TELE-INSULA
HELPING ISLANDS MITIGATE THE CONSTRAINTS ARISING FROM INSULARITY.

The project, supported by the European Union, is based on the provision of telematic services applications to a selected group of European islands, from the North-Sea and the Baltic to the Eastern Atlantic islands, from the central Mediterranean to the Greek archipelago. The project is also being extended to far away Ulithi, INSULA's atoll-friend, situated in Micronesia in the South Pacific.

A selected group of European partners coordinated by INSULA are also engaged in the challenging endeavour to provide and test, together with the islanders, a set of much needed services based on telematics with the aim of complementing the efforts of these small communities to overcome their 'insular' constraints. Distance learning and training, tele-medicine, easy access to public services, improvement of tourism services, access via an electronic media to a worldwide information system, and exchange of experiences and information between islands are among the objectives pursued by the TELE-INSULA Project.

No doubt the experience and know-how contributed by the partners will provide the project with a synergic effect, capable in itself to generate unexpected innovations.

Local authorities have also joined the partnership. These include the Municipalities of the islands of the French region of Finistère, the town-hall of Lipari in the Eolian Archipelago northeast of Sicily and the Highland Authority in Scotland, U.K. Other partners are service providers, including TRAINET, belonging to the powerful Italian STET-TELECOM group, POOL STRATEGIE cooperating with France TELECOM and the regional authorities, the SAMOS HEALTH INSTITUTE together with the University of the Aegean, CITMA in the well-known Portuguese island resort of MADEIRA and finally AETHRA in Italy, which will contribute the hardware and the software application.

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75352 PARIS 07 SP - FRANCE
Tourism has been the main focus of INSULA’s activities during the first semester of 1995. I refer of course to the World Conference on Sustainable Tourism, which was organized at the end of April in Lanzarote, Canary Islands. More information about this important event is given in another section of this issue.

Evidently, this topic is of direct concern to islanders interested in the many aspects related to sustainable development.

Sustainable tourism is in fact a critical aspect of the development process, as many island communities and countries worldwide, particularly in developing ones, count on tourism to raise incomes and create employment.

The impacts on the physical, biological and social environment of tourism are well documented, and these impacts tend to be especially relatively large in small islands.

A sound environmental policy is fundamental to ensure sustainable development, even in the narrow economic sense, in the medium and in the long term.

Ensuring sustainable tourism is thus an international challenge, which requires awareness of the impacts of tourism, exchange of information and experiences and a constant dialogue among all partners involved.

To encourage and support such a dialogue is of course INSULA’s goal. We therefore chose to once again dedicate the Dossier of this issue of the journal to sustainable tourism. From Cuba to Mauritius, from the Mediterranean to the Polar areas, we have tried to present a large array of experiences and hopefully to extend the debate on this theme.

INSULA wishes to promote further discussion on other critical issues regarding islands sustainable development, in particular on liquid and solid waste management, and the journal is calling for papers on this issues.

Regarding solid waste, the problems among others, of scrapped cars, used tyres and their possible re-use for non-conventional applications, would be of particular interest.

Another issue, on which readers’ contributions would be most welcome, is the application of telematics for services and communication, access to information, sharing of experiences in areas such as the environment, health and education which are all priorities in INSULA’s and the islanders’ agenda.

Also, renewable energies, their costs, technologies, applications and experiences in specific island conditions are obviously areas of direct interest to islanders. Here again relevant papers are welcome.

Last but not least, critical assessments of nuclear energy and safety as well as its peaceful applications would be most welcome.

In this respect, INSULA associate itself with all islanders of the world and specifically with the peoples of the Pacific in protesting vigorously against nuclear bomb testing.
The World Conference on Sustainable Tourism
Lanzarote, 24-29 April 1995

The major news item in this issue of *insula* comes from Lanzarote, the well-known tourism resort of the Canary Islands, where the World Conference on Sustainable Tourism took place last April.

The venue was Jameos del Agua, a unique volcanic site transformed into a sophisticated blend of nature and culture by César Manrique, the famous "lanzaroteño" artist.

The conference attracted more than 800 participants from 75 countries, including government representatives and the representatives of all major international organizations. This indicated that there was a need for such a timely international gathering.

The organization of the conference, in which INSULA and its Vice-Secretary General Cipriano Martín Cabrera, were main actors, proved to be the key factor in the success of the meeting. Concrete support from the European Union and the Spanish national and regional authorities together with the prestigious sponsorship of UNESCO, UNEP and WTO, made the rest.

By proposing the adoption of the Charter for Sustainable Tourism to the Conference, INSULA and the co-organizers kept in mind the outcomes of the UN Global Conference on Sustainable Development of Small Island Developing States, organized a year before in Barbados (see the December 1994 issue of *insula*). The Charter therefore reflects the interests of islands. Its adoption by the UN General Assembly will undoubtedly confirm its value as an overall strategic document for islands sustainable development.

We the participants at the World Conference on Sustainable Tourism, meeting in Lanzarote, Canary Islands, Spain, on 27-28 April 1995,

Mindful that tourism, as a worldwide phenomenon, touches the highest and deepest aspirations of all people and is also an important element of socioeconomic and political development in many countries.

Recognizing that tourism is ambivalent, since it can contribute positively to socioeconomic and cultural achievement, while at the same time it can contribute to the degradation of the environment and to the loss of local identity, and should therefore be approached with a global methodology.

Mindful that tourism is ambivalent, since it can contribute positively to socioeconomic and cultural achievement, while at the same time it can contribute to the degradation of the environment and to the loss of local identity, and should therefore be approached with a global methodology.

Recognizing that the resources on which tourism is based are fragile and that there is a growing demand for improved environmental quality.

Recognizing that tourism affords the opportunity to travel and to know other cultures, and that the development of tourism can help promote closer ties and peace among peoples, creating a conscience that is respectful of the diversity of culture and world styles.

Recalling the Universal Declaration of Human Rights, adopted by the General Assembly of the United Nations and the various United Nations declarations and regional conventions on tourism, the environment and the conservation of cultural heritage, and on sustainable development.


Recalling previous declarations on tourism, such as the Manila Declaration on World Tourism, The Hague Declaration and the Tourism Bill of Rights and Tourist Code.

Recognizing the need to develop a tourism that meets economic expectations and environmental requirements, and respects not only the social and physical structure destinations, but also the local population.

Considering it a priority to protect and reinforce the human dignity of both local communities and tourists.

Mindful of the need to establish effective alliances among the principal actors in the field of tourism so as to fulfil the hope of a tourism that is more responsible towards our common heritage.

APPEAL to the international community and, in particular, UNGA governments and public authorities, decision makers and professionals in the field of tourism, public and private associations and institutions whose activities are related to tourism, and tourists themselves, to adopt the principles and objectives of the Declaration that follows:

1. Tourism development shall be based on criteria of sustainability, which means that it must be ecologically bearable and in the long term, as well as economically viable and socially equitable for local communities.

Sustainable development is a guided process which envisages global management of resources so as to ensure their viability, thus enabling our natural and cultural capital, including protected areas to be preserved. As a powerful instrument of development, tourism can and should participate actively in the sustainable development strategy. A requirement of sound management of tourism is that the sustainability of the resources on which it depends must be guaranteed.

2. Tourism should contribute to sustainable development and be integrated to the natural, cultural and human environment; it must respect the fragile balances that characterize many tourist desti-
nations, in particular small islands and environmental sensitive areas. Tourism should ensure an acceptable evolution as regards its influence on natural resources, biodiversity and the capacity for assimilation of any impacts and residues produced.

3 Tourism must consider its effects on the cultural heritage and traditional elements, activities and dynamics of each local community. Recognition of these local factors and support for the identity, culture and interests of the local community must at all times play a central role in the formulation of tourism strategies, particularly in developing countries.

4 The active contribution of tourism to sustainable development necessarily presupposes the solidarity, mutual respect and participation of all the actors, public and private, implicated in the process, and must be based on efficient cooperation mechanisms at all levels: local, national, regional and international.

5 The conservation, protection and appreciation of the worth of the natural and cultural heritage afford a privileged area for cooperation. This approach implies that all those responsible must take upon themselves a true challenge, that of cultural, technological and professional innovation, and must also undertake a major effort to undertake a major effort to create and implement integrated planning and management instruments.

6 Quality criteria both for the preservation of the tourist destination and for the capacity to satisfy tourists, determined jointly with local communities and informed by the principles of sustainable development, should represent priority objectives in the formulation of tourism strategies and projects.

7 To participate to sustainable development, tourism must be based on the diversity of opportunities offered by the local economy. It should be fully integrated into and contribute positively to local economic development.

8 All options for tourism development must serve effectively to improve the quality of life of all people and must influence the socio-cultural enrichment of each destination.

9 Governments and the competent authorities, with the participation of NGO's and local communities, shall undertake actions aimed at integrating the planning of tourism as a contribution to sustainable development.

10 In recognition of economic and social cohesion among the peoples of the world as a fundamental principle of sustainable development, it is urgent that measures be promoted to permit a more equitable distribution of the benefits and burdens of tourism.

11 Environmentally and culturally vulnerable spaces, both now and in the future, shall be given special priority in the matter of technical cooperation and financial aid for sustainable tourism development. Similarly, special treatment should be given to zones which have been degraded by obsolete and high impact tourism models.

12 The promotion of alternative forms of tourism that are compatible with the principles of sustainable development, together with the encouragement of diversification, represent a guarantee of stability in the medium and the long term. In this respect there is a need, for many small islands and environmentally sensitive areas in particular, to actively pursue and strengthen regional cooperation.

13 Governments, industries, authorities and tourism-related NGOs should promote and participate in the creation of open networks for research, dissemination of information and transfer of appropriate knowledge on tourism and environmentally sound sustainable tourism technologies.

14 The establishment of a sustainable tourism policy necessarily requires the support and promotion of environmentally compatible tourism management systems, feasibility studies for the transformation of the sector, as well as the implementation of demonstration projects and the development of international cooperation programmes.

15 The travel industry, together with bodies and NGOs whose activities are related to tourism, shall draw up specific frameworks for positive and preventive actions to secure sustainable tourism development and establish programmes to support the implementation of such practices. They shall monitor achievements, report on results and exchange their experiences.

16 Particular attention should be paid to the role the and environmental repercussions of transport in tourism, and to the development of economic instruments designed to reduce the use of non-renewable energy and to encourage recycling and minimization of residues in resorts.

17 The adoption and implementation of codes of conduct conducive to sustainability by the principal actors involved in tourism, particularly industry are fundamental if tourism is to be sustainable. Such codes can be effective instruments for the development of responsible tourism activities.

18 All necessary measures should be implemented in order to inform and promote awareness among all parties involved in tourism industry, at local, national, regional and international level, with regard to the contents and objectives of the Lanzarote Conference.
Dossier: Island Sustainable Tourism

Planning Tourism for the 21st Century: The Carrying Capacity Notion

Prem Saddul

Introduction

Tourism is today the third largest industry in the world, contributing about 12 percent of the world GNP. According to World Tourism Organisation, it may become the largest industry by the year 2010 when 3.5 billion tourists will be on the move in search of exotic destinations. By that time, tourism development in small island states will have reached a significant proportion, with a great impact on the natural and cultural environment.

