of actual domestic key stakeholders such as Ministry of Tourism, NTO and local “incapable” managers). Newly implemented programs include establishment of subsidy programmes for travel agencies, tour operators and hotel companies, (e.g. zero VAT rate for services on organized stays paid from abroad.) Future measures include adoption of new standards for the classification of accommodation facilities and establishment of a programme of golf course development. These measures are designed to quickly address the reduction of what are viewed as key weaknesses of Croatian tourism products, including replacement of ineffective management systems remaining from the former socialist economy, re-evaluation of the desirability of mass tourism, upgrading of outdated accommodation facilities, development of means to reduce the seasonality of tourism traffic and especially to address the lack of the variety of offer which may limit Croatia’s ability to compete in the rapidly changing tourism marketplace.

3 In Croatia there are only two “proper” golf courses, so lack of golf courses is often seen as important obstacle to higher quality foreign investments in tourism.
Part Five: Issues and Indicators for Ugljan-Pasman

This section is the key result of the workshop and the study process. Here, the key issues and opportunities relating to sustainable tourism in Ugljan-Pasman are identified. Here, as well are the full range of indicators found potentially useful in the study area - indicators which respond to these key issues and opportunities. The indicators are defined and evaluated relative to the criteria for indicator selection. (See Annex 3). The evaluations of the candidate indicators are based on the material gathered by the study team, the interviews with key planners and managers in the region, and the deliberations of the Kukljica workshop. For each indicator, where applicable, the specific method of calculation to be used is indicated and the specific sources for the data are also listed wherever they can be identified.

Each of the indicators given four or five stars (high priority) are specifically rated. Where other indicators were suggested but received lower ratings, these are shown in the appropriate sections but most have not been fully rated except where no better option exists relative to a key risk or issue. 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, some of the potential components of carrying capacity, levels of stress, and attractivity are also considered as they may be derived from the indicators for the Ugljan-Pasman case.

Many of the issues and associated indicators are linked to the perceptions of local people with respect to tourism. Consequently, it would be useful to administer occasionally a questionnaire to local people that will help to clearly identify these perceptions and, in so doing, complement the development and application of the indicators suggested in this report. The questionnaire appears as Annex 6 to this report.

Note that indicators shown with 5 asterisks (*) are those with highest priority for implementation.

A) Cultural integrity of the island community

The islands have a relatively strong local identity which is central to the social values of the community and is a tangible component of the tourism experience. Many tourists return regularly to visit family, or to stay with residents who have become friends over the years. As well, the pastoral nature of the islands, the visible evidence of past communities (the stone fences which cover the islands, the religious communities and the relics of past habitation) are key to the ambience which draws visitors. As well, there is a vibrant community culture, focussed on each village, which expresses itself in community activities, song and poetry.

Inherent within this issue is the need to clearly identify the cultural sites on the islands that attract - and could potentially attract - tourists. Once identified, the task will be to preserve the sites yet while enabling sufficient tourist access to occur such that the local economy will stand to benefit.
Issue: Identification and protection of key cultural and historic sites

***** Inventory of sites prepared and maintained

| relevance | HIGH | Direct measure and necessary precursor to preservation of island’s cultural integrity. Key sites include the monasteries, the ruined castle, churches, and may also be defined as key open spaces in community centres or wharfsides. |
| feasibility | M/H | Information not currently in place, but can be prepared and maintained without great difficulty |
| credibility | HIGH | Information included in an inventory would be considered as valid and reliable, provided it is updated as required and developed through consensus procedures |
| clarity | HIGH | Easy to understand |
| comparability | HIGH | Readily comparable over time and across jurisdictions - providing consistent criteria used. |

***** Availability of information on sites
(Measure: # /%brochures/maps noting sites)

| relevance | M/H | The noting of sites on maps is seen as a relevant indicator as to the accessibility of the sites |
| feasibility | HIGH | Simple to obtain maps and verify noting of sites. |
| credibility | HIGH | Information is credible |
| clarity | HIGH | Simple to understand |
| comparability | HIGH | Noting of sites on maps can be compared over time and on a site-specific basis |

Note that in future, an important measure would be the existence of web-based information relating to tourism service information. Indeed, Kukljica currently has its own website http://www.dalmacija.net/kukljica.htm under development. There is also information on the islands at www.zadar.hr

**** Number of visitors to sites

| relevance | HIGH | Direct measure of both interest expressed by tourists in sites and an indicator of potential stress posed by tourism pressure on sites |
feasibility      MED  System required to capture number of visitors at sites - none in place at this time and access is not necessarily controlled

credibility   M/H  Information as valid and reliable as the measures used to collect data

clarity       HIGH  Easy to understand

comparability  HIGH  Readily comparable over time and among sites

*** State of sites and condition

relevance    HIGH  A clear indication as to the current status of cultural and historic sites

feasibility  MED  Information requires an investment strategy to monitor and record on an ongoing basis

credibility  MED  Criteria gauging state and condition may be seen as subjective and value laden, and therefore, could be criticized as a result. Clear and publicly accepted criteria will be needed.

clarity       MED  Due to subjectivity, clarity may be questioned

comparability M/H  Comparable over time provided state and condition criteria are consistently applied

Issue: Local attitude towards tourists and tourism

As tourist numbers change, local attitudes toward tourism and tourists may also change. The nature of the family and local community level experience of Ugljan-Pasman depends on small scale and direct contact which could be affected by changes in numbers or attitudes. The number of people on the islands is approximately half of what it was at the end of WWII and, moreover, the population continues to decline. The economic opportunities for young people are relatively few compared to those offered on the mainland or, as has often been the case, overseas. However, the strong family ties and cultural roots of those with an island heritage are such that there are many instances of those having economic means, returning to the islands. Enhanced economic opportunities through the tourism industry are seen as key to both rebuilding the islands’ economy and in retaining current inhabitants and in attracting back those who have left.
**** Local attitudes
(Measure: survey of residents - specific question regarding attitude towards current and/or increased tourism, also question on contribution of tourism to community - see survey instrument in Annex 6.)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Relevance</th>
<th>Feasibility</th>
<th>Credibility</th>
<th>Clarity</th>
<th>Comparability</th>
</tr>
</thead>
<tbody>
<tr>
<td>relevance</td>
<td>HIGH</td>
<td>MED</td>
<td>MED</td>
<td>HIGH</td>
<td>HIGH</td>
</tr>
</tbody>
</table>
| Allows specific feedback from the local community that can be used as a basis for planning.
| Design and delivery of a survey that is representative of the local community requires a coordinated effort and associated costs; moreover, to be meaningful, the survey would need to be undertaken on a regular basis (e.g., annually).
| The provision of data on this issue that would be considered both valid and reliable, but is dependent on the questions asked and the response rate achieved - cooperation of local authorities would be essential.
| Easy to understand depending on the questions asked and responses given.
| The results of a survey given at regular times can be a useful tool to gauge these attitudes among members of the local community and anticipate and hopefully prevent incidents.

B) Employment and Economic Welfare

Issue: Local involvement in tourism industry

The extent to which members of the local community are directly or indirectly involved in the tourism industry is often not immediately evident. Clearly, the benefits to the community from tourism - and the attitudes of the local community towards the tourism industry - are contingent upon the extent to which members of that community can be considered to be economic beneficiaries of the industry.

***** Unemployment statistics
(Measure: total numbers and % from census and government surveys (also tourism related employment/unemployment))

<table>
<thead>
<tr>
<th>Measure</th>
<th>Relevance</th>
<th>Feasibility</th>
<th>Credibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>relevance</td>
<td>HIGH</td>
<td>HIGH</td>
<td>MED</td>
</tr>
</tbody>
</table>
| Direct measure of state of economic health of the community and indirectly related to potential for disruptive activity or local hostility.
| Information readily available from existing statistics.
| Issue of adequacy of reporting and of underemployment and unofficial employment.
<table>
<thead>
<tr>
<th>clarity</th>
<th>HIGH</th>
<th>Easy to understand</th>
</tr>
</thead>
<tbody>
<tr>
<td>comparability</td>
<td>HIGH</td>
<td>Readily comparable over time and across jurisdictions</td>
</tr>
</tbody>
</table>

***** Local residents employed in tourism  
(Measure: Number of locals employed directly/indirectly in tourism/ % of all direct tourism jobs held by local residents compared to non locals)

<table>
<thead>
<tr>
<th>relevance</th>
<th>HIGH</th>
<th>Direct measure of economic dependency and of trends in the key tourism sector. Job gains and losses can be early warning indicator of economic success and problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>feasibility</td>
<td>M/H</td>
<td>Requires commitment and expense to collect data on a regular basis</td>
</tr>
<tr>
<td>credibility</td>
<td>HIGH</td>
<td>The provision of data on this issue would be considered both valid and reliable, but is dependent on the questions asked and the response rate achieved</td>
</tr>
<tr>
<td>clarity</td>
<td>HIGH</td>
<td>Easy to understand depending on the questions asked and responses given</td>
</tr>
<tr>
<td>comparability</td>
<td>HIGH</td>
<td>Administering the survey over time enables a comparison of the extent to which and nature of involvement of the local community in the tourism industry</td>
</tr>
</tbody>
</table>