The Lanzarote World Conference on Sustainable Tourism held in April 1996, could not have come at a more opportune time. The conference has provided an invaluable opportunity for different countries, the private sector and all those involved in the tourism sector, to take stock of progress in implementing the Rio Declaration and to move ahead in the practical application of AGENDA 21, identifying partnerships at worldwide level, to plan towards sustainable tourism (a concept which has really dominated reflection and discussion during the conference) for the safeguarding of the long term quality of the island's resources.

Sustainable Tourism Development

It is noted that the uncontrolled development of mass tourism during the past two decades has led to a point of saturation in many areas of the world – both in developed and in developing countries. In many of these saturated areas, the environment, which once attracted tourists 'en masse', has been unattractive to today's ecologically sensitive tourists. Small island states, especially along coastal belts, which have suffered from intensive and dynamic tourism development, are the ones which are most threatened.

Today, the need for environmental protection and careful planning in the tourism sector with a view to pave the way towards sustainable tourism is a must in many countries. It is now generally accepted that the way towards achieving this goal is through a careful and scientific assessment of their carrying capacity - i.e. the threshold of tolerance (environmental, social and cultural) so much needed to ensure appropriate environmental protection and to offer guarantees for a long-term economic prosperity. The latest documents of UNEP and WTO define the carrying capacity for tourism as: 'the maximum number of people that may visit a tourist destination at the same time without causing destruction of the physical, economic and socio-cultural environment, and an unacceptable decrease in the quality of the visitor's satisfaction' (Dragicevic, 1991).

The Case of Mauritius

The development of tourism in small tropical islands is closely linked to several factors – a tropical to subtropical climate which is highly favourable to tourism, long stretches of white coralline sand, a calm blue lagoon encircled by coral reefs and a diversity of its physical and human landscape. All these form a powerful force of attraction – an invitation to travel.

Mauritius (location 20° S; 56° E) offers all of them. It is considered as an exotic, long haul beach destination. The figure next page gives an idea of the monthly weather characteristics in Mauritius. Throughout the year, there is a predominance of fine, sunny and comfortable weather with average temperatures ranging from 22 degrees Celsius to 33 degrees Celsius. On average, there are about 220 days with favourable weather conditions for tourists in Mauritius. This compares favourably with Las Palmas (Canary Islands) which has only about 180 days/year which can be classified as favourable from a tourist 'point of view' (Besancenot, 1987).

Tourism Development in Mauritius

In 1950, there was only one tourist hotel of international standard on the island. The Mauritius Tourism Office was set up in 1957 and the island's National airline – Air Mauritius – started operation in 1967, seven years prior to independence. Tourism was integrated into the strategic development plan of Mauritius in the years following independence. Since then, tourism has, year after year, contributed to consolidate the country's economic base and to increase its socio-economic wealth. The table above illustrates clearly the rapid development of tourism in Mauritius from the year of independence (1968) to date.

After 1991, the number of tourist arrivals crossed the mark of 300,000 and the figure of 400,000 was reached in 1994. Still, for the tourist industry to be profitable, the occupancy rate for hotels must be around 70 percent with an average of 13,000 tourists a day. Judged by world tourism growth rates, Mauritius is one of the fastest growing tourism destinations.

In Mauritius, more than 90 percent of the 400,000 tourists come to spend their holidays because of the sea, the sand and the sun. Because tourism is viewed as one of the main sectors contributing to the expansion of the Mauritius economy, the volume of tourist arrival will continue increasing in the years ahead. Apart from the favourable tropical maritime climate, the foundation of the island's success in tourism is its natural scenic beauty, its beaches and its marine environment.

Mauritius has a coastline of 521.5 km, of which 86 percent of the may be classified as "Pas Geographiques" belonging to the State and 14 percent is privately owned. About 32 percent of the coastline is occupied by buildings as follows:

- Bungalows 16.1% 52 km
- Hotels 9.9% 30 km
- Building sites 7.8% 25 km

Almost all the hotels have developed along the coast where attractive beaches are available. This development has happened in a somewhat unplanned manner following a dangerous dyna-
Planning Tourism: The Carrying Capacity Notion

mism triggered by an eagerness to develop the tourist sector "by all means".

In 1975, hotel complexes occupied 10 km (3.26 percent) of the island's most attractive coastline in terms of beaches. This figure tripled to 30 km (i.e. 9 percent) in 1990. With the completion of other "big" hotel complexes and the defreezing of some hotel construction projects, this figure is bound to increase. The rapid proliferation of bungalows has gone hand in hand with tourist development. In 1975, bungalows with direct access to the beach occupied some 61 km of coast (6.8 percent of the total stretch) of which 13.5 km are on the best beaches of the island.

Towards Sustainable Tourism Development

At this stage, it is appropriate to ask ourselves the following questions:

• How best can we set up a system of coordination and cooperation between the Mauritian authorities and the Mauritian hotel groups in order to achieve objectives related to cultural and environmental conservation?

• How do we go about planning for an ecologically rational and culturally sustainable tourism programme in the island and serve it as a model for others?

• How do we go about calculating the optimal carrying capacity for tourists in the different coastal zones of Mauritius?

In Mauritius, and perhaps in many other small island states, there is an urgent need for a finer definition of the "carrying capacity" notion in order to arrive at a threshold of tolerance on the influx of tourist arrivals at a particular point in time and at a particular place, to ensure sustainable tourism development.

In this regard, one could refer to the formula put forward by the ECOMOST project of the International Federation of Tour Operators based on the Mallorca case. According to ECOMOST, to prove the way towards sustainable tourism, we must see to it that:

(i) the population should continue to remain prosperous and maintain its cultural values and identity;
(ii) the place should remain attractive to tourists for many generations;
(iii) nothing should be done to damage the ecology.

To achieve the three objectives, an effective political framework is needed. This includes laws to protect the principles of sustainability, integrated planning procedures and coordination involving different authorities who have a say in tourism development. Public enquiries and transparency in the issue of development certificates for the construction of hotels is an important requisite in such a framework.

The daring and commendable move of Ecuador's president Sixto Duran Ballen is worth mentioning in this context. In September 1994, he signed a decree suspending the granting of licences for new tourist vessels and for hotel construction in order to curb tourist development on the Galapagos Archipelago. The objective behind this was to help preserve the island's unique flora and fauna and to ensure the long term future of the existing tourist industry.

Visitors to the Galapagos are required to pay an $80 entry fee which goes towards maintaining the national parks and reserves of the country. This example can be followed by many small islands where the flora and fauna are threatened by irrational tourism development.

Carrying Capacity in Mauritius

The notion of carrying capacity has not yet been properly defined in Mauritius. This is perhaps also the case in other small islands. In Mauritius, several firms have been approached to conduct a study and to advise the Mauritian authorities accordingly. So far none has been able to come up with an acceptable formula. In 1988, the White Paper on Tourism prepared by the government, set the ceiling at 400,000 by the year 2000 AD i.e. a ratio of tourists to population of 1 to 3.

However, during a recent National Forum on Tourism held in May 1992, this figure was challenged. The arguments put forward were as follows:

(a) the ceiling for tourism expansion in Mauritius cannot be reduced to a simple mathematical concept;
(b) the figure proposed in 1988 would restrict the industry to a growth rate of about 2 to 3 percent yearly. This will be much below the international growth rate of 10 percent;
(c) a high percentage of tourists stay in private bungalows and in cheap accommodation, rendering it rather difficult to carry out such a study, since most bungalow owners do not declare their income from tourism activities to evade income tax.

One may refer to the situation in other small island states on this question. In Singapore, Hong Kong, the Maldives, the Seychelles, and the Canary Islands, the number of tourist arrival per year far exceeds the total indigenous population are worth noting. How do these islands cope with a much larger number of tourists?

As stated, in Mauritius, there are conflicting views regarding optimum carrying capacity. According to local authorities, Mauritius cannot afford to raise its present number of tourist hotels. Others argue that we can still afford from 700,000 to 1 million tourists per year by 2020. The Minister of Tourism recently quoted the figure of 600,000 tourists a year as the limits of tolerance in order to ensure sustainable tourism.

Some Proposals

The task of carrying capacity assessment should be undertaken on a zonal basis as each coastal or island zone is more or less a separate identity with its own specificity as regards the natural, physical and socio-cultural entities.

The coastal zones should be carefully chosen, taking into consideration the following three sets of broad parameters (Klaric, 1995):

- Physical, ecological and infrastructural parameters, which refer to all fixed and flexible components of the natural environment as well as to the infrastructure systems;
- Socio-demographic parameters, which refer to all elements which concern social communities and population dynamics;
- Political-economic factors which include anticipated investment and economic measures for tourism development.

Although many of the parameters for calculating carrying capacity are observable and hence measurable, there are some important ones, which are not easy to quantify. These include flexible and dynamic factors, in particular those referring to cultural identity, attitudes of the locals and the process of deculturation.

It is therefore highly recommended that a flexible approach be adopted, with maximum and the minimum limit of tolerance being set on a region or unit basis (i.e. each hotel area).

A careful and scientific process of eco-auditing for each and every hotel is possible and a system of green award or "green tokens" could be adopted in order to encourage hotel complexes to think environmentally.

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Dossier: Island Sustainable Tourism

Landscape Planning for Tourism in Tropical Islands. A Case Study of Coco Key, Cuba
Eduardo Salinas Chavez, Eros Salinas Chavez and Eduardo Veiga Jimenez

During the last two decades there was an increase in tourism in small tropical and subtropical islands. For these islands, tourism has become a promising option for socioeconomic development, since these territories in many cases lack natural resources and do not have sufficient land areas to develop agriculture to meet the demand of the native population. Tourism development in such islands is attractive because these territories can offer the tourists direct contact with nature and an "insular" feeling—qualities which those coming from developed urban areas look for.

Tropical islands constitute a special case of development due to their particular natural and geographical features and, in many cases, their cultural background. Ecologically and economically the options for sustainable development in small islands are limited, the provision of public services is difficult and expensive and human resources are scarce.

The lack of natural resources may constrain the absorptive capacity of an island and furthermore, the productivity of its resources would be weakened if they are not adequately functionally related to the landscape.

Cayo Tourisin Dossier: Island Landscape Potential area evaluation in Coco permitted this territory of Cuba for more than 480 km. Around 40% of the territory of Coco Key (approximately 150 km) is firm land (See Fig. 1)

Coco Key coincides with a raised tectonic structure of sedimentary rocks on a little dissected low plain (average altitude 3 meters with a maximum of 12) divided into three sectors, namely abrasive-cumulative marine in the north, karstic at the centre and lacustrine-palustrine in the western, south and eastern sides.

The climate is hot and partly dry with non-sufficient and unstable humidity. The mean annual temperatures are between 25 and 28 degrees Celsius and the average annual rainfall is generally less than 1000 mm, with a strong seasonal and yearly variability. The range of evaporation surpasses the rainfall and the average evaporation humidity is 85% of the annual average (see Fig. 2).

The hydrography of the territory is complex, with no existing superficial runoff, and drainage is mainly underground. In general, the water table is fragmented and shallow. The soils are sparse, little developed and young.

The territory is covered by different vegetative formations in natural and semi-natural states, with a great floristic diversity and high endemism.

The fauna is poorer than in the Cuban mainland because of the simplicity of these habitats and the geographical isolation. More than 100 species of molluscs, 400 of Amphibians and reptiles and more than 150 birds (31% of which are endemic) have been collected.

The waters around the island have plenty of fish and important coral reefs with all the marine flora and fauna associated with them.

The main natural resources of importance for touristic development in Coco Key are:
- more than 20 km of beaches, with excellent quality and beauty.
- the barrier coral reef, the longest in Cuba and the second in the world;
- sandy dunes, surpassing 10 m of altitude, exclusive of this region and very good natural "miradors";
- large number of birds, especially flamingos with the most important population in the Cuban Archipelago;
- great floristic diversity and relatively high endemism.

The landscapes of Coco Key are littoral and partly dry, young in evolutionary terms and generally poorly differentiated. The agents that determine their differentiation are: relief, the abrasive-cumulative activity, drainage and the influence of trade winds.

Physically and geographically, Coco Key is formed of three higher units and 15 lower units of landscapes, each differentiates through relief, drainage, soil and vegetation (see Fig. 3).

Table 1
Geographical and Economical Data of Selected Tropical Islands

<table>
<thead>
<tr>
<th>Land Area</th>
<th>Population</th>
<th>Density</th>
<th>GNP PC</th>
<th>Gross Receipts</th>
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<tr>
<td>Bahamas</td>
<td>13935</td>
<td>221</td>
<td>16</td>
<td>960 4290</td>
</tr>
<tr>
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<td>431</td>
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<td>545</td>
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<td>227</td>
<td>8350 7140</td>
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<tr>
<th>Islands</th>
<th>Population in thousands</th>
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<td>Solomon</td>
<td>369</td>
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<tr>
<td>Trinidad</td>
<td>1167</td>
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</tbody>
</table>

- Land area in km²
- Population density per km²
- GNP Total in US
- Gross receipts from tourism in US

Dossier: Island Sustainable Tourism

Landscape Potential

The results of landscape evaluation in Coco Key permitted the integration of this territory into the development plan of all the 'Cayeria Norte Resort', which will facilitate the investment process for the next few years.

Landscape evaluation was carried out on the basis of 10 indices namely (1) degree of modification (2) conservative value (3) aesthetic value (4) functional value (5) accessibility (6) transitivity (7) area (8) stability of the landscape (9) tourist carrying capacity and (10) productivity. The types of relations between the criteria of evaluation and of these with tourism are shown in Figures 4 and 5.

The highest landscape potential values according to this evaluation were found in the beaches, dunes lagoons (see Fig. 6).

For the evaluation of the beaches special indices were used, with the purpose of obtaining information about their natural potential

Dr. Eduardo Salinas Chavez: Facultad de Geografía, Universidad de la Habana, Cuba.
Dr. Eros Salinas Chavez: Instituto Nacional de Turismo, La Habana, Cuba.
Dr. Eduardo Veiga Jimenez: Dirección Provincial de Planificación Flúida, Ciego de Avila, Cuba.
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The most important, and frequently used, measure to evaluate the physical carrying capacity in the Keys is the beach sand fringe, assuming that only a small number of bathers used this resource simultaneously. The standard used in the case of Coco Key was 6 to 15m² per bather and the criteria determine this standard were width and stability of sand fringes, the quality of bathing-place and the possibilities to build in adjacent areas of the beach, as well as the type of tourism proposed for the area according to quality of resources and touristic policy of development.

The main touristic-recreational activities that will be carried out in Coco Key are:
- In the sea: "seafari", sport fishing, diving, snorkeling, sailing and others.
- On land: walking, flora and fauna observation, visits to natural and historical places and so on.

In spite of the length of the territory, human activity will not be permitted to concentrate along the roads because this will give the impression of a significantly transformed landscape. It is assumed that it would be better to allow concentration of human activity in specific areas while maintaining wide bands of land along the roads free from human intervention. In this way, the "natural" appearance of the island is preserved and its fragile ecological equilibrium is protected.

On the basis of the natural potential value of the landscape and in recognition of the natural features of the territory, it was proposed the territory should be divided into different zones of use which will include diverse categories of management, as shown in Fig. 7.

The difference in the meaning between intensive use zones and extensive use zones, shown in Fig.
Landscape Planning for Tourism in Coco Key, Cuba

7 is in order here.

Intensive Use Zone. These include beaches, dunes and subaquatic landscapes in the north coast shelf located in shallow waters. These coincide with most of the areas of touristic recreational activities and they can take high numbers of visitors and allow for modifications and changes in the landscape since they are the main supporter of development and concern lodging and service infrastructure.

Extensive Use Zones. These are the natural and semi-natural forests and shrubs, internal lakes and mangroves that have floristic, faunistic and forestal importance and constitute detached elements because of their protective and regenerative function in the landscapes. In these territories special activities are allowed, including diving, photo-hunting, walking, etc.

It is proposed also that for the whole territory the zoning categories for protection purposes should include an Integral Management Area, complemented by other categories, such as: Touristic Natural Areas for north coastal zone.

Figure 7
Functional Zoning of Landscape to Tourism

Legend
Touristic use:
1. Intensive use zone
2. Extensive use zone
3. Integral management area
4. Floristic reserve
5. National natural monument
6. Fauna refuge
7. Touristic natural area
Other:
8. Rehabilitation zone

The extensive sandy beaches are the main tourist resources of Coco Key.

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recently, rearing of livestock. From the 1970s on these activities were abandoned and the keys were deserted.

In 1981, studies to establish the potential of the land for touristic development were initiated, and in 1984 the first master plan was published. In 1985 some roads were built according to the projects approved. In the middle of 1986, the construction of a viaduct was begun and it was finished in 1988, thereby connecting Coco Key to the Cuban main island, rendering possible a fast development of the construction process.

At the end of 1990 the building of the first “five star” hotel was started in Playa Larga Beach with 458 rooms belonging to the Cubanacan Corporation. Its design is in line with recent tendencies, with relatively low elevation (maximum 5 floors and average of 2) and spatial organisation similar to that found in a town with street service zones.

The proposed touristic development in Coco Key will be relatively large. According to a report carried in the Spanish newspaper El País (May 2, 1993), the Spanish corporation, registered as Gigatel, together with Cubanacan SA, will build the mixed enterprise Paraiso Cayo Coco, with an initial capital of about US$2.5 mil.

The Gutierrez Coco Hotel

with touristic interest including the barrier coral reef; Floristic Reserve for the middle-north sector with high floristic diversity and endemism; Natural National Monument for the high dunes and a Fauna Refuge to protect the flamingo colonies and other important birds in their natural habitats.

In these areas the development of ecotourism will be possible by means of a road network and "miradors" properly indicated, and an environmental interpretative centre.

Rehabilitation zone. These are zones which underwent a strong human modification in the socio-economical assimilation process. Rehabilitation would take place by means of improvements in, for example, old quarries and deforested areas.

Special Use Zones. The infrastructure to support tourism will be located in such areas. They may also have other functions of productive, social or scientific character.

The functional zoning for Coco Key just described presupposes multiple use of natural resources based on a rational policy that takes into account all the territory as an integral unit for its management and handling. This is necessary not only because of its extension but also because of its diverse resources, geographical isolation and the strong relation between the landscape components.

Actual Touristic Development

Because of its own geographical isolation, Coco Key was deprived of the socio-economical development prevailing in mainland Cuba. Since the beginning of the last century, it was only inhabited temporarily by small groups of persons, devoted mainly to the procuring firewood and production of salt. They also carried out subsistence activities such as hunting and fishing, and more...
The main centre supporting the development of tourism in Coco Key will be the city of Morón, the second in importance in the province, located 55 km from the Key. A secondary town will also be developed in Turiguano, only 35 km from Coco Key. A high degree of mobility of workers will be generated, because permanent settlements in the island will be forbidden, so as to decrease the negative impact on the environment.

Social Impact
The social impact will therefore be associated with two main factors: 
- increase in labour demand and naturally migration of population from neighbouring territories. This will have an impact on local population.
- the impact of tourism on the local population, given that this activity is a new experience to them.

Stages of Development
Taking in consideration the actions of impacts on the landscape of Coco Key, the following stages will take place:
- preparation for implementation;
- implementation;
- exploitation.

The first stage will be characterized by the first impacts on the territory. In general negative impacts will prevail with an intensity ranging from high to medium arising from building of access roads, temporary lodging by the workers, dredging of the littoral and lakes and so on.

In the second stage some permanent structures will be carried out.

The impacts are difficult to predict without a detailed study, but the action will be concentrated on the north coast of the island. It will probably related to tourist urbanization, waste disposal, forestry, chemical and biological control of pests and so on. The impact in the last stage is more localized and in general will be of low intensity. It will probably have the least damaging impacts on the environment. The expected activity in this stage will probably include occupation of the beach by tourists, free walking in the forest, nautical activities in lagoons, and in the sea, relatively high noise levels in some places with high concentration of tourists, and visits to natural areas.

Conclusions
As stated in the introduction, landscape planning for tourism in tropical islands (such as Coco Key) is very important. There is a need for integrated physical and economic planning, so as to maximize the economic benefits of tourism and at the same time minimizing the negative environmental and social impacts.

In addition, such planning could take into account the recent or expected developments in the industry. One should expect, for example, that in the future, tourists would spend less time on the beaches, exposed to the sun’s rays, due to its harmful effects, and non-beach recreational activities should therefore be planned.

Planning could also enable the host island to enhance the relations and co-operation between the different project tourist installations with the aim of enlarging the supply of recreational activities and decreasing duplicity of services and installations, thus making the investments less expensive and economically more viable.

In addition, planning would enable the authorities of the islands to establish and execute environmental management programmes to render possible biodiversity conservation and ecosystem maintenance, and permits the continual monitoring of the impacts provoked by tourist development.

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Ethnic Tourism
The Responsible Way

Duccio Canestrini

For more than twenty years now, ethnologists and anthropologists have been observing the new tribes of Homo turisticus, and their cultural, economic and social impacts on the hosts' land and cultures. The term "sustainable tourism" has been coined to indicate a type of tourism which attempts to minimise the negative effects of tourism. It is based on the paradox, typical of the free market economic model, and aims to overcome its disadvantages.

To use a common metaphor, the goose may have become fat enough to crush its golden eggs, as well as its nest. We all realize that in the long-term, tourism, if not sustainable, would destroy the foundations of its own existence. From the touristic point of view, the paradoxical risk of polluting the as yet uncontaminated destinations is very serious. It is in the interest of tourism itself, therefore, to protect its own attractions.

Ecotourism has become a buzzword in this regard. While waiting for an acceptable definition, ecotourism has tended to be used synonymously with sustainable tourism. It should be clear, though, that only some aspects of ecotourism may qualify as consistent with sustainable tourism. Originally, ecotourism did not contain an adequate social dimension, even though environment and nature are not the only resources that deserve the traveler's consideration. Social and cultural dimensions are also important resources and must be considered in the context of tourism because human diversity is part and parcel of that biodiversity that is absolutely necessary for the health and balance of our planet.

More recently tourists have developed an interest in the ethnic aspects of the host countries, in an attempt to make their experience more authentic. This type of tourism also is not without its dangers. It can be of two main types, namely direct and indirect.

The Indirect discovery. Tourists – and not only those who are

in love with nature – have recently been seeking more and more distant destinations, in search of virgin nature and remote fascinating landscapes. In some cases small groups of indigenous people have become touristic attractions, just because they live in scenic places, or next to natural ecotouristic attractions. This is what can be referred to as the indirect discovery. Although the place is the attraction, the people associated with it become also objects of curiosity.