***** Ratio of local employees to total population  
(Measure: employment and census data)

<table>
<thead>
<tr>
<th>relevance</th>
<th>MED</th>
<th>An indicator as to whether employment opportunities are increasing or decreasing for island residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>feasibility</td>
<td>M/H</td>
<td>Job and population statistics are readily available</td>
</tr>
<tr>
<td>credibility</td>
<td>HIGH</td>
<td>Job and population statistics are collected by the government and are considered to be both valid and reliable</td>
</tr>
<tr>
<td>clarity</td>
<td>HIGH</td>
<td>Easy to understand</td>
</tr>
<tr>
<td>comparability</td>
<td>HIGH</td>
<td>Easily compared over time and across jurisdictions</td>
</tr>
</tbody>
</table>

**** Ratio of jobs men/women  
(Measure: employment and census data)

<table>
<thead>
<tr>
<th>relevance</th>
<th>M/H</th>
<th>Increased job opportunities for women are seen as a key to retaining island residents, as families often leave unless both partners are employed</th>
</tr>
</thead>
<tbody>
<tr>
<td>feasibility</td>
<td>HIGH</td>
<td>Employment statistics by sex are readily available</td>
</tr>
</tbody>
</table>
**credibility**  HIGH  Census data and job statistics are credible

**clarity**  HIGH  Easy to understand

**comparability**  HIGH  Comparable over time and across jurisdictions

### Issue: Quality of Accommodation

One of the major impacts of the war was the lack of investment in maintenance and/or improvement of accommodation on the archipelago. The need to improve the state of accommodation - through repair, upgrading etc. to meet the changing expectations of travellers and to respond to aging accommodation is understood.

**** **Complaints**  
(Measure: Number of complaints from visitors and owners)

| relevance | HIGH | Direct measure of tourism satisfaction with quality of accommodation |
| feasibility | MED | Must establish a means to capture and report complaints from a great number of tourism accommodation locations |
| credibility | M/H | Number of complaints may be considered valid and reliable, but does not provide qualitative perspective on type of complaints |
| clarity | HIGH | Easy to understand |
| comparability | HIGH | Can be compared over time and among different categories of accommodation |

**** **Price of Accommodation**  
(Measure: average cost/night)

| relevance | MED | As a proxy for the quality of accommodation, price is relevant, but does not reflect the presence of lower priced units of high quality but which may not be as well favoured with such attributes as better amenities or location as accommodation that could be more expensive - but perhaps of lower quality or condition. |
| feasibility | HIGH | Price of accommodation is readily available. |
| credibility | HIGH | The provision of data on this issue would be considered both valid and reliable, but is dependent on the questions asked and the response rate achieved. |
### Clarity

**Clarity**

*HIGH* Easy to understand

### Comparability

**Comparability**

*HIGH* Pricing easy to compare over time, across jurisdictions and among different categories of accommodation.

---

#### Opinion of Quality

*(Measure: survey of tourists regarding quality of accommodation)*

**Relevance**

*HIGH* Highly relevant as based on direct response from tourists

**Feasibility**

*MED* Can be expensive to design and to deliver survey on a regular basis

**Credibility**

*HIGH* The provision of data on this issue would be considered both valid and reliable, but is dependent on the questions asked and the response rate achieved

**Clarity**

*HIGH* Easy to understand depending on the questions asked and responses given

**Comparability**

*HIGH* Administering the survey over time enables a comparison of the extent to which tourists are satisfied with the quality of accommodation

#### Repeat visits to same accommodation

*(Measure: number and percent)*

**Relevance**

*HIGH* Repeat clientele a relevant indicator of satisfaction with state of accommodation

**Feasibility**

*MED* Must establish a means to track number and/or percent of repeat visitors to same establishments.

**Credibility**

*HIGH* The provision of data on this issue would be considered both valid and reliable

**Clarity**

*HIGH* Easy to understand

**Comparability**

*HIGH* Statistics on repeat clientele would allow for easy comparability over time, across jurisdictions, and among different types of accommodation.

---

#### Stability and Seasonality

**Issue: Low numbers of tourists out of peak season**

Seasonality of tourism is a key issue on Ugljan-Pasman, affecting the ability to invest, the impact on employment, and the overall economy and level of services. A key objective
locally is to lengthen the season - which may require innovative marketing to new cohorts, different from the current family groups who dominate, and who can only travel in peak season.

***** Number of tourists over year
(Measure: volume of tourism by type/origin from local municipalities - tourism bureaus)

<table>
<thead>
<tr>
<th></th>
<th>HIGH</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>relevance</td>
<td></td>
<td>Key indicator of the economic success of tourism and the potential effects of tourism pressure on the study area</td>
</tr>
<tr>
<td>feasibility</td>
<td></td>
<td>Tourism Bureaus for official accommodation - can be obtained weekly or monthly (weekly may be most useful - in season and shoulder seasons)</td>
</tr>
<tr>
<td>credibility</td>
<td></td>
<td>Information will be seen as credible if it is perceived to be comprehensive and accurate - issue with non-reporting</td>
</tr>
<tr>
<td>clarity</td>
<td></td>
<td>Easy to understand</td>
</tr>
<tr>
<td>comparability</td>
<td>HIGH</td>
<td>Easy to compare numbers over time to see trends or the effects of action to market the study area</td>
</tr>
</tbody>
</table>

Issue: Level of tourism business in community

The workshops indicated that it would be useful to measure the level of tourism business in the community. Much of the tourism business is unlicenced (although community members and authorities watch quite strictly on unregistered businesses and room rentals), ad hoc, part time etc, and no organization at present collects information useful for measurement. The indicators on tourism employment (cited earlier) may be the best surrogate. In particular, the seasonality of bars and restaurants was viewed as a good indicator of impact of tourism seasonality.

**** Number of bars and restaurants open
(Measure: total number and % - express as % open more than 4 months a year)
(Note that while this indicator can also serve as a measure for seasonality, in the context of this issue it is used as an indicator of demand from tourists on local businesses.)

<table>
<thead>
<tr>
<th></th>
<th>HIGH</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>relevance</td>
<td></td>
<td>Direct measure of changed demand for services used by both locals and tourists</td>
</tr>
<tr>
<td>feasibility</td>
<td></td>
<td>Simple monthly/weekly count by municipality</td>
</tr>
<tr>
<td>credibility</td>
<td></td>
<td>Direct measure of service variety visible to all</td>
</tr>
<tr>
<td>clarity</td>
<td></td>
<td>Link to reason for closing may not be clear</td>
</tr>
<tr>
<td>comparability</td>
<td>HIGH</td>
<td>Number of restaurant/bar closings and openings can be compared over time</td>
</tr>
</tbody>
</table>
**** Garbage volume
(Measure: Number of truck loads of garbage removed from the island/day- by week) (useful to measure seasonality - can be used to cross check figures on total numbers on island (including those unofficially). May be a more direct measure of impact on demand for services than other indicators.

| relevance | HIGH | Means to estimate total numbers on island |
| feasibility | HIGH | Readily obtainable from the Local Authority - number of trucks sent to dump at Biograd |
| credibility | MED | Relation to total numbers needs to be clarified - difference in waste generation between tourists and locals may need clarification |
| clarity | HIGH | Readily understood - more people, more waste |
| comparability | HIGH | Changes over time enable easy comparison - may be easier than checking numbers of unofficial tourists |

Issue: Quality of tourism product

Due to the highly subjective nature of this issue, an exist questionnaire may be the only effective way to determine tourism satisfaction with quality. The content of such an exit questionnaire could include several factors relating to the tourism experience, responding to a number of the indicators listed separately in this section. (Each of the areas where the exit questionnaire could be of use has been noted relative to the specific indicator) If an exit questionnaire is done, it would be efficient to include several questions together. A possible model, using proven format to obtain the most objective responses possible, and to permit comparison with other destinations using the same form of questions follows.

(Note: it is also possible to append a question to an overall exit questionnaire regarding the level of service and courtesy perceived to have been received by the tourist - this may be a more effective means to collect information if a sample can be done at key exit points (ferries)).

***** Perception of quality of experience by tourists
(Measure: part of exit survey querying whether tourists satisfied with level of exposure and quality of experience.)

| relevance | HIGH | Relates directly to perception of quality |
| feasibility | MED | Requires question on exit survey (can be coupled with other exit questions and queries of reasons) |
| credibility | HIGH | Direct measure of what tourists think |
**clarity** M/H  May need to also ask more specifically which experiences tourists are referring to when they indicate their perception of quality

**comparability** HIGH  Can be used to compare with competing destinations such as Italian coast, or Greek islands if common instrument is used.

Note: If questionnaire is used, relative to seasonality it will also be possible to inexpensively obtain information on key factors affecting decision regarding when to visit (Why come only in July-Aug) (What would cause you to come in other seasons?) This would yield information directly pertinent to planning decisions aimed at lengthening season. See also the section on variety of the product)
Model Exit Questionnaire

**Why did you visit Ugljan-Pasman?**

Is this your first visit?  Yes  No

Please respond to the following questions with the appropriate answer:

<table>
<thead>
<tr>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Neutral</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
</tbody>
</table>

a) I enjoyed my experience in Ugljan-Pasman
   - Circle best answer
   - 5 4 3 2 1

b) I found access to/from the islands to be good
   - 5 4 3 2 1

c) I found the island to be clean
   - 5 4 3 2 1

d) I found enough to do on the islands
   - 5 4 3 2 1

e) The towns were uncrowded
   - 5 4 3 2 1

f) I had a good experience involving the local culture
   - 5 4 3 2 1

g) I had good health during my visit
   - 5 4 3 2 1

h) The beaches were clean and pleasant
   - 5 4 3 2 1

i) I was able to buy souvenirs and artifacts
   - 5 4 3 2 1

j) I had good opportunities to enjoy local cuisine
   - 5 4 3 2 1

k) I feel I received good value for money
   - 5 4 3 2 1

l) I would recommend a visit to the islands to my friends
   - 5 4 3 2 1

What would cause you to visit Ugljan-Pasman outside the summer season?

Were there any activities which you expected to find on the islands which were missing?

Comments re any of the above answers:

What could be done to improve your vacation next time in Ugljan-Pasman?
D) Diversification of the Tourism Product

This was identified as a priority issue in the workshop, as well, it was an important topic of the Seminar on Sustainable Tourism and Competitiveness in the Islands of the Mediterranean that was held in Capri, Italy last May. It is related to a concern that is shared by many Mediterranean destinations: to create alternatives to the traditional sun-and-beach tourism activities. Besides the beaches and the climate, that are the prime attractions in the region, each Mediterranean island hosts a range of unique natural and cultural features that can be marketed for tourism. These features are comparative advantages of each individual island, providing special tourist attractions for distinctive tourism activities and programmes.

The diversification of the tourism product can lead to extended length of tourists’ staying and increased expenditures. Furthermore, it can lead to the extension of the season and an increased visitation off-season. As the current tendency in tourists’ motivation and behavior is characterized by the expectations of more active holidays engaging in activities related to the cultural and natural attributes of destinations, more divers tourist programmes can lead to an enhanced quality of the overall tourist experience.

Issue: Lack of variety of tourist activities and alternatives to sun-and beach tourism

In Ugjan-Pasman the comparative advantages were defined as the unspoiled and relatively undisturbed natural environment, the rural landscapes, the well preserved traditions and some cultural monuments, furthermore the position of the island in the vicinity of the town of Zadar and the Kornati National Park. Among the opportunities several options were identified, such as the creation of nature trails, walking and bicycle routes, and other outdoor sport and leisure facilities, development of the processing and marketing of typical local agricultural and handicraft products as family businesses, marketing of tourism programmes related to traditional festivities and creation of new cultural events, enhance visitation to cultural sites (e.g. to villages, monasteries, other monuments), and plans for marina development that are already under way, among others. An idea was raised to use the dirt roads, that were created recently in order to divide green areas as fire protection, for walking or cycling routes. The necessity of conducting a survey on the islands’ flora and fauna was also mentioned, as this kind of research has never been done before.

Simple normative indicators on the existence of special natural and cultural features, as well as on related tourist activities and services are important information for tourism planning and development. This information is fundamental for the inventory of attractions and for the setting of development objectives at the initial phases of tourism planning. In the implementation and operational phases this information can be directly used for tourism promotion and marketing materials. The number of tourists engaging in these alternative activities will be an important indicator measuring the success of product development and marketing efforts.

Indicators related to the existence and state of cultural assets are detailed under the issue: Identification and protection of key cultural and historic sites. Similar indicators could be developed, for example, for special natural features (like species of flora and fauna, geological formations), for typical local products, the number and length of walking and bicycle routes, the capacity and use-level of services related (e.g. bike rental facilities), the level of signage and information provided for visitors on these features and services.
Issue: Lack of tourist services

There is a lack of tourist services on the islands. Apart from the seasonal lodging there are few services directly targeted at the tourist market.

**** Number and capacity of tourism related services (e.g. marina, laundry, photo, mechanics, restaurants etc.)

(Measure: count and categorization of services)

| Relevance | HIGH | It represents a basic data on tourism supply for municipal authorities and tourist boards, county and national tourism authorities, foreign tourist offices, tour operators |
| Feasibility | HIGH | Municipal and county authorities control licensing procedures and registration. The figures are reported annually to national offices. |
| Credibility | HIGH | The registrations are official procedures with high level of control and inspection. |
| Clarity | MED | These are objective and readily understood data for all stakeholders and likely feed decisions on tourist services |
| Comparability | HIGH | The same standard procedure is in place at all municipalities, conducted on a regular base. |

E) Physical Planning and Control

Issue: Income sources for municipalities

To deliver any planning and development(sustainable or other) municipalities, as the key focus of local planning for tourism require a source of revenue. This may be collected directly or obtained from higher order governments.

**** Indicator: Sources of income for the municipalities

(Measure: Amount of national currency (Kuna) per year classified by income categories)

| Relevance | HIGH | There is a variety of income sources for municipal budgets: |
| | | - Taxes and fees (tourism taxes, secondary residence taxes, company taxes, professional income taxes, real estate taxes, communal fees, advertising fees) |
| | | - Grants, subsidies (e.g. government grants) for specific projects |
| | | - Donations |
| Feasibility | HIGH | The data is regularly collected and provided by municipal and county level authorities. To keep records regularly is fundamental in financing community projects and activities, enabling to identify gaps and potential sources of income. The principal user of this information is the municipal |
government that reports to higher level (county, national) authorities. It is also essential to provide transparent and credible information on municipal income and spending to local residents, donor authorities and organizations, among others.

**Credibility** HIGH The collection and analysis is an official procedure with strict control by registrations and inspections.

**Clarity** HIGH The measurement unit of the indicator is a widely understood and simple economic term. The meaning may need to be clarified based on the classifications used.

**Comparability** HIGH Data is collected in a regular base, allowing comparison in time series, as well as with other municipalities.

### Issue: State of planning for the islands

The planning process - and its implications for the management of sustainable tourism - is a major issue for Ugljan-Pasman. In short, there are many agencies with elements of the planning and implementation process, but little coordination at the level of the destination. It is important to know the simple existence or non-existence of comprehensive and formal planning processes involving different stakeholders. 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.

There is no integrated plan overseeing development in the islands study area. The lack of this plan inhibits the ability of the tourism industry as a whole to develop a coordinated and comprehensive approach to tourism development within the area and inhibits the response to many of the other issues. As noted, a number of agencies have varying degrees of responsibility of relevance to tourism management. It is generally recognized by those interviewed in the course of this study that a plan is required and that this plan needs to be developed and agreed to by all stakeholders in the community and the tourism industry.

***** **Planning of Destination**

(Measure: existence of organized regional plan for tourist destination region including tourism component.)

**relevance** HIGH Presence of an integrated plan is a strong and relevant indicator that planning for Ugljan-Pasman as a whole can be conducted in ways that improve the sustainability of the area's tourism industry.

**feasibility** HIGH Presence of the plan is readily determined (there is none at present).

**credibility** MED While existence of the plan is the main point of departure, the manner in which the plan was developed is also critical.
This indicator by itself does not therefore reflect the quality of the plan.

*clarity*  
M/H  
The indicator is easy to understand, but does not in any way speak to the quality of the plan or the manner in which it was produced

*comparability*  
MED  
As there is no current plan; any new plan will be the benchmark against which future iterations of the plan will be compared

**Issue: Level of communication/coordination between authorities**

In mobilizing to prepare an integrated plan and in ensuring legislation is enforced (specific issues cited above), it will be essential that the relevant agencies communicate and coordinate their efforts to address the key issues identified in this report.