The creation of a natural park can therefore harm or cause difficulties to native minorities. To use a metaphor once again, in many cases Adam has been chased out of the Garden of Eden, in the name of ecology and ecotourism. This has happened for instance to the Penan people in Mulu Park in Sarawak. And to the Bushmen in the Kalahari Park in Botswana, where these last hunters and gatherers are not allowed to hunt any more.

Recently I had the opportunity to visit a few natural reserves and national parks in South Africa. Their case is paradigmatic and shows precisely the limits of classical ecotouristic itineraries. Rural communities – the so called "neighbouring communities" – have been traditionally excluded from school education and wildlife management. The benefits were and are only for foreign ecotourists – an arrangement which is of course unsustainable. Giving job opportunities, for justifying the business, is not enough, and smells of paternalism. What ethnic communities, living next to the natural parks, need are partnerships. The long term formula for success is indigenous controlled operations, otherwise poaching will not be eradicated. And wildlife as an ecotouristic resource will be endangered again.

In some other cases indigenous people are just part of the tour package. Sometimes they decide to be so themselves, being so to speak "naturally business oriented" like the Brazilian Kayapo. Much more frequently, however, it is the national governments that force them to act as entertainers. Their identity becomes a humiliating ethnic "sideshow". This happened in many places, all over the world: from Chinese ethnic minorities, to Masai people in Kenya, from "tamed" Amazon Indians to European mountain people: they all dance in the hotel.
Ethnic Tourism – The Responsible Way

Direct discovery – Ethnic Tourism
As is well known, the interest in ethnic expressions (music, dance, traditional costumes, tales and legends, ecology, esomygog etc.) is increasing. This has led to a type of tourism with direct interest in ethnic minorities, where people become a tourist attraction as such.

Sometimes ethnic tourism is classified as a branch of ecotourism, as if the people of the host country can be observed as specimens of nature – like animals in the zoo. This is of course a disrespectful attitude towards these ethnic minorities. All peoples, even the most technologically primitive, have developed a culture, which deserves acknowledgment and respect.

The famous Lonely Planet Guides (books and phrase books) for instance, known to travellers as Touristic Bibes, are new publishing a series of language survival kits containing essential words and phrases to communicate with native peoples. The peoples included are Burmese, Thai Hill Tribes, Hindi, Korean, Papua New Guinea, Philippine, Quechua, and others. This demonstrates a broader interest in communication (and an attempt to gain deeper knowledge) than in the past.

Anthropology, which is an academic and field discipline, teaches us that ethnic people possess – although this is not always demonstrated to foreigners – a coherent and sacred centre which our alienated societies have unfortunately lost, erased by routine, production rhythms, consumerism, television and so on. "That is why some anthropologists talk about ethnic tourism as a form of regeneration tourism, among people who have a different and a more genuinely way of life.

A pertinent question to ask with regard to ethnic tourism relates to how much tourist money goes into native pocket. The World Bank and Survival International (a London based organization that takes care of indigenous rights all over the world) give different figures. According to Survival International, only about ten percent of the total income goes to natives – and not even to the native community as a whole, but most probably to those who can most quickly avail themselves of the opportunities offered by tourism.

Impact
Ethnic tourism has various kinds of impacts, including, economic, structural, psychological, social and cultural ones. It introduces new values, new hierarchies, and a new mentalities, such as the business attitudes we wealthy western travellers carry all over the world.

Demand often creates its own supply, which in the context of tourism is often not genuine and not authentic. Commercialization of folklore is a good example. Take for instance the souvenir industry known as ‘airport art’ displaying as ‘typical’, objects that are manufactured out of the host country, often in Hong Kong.

These objects relate more to “fakelore” than to folklore. Obviously, there are aspects of human life which should never be put for sale. There is a dignity, especially for ethnic minorities, that needs encouragement and protection from commercialisation, and income should not be always considered as the overriding objective.

I was born in the Italian Alps, and I have witnessed the touristic development – or should I say degradation – in my mountains. Different environmentalist organizations have by now spread the alarm: the Alps are becoming a giant entertainment park. Tourists expect highways to finish in front of skyscrapers. Facilities that never existed in the mountains are developed for the tourists. In short, tourists expect mountain villages to become cities, a development which is hardly sustainable.

In the Alps you can often see traditional activities dying and young people despising their father’s job. Many youngsters throw themselves into touristic business, just to earn quick money, forgetting their own history or using it as a stereotype version as a bait. Most of them abandon little mountain villages when these are not commercialised enough for touristic purposes.

Reinhold Messner himself, the world famous climber, has launched a warning: while mass tourism comes up, alpine natives go down.

There are even more extreme cases. For a Nepalese Sherpa, mountain tops once were not to be climbed, but to be respected as sacred. Now the Sherpa has internationally become synonymous with a porter. Furthermore, many Himalayan fields are now uncultivated; the men who once farmed them, have become porters for climbing expeditions.

The list of negative touristic impact on local cultures is very long. In the island of Bali, Indonesia, indigenous people nowadays have to celebrate their funerals in hiding, to avoid the numerous tourists taking pictures and shooting with handy videocameras. No wonder that the communities of the Ucayali river in Peru, finally declared: “We totally reject the appearance of tourist companies because we are not tourist objects, but human beings”.

It is also true that tourists in some cases could become the natives’ best allies in their struggle. A very delicate role that few travellers actually have played. One could hardly expect a tourist to engage in dangerous political matters during a vacation! Oppressive but touristically greedy governments however are cautious not to discourage tourists, even when these take up matters in favour of the locals.

Cuna Indians of Panama, for instance, have learned to use tourists as sponsors for their cultural and economic independence. In socio-cultural terms we may see it as a symbiosis: the tourists are attracted by the Cuna coloured clothing, the Cuna take advantage of the tourists’ strength and political immunity. A very rare phenomenon.

As far as development is concerned, it really all depends on the pattern of development. We are thinking of. There are many. Sustainable, true, false, functional, imperialistic, etc. Some types of development favour liberalism, others solidarity. Whether tourism brings one or the other, remains debatable.

Responsible Tourism
The key adjective to accompany tourism should be "responsible”. Responsible tourism means respect for the environment and for cultures.

To be sure, we can promote sustainability, by rethinking in ethical terms both the tourism industry and individual behaviour. In the touristic context, where income plays a major role, the concept of ethics, duties and respect are not often given adequate importance. We must reverse this tendency.
Sustainable Tourism in the Arctic and Antarctic

Sustainable Tourism in the Arctic and Antarctic
B. Stonehouse, K. Crosbie and L. Girard

Economic development is deemed sustainable if it uses resources in ways that meet the needs of the current generation without compromising the needs of future generations. Resources in both polar regions include, and to some degree are dominated by, such natural assets as wilderness, wildlife, scenery, and ecosystems that many regard as fragile.

To ascertain conservationists, these values to be protected from all but the mildest incursions. They cannot be violated, and they must be maintained at all costs for future generations.

An alternative model, more flexible and in practice more widely used, allows for part of a natural resource base to be expanded so long as an equivalent asset, probably man-made, can thereby be gained. In a trade-off within the bounds of sustainable development, the value of the remaining natural asset, plus that of the man-made asset, cannot be less than the original value (McKercher, 1993). If the original resource has value V, the man-made development has value M, and the remnant resource has value R, then M + R must equal or exceed V.

An example might be a campsite

Bernard Stonehouse and Kim Crosbie operate at the Scott Polar Research Institute, University of Cambridge, Lensfield Road, Cambridge, UK and Laurence Girard at the Institute de Recherche et d'Études Supérieures de Tourisme, Université de Perpignan.

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Sustainable Tourism in the Arctic and Antarctic

Both the Arctic and the Antarctic are cold and ice-bound, profoundly seasonal, with long winter nights and long summer days. Both are dry and anticyclonic, ringed by warmer, invasive air masses that bring snow, sleet and rain. Differences follow from their geographical diversity. Tourists at the South Pole stand on a high plateau 2,900 meters above the sea, on ice that is itself almost 2,800 meters thick. At the North Pole, they stand on a shifting pack ice close to sea level, in the centre of a wide ocean basin.

Both regions have unique natural resources. The Arctic Circle rings a desert continent fringed by oceans: the continent is without trees, shrubs or continuous ground cover, populated only by transient scientists and their support staff (perhaps totalling 8,000 or more) in summer, diminishing to a few hundreds in winter. The Arctic Circle encloses an ocean basin, fringed by lands more generously endowed with forests, tundra, mines, industrial developments, native settlements, towns and cities, and an important resident human population.

Resource management and conservation problems of the two regions are again similar but also different. Sustainable development, covers such issues as tourism, is a common concern with the same basic cause: man’s eagerness to explore and develop natural resources. However, the perceptions and management regimes controlling the two regions differ widely, and tourism and other environmental issues are handled quite differently at these two ends of the earth.

Management and Development
The Arctic

Arctic lands and the seas around them are northern extensions of sovereign states that have long been controlled from southern centres. Many of the indigenous populations are currently becoming autonomous, able to control their natural resources more directly than before.

Throughout the Arctic, the need for resource development has long been accepted. Concepts of sustainability in development have evolved, with shifting emphases of government, from precolonial and colonial exploitation, through paternalism, toward autonomy. Each regime has traded-in a proportion of its natural assets – the Soviet government of Siberia with a great deal, the Danish government of Greenland relatively little – to secure development. Natural resources of wilderness and unspoilt tundra have been invaded and, to some degree, displaced by airstrips, roads, harbours, campsites, hotels and lodges, for defence stations, mines, research laboratories, labour camps, settlements and other developments. Each regime has provided its own methods of measurement and assessment of balance. Conservationists deploy many of these past developments, pointing out the legacy or pollution arising from mining, smelting and defence activities. Economists and global strategists disagree, stating that these were essential uses of the Arctic, fully justified in their times, no more and no less reprehensible than Britain’s use of its coal reserves and fish stocks. Thus the nature of sustainable development in the Arctic remains a live and debatable issue.

Arctic administrators usually see tourism as a welcome economic development, not surprisingly in regions where resources are limited and expensive to utilize, and more revenues are constantly required to improve the living standards – to pay the fuel bills and...
In the land of Baffin, Canada, August 1995 (Photo: Emmanuel Hussenet)

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Tourism has evolved differently at these two ends of the earth. The Arctic, close to the major centres of human habitation, has for long attracted adventure tourism: hunting and fishing expeditions in northern Canada, and shipborne sightseeing in Alaska and Spitsbergen. These activities were advertised in newspapers and journals long before the start of the present century. According to a recent survey (Hirner and Girard, 1992) well over 35,000 tourists visit northern Canada, 16,000 visit Spitsbergen, and growing numbers each year take icebreaker cruises in the Northeast and Northwest passages and in some years even to and across the Arctic basin to reach the North Pole itself.

Many tourists visit Arctic North America each year by air, sea and land routes. The rush to Canada’s Northwest Territories began in the 1980s with the development of the Mackenzie Highway system, and expanded with the development of air transportation in the 1970s. Greenland’s Home Rule government is seeking to increase tourism approximately fivefold by the year 2005 (Christensen, 1992).

Many scientific, mining and industrial organizations of Northern Russia, hitherto government agencies but now rapidly privatizing, are currently diversifying into tourist activities: a particularly strong future is predicted for “scientific tourism” in Russia and indeed throughout the circumpolar north. All indications suggest that tourism throughout the Arctic is growing, and is being encouraged by all interested parties to continue growing as rapidly as possible.