**** Level of cooperation  
(Measures: Number of joint projects; number of committees/coordination bodies)

*relevance*  
M/H  
A clear measure of cooperation among pertinent agencies, but does not address the nature of the projects

*feasibility*  
HIGH  
Information can be readily gathered

*credibility*  
MED  
The number of joint projects or committees/coordination bodies does not provide an indication as to whether the projects have resulted in meaningful communication/coordination among the agencies

*clarity*  
M/H  
Simple to understand - but may not be clearly related to results in the planning process

*comparability*  
HIGH  
Changes in number of projects or committees/coordination bodies can be compared over time

**Issue: Need for local involvement in the planning process**

Ensuring that tourism is planned and undertaken in ways that are sustainable over the long-term will require the ongoing input of local stakeholders. A topdown planning process was clearly considered unacceptable by workshop participants. Moreover, this input must be provided in ways that are seen to result in meaningful outcomes that reflect stakeholder contributions to the planning process.
### # Locals in project teams
(Measure: count of number of local residents involved in project teams in support of planning initiatives)

- **relevance**: HIGH  
  Direct measure of the extent of local participation in regional and local planning initiatives

- **feasibility**: MED  
  Simple to obtain numbers provided a person(s) is charged with tracking number of people involved over time in planning initiatives, although can be difficult to define 'locals'

- **credibility**: MED  
  Data on this issue would be considered both valid and reliable if tracking process is firmly in place, but subject to same limitation as that concerning feasibility

- **clarity**: HIGH  
  Easy to understand

- **comparability**: HIGH  
  Changes in local participation provide comparability over time

### Level of awareness among locals of planning initiatives
(Measure: survey of awareness among local residents)

- **relevance**: HIGH  
  Clearly indicates the existing and potential capacity of local people to be involved in the planning process.

- **feasibility**: L/M  
  Can be difficult to measure “awareness” and would at a minimum involve design and delivery of a survey among local people.

- **credibility**: HIGH  
  The provision of data on this issue would be considered both valid and reliable, but is dependent on the questions asked to determine awareness, and the response rate achieved

- **clarity**: HIGH  
  Easy to understand depending on the questions asked and responses given

- **comparability**: HIGH  
  Administering the survey over time enables a comparison of the extent of awareness

### % of local population aware of local planning initiatives
(Measure: survey of local people on awareness surrounding local planning initiatives)

- **relevance**: HIGH  
  Relevance is high as this indicator illustrates the extent to which local people are made aware (or make themselves aware) of planning initiatives
Issues: Feasibility, Credibility, Clarity, Comparability

**Feasibility**
MED
Measures of “publicity” may prove difficult to clarify; somebody must be charged with assessing these measures surrounding each initiative; also need to be clear as to who 'locals' are.

**Credibility**
M/H
The provision of data on this issue would be considered both valid and reliable - depending on the degree to which the indicator's feasibility is determined (and locals can be identified).

**Clarity**
M/H
Easy to understand depending on accepted and applied criteria as to what “publicity” entails.

**Comparability**
HIGH
Measures of the degree and type of publicity can be compared over time.

### Issue: Ease of Access to the Islands

An important element of tourism sustainability is the means by which tourists access the islands - and the ease by which this access is permitted. With access limited by the ferry service, the sustainability of tourism from an economic perspective may be limited from what it could be with bridge access (considered a possibility). Conversely, various social and cultural benefits enjoyed currently by islanders as a result of the limited current access must be considered as an area which could become at risk of being compromised (i.e., made unsustainable) in the eyes of some islanders should access increase. At present, it is evident that the economic advantages of increased access to the islands are seen by most islanders to outweigh these risks.

####  # of Ferry Trips per Day

**Relevance**
HIGH
This indicator provides a useful measure of the demand for access - information critical to planners who may be charged with exploring other options to access the islands.

**Feasibility**
HIGH
Information readily available.

**Credibility**
HIGH
Data valid and reliable.

**Clarity**
HIGH
Easy to understand.

**Comparability**
HIGH
Comparable over time.

#### # and Type of Boats Used to Provide Transport to and from Islands

**Relevance**
M/H
This measure gauges demand for island access and can, therefore, be considered useful in assessing alternative transportation options.
feasibility  M/H  Information can be obtained through annual count of boats providing passenger service to the islands

credibility  HIGH  Data valid and reliable

clarity  HIGH  Easy to understand

comparability  HIGH  Comparable over time

***** Price of ferry trips

relevance  M/H  As supply and demand affect the price, this indicator can suggest the level of demand for access to the island

feasibility  HIGH  Information readily available

credibility  HIGH  Data valid and reliable

clarity  HIGH  Easy to understand

comparability  HIGH  Comparable over time

***** Frequency of hourly crossings

relevance  HIGH  A clear indicator of demand for access

feasibility  HIGH  Information readily available

credibility  HIGH  Data valid and reliable

clarity  HIGH  Easy to understand

comparability  HIGH  Comparable over time

Issue: Access to sites

As many of the islands’ tourism assets, particularly those that are social and cultural in nature, are located in the settlements (particularly those on Ugljan), ease of access to these assets is an important issue. It is apparent that due to the narrow streets, vehicle access (especially bigger vehicles of public or group transport) can be problematic and, therefore, may pose a barrier to tourists interested in experiencing the social and cultural dimensions of the island.

***** Volume of tourism

This indicator is already addressed in the context of Issue “Low numbers of tourists out of peak season”
**** Complaints to restaurants and accommodation regarding access

<table>
<thead>
<tr>
<th>Metric</th>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>relevance</td>
<td>HIGH</td>
<td>Direct measure of tourism satisfaction in accessing sites</td>
</tr>
<tr>
<td>feasibility</td>
<td>L/M</td>
<td>Can be difficult to obtain from restaurants/accommodation units on an ongoing basis the number of complaints</td>
</tr>
<tr>
<td>credibility</td>
<td>HIGH</td>
<td>The provision of data on this issue would be considered both valid and reliable, but is dependent on the questions asked and the response rate achieved</td>
</tr>
<tr>
<td>clarity</td>
<td>HIGH</td>
<td>Easy to understand depending on the questions asked and responses given</td>
</tr>
<tr>
<td>comparability</td>
<td>HIGH</td>
<td>Once captured, data on complaints could be compared over time</td>
</tr>
</tbody>
</table>

***** Signage
(Measure: # signs to sites)

<table>
<thead>
<tr>
<th>Metric</th>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>relevance</td>
<td>M/H</td>
<td>A useful proxy on ability to access sites, as the more the signs the easier it may be assumed that access can be had</td>
</tr>
<tr>
<td>feasibility</td>
<td>HIGH</td>
<td>Simple to count the signs</td>
</tr>
<tr>
<td>credibility</td>
<td>HIGH</td>
<td>A counting of the signs would result in data that is credible</td>
</tr>
<tr>
<td>clarity</td>
<td>HIGH</td>
<td>Easy to understand</td>
</tr>
<tr>
<td>comparability</td>
<td>HIGH</td>
<td>Changes in the number of signs can be compared over time</td>
</tr>
</tbody>
</table>

***** Organized access
(Measure: # organized excursions to sites)

<table>
<thead>
<tr>
<th>Metric</th>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>relevance</td>
<td>M/H</td>
<td>An indicator of accessibility, as it may be assumed that there is a correlation between the number of excursions to the sites and the ability to access the sites</td>
</tr>
<tr>
<td>feasibility</td>
<td>HIGH</td>
<td>Simple to obtain number of organized excursions.</td>
</tr>
<tr>
<td>credibility</td>
<td>HIGH</td>
<td>Information is credible</td>
</tr>
<tr>
<td>clarity</td>
<td>HIGH</td>
<td>Simple to understand</td>
</tr>
<tr>
<td>comparability</td>
<td>HIGH</td>
<td>Numbers can be compared over time and on a site-specific basis</td>
</tr>
</tbody>
</table>
***** Availability of information on sites
(Measure: # /% brochures/maps noting sites)

relevance M/H The noting of sites on maps is seen as a relevant indicator as to the accessibility of the sites

feasibility HIGH Simple to obtain maps and verify noting of sites.

credibility HIGH Information is credible

clarity HIGH Simple to understand

comparability HIGH Noting of sites on maps can be compared over time and on a site-specific basis

F) Management of Resources and the Environment (water, energy, waste)

Issue: Maintaining clean environment and image

**** Indicator: Amount of chemical compounds in seawater
(Measure: through laboratory analysis by sampling)

Relevance HIGH A clear indicator of the type and degree of contamination in surrounding aquatic environment

Feasibility HIGH A county authority carries out sea-water sampling three times a year. Samples are taken at different points of intensive use at the municipalities around the islands. For example, at Kukljica sampling is done at the harbour, at Sabusa beach (one of the most visited beaches of the island) and at the passage by the bridge (an area with heavy boat traffic). Sampling at this three sites and laboratory analysis is provided for free, additional sampling points can be added for charge. Among the tests are those for faecal coliforms and other common contaminants.

Credibility HIGH The sampling and laboratory analysis is an official procedure, carried out with the application of modern equipment.

Clarity L/M Some elements of the laboratory analysis are highly technical, might be difficult to interpret for some stakeholders. Could be high if interpreted for public use (good/moderate/poor etc) or used to support designation like blue flag as a form of public indicator.

Comparability HIGH Data is collected in a regular base and throughout the entire coast, allowing comparison in time series, as well as with other sites.
### Indicator: Presence, proliferation of certain marine species
(Measure: number, density, area coverage of species by observation)

<table>
<thead>
<tr>
<th>Relevance</th>
<th>L/M</th>
<th>Certain marine species, like algae, medusa, urchin can serve as biological indicators reacting to changes in sea water quality (e.g. chemical components, organic material, temperature). The increasing presence of algae and medusa can indicate changes in seawater quality due to chemical and organic affluent, warning for potential pollution problems at a relatively early stage. This indicator has a limited relevance at the study site, since the strong currents around the island generally prevent the build-up of affluent and the proliferation of algae. Sea urchins are clear indicators of seawater conditions, since they prevail just in clean waters. Since they are removed regularly from bathing areas preventing tourist injuries, their observation is limited at the tourist use beaches.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feasibility</td>
<td>MED</td>
<td>There is a national monitoring system in operation, the county office for public health regularly checks alga and medusa proliferation. Since the reporting normally refers to information on a larger regional level, there is little relevance to detect exact conditions at different sites around the islands of the study area.</td>
</tr>
<tr>
<td>Credibility</td>
<td>HIGH</td>
<td>Changes in the presence of these biological indicator species are sure signs of alterations in seawater conditions.</td>
</tr>
<tr>
<td>Clarity</td>
<td>MED</td>
<td>Changes in the presence of these species does not lead to clear conclusions in all cases for possible causes and implications on tourist use.</td>
</tr>
<tr>
<td>Comparability</td>
<td>MED</td>
<td>May be useful for interregional comparisons with destinations having similar species. Also useful for longitudinal comparisons with other years.</td>
</tr>
</tbody>
</table>

### Indicator: Tourist opinions on seawater quality
(Measure: number of complaints on seawater quality registered at municipal offices, accommodations and other tourist services)

<table>
<thead>
<tr>
<th>Relevance</th>
<th>HIGH</th>
<th>Tourists’ perception on the seawater quality is of outmost importance, directly influencing their satisfaction and experience. This is an important factor considering, that sea and the beaches is the primer attraction.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feasibility</td>
<td>MED</td>
<td>Complaints are registered at the municipality offices, at the Zelena Punta resort and other accommodations. Since not</td>
</tr>
</tbody>
</table>
all complaints all registered, the information on tourists dissatisfaction might not be complete.

**Credibility** M/H

Tourists’ opinions are subjective and individual, do not reflect reality in all cases. This indicator can serve with approximate information on changing sea-water qualities at certain locations. It can provide early warnings on potential risks. It measures perception of risk well, which can translate directly into decisions on next visit.

**Clarity** MED

Although everybody understands complaints, their subjective and individual nature might not allow a full understanding of the situation.

**Comparability** M/H

The comparison of registered complaints at different locations is feasible, given that procedures are standard.

***** **Indicator: Perception of level of cleanliness of beaches**

(Measure: survey of tourist and local perceptions of beach contamination (plastic, other garbage, localized contamination)

- **relevance** HIGH
  Specific information from each tourist of their understanding of the cleanliness of this key resource

- **feasibility** MED
  Need to integrate into exit questionnaire

- **credibility** M/H
  Provided the sample is representative, the information supporting this information will be credible (note: can be culture specific as some nationalities more sensitive to waste than others - relates to their expectations

- **clarity** HIGH
  Easy to understand - any negative result may be signal of environmental and marketing issue

- **comparability** MED
  Difficult to generalize - as nature of contamination may be different in each site

***** **Garbage levels on shoreline** - (shore is contaminated by plastic and other floating items - most arriving on shore with storm events. Impact is mainly visual, and can effect image of islands as clean destination).

(Measure: Number of garbage items per 100 linear metres - counted monthly)

- **relevance** HIGH
  Direct measure of garbage that is contaminating shoreline

- **feasibility** HIGH
  Can be undertaken regularly and cheaply

- **credibility** MED
  May be criticized as being subjective unless clear criteria are used to gauge impact (visual, odour, location, type, amount) of waste in the area
***** Clean Image of Island
(Measure: Questionnaire)

- **relevance** HIGH: Direct measure of tourists’ perception as to whether island lives up to its marketing as a clean and unspoiled destination
- **feasibility** MED: Must be built into the questionnaire with attending data capture, compilation and reporting requirements.
- **credibility** HIGH: Based on questions asked and responses received
- **clarity** HIGH: Readily understood - relates to people’s experience against their expectations concerning island cleanliness
- **comparability** M/H: Easily comparable over time, and can be used to judge success of remediation measures, although comparison with other areas difficult

***** Volume of sewage treated to secondary or tertiary levels
(Measure: total volume treated and as % of total)

- **relevance** M/H: Relevance only compromised to the extent that volume treated needs to be viewed in comparison to the volume that is untreated
- **feasibility** MED: Flows from unlicenced accommodation or services is not normally measured. Wastewater flow should be measured in total, from secondary private residencies and homes as well, not just from registered tourist accommodations.
- **credibility** M/H: As data must be derived from several sources, there may be difficulty in assuring a high degree of data reliability and validity; also, specifying the level of treatment may not always be straightforward
- **clarity** M/H: Simple to understand - known to relate to water cleanliness
- **comparability** HIGH: Measurements of volume over time can be easily compared both from the point sources and as a collective total of volume discharged in any given area (e.g., along the beach)
Part Six: Use of Indicators to deal with Complex Planning Concepts

A. Carrying Capacity

Carrying capacity is a concept that looks to identify the ability of a destination to maintain its environmental, socio-economic and cultural attributes - taken either individually or collectively. Experience to date has shown that the concept, while a necessary element of any discussions surrounding sustainable tourism, is difficult to quantify in ways that are generally accepted, particularly when it is approached as a collective of environmental, socio-economic and cultural components. The reason for this difficulty is that a determination of carrying capacity must embody a number of indicators - there is no single quantifiable measure. Some of these indicators are objectively measurable (e.g., water quality, number of species) and some are subjective (e.g., aesthetic qualities, tourist satisfaction). Thus, while each of these indicators provides specific information on a single element of carrying capacity, it is not yet possible to develop objective and defensible criteria that stipulate what these indicators mean for a destination’s overall carrying capacity. Instead, it is contingent upon tourism planners to assess those indicators of which carrying capacity is comprised and to make a judgement. This judgement must be based on planners’ knowledge of the tourism related values that have been identified as important to sustain at the destination. Although it is difficult to define, tourism planners must deal with carrying capacity and define maximum acceptable use levels for specific tourist sites taking into consideration the most limiting environmental and social factors.

B. Site Stress

Similar to carrying capacity, site stress is an essential concept in promoting sustainable tourism, and consists of a variety of tangible and intangible variables. It is critical that tourism planners consider these variables when making a determination as to what stresses a destination is currently experiencing, and those that will be experienced under different tourism planning scenarios.

There are many indicators that can give tourism planners information as to the status of stress on a site - several of which appear in this study. The task for tourism planners is to use these indicators as tools to gain an understanding - based on their knowledge of the destination - as to when site stress thresholds are being approached. This information, therefore, provides an early warning as to whether a destination’s environmental, socio-economic or cultural assets are at risk, and what action can be taken to contain the risks before carrying capacity is likely to be exceeded. Again, it is important for planners to consider the destination’s environmental, socio-economic and cultural attributes individually and as a collective whole, when assessing stress.

C. Destination Attractivity

There is an ongoing concern by the tourism industry to maintain the reputation of the destination despite changes in types of development, levels of use and other external factors.
A single incident affecting tourists (e.g., threats to health or safety) can quickly alter the perception of the attractivity of the site.

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. It may relate directly to the decision to return, or to advise others to visit. The effects of large numbers of people on the site (e.g., no privacy on beach, harassment, no available transport) is, for instance, a problem that reduces the perception of site "attractivity" experienced by tourists. If the site is seen as hard to get to, expensive, or dirty, this can also reduce its attractivity. This index may correlate well with the recommended core indicator which measures tourist overall response. In the weighting, it may be useful to deliberate on the relative importance of each element. One option is to examine separate attractivity indices for different niches of the market, creating different ones for the specific subsets of tourists such as sunbathers, those seeking cultural experiences, and nature lovers. However, if tourists visit more than one destination on the trip, it may be difficult to disaggregate the data across each site without a specific exit questionnaire on site.
References


Prostorni plan Zadarske zupanije (Zadar county physical plan), /finished 2001, but still not aproved/, Zavod za prostorno uredjenje Zadarske zupanije (Zadar county planning department), Zadar, Croatia

Statistical base of the Institute for tourism Zagreb, extracted data from the Central Bureau of Statistics, Zagreb, Croatia


WTO 1999 Guide for Local Authorities on Developing Sustainable Tourism
Annex 1: WTO Core Indicators