It is clearly important to know what tourists themselves seek from their experience, and whether their demands differ significantly from what tour-operadores provide for them. Project Arctic Conservation (PAC), based at the Scott Polar Research Institute, Cambridge, is develop-

Sustainable Tourism in the Arctic and Antarctic

The Antarctic region has no native populations, only interested scientists, administrators and well-wishers concerned in various ways with the management of resources of this vast region. Under the Treaty regime, development is not a prime objective. Since the mid-1960s the Treaty area has been accepted by participating governments as a “Special Conservation Area”, with the clear intention of maintaining its environmental integrity. Under the recently-negotiated Protocol on Environmental Protection to the Antarctic Treaty, Antarctica is further designated a “natural reserve, devoted to peace and science”, and the continuing protection of the Antarctic environment “...including its wilderness and aesthetic values...” is assured.

Activities, such as tourism, are not excluded by the Protocol, but neither are they welcome. Those seeking to develop Antarctic resources for tourism - or indeed for science or any other purpose - are warned that “The protection of the Antarctic environment, of the dependent and associated ecosystems, and the intrinsic value of Antarctica, including its wilderness and aesthetic values and its value as an area for the conduct of scientific research...shall be fundamental considerations in the planning and conduct of all activities in the Antarctic Treaty area. The scientists for whom Antarctica is reserved safeguard their position: tourism in common with all other activities must be planned and conducted...so as to accord priority to scientific research and to preserve the value of Antarctica as an area for the conduct of such research...”.

There is an underlying assumption among the Treaty parties that development in Antarctica has been minimal, and that further development must be discouraged in an area that has so far remained relatively pristine.

In reality, however, the start of the present century, and particularly since the 1950s, Antarctica has seen developed substantially. It remains the continent of which man’s influence is least evident but it is far from pristine. The Antarctic Peninsula, the South Shetland and South Orkney Islands, and the island of South Georgia, for example, show many remains of the whaling industry that flourished in the first half of the century. The whole Antarctic region is dotted with more than 1000 scientific stations and refuges, some occupied, others empty - some derelict, dating mainly from the 1940s onward.

Although scientific research has been the primary objective of these stations, their impacts was not negligible. Most stations spread over less than a hectare - some have achieved the size of small towns and villages, with airstrips and docks, the equivalent of hotel facilities, and flourishing support industries. A few include accommodation for families, with shops, schools, post offices and churches. Each year, new stations or refuges appear and old ones fall into disuse. Like the developmental infrastructure of the Arctic, these are the man-made assets representing past and current Antarctic development, for which wilderness and other natural assets have willingly been traded.

It is pertinent to ask at this stage whether or not in Antarctica M + R has exceeded V? Environmentalists draw attention to the damage inflicted and tend to say no, arguing that Antarctica has been ruined and posterity has been short-changed. Scientists point beyond their installations and refuse-piles to half a century’s worth of hard-won scientific data, arguing that once the mess has been cleared up the benefits to humanity will be indisputable. Where, after all, was the ozone hole first detected?

None of this development within the Antarctic Treaty area has been used to support tourism. Still less has it been used to organize the tourist sector and bring it under control. There are no tourist-welcoming parks, recreational reserves or interpretation arrange-
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Antarctic Tourism

Antarctica is a relatively new tourist destination. The first tourist aircraft, a Chilean DC6B, flew over the Antarctic Peninsula on 23 December 1956. The first tourist ship, "Les Éclaireurs," arrived on 10 December 1968. The Antarctic Treaty stipulates that, except in special circumstances, only a few tourists are treated directly. Thus Antarctic tourism developed in the absence of any law and despite its good potential and increasing number of annual visits, it is virtually impossible to see where the tourists have been.

In contrast, the environmental impact of whaling, and even more recently of scientific activities, are very much in evidence. And not all manifestations of earlier development are negative. Expedition hutts dating from the first two or three decades of the century, for example those of Scott, Shackleton and Mawson, have become shrines which tourists visit with reverence. Experimentation installations have the potential of industrial archaeological museums.

However, later scientific huts in the Peninsula sector, dating from the 1950s onward, have stood in the way of visits and have been criticized. Some huts are occupied by scientists, but even the most remote have been visited and remain as monuments to environmental insensitivity.

Antarctic Treaty signatories have new responsibilities under the Protocol to deal with these relics, and efforts are being made by several countries to clear up or refurbish them for which they assume responsibility. Some could with little difficulty be converted into tourist amenities, for example historic resource and information centres, at far less cost than their complete removal.

The new Environmental Protocol covers not specifically tourism, but all human activities including tourism. It has yet to be seen whether this broad-brush approach is appropriate for such volatile an industry, with such rapid growth and despite its good potential and record in Antarctica - such an enormous potential for environmental damage. Though the Treaty system long ago made provision for sites of Special Tourist Interest, designed to bring tourists together in places where their impacts on the environment could be monitored, no such sites were ever designated. Instead, tourist operators are free to land their clients anywhere in Antarctica that is not a scheduled scientific reserve. Over 70 landing sites are now known to be in the Peninsula area alone. Some have received several visits per year for over 30 years. Yet none has so far been formally assessed for environmental damage, or for its vulnerability to future damage from frequent tourist visits.

Although environmental damage or degradation due to Antarctic tourism so far appears minimal, there is no guarantee that worse will not happen. Antarctica is open equally to well-informed, responsible operators and to the cowboys. Ie., to those who know and doubt the rules and to those who do not even know that rules exist. Nigel Sitwell, a British who has been sailing the Antarctic seas for a long time, in 1993 recorded that recent visits from one ship with no experienced personnel on board, one with no charts, landing some 400 passengers to trample a Site of Special Scientific Interest.

Nor can we be sure that observing the rules is a guarantee of safety. We do not know, for example, whether or not there are detrimental short-term effects of well-organized tourist visits to penguin colonies, vegetation, historic sites and other attractions. In deed we are not always able to...
Sustainable Tourism in the Arctic and Antarctic

First contact with the autochthonous populations of penguins in Salisbury Bay, Southern Georgia, December 1993 (Photo: Laurence Girard)

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Arctic country. Each country is well endowed with protective legislation, though several lack the information that would allow them to judge when sustainable levels of tourism have been achieved. If development for tourism brings needed revenues to growing populations whose current renewable resource bases are failing, and if the environmental costs of developments bear some relation to advantages received, tourism could be sustainable, and policy may judge its development kindly.

Antarctic assets too have been traded in the past for industrial and scientific development, transactions in which McRcher's M + R have, at least to general appearance, fallen far short of V. Possibly as a consequence, trading in to accommodate or even to control the new industry of tourism is accepted with willingness. Those who manage the Antarctic, rightly trying to stop the gross degradation of past decades, seem concerned not to encourage a consumer-driven industry with a well-documented capacity for damaging the environment. However, by continuing to allow the industry to develop at its own pace and its own way, they may be missing opportunities for helping to rationalize tourist uses of Antarctica, and bringing tourism itself under more effective control.

So long as Antarctic tourism remains small and mainly shipborne, Treaty policies and management mechanisms seem adequate to deal with it. It remains essential that the consultative parties keep abreast of growth and changes within the industry, and, if possible, take a pro-active role in providing for future developments. In doing so they would be better equipped to take into account the views of those who know Antarctic tourism best. They are fortunate in dealing with a form of tourism that, over many years, has to a remarkable degree, demonstrated environmental awareness. To impose arbitrary or bureaucratic constraints that do not take into account the practicalities of the industry would be both insulting and counter-productive.

Project Antarctic Conservation is concentrating on issues in Antarctic tourism, but drawing parallels and distinctions, where possible, with Arctic tourist experience. At neither end of the world is there sufficient information readily available for responsible, effective management – in particular for assessing limits to the sustainable growth of these linked, ebullient industries.

To provide the information needed for sensible planning and effective management, we see first of all the need for intensification of long-term field studies of tourism such as those fulfilled by the Project Antarctic Conservation – and tourist impacts in both Arctic and Antarctic.

Secondly we seek more direct contacts and discussion between Arctic and Antarctic researchers and managers, to compare and possibly standardise techniques, methods and approaches both to research and to management.

Laurence Girard already organized one international symposium in Colmar in 1992, gathering researchers, managers and administrators in conservation and tourism fields linked with polar areas. It was a success and all participants were eager to continue the discussion and enhance the experience through other meetings. To this end we are planning workshops and conferences, possibly in Cambridge, covering the interests of researchers, tour operators, administrators and dedicated tourists.

Thirdly we see the need for a database of information on polar tourism, bringing together the vast, heterogeneous range of information that is available, particularly from the north, and making it more readily accessible and usable for management at both ends of the world. St Petersburg, Rovaniemi and Oxford institutes are interested in taking part in this “polar centre”. We are now looking for some French support to gather these pro-active institutions and launch this database.

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Tourism: A Missing Dimension of Agenda 21

Dubbed the Earth Summit, the 1992 United Nations Conference on Environment and Development in Rio de Janeiro, Brazil, embraced the mammoth task of reconciling economic growth and environmental protection with the goal of achieving a more secure, sustainable, and equitable future. Integration and partnerships are key words of Agenda 21, which was adopted by some 180 governments at the conference as a global blueprint for sustainable development into the 21st century.

Among the agreed-upon objectives of Agenda 21 are national strategies for biodiversity conservation, the integration of those strategies into national development plans, and coordination of international trade and environment policies into a mutually supportive relationship that favors sustainable development.

A flow of new financial resources to developing countries as well as strengthened research on conservation and sustainable management of landscape ecosystems are recognized in Agenda 21 as essential for realizing these objectives. There is no reference to tourism in Agenda 21’s presentation of the aforementioned goals and means.

The International Ecotourism Alternative

Partnerships built around tourism are implicit in the argument that if the Caribbean is to protect its environmental quality and remain competitive in the global marketplace, it has to move towards ecotourism or new tourism that will link agriculture, industry, services and training into a total system of economic development (Douglas, 1992; Poon, 1989). Comparable with the changing perspective on the environment and development in the Caribbean island region is the growing recognition in Latin America of the potential socioeconomic benefits from investment in conservation via ecotourism.

In Brazil, ecotourism is viewed as the opportunity for sustainable development and preservation of the country’s tremendous diversity. A logical resource to exploit is ecotourism (Schieneman, 1993), which is currently assigning ecotourism the principal role among a variety of policies for achieving sustainable economic development (Gonzalez, 1993). The government of Costa Rica formalized its commitment to using ecotourism as a catalyzing agent for other sectors of sustainable development with the proposal of, and pledge of compliance with, a tourism chapter for Agenda 21. The proposed chapter, which was unveiled on the occasion of the symposium “De los Bosques a la Sociedad” in San Jose in May 1994, characterizes a tourism for sustainable development as encompassing the stewardship of nature, the development of local communities, and the capacity to be self-sustaining while providing support for other important programmes in national development.

The international ecotourism alternative is gaining momentum also in the Asia-Pacific region. Under the pressure of declining profits from its agricultural exports and with the desire to spread economic development throughout the country, the government of Papua New Guinea is in the process of prioritizing tourism within national economic development strategies (Milne, 1991).

The archipelago’s unique scenery, wildlife and indigenous cultures are the focus of the shifting development policy. In Laos, plans are underway for the development of the ecotourism industry as a new sustainable base for the nation’s national economy. These plans anticipate tourism revenues sufficient not only to fund the maintenance of the whole envisioned network of national parks and protected areas, but also to contribute substantially to community development (Laird, 1993).