Core Indicators of Sustainable Tourism

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Specific Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Site Protection</td>
<td>Category of site protection according to IUCN index</td>
</tr>
<tr>
<td>2. Stress</td>
<td>Tourist numbers visiting site (per annum/peak month)</td>
</tr>
<tr>
<td>3. Use Intensity</td>
<td>Intensity of use in peak period (persons/hectare)</td>
</tr>
<tr>
<td>4. Social Impact</td>
<td>Ratio of tourists to locals (peak period)</td>
</tr>
<tr>
<td>5. Development Control</td>
<td>Existence of environmental review procedure or formal controls over development of site and use densities</td>
</tr>
<tr>
<td>6. Waste Management</td>
<td>Percentage of sewage from site receiving treatment (additional indicators may include structural limits of other infrastructural capacity on site, such as water supply)</td>
</tr>
<tr>
<td>7. Planning Process</td>
<td>Existence of organized regional plan for tourist destination region (including tourism component)</td>
</tr>
<tr>
<td>8. Critical Ecosystems</td>
<td>Number of rare/endangered species</td>
</tr>
<tr>
<td>9. Consumer Satisfaction</td>
<td>Level of satisfaction by visitors (questionnaire-based)</td>
</tr>
<tr>
<td>10. Local Satisfaction</td>
<td>Level of satisfaction by locals (questionnaire-based)</td>
</tr>
</tbody>
</table>

Composite Indices

A. Carrying Capacity

* Composite early warning measure of key factors affecting the ability of the site to support different levels of tourism

B. Site Stress

* Composite measure of levels of impact on the site (its natural and cultural attributes due to tourism and other sector cumulative stresses)

C. Attractivity

* Qualitative measure of those site attributes that make it attractive to tourism and can change over time

* The composite indices are largely composed of site-specific variables. Consequently, the identification and evaluation of the indicators that compose these indices require on-site direction from an appropriately trained and experienced observer. In future, based on the experiences in designing composite indicators for specific sites, it may be possible to derive these indices on a more systematic basis.
Annex 2: WTO Supplementary Indicators

In the context of Ugljan-Pasman, the following are two relevant categories of ecosystem specific supplementary indicators that have been developed by the WTO and that tourism planners for the islands may wish to consider now or in the future.

Coastal Zones

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>INDICATORS</th>
<th>SUGGESTED MEASURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ecological destruction</td>
<td>amount degraded</td>
<td>- % in degraded condition</td>
</tr>
<tr>
<td>beach degradation</td>
<td>levels of erosion</td>
<td>- % of beach eroded</td>
</tr>
<tr>
<td>fish stocks depletion</td>
<td>reduction in catch</td>
<td>- effort to catch fish</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- fish counts for key species</td>
</tr>
<tr>
<td>Overcrowding</td>
<td>use intensity</td>
<td>- persons per metre of accessible beach</td>
</tr>
<tr>
<td>disruption of fauna (e.g., whales)</td>
<td>species counts</td>
<td>- number of species present</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- change in species mix</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- number of key species sightings</td>
</tr>
<tr>
<td>diminished water quality</td>
<td>pollution levels</td>
<td>- fecal coliform and heavy metals counts</td>
</tr>
</tbody>
</table>

Small Islands

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>INDICATORS</th>
<th>SUGGESTED MEASURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>currency leakage</td>
<td>measures of capital flight</td>
<td>- % of exchange leakage from total tourism revenues</td>
</tr>
<tr>
<td>high levels of foreign ownership</td>
<td>value of foreign ownership</td>
<td>- % of foreign ownership of tourism establishments</td>
</tr>
<tr>
<td>Issue</td>
<td>Indicator</td>
<td>Note</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>overcrowding</td>
<td>use intensity and social impact indicators*</td>
<td>- may be applied at both a local level and as an island-wide measure</td>
</tr>
<tr>
<td>lack of jobs for local population</td>
<td>local jobs created through tourism</td>
<td>- % of jobs directly/indirectly supported by tourism - % of seasonal jobs</td>
</tr>
<tr>
<td>fresh water shortage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>fresh water availability</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- volume of water used by tourists/ volume used by local population on per capita basis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- cost to supply water</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- cost to supply water/number of tourists</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- estimates of capacity (e.g., litres remaining in reservoir/aquifer)</td>
</tr>
</tbody>
</table>
### Annex 3: Indicators Worksheets

#### A) Indicator Initial Evaluation

<table>
<thead>
<tr>
<th>KEY ISSUES</th>
<th>CANDIDATE PERFORMANCE INDICATORS</th>
<th>EVALUATION CRITERIA</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>RELEVANCE</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Who will use and how will it influence decisions?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>FEASIBILITY</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Is it practical and affordable to collect and analyze?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>CREDIBILITY</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Is it supported by valid and reliable information?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>CLARITY</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Is it easy to understand and clear to users</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>COMPARISON</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Is it useful for comparisons with other areas/standards</td>
<td></td>
</tr>
</tbody>
</table>

#### B) Rating the Indicators for Use (overall rating)

- ***** Critical indicator for the management of the site/destination
- **** 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
C) Indicator Development Worksheet

(to be used in the next phase to flesh out the indicator and make it operational)

**Issue or Risk Area**

---

**Indicator (clearly define)**

---

**Relevance**

To whom is it relevant and how will they use it?

---

Is it critical for short or long-term decisions?

---

**Feasibility**

What data will be used and who will supply it?

---

Who will be doing the analysis, and how often will the information be provided?

---

**Credibility**

How is the data acquired and what assurances are there of scientific soundness and objectivity?

---

**Clarity**

In what form will the indicator be used? How detailed, how frequent, and how current must it be?

---

Who will be the key users, and will it be phrased in terms easy for them to understand?

---

**Comparability**

Is the indicator in use in this form in other destinations, or are there standards of comparison to which it can be related?

---

**Operational Concerns**

Who will be accountable for managing the procedure to produce the indicator on an ongoing basis?

---

To whom will the indicator be provided and in what form?
Annex 4: Additional Data for Croatian Tourism

Table 1


<table>
<thead>
<tr>
<th>Year</th>
<th>Accommodation capacity (beds and camp places)</th>
<th>TOTAL</th>
<th>Hotels and similar establishments</th>
<th>Camp sites</th>
<th>Rented rooms and flats</th>
<th>Other1)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KUKLIJA MUNICIPALITY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1980</td>
<td>1,053</td>
<td>521</td>
<td>532</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1987</td>
<td>2,068</td>
<td>1,530</td>
<td>538</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1989</td>
<td>1,638</td>
<td>1,130</td>
<td>508</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>798</td>
<td>518</td>
<td>280</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>1,322</td>
<td>762</td>
<td>560</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UGLJAN-PASMAN ARCHIPELAGO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1980</td>
<td>6,921</td>
<td>837</td>
<td>1,600</td>
<td>3,883</td>
<td>601</td>
<td></td>
</tr>
<tr>
<td>1987</td>
<td>6,674</td>
<td>1,871</td>
<td>1,490</td>
<td>2,586</td>
<td>727</td>
<td></td>
</tr>
<tr>
<td>1989</td>
<td>6,400</td>
<td>1,471</td>
<td>1,290</td>
<td>3,383</td>
<td>256</td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>2,149</td>
<td>859</td>
<td>400</td>
<td>890</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>7,243</td>
<td>1,169</td>
<td>1,270</td>
<td>4,570</td>
<td>234</td>
<td></td>
</tr>
<tr>
<td>ZADAR COUNTY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1980</td>
<td>63,761</td>
<td>10,165</td>
<td>18,890</td>
<td>24,478</td>
<td>10,228</td>
<td></td>
</tr>
<tr>
<td>1987</td>
<td>85,602</td>
<td>13,348</td>
<td>27,750</td>
<td>35,898</td>
<td>8,606</td>
<td></td>
</tr>
<tr>
<td>1989</td>
<td>81,280</td>
<td>14,813</td>
<td>26,830</td>
<td>31,385</td>
<td>8,252</td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>53,906</td>
<td>12,239</td>
<td>17,893</td>
<td>23,199</td>
<td>575</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>76,233</td>
<td>13,545</td>
<td>21,997</td>
<td>37,932</td>
<td>2,759</td>
<td></td>
</tr>
<tr>
<td>CROATIA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1980</td>
<td>692,000</td>
<td>162,310</td>
<td>232,960</td>
<td>196,034</td>
<td>100,696</td>
<td></td>
</tr>
<tr>
<td>1987</td>
<td>885,770</td>
<td>202,095</td>
<td>282,545</td>
<td>290,636</td>
<td>110,494</td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>645,942</td>
<td>200,968</td>
<td>248,200</td>
<td>177,933</td>
<td>18,841</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>710,188</td>
<td>199,474</td>
<td>210,148</td>
<td>273,833</td>
<td>26,733</td>
<td></td>
</tr>
</tbody>
</table>

1) Refer mainly to union rest houses and children/youth rest houses.
### Table 2

#### TOURIST ARRIVALS AND OVERNIGHTS

**1980-2000**

<table>
<thead>
<tr>
<th>Year</th>
<th>KUKLJICA MUNICIPALITY</th>
<th>UGLJAN-PAŠMAN ARCHIPELAGO</th>
<th>ZADAR COUNTY</th>
<th>CROATIA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tourist arrivals</td>
<td>Overnights</td>
<td>Tourist arrivals</td>
<td>Overnights</td>
</tr>
<tr>
<td>1980</td>
<td>6,970</td>
<td>80,070</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>1981</td>
<td>7,018</td>
<td>75,667</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>1982</td>
<td>8,534</td>
<td>88,392</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>1983</td>
<td>9,266</td>
<td>80,524</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>1984</td>
<td>10,669</td>
<td>124,099</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>1985</td>
<td>12,184</td>
<td>131,547</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>1986</td>
<td>13,229</td>
<td>139,002</td>
<td>34,470</td>
<td>339,080</td>
</tr>
<tr>
<td>1989</td>
<td>13,001</td>
<td>121,796</td>
<td>41,129</td>
<td>399,052</td>
</tr>
<tr>
<td>1990</td>
<td>13,055</td>
<td>113,399</td>
<td>24,998</td>
<td>219,532</td>
</tr>
<tr>
<td>1991</td>
<td>183</td>
<td>1,929</td>
<td>461</td>
<td>3,154</td>
</tr>
<tr>
<td>1992</td>
<td>0</td>
<td>0</td>
<td>10,468</td>
<td>29,941</td>
</tr>
<tr>
<td>1993</td>
<td>0</td>
<td>0</td>
<td>12,581</td>
<td>43,962</td>
</tr>
<tr>
<td>1994</td>
<td>683</td>
<td>4,299</td>
<td>38,057</td>
<td>195,887</td>
</tr>
<tr>
<td>1995</td>
<td>754</td>
<td>6,629</td>
<td>1,459</td>
<td>11,234</td>
</tr>
<tr>
<td>1996</td>
<td>2,875</td>
<td>22,444</td>
<td>5,935</td>
<td>47,277</td>
</tr>
<tr>
<td>1997</td>
<td>7,513</td>
<td>67,939</td>
<td>18,968</td>
<td>152,370</td>
</tr>
<tr>
<td>1998</td>
<td>8,182</td>
<td>62,043</td>
<td>26,690</td>
<td>201,054</td>
</tr>
<tr>
<td>1999</td>
<td>7,826</td>
<td>59,039</td>
<td>18,805</td>
<td>142,042</td>
</tr>
<tr>
<td>2000</td>
<td>11,542</td>
<td>86,715</td>
<td>31,791</td>
<td>233,203</td>
</tr>
</tbody>
</table>

*Source: Institute for Tourism data base (2001).*

*Data collected by Croatian Central Bureau of Statistics, Zagreb.*
Table 3.

**DOMESTIC AND FOREIGN TOURIST ARRIVALS AND OVERNIGHTS IN ZADAR COUNTY AND CROATIA, 1986-2000**

<table>
<thead>
<tr>
<th>Year</th>
<th>ZADAR COUNTY</th>
<th>CROATIA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TOTAL</td>
<td>Domestic</td>
</tr>
<tr>
<td></td>
<td>Tourist arrivals</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>Domestic</td>
</tr>
</tbody>
</table>

### Table 4

**OVERNIGHTS BY NATIONALITIES IN CROATIA in 1987, 1989, 1996 and 2000**

<table>
<thead>
<tr>
<th>Country of origin</th>
<th>Overnights in CROATIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>68,160,023</td>
</tr>
<tr>
<td>CROATIA</td>
<td>8,397,130</td>
</tr>
<tr>
<td>ex.YU republics</td>
<td>17,556,691</td>
</tr>
<tr>
<td>BOSNIA &amp; HERZEGOVINA</td>
<td>3,884,336</td>
</tr>
<tr>
<td>SLOVENIA</td>
<td>6,845,886</td>
</tr>
<tr>
<td>other ex.YU republics</td>
<td>6,826,469</td>
</tr>
<tr>
<td>WESTERN EUROPEAN COUNTRIES</td>
<td>35,364,146</td>
</tr>
<tr>
<td>AUSTRIA</td>
<td>4,591,245</td>
</tr>
<tr>
<td>GERMANY</td>
<td>17,374,537</td>
</tr>
<tr>
<td>ITALY</td>
<td>4,215,702</td>
</tr>
<tr>
<td>NETHERLANDS</td>
<td>2,265,325</td>
</tr>
<tr>
<td>FRANCE</td>
<td>1,082,297</td>
</tr>
<tr>
<td>BELGIUM</td>
<td>658,956</td>
</tr>
<tr>
<td>GREAT BRITAIN</td>
<td>4,709,647</td>
</tr>
<tr>
<td>SWITZERLAND</td>
<td>466,437</td>
</tr>
<tr>
<td>SCANDINAVIA</td>
<td>1,495,517</td>
</tr>
<tr>
<td>EASTERN EUROPEAN COUNTRIES</td>
<td>4,088,294</td>
</tr>
<tr>
<td>CZECH REP.</td>
<td>1,647,657</td>
</tr>
<tr>
<td>SLOVAKIA</td>
<td>848,792</td>
</tr>
<tr>
<td>POLAND</td>
<td>592,107</td>
</tr>
<tr>
<td>HUNGARY</td>
<td>710,781</td>
</tr>
<tr>
<td>other Eastern European countries(1)</td>
<td>288,957</td>
</tr>
<tr>
<td>OTHER EUROPEAN COUNTRIES</td>
<td>452,622</td>
</tr>
<tr>
<td>NON-EUROPEAN COUNTRIES</td>
<td>805,623</td>
</tr>
<tr>
<td>AUSTRALIA</td>
<td>34,679</td>
</tr>
<tr>
<td>CANADA</td>
<td>85,023</td>
</tr>
<tr>
<td>USA</td>
<td>373,636</td>
</tr>
<tr>
<td>other non-European countries</td>
<td>312,285</td>
</tr>
</tbody>
</table>

(1) Latvia, Lithuania, Russian Federation, Belarus, Estonia, Ukraine (ex. USSR).

<table>
<thead>
<tr>
<th>Year</th>
<th>Overnight by months</th>
<th>ZADAR COUNTY</th>
<th>CROATIA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>TOTAL</td>
<td>I</td>
</tr>
<tr>
<td>1987</td>
<td>TOTAL</td>
<td>4,770,944</td>
<td>20,256</td>
</tr>
<tr>
<td></td>
<td>Domestic</td>
<td>1,163,152</td>
<td>9,092</td>
</tr>
<tr>
<td></td>
<td>Foreign</td>
<td>3,607,792</td>
<td>11,164</td>
</tr>
<tr>
<td>1989</td>
<td>TOTAL</td>
<td>4,161,772</td>
<td>16,175</td>
</tr>
<tr>
<td></td>
<td>Domestic</td>
<td>801,172</td>
<td>7,564</td>
</tr>
<tr>
<td></td>
<td>Foreign</td>
<td>3,360,600</td>
<td>8,611</td>
</tr>
<tr>
<td>1996</td>
<td>TOTAL</td>
<td>859,629</td>
<td>4,760</td>
</tr>
<tr>
<td></td>
<td>Foreign</td>
<td>444,244</td>
<td>475</td>
</tr>
<tr>
<td>2000</td>
<td>TOTAL</td>
<td>2,910,915</td>
<td>3,748</td>
</tr>
<tr>
<td></td>
<td>Domestic</td>
<td>691,637</td>
<td>2,809</td>
</tr>
<tr>
<td></td>
<td>Foreign</td>
<td>2,219,278</td>
<td>939</td>
</tr>
</tbody>
</table>

## Annex 5: IUCN Index of Level of Protection

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 1</td>
<td>Strict protection (nature reserve or wilderness park) - limited human access.</td>
</tr>
<tr>
<td>Category 2</td>
<td>Ecosystem conservation and recreation (e.g., national park)</td>
</tr>
<tr>
<td>Category 3</td>
<td>Conservation of natural features (e.g., natural monument -managed access)</td>
</tr>
<tr>
<td>Category 4</td>
<td>Conservation through active management (e.g., management of specific habitats or species, some control of access where negative impacts predicted)</td>
</tr>
<tr>
<td>Category 5</td>
<td>Landscape or seascape conservation and recreation (e.g., controlled access beach)</td>
</tr>
<tr>
<td>Category 6</td>
<td>Sustainable use of natural systems (some use of resources permitted but certain natural resources [e.g., fauna] protected)</td>
</tr>
</tbody>
</table>

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).
## Annex 6: Local Questionnaire

*This is a local questionnaire to be periodically administered to a sample of local residents in the Ugljan-Pasman study area:*

Please indicate your reaction to each of the following questions as follows.