While Laos and neighboring Vietnam increasingly open their markets, stunning discoveries of natural and cultural resources have revealed the global importance of the two countries’ ecosystems for conservation and the study of evolutionary biodiversity. The imminent challenge of making conservation of this irreplaceable patrimony profitable, and thus defendable and implementable, falls to the proposed schemes of tourism-conservation teamwork.

And there are other countries and regions where the urgent task of reconciling conservation and economic utilization of heritage, whose importance transcends political and geographical boundaries, will have to be dealt with largely in terms of tourism-environment partnerships. For example, the tourist potential of the magnificent aquatic and coastal ecosystems of the Red Sea is the defining factor of the development concept for this desert sea (Dicky and Dennis, 1995), whose isolation has resulted in a wealth of endemic marine life: one-fifth of its species are found nowhere else in the world (Doublert, 1993).

Restricting the number of ecotourists is also recommended to counteract the ecological degradation and destruction in the Northern Region of the Central African Republic (Plummer, 1992). This scenario, moreover, incorporates a broadly-shared argument in favour of ecotourism, namely, that this form of tourism is much more affordable to the host country since it is not conditioned by luxury accommodations. In her article in the April 1994 issue of insula, Bookman notes that many island nations share the belief that ecotourism is an excellent way to attract tourists to the natural beauty of the place with little initial capital expenditure.
Current approaches to ecotourism grossly underestimate the investment of both capital and skills that will be needed to integrate tourism, conservation and sustainable development into a viable interactive system that is self-sustaining over the long term. The challenge lying ahead is not only to add value to natural and human environments, but also to induce a multiplying effect throughout a national economy, while keeping the tourist consumption of heritage attributes within the limits of the destination’s ecological and social carrying capacities.

There is a growing number of studies that caution against a simplistic equation between promotion of ecotourism and augmentation of the value of destination’s ecosystems. The fragility and physical inaccessibility of many areas of ecological importance are perceived as factors that detract from the appreciation of the value of these areas through ecotourism (see, for example, Lindberg, 1991). Moreover, the increasing desirability of adopting the zoning concept in planning ecotourism destinations raises the need to reconcile the growth of ecotourism with a voluntary exclusion of some areas from any tourist use.

A lack of physical access, however, does not exclude contextual access, achievable through interpretation. A skilful interpretation can add ecotourism value to much larger areas than those actually visited by tourists, by taking advantage of an increased accessibility of landscape elements or by establishing referential connections even with landscapes that are not directly observable. It can provide a “multilayered” appreciation of the destination, by linking a particular site to natural or cultural themes that are distinctive to an area, a country or a region. For example, the “ice and fire” theme captures the two major geological forces that have moulded the beauty and interest of New Zealand’s landscapes, glaciation and vulcanism (Hall, Springett and Springett, 1999). Such themes can successfully market the same destination to both overseas and short-haul tourists who differ in their preferences and travel motivations. Aspiring ecotourism destinations should take into account that long-haul tourists typically perceive their foreign destination within much broader spatial scale than do short-haul tourists and are often motivated by characteristics pertaining to a country, a region or a continent (Leiper, 1990).

There exists plentiful evidence that lack of interpretive guidance, which results in the traveller’s direct and unprepared exposure to unknown environments and cultural traditions, easily spoils the tourist experience and greatly diminishes the quality of the tourism product. Interpretation, which comprises selection, packaging and presentation of heritage resources, is a knowledge-demanding process. It relies on both modern research data and traditional beliefs and practices to define the interest and distinctiveness of the ecotourism product. In its presentation stage, interpretation requires infrastructural support that may integrate interpretive centres, interpretive exhibits and the like. It has been demonstrated that a well-designed and equipped visitor centre can satisfy the curiosity and educational interest of many tourists and is, therefore, invaluable as a zoning tool. A failure to appreciate the difference between a destination’s “raw material” of heritage resources and a heritage product that adds ecotourism value to these resources and, at the same time, can protect their integrity, would undermine any ecotourism initiative. The negative consequences of such a failure for the destination could be very serious if it occurred on the level of a national or regional ecotourism strategy.

Cultural Landscape

Ecotourism tends to be confined to nature travel that contributes to the conservation of natural resources. Yet, the evolutionary process of interaction between societies and their natural environment has often blurred the line between the natural and cultural resources that give distinctiveness, interest and conservation value to landscapes around the world. In Israel, numerous sites, called makam, comprised of mountains, trees, rocks and water, have been declared heritage conservation zones and are believed to be especially connected with the divine, with life and with mystical forces (Stein, 1984). Because of their sacred status, the makam have been preserved as microcosms of the natural Mediterranean landscape. Whenever the visitor gains a glimpse of the remains of the once wide-spread ancient forests, the makam is neither a purely natural nor a merely cultural resource.

An interesting parallel can be drawn between the makam and thousands of sacred groves that have been established throughout Africa on the basis of cultural and religious beliefs. These protected areas represent not only valuable pools of biodiversity, worthy of inclusion in conservation networks, but also important elements of local cultural heritage. Conservation of the African sacred forests as natural resources is integrally associated with cultural values that would keep alive those traditional practices that are ecologically beneficial. Similarly, a strong identification of the indigenous people with their island environments makes conservation of the natural and cultural resources integrally part of the South Pacific. For example, the natural environment is the key component of numerous sites of historical and cultural significance that exist throughout the Fijian archipelago, such as the sacred Masomo Lake on the island of Vanua Balavu where the fish-riding ritual is performed. The heritage value of the sacred ecosystems in Africa and the South Pacific as a region is both natural and cultural.

UNESCO’s recent decision to extend the protection of cultural landscape designation to “associative cultural landscapes” represents a much needed stimulus for more comprehensive assessment of destinations’ potential and carrying capacity for ecotourism. An associated cultural landscape becomes part of the global heritage of humankind “by virtue of the powerful religious, artistic or cultural importance of the natural element rather than material cultural evidence, which may be insignificant or even absent” (Dossière, 1994). The Tongariro National Park in New Zealand, whose volcanic landscape has defined the mythology and spiritual life of the Maori people, was recognized, in 1993, as the first World Heritage Site within the new category.

The appeal, educational impact and prospect of sustainable management of any one of the above-mentioned landscapes, as an ecotourism attraction, would be diminished if the focus was exclusively on the landscape’s natural elements. The opportunity for the local population to participate in, and benefit from, the ecotourism harvest of development would be diminished as well. There is a great need for well-researched interpretation of the heritage resources, integrating indigenous knowledge and engaging indigenous people as a condition of accessibility of these resources to their full appreciation through ecotourism. These examples also add a cultural dimension to the ecological reason why the tourism and conservation industries overlap with the values of the destination, and which overlap with the values of the destination.

The International Ecotourist

Visitor volume is another factor that will pressure host countries to seek solutions to the problems it poses. Visitor pressure can be alleviated by providing contextual access to their heritage resources through interpretive presentations outside the fragile sites. It is unrealistic to base national and regional strategies for economic development on the successful conservation of a small sample of tourists. As Garrett (1991: 205) puts it bluntly in the context of the ecotourism expectations of the Maya World, which spans five Latin American countries, the Maya region will be a better place in the future only if eco tourists go there to make conservation an attractive alternative to destruction.

There is every indication that the size of the international ecotourism market is not likely to figure as a constraint on national and regional ecotourism initiatives. This observation is based on a new trend that redefines the tourist demand as a growing confluence of international tourism and international ecotourism (Ayala, 1995; Ayala in press). International tourists are increasingly characterised by the quality of destination landscapes, in terms of environmental integrity, prestige and integrity of heritage resources. Authenticity of the destination experience and the opportunity to be actively engaged in the discovery and learn in the process of gaining this experience, are the expectations of a growing proportion of international leisure travelers, and of the large majority of those bound for overseas vacations. The preferences and expectations of international tour-ists progressively overlap with those that are often attributed to ecotourists, and the degree of this overlap appears to be correlated with the distance travelled, the highest correlation being in long-haul tourism.

The prominence of destinations’ nature and culture in tourist demands is shifting the focus of qualitative change in product development in international tourism towards mediating a place existence that is meaningful, educational and

![The striking limestone cliffs of the Vatuilevu Island echo the evolutionary legacy of the Lau Group, Fiji (Photo: Hana Ayala)](image)
joyable, and that can be accomplished within a few days' tourist visit. High-quality exhibits, qualified field guidance and other meaningful place exposure and place experience call for training, technical skills and substantial financial investment giving the increasingly better educated, better travelled and more demanding market of international tourists.

The merger between international tourism and international ecotourism proceeds both ways. In Central America, for example, where nature-based tourism is predicted to exceed the economic worth of all other nature-based industries combined, the number of pure ecotourists willing to sustain low comfort levels and utilize minimal facilities is small, and diminishes every year (Ashton and Ashton, 1993). In the context of international travel, ecotourism as an industry is evolving towards "soft" forms, in the sense of adventure and discovery without risk (Tinard, 1992) supplemented with high standards of comfort and service (Sørensen, 1993).

In a discussion of ecotourism for island nations, Bookman (1994) offers a perspective that fully applies to most of the countries that have been described as "high risk" in the low-income, nature-driven model of development. Bookman suggests that generous initial spending will be required on the ecotourism infrastructure, with the possible exception of those sites located near major transportation hubs where the level of infrastructure development is already advanced. The current emphasis placed on the potential of ecotourism to expand beyond resorts—where little of the profits filter down to local economies and local conservation efforts—will be accomplished by a different emphasis. The new emphasis must be on building into the new generation of resorts a solid business reason for investing in conservation and sustainable development of the destination. The need for such a shift in emphasis is immediate and global in scope, in view of the growth pattern of the international hotel industry and the capital being moved into the same regions that realize the sustainability and prosperity funded by low-volume, small-scale ecotourism.

The Competing Perspective

International ecotourism is not just poised for massive growth in infrastructure. It will, and already does, trigger optimism in the resort hotel industry about the growth opportunities that are envisioned particularly in pristine, far-away and emerging destinations. Vietnam, Laos, Myanmar and Cambodia, together with the remote parts of India, the Philippines, Malaysia and Indonesia are the principal target areas for new resort developments in Asia, with many hotel corporations taking a stance on the region as a whole. Untouched forests, emerald green rice fields and unpolluted beaches figure prominently in the positioning of Vietnam abroad as the investment opportunity of the 1990s (Hobson, Heung and Chon, 1994). But resort projects, which emphasize golf courses and marinas and are already at various stages of planning or completion (Sheridan, 1995), do not set the stage for the much needed patronage that tourism could offer to Vietnam’s unique landscape heritage.

Baum (1994) defines the great potential of Latin America for hotel resort development in terms of its wide range of distinctive attractions, from rainforests to glaciers to indigenous cultures. The region is viewed as one of the most promising markets by international hotel corporations, many of which are moving into multiple resort locations. However, no national or regional strategies are in place that would realize the international hotel industry’s ambitious expansion potential to mobilize resources for conservation of the heritage assets that are very much dependent on the tourism industry.

Reserves of the “Greening” Trend

To its credit, the international hotel industry has widely adopted new policies to make its operations more environmentally responsive. However, a clear difference in terms of energy and water conservation, improved waste management and other measures that maximize the environmental benefits of reusing, recycling, rationalizing and recovering.

The international hotel industry’s environmental policies and guidelines are in tune with the objectives of cleaner production and responsible entrepreneurship that were set forth in Agenda 21. Under its Section 3, Agenda 21 appeals to business and industry, including the transnational corporations, to recognize environmental management as among the highest corporate priorities and to assess the various strategies that utilize resources more efficiently through waste reduction and reuse of natural and cultural experiences. This very same research is of relevance to the improvements in efficiency of resources utilization and sustainability of land management practices in the host countries. A shift towards experience management opens the way for an upended relation by the national resort industry to conservation and sustainable development of destinations, as a by-product of the industry’s investment in quality tourist experience.

And there is another aspect of resort-development interaction that is yet to be addressed in terms of its place in the implications for the resort industry. As resorts seek to redefine their competitive edge as ecotourism becomes a more marketable product, quality declines diminish.

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nation’s landscapes will enhance the ecotourism value of these landscapes. It will be invaluable for the continuous upgrading of international hotel industry’s product, and thus for enticing repeat visits. Moreover, such research will reveal how the same landscapes are presented to a range of target markets with differing demands on land use and cultural experiences. This very same research is of relevance to the improvements in efficiency of resources utilization and sustainability of land management practices in the host countries. A shift towards experience management opens the way for an upended relation by the national resort industry to conservation and sustainable development of destinations, as a by-product of the industry’s investment in quality tourist experience.

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The Ecoresort Masterplan

Presented in detail in a separate study (Ayalia, in press), the ecoresort masterplan offers a conceptual framework for resort planning, design and management that takes into account the changing profile of international tourism and the various ramifications of environmental conservation and sustainable development. This "prototype" masterplan incorporates the guidelines provided by the International Hotels Environment Initiative with the goal of giving new resort developments the ability and business reason to accomplish the ecological, cultural and social sustainability of a resort destination partnership.

The ecoresort concept integrates three core principles: (a) "resort potential" ecoconservation, that is, an expanded capacity to assimilate; and (b) a layered approach to product development. The first principle articulates the need to treat an ecosor project as an overall system of resort-destination interaction from the earliest phase of the project's conceptualization to the masterplan, if the sustainability and quality of this interactive system are to be maximized. The current concept of resort planning, however, already favours an evaluation of the economic, sociocultural and environmental costs and benefits in selecting the optimum development plan for the resort site. The growing effort within the international resort industry to identify the resort product and integrate an ecoconservation experience into the destination calls for a complementary evaluation of planning approaches that would combine the objectives of quality experience and minimum disturbance to the heritage resources in the development of the resort-mediated ecosor product.

The ecoresort masterplan fully endorses the desirability of building resorts as self-contained developments and closed systems in the sense of a "guest" and minimalized demand on the destination's non-renewable or scarce resources. But at the same time it seeks to achieve the greatest possible openness and communication between the resort— as a staging area for the ecoconservation experience—and the broader landscape setting whose ecoconservation value can be enhanced on the resort premises. That applies particularly to the landscape design elements reachable from the resort through panoramic views and during excursions. A closely related second principle of the ecoresort masterplan, "an expanded capacity to assimilate," encompasses building into the ecoconsort development the capacity to catalyze the place experience; to sensitize the guests to the special qualities of the destination; to act as a pre-exursion "filter." to enhance and protect the authenticity of experiences; and actively to mitigate against ero-sion of the cultural heritage in ways that strengthen the economic base for local communities.

The ecoresort masterplan recognizes that the element of spatial separation can be an opportunity, rather than a problem. For example, a panoramic view is conditioned by the viewer's setback from the landscape attraction. The value of this is enhanced in synergy both in its scenic quality and information content. An interplay of the overall layout, hotel architecture, guest participation in the natural and interpretative exhibits allows the resort to "explore" thoroughly the view and to transform it into a heritage attraction in its own right. Coordination of planning and design in diluting the boundary between the resort-owned and "borrowed" elements of the setting would give the resort project a strong sense of place and the capability of identifying closely with the life style and willingness to undertake physical effort in pursuit of their interest. By providing opportunities for the personalization of the infrastructure or the premises, an ecoresort will also be able to cater to the older traveler who, in terms of resources as well as access to the resource, is the most important market for international ecoconservation. The same ecoresort will remain positioned to supply supreme setting for a more intense place experience, which could incorporate excursion trips or a multiday destinations plan.

The ecoresort masterplan recognizes cooperative master-planning of several ecoresorts as a distinctive mode of ecoconsort development, which would give the cooperating properties a new sense of flow of tourism along heritage themes and pool the benefits of environmentally sustainable development.

The focus of many hotel groups has been expansion plans on multiple luxury destinations, particularly within the Caribbean, South-East Asia and Latin America, indicates that multi-resort networks will increasingly set the tone of the industry's growth. At the same time, the ever stronger ecoconservation orientation of international leisure travel is likely to prompt the launch of new resort-sponsored ecoconsort circuits. The motivation for several resorts to participate in such circuits is the potential of enticing tourism through an invitation to sample a country's or a region's greatest treasures or to pursue special interests along themed itineraries. The offer of "eco-tourism" throughout the Pacific region, which involved Select Hotels and Resorts International, is a good example. Resort "ecocircuits" has so far been structured primarily through joint marketing. The trend, however, presents a novel chance for countries and regions that possess a wide diversity of potential attractions but lack their effective protection to subordinate the incentives for attracting resort development to the layout of the envisioned network of protected areas. An offer of maximum contextual access, rather than physical access, to the resource, is the most important market for ecoconservation. The South Pacific offers a wealth of natural and cultural resources, allowing few protected areas and an interest in encouraging the numbers of international tourists in the position to benefit from an infrastructural masterplan that would spell out the economic justification for a comprehensive conservation network.

The Case for "Heritage Destination"

Poon (1989) rightly stresses that if new tourism is, in fact, to be developed as a system that links together and stimulates agricul-
the ecotourism potential of Brazil and other countries that share the outstanding heritage attractions of the Amazon forest.

In his keynote address at the 1994 Central American Environmental Summit in Managua, Nicaragua, President Figueres Olsen of Costa Rica called for an immediate attention to biodiversity inventories as a condition for tapping Mesomérica's wealth of biodiversity to both generate income and foster research that could enhance national and regional wellbeing. This call is being echoed in a growing number of countries, particularly in the Third World, that look for ways to combine an access to better knowledge about their heritage resources with an access to funds that would support protection of these resources.

Biodiversity prospecting — the screening and evaluation of animal species for commercially valuable genetic and biochemical resources — has become a widely recognized model of conservation partnership among multinational pharmaceutical companies, indigenous and local peoples and research institutions that include Costa Rica's National Biodiversity Institute and the University of Suriname. International ecotourism has yet to be appreciated as another, complementary, but potentially much more widely and readily applicable partnership that can bridge the business and conservation value of research and ignite sustainable development.

Unlike conventional tourism, ecotourism depends on ongoing upgrades to satisfy the key characteristics of ecotourism: complexity, authenticity and educational value. From the tourism and hotel industry's perspective, the existence of a research institution or a university interested in linking scientific investigation and practical application establishes the desirability and viability of investment in one ecotourism destination over another. It would be a great loss for Panama as both a country and as a tourism destination not to take up an offer by the Smithsonian Tropical Research Institute to participate actively in transforming Panama's spectacular forest and marine ecosystems into a model of tropical biological research, conservation, environmental education and ecotourism, which would bring significant social benefits to the people of the region (Smithsonian Tropical Research Institute, 1992). Committed to sharing knowledge with students throughout the country as well as with international tourists to Panama, the Institute has already initiated the development of a Marine Education Centre. Since the Centre will draw upon leading-edge research in tropical ecosystems, conducted by the researchers from both the Institute and the University of Panama, its exhibits will be unique, dynamic and continuously changing (Smithsonian Tropical Research Institute, 1993), as would be any ecotourism project that would grow from a partnership co-sponsored by the Institute.

A masterplan for new tourism that must be proactive, placing the pursuit of tourism quality and destination quality into a mutually supportive and reinforcing relationship. It must also recognize the importance of interpretive and accommodation infrastructure in the enjoyment and security of the ecotourism experience, in stimulating investment in conservation and in zoning the tourist consumption of heritage attractions. And it must integrate a long-term strategy of upgrading and diversifying the ecotourism product so as to systematically strengthen the destination's research capacity and enhance both the ecologi cal and economic value of its protected areas. I propose that an active and systematic pursuit of national or regional benefits of international ecotourism, carried out in a manner that procures excellence in the quality of the tourism product development, be adopted as a new category of international recognition of a Heritage Destination.

Co-sponsored with this recognition by UNESCO, the World Tourism Organization (WTO) and possibly other international organizations, the United Nations Network on Sustainable Tourism, the one hand, and the international hotel industry — represented perhaps by the International Hotel Association (IHA), on the other, would open unprecedented opportunities for mobilizing financial and intellectual resources needed to preserve the natural and cultural heritage of mankind for future generations.

A Vision and a Strategy for the Fiji Islands

The following outlines my proposal of a new tourism-conservation masterplan for Fiji. First introduced at the 1993 Fiji Biodiversity Conference (Ayala, 1995), the proposal is currently under consideration by the Fiji government. The basic argument that will play in the masterplan's preparation is as follows: The unique ecological, geological and cultural diversity of the Fijian archipelago is in a sharp contrast with the poorly developed system of protected areas. The outstanding conservation value of the country's heritage resources is what gives these resources outstanding tourist value. Fiji is uniquely positioned to begin an ongoing tourism expansion strategy as a tourism strategy that would add socio-economic considerations to the goals of protecting the islands' ecosystem and enhancing the appreciation of heritage sites. This model will realize its full benefit when extended throughout the South Pacific island region.

Ecological Theatre and Heritage Bank

An immediate priority for Fiji should be the establishment of a network of national parks, reserves and other protected areas.

The process of selecting heritage resources, and what management model will be utilized, will be decisive for both the international recognition of Fiji as a destination of World Heritage quality and for international support of Fiji's conservation effort.

I propose adoption of two distinctive, yet mutually interlinked, themes as catalysts of the selection process:

(1) Fiji as a microcosm and a heritage bank of the South Pacific island diversity; and

(2) Fiji as an ecological theatre.

The first theme reflects the fact that the Fijian archipelago uniquely captures and showcases in a nutshell the rich diversity of the South Pacific island environments — a diversity that no other island region in the world can match. Fiji contains high volcanic islands with sharply pronounced differences between leeward and windward sides; uplifted limestone islands with striking forms of eroded limestone cliffs, caves and inlets; and coral atolls.

The archipelago also harbours an excellent display of all three types of coral reefs: barrier reefs that are closely related to atolls; fringing reefs, attached to the shore and extending seaward; and platform reefs confined to shelf waters. In my opinion, Fiji could supply outstanding examples in all four categories of the criteria used by UNESCO to determine natural sites for the World Heritage List. It is particularly rich in sites that represent important stages of the Earth's evolutionary history, areas of exceptional scenic beauty and habitats with species of universal value from the point of view of science and conservation. For example, the North Astrolabe Reef in the Kadavu Group provides supporting evidence for the Darwinian theory of the origin of atolls. The scenery in the eastern Lau Group features the impressive examples of the repeated uplifting of the limestone rock, of the "sculpturing" effects of sea level changes, and of various stages of the evolution of the coral reef ecosystems. Many Lau landscapes, moreover, support a richness of cultural associations. Elsewhere in Fiji, the island of Taveuni was identified by the World Conservation Union (IUCN) as one of the Pacific's most important islands in terms of biology and conservation.