<table>
<thead>
<tr>
<th>Question</th>
<th>5 Strongly Agree</th>
<th>4 Agree</th>
<th>3 Neutral</th>
<th>2 Disagree</th>
<th>1 Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tourism is good for my community</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I personally benefit from the tourism industry</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tourism in Ugljan-Pasman has the following effects:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>creates jobs for local residents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>employs local youth</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>raises prices for goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>helps the community obtain services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>causes rise in crime rates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>harms moral standards</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>stops locals from beach access</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>helps stimulate local culture and crafts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>uses resources needed by local residents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Overall, what is your opinion of the tourism in your community?

   Very Unsatisfactory------Poor------ Satisfactory --------Good---------- Excellent

   1  2  3  4  5  6  7  8  9  10

5. Would you want more or less tourism in future in Ugljan-Pasman?

   Much Less-----------Less-------Same--------More----------Much More

   1  2  3  4  5  6  7  8  9  10

Comments__________________________________________________________________

(Note: These standard questions parallel those recommended for use in other destinations and can be used for interregional comparability. They may be supplemented by other questions on attitude towards specific elements of the impacts or to reactions from specific community cohorts.)
ANNEX 7: LIST OF PARTICIPANTS

ALBANIA

Mr. Arben GOLEMI
Director
Investment Department
Tourism Development Committee
Bul. Deshmoret e Kombit, 8
Tirana
Tel. (35542) 58320
Fax (35542) 58322

Mr. Genc METHOU
Head of Section
Tourism Planning
Tourism Development Committee
Bul. Deshmoret e Kombit, 8
Tirana
Tel. (35542) 58320
Fax (35542) 58322

Mr. Drago MATINOVIC
Deputy mayor
Općina Kuklja
23 271 Kuklja
Tel./fax: +385 23 373 229

CROATIA

H.E. Mrs. Pave ŽUPAN-RUSKOVIĆ
Minister
Ministry of Tourism
Zagreb

Mrs. Zdenka ŠUTAK
Chief of Cabinet
Ministry of Tourism
Zagreb

Mr. Claudio ROIS
Counsellor to the Minister
Ministry of Tourism
Zagreb

Mrs. Milka BLAGDAN
Mayor
Town of Kuklja
23 271 Kuklja
Ugljan Island
Tel/fax: +385 23 373 229

Mr. Ante JAŠA
Tourist Board Office
Općina Kuklja
23 271 Kuklja
Tel./fax: +385 23 373 229

Mrs. Franka PERKOVIĆ
Member of the Community Council
Općina Kuklja
23 271 Kuklja
Tel./fax: +385 23 373 229

Ms. Katarina VOJVODIĆ
Student (University of hotel management/Opatija)
Općina Kuklja
23 271 Kuklja
Tel: +385 23 373 301

Mr. Josip GRZUNOV
Mayor
Commune of Kali
23 272 Kali
tel: +385 23 281 284

Mr Zladimir FRANOV
President
Tourist Board
Commune of Kali
23 272 Kali
Tel: +385 23 281 715

Mr. Visko HALADIĆ
Mayor
City of Stari Grad
Nova riva 3
21 460 Island of Hvar
Tel: +385 21 765 029
CROATIA (cont.)

Mr. Danijel KATIČIN
Mayor
Town Tkon
23 265 Tkon
Pašman Island
Tel: +385 23 85 824

Mr. Ante DUJMOVIĆ
Mayor
Town Pašman
23 264 Pašman
Pašman Island
Tel: +385 23 260 260

Mr. Srečko RUŠEV
Mayor
Town Preko
23 273 Preko
Pašman Island
Tel: +385 23 286 226

Mrs. Nives KOZULIĆ
Director
Institute for Environment
Zadar County

Mr. Vjekoslav PAVLAKOVIĆ
Planner
Institute for Environment
Zadar County

Mr. Niko KOZULIĆ
Secretary
Islands’ Parliament
1st Island

Mr. Nikola ZANINOVICI
President, Tourist Office
City of Hvar
21 450 Hvar
Island of Hvar
Tel: +385 21 741 059

Mr. Željko JEROLIMOV
Director, Tourist Office of Preko
23 273 Preko
Pašman Island
Tel: +385 23 286 226

Mr. Josip GRZANOV
Town Kali
Ugljan Island

Mr. Krunoslav BOBIĆ
Director
Tourist Office
Town Pašman
23 264 Pašman
Pašman Island
Tel: +385 23 260 111

Mr. Valentin BAKOTA
Director
“Hotel Ugljan” d.o.o.
Town Ugljan
23 275 Ugljan
Ugljan Island
Tel: +385 23 288 004

Mr. Goran ŠARIN
Director, Public Utilities
Communal Company
23 273 Preko, Ugljan Island
Tel: +385 23 286 383

Mrs. Marija DEJANOVIC
Manager of Marketing
Tourist Office
City of Nin
23 200 Nin
Tel: +385 23 264 280
Fax: +385 23 265 247

Mrs. Jadranka ŠAVAR
Director
Tourist Office
City of Pag
Od špitala bb 2
23 250 Pag
Pag Island
Tel: +385 23 611 301

Mr. Dragan SEGARIĆ
Assist. Gen. Manager Comm. Affairs
Zadar Airport

Mr. Jerolim URODA
Zadar County
CROATIA (cont.)

Mrs. Iva VIČEVIĆ
Student, ACMT Dubrovnik
Tel: +385 23 325 015

CYPRUS

Ms. Athena METAXAS
Architect, Planning Department
Cyprus Tourism Organization
Limassol Avenue, 19
P.O. Box 24535
1390 Nicosia
Tel. (357-2) 337.715
Fax (357-2) 339.723
E-mail: cto2@cto.org.cy

ITALY

Mr. Alessio SATTA
Consultant, Ambiente Italia
Ecobilancio Italia
Via Vicenza S/A
00185 Rome
Tel. (39-06) 4470.4205
Fax (39-06) 4440.872
E-mail: alessio.satta@ecobilancio.com

MALTA

Mr. Claude ZAMMIT TREVISAN
Research and Information Executive
Malta Tourism Authority
Republic Street, 280
Valletta CMR 02
Tel. (356) 226.210 / 221.111/5
Fax (356) 220.401
E-mail: Claude.Zammit@visitmalta.com

Mr. Alan VELLA
Planning Officer
Planning Authority
St. Francis Ravelin
Floriana
CMR 01 Valletta
Tel. (356) 2290.1533
Fax (356) 224.846
E-mail: Alan.Vella@pa-malta.org

SLOVENIA

Mr. Štefan PRŠA
Mayor
Municipality of Velika Polana
Velika Polana, 111
9225 Velika Polana
Tel. (386-2) 573.7030
Fax (386-2) 573.7032
E-mail: stefan_prsa@hotmail.com

Mr. Damijan JAKLIN
President
Association for Sport, Tourism
Development and Culture
Velika Polana, 44a
9225 Velika Polana
Tel. (386-2) 573.7327
Fax (386-2) 573.7326
E-mail: damijan_jaklin@hotmail.com

SPAIN

Sr. Alfonso MEAURIO FLAMEN
Director
Centro de Investigación y Tecnologías Turísticas Islas Baleares (CITTIB)
Reverendo Françesc Sitjar, 1
07010 Palma de Mallorca
Baleares
Tel. 971.17.70.83
Fax 971.17.70.81
E-mail : cittib@cittib.caib.es

Sr. Iván MURRAY MAS
Subdirector Proyecto Indicadores de Sostenibilidad Turísticos
Centro de Investigación y Tecnologías Turísticas Islas Baleares (CITTIB)
Reverendo Franquesc Sitjar, 1
07010 Palma de Mallorca
Baleares
Tel. 971.17.70.83
Fax 971.17.70.81
E-mail : cittib@cittib.caib.es
WTO CONSULTANTS

Dr. Ted MANNING
Centre for Sustainable Future
Foundation for International Training
7181, Woodbine Avenue – Suite 110
Markham – ONTARIO
L3R 1ª3 Canada
Tel. (613) 947-2335
Fax (613) 943-1109
E-mail: Ted.Manning@cac.gc.ca

Mr. Gordon CLIFFORD
Centre for Sustainable Future
Foundation for International Training
7181, Woodbine Avenue – Suite 110
Markham – ONTARIO
L3R 1ª3 Canada
Tel. (613) 947-2335
Fax (613) 943-1109
E-mail: Gordon.Clifford@cac.gc.ca

Dr. Zoran Klaric
Senior Scientific Collaborator
Institute for Tourism
Vrhovec 5
HR-10000 Zagreb
Croatia
Tel (38-51) 377.3222
Fax (38-51) 3774.860
Email: zoran.klaric@iztzg.hr

WORLD TOURISM ORGANIZATION
SECRETARIAT

Mr. Gabor VERECZI
Programme Officer
Capitán Haya, 42
28020 Madrid - Spain
Tel. (34) 91.567.8210
Fax (34) 91.571.3733
E-mail: gvereczi@world-tourism.org