The second theme reminds us that these island environments are not static, but evolving. They are part of an evolutionary play that unfolds on the stage of the ecological theatre and involves culture as a factor of diversity, interest and heritage value. Relating the South Pacific island microcosm to the specific socio-cultural context of Fiji energizes the idea of pooling the strength of Fiji's natural and cultural heritage assets.

Utilisation of local materials and building techniques can blend a resort development into the cultural context of the place (above) in Taveuni Village and (below) in Queina Beach Club, both at Queina Island, Fiji (Photos: Hana Ayala).
Heritage Conservation and Sustainable Development

The criteria used by UNESCO to grant World Heritage recognition will be utilized by the masterplan to direct identification of the most prominent heritage sites throughout Fiji. Simultaneously, the masterplan will guide the establishment of an additional network of marine and landscape ecosystems so as to complement existing sites of World Heritage value in creating a heritage bank of the islands’ geological, climatic and ecological diversity. In the process, it will take advantage of information provided by projects on island diversity that were completed in Fiji, but never related to tourism or conservation strategies. Particularly relevant is the Eastern Fiji Project, which was launched in 1974 under the auspices of UNESCO and the United Nations Fund for Population Activities (UNFPA) and which disclosed remarkable, previously unknown ecological diversity within the traditional categories of continental, high-volcanic and low-lying islands.

The concept of the island heritage bank and ecological theatre will guide the development of a comprehensive system of protected areas and sites. Additionally, the emphasis on heritage themes that involve—and cross-reference—natural and cultural landscapes and marine ecosystems will integrate a significant tourist value into this distinctive conservation network. This strategy will set the stage for an infrastructural masterplan that will become the "cornerstone" of a country-wide conservation scheme.

Resort-Conservation Network

The current tourism masterplan for the Fiji Islands (Coopers and Lybrand Associates, 1989) builds upon the expanded network of the existing cruise port areas, as well as designations of mangroves and mangrove forest capacity to accommodate the "bulk of sand, sea and smiles" tourists from the main resort areas. Yet, tourism research increasingly reveals that the demand from the tourism-generating markets for Fiji is strongly biased towards an extraordinary and educational experience of nature and culture, with the emphasis on authenticity and complex experience of the (Yacoumis, 1988; Stолов Sketch Project Ltd, 1992; King, 1992).

The implications of these findings are twofold. Firstly, the island resorts will have to assume a much more active role in mediating the guests’ exposure to the destination and find ways to shift the emphasis of their vacation product offer from a sun-lust to a sun-plus experience that emphasizes the component of "wonder." Secondly, Fiji would greatly benefit from a pro-active strategy for future resort developments that would pursue the tourist value of the country’s heritage resources within the context of broad strategy for the systematic and well-orchestrated protection of these resources. Currently, Fiji, which seeks to further increase tourist arrivals and where new resort developments are being built and planned, has no long-term strategy to guide the expansion of the resort infrastructure.

With regard to repositioning and upgrading the existing resorts, the masterplan proposal will direct special attention to tapping the potential of many resorts’ grounds to serve as a "middle ground" between the hotel and the destination, thus enhancing the sense of place and experience of the place for the guest.

Interpretive support would greatly increase the enjoyment and educational experience that the abundance of indigenous assets enclosed inside the resorts’ boundaries, or found in their immediate vicinities could offer to the guests, while enforcing conservation. The magnificent coral reefs that envelop many resorts are a prime example of heritage resources that cry for protection.

Quite a few resort areas in Fiji feature heritage resources that bear similarities to those it need of strict protection in other parts of the archipelago. The Vatulele Island, which hosts the Vatulele Island Resorts, is in many respects a microcosm of the ecologically and culturally sensitive Lau Group of islands that are largely off limits to tourists. Besides being one of Fiji’s few limestone islands outside the Lau Group, Vatulele is also surrounded by mushroom-like islets that echo the islet groupings for which parts of the Lau are legendary. A unique opportunity exists for the Vatulele Island Resort to develop a system of interpretive guidance that would extend the Vatulele-Lau connection. Such guidance would enrich the guests’ experience of the destination and encourage the resort’s very marketable patrimony of outstanding heritage assets elsewhere in Fiji.

Further, the masterplan will take advantage of resorts’ convention and conference capabilities in directing Fiji towards becoming the hub for international meetings with the "new tourism" theme.

The conceptual blueprint that will guide future resort development will be closely tied with the proposed conservation strategy. It will aim at creating staging areas across Fiji to facilitate contextual access to the heritage resources, by utilizing views as prime access channels. Planning, design and management models will be offered that will illustrate benefits of closely tying together resort lay-out, views and excursions in representative but less sensitive parts of the destination. The staging areas will be meaningful only if in the spatial sense, but they will also serve as supportive settings for eco-tourism experiences that cover much greater areas than tourists will visit. This will allow Fiji to set aside, in a systematic fashion, ecologically and culturally, the most sensitive island environments without depriving these environments of the benefits of sponsorship by the tourism industry. Such a strategy would be invaluable in bringing the superficial heritage resources of the Lau Group and other highly sensitive areas into the overall strength of Fiji’s eco-tourism product without overloading the very limited carrying capacity of these areas for tourism development and excursion traffic. A resort project under consideration by the Fiji Development Bank for Lau’s island of Vanua Balavu could become a flagship model of a staging area for a conservation strategy fuelled by quality tourism. The site’s potential for developing cultural links with the distinctive heritage of the Lau Group is magnificent.

Guidance offered for both existing and future developments will be used to stimulate a prestigious and highly marketable patronage of Fiji’s heritage resources by the resort industry. The concept of patronage will encompass not only financial contribution to conservation, but also ecological and cultural sensitivity and utilization of local skills and material resources in a focused effort to provide an economic justification for the continuation of the indigenous traditions and to encourage links between the tourist sector of the country’s economy. This concept gives new momentum to conservation partnerships that have already been suggested by some resorts, such as the “user-pays” model proposed for the creation of Cakasavouvua Marine Park and Reserve. The international hotel industry increasingly recognizes the marketing effectiveness and business value of donations to environmental causes. An "optional dollar" fund-raising scheme, which characterizes the Going Green Environmental Program by the ITT Sheraton hotels in Africa; the joint effort of the Ramada Hotels and Resorts and American Express to raise funds for conservation projects in Central America and the Pacific; and donations to World Wide Fund for Nature from eco-touring itineraries co-sponsored by the Select Hotels and Resorts International and Qantas airline, are just three proofs of this. The masterplan for Fiji goes beyond mere representation and provide on-site interpretation and presentation. The underlying objective is to foster ecological growth of the industry, in which each new development enhances the quality, diversity and conservation value of Fiji’s tourism product.

The resort-environment partnership could become the single most important source of funding for conservation, the lack of which has been a key factor hindering the establishment of protected areas in Fiji. The success of this ambitious vision will be greatly influenced by two factors. Since over 80% of the country’s land is held under communal tenure by indigenous groups (matasalk), of ethnic Fijians, the development of future parks must go hand in hand with generation of benefits for the landowners that would outweigh short-term financial gains from alternative land uses, such as logging. Another factor to consider is that the new emphasis on "experience" and contextual access will generate a great demand for more and better information about Fiji’s ecosystems.

Biophere Reserves

Since 1984, when UNESCO adopted an Action Plan for Biophere Reserves, there has been a growing awareness among building where reserves serve as new, multifunctional models of protected areas that bridge conservation and economic development. This makes biophere reserves valuable management models for new tourism destinations—a strategy that will be elaborated on by the proposed masterplan. The goal will be to convert the protected areas into...
multiuse areas that are structured around the zoning concept and managed through tourism-destination partnerships that stimulate and reward the involvement of the Fijian people in sound resource management. The benefits for both the destination and the industry from sharing responsibilities in resource conservation and resource management are not limited to natural resources. An inspiring example comes from the island state of Vanuatu in the South Pacific (Sofield, 1991). By assuming responsibility for control and management of a traditional ceremony in the presence of tourists, the village people are able to give the tourists greater understanding of the event’s symbolic importance and a sense of participation rather than observation, which significantly enhances tourist satisfaction. The income, which is channelled into community projects, does not reward a staged event, but encourages a contact between different cultures, carried out on the basis of partnership, respect and reciprocity of gains.

Within regions involving a number of smaller countries, UNESCO encourages selection of each location for future biosphere reserves that are not only representative of the region or biogeographical province, but also where the functions of the biosphere reserves as “laboratories” of sustainable development can be best carried out. Fiji has a better information base on its natural resources than do most other South Pacific island nations and, importantly, is the main seat of the University of the South Pacific. The masterplan will supply incentives for the creation of partnerships that engage the relevant units of the University, land owners and the resort industry in transforming parts of the protected area network into laboratories of sustainable agriculture, forestry and other activities of national and regional interest. Information generated in these field laboratories will, in turn, be utilized for an ongoing upgrading of Fiji’s ecotourism product as well as for the promotion of environmental education in Fiji.

Another proposal, directed at the University, will suggest that the current course offering be developed to build the intellectual capabilities needed to manage new tourism for the benefit of the country and the region. Current courses on island geography, human ecology, tropical forest ecology, resource conservation and management are among those that could be combined with “traditional” tourism courses into hybrid curricula that would stimulate, in a proactive manner, interdisciplinary approaches to national and regional development planning. These courses would also prepare the highly qualified professional guides who will be needed to staff the new national parks and protected areas.

The Galapagos National Park well illustrates the returns on investment into a comprehensive training system that integrates university education.

The Value of “Synergy”

Fiji as an ecological theatre and an island heritage bank are not marketing themes. They are conceptual constructs that will guide the integration of tourism and conservation planning within a broader land-use plan. These themes will serve also as a foundation of a marketing strategy. But this strategy will be defined within the context of the overall masterplan, as a form of management that assists in zoning the tourist demand, encourages the right markets, and provides an educational and exciting introduction to the place experience.

The proposed masterplan for Fiji is not a tourism masterplan in the sense of the traditional definition of sectoral responsibilities and execution of sectoral policies. It is structured around the definition of opportunities that changing consumer demand and the growing business value of environmental stewardship open for a joint—and mutually beneficial—partnership in quality, conservation and sustainable resource management. It aligns the tourism strategy with the objective of establishing an effective parks and protected area system as formulated in the National Environment Strategy, which was endorsed by the Cabinet of the Government of Fiji in 1993.

The national perspective of Fiji as a prospective Heritage Destination, however, is not separable from the regional perspective, which reveals the full value of the model in which tourism and conservation would be masterplanned to grow together.

South Pacific Heritage Destination

The 1990 Guidelines for the Integration of Tourism Development and Environmental Protection in the South Pacific, published by the Tourism Council of the South Pacific (TSCP), alert us to several concerns that can be raised across the island region. A limited contact exists between the tourism authorities and the protected area agencies. The network of protected areas is only rudimentary and ill-funded. It is beyond the financial and human resource capabilities of the existing relevant agencies to deal with the very large number of areas that deserve immediate attention for their conservation value. A progressing depletion of natural resources and ecologically disastrous effects of logging have recently been added to these concerns (Wallace, 1995).

The spatial pattern of international tourism is most relevant to an identification of opportunities for bringing tourism and conservation into a teamwork. A substantial and a growing proportion of international tourism is multidestination in character. The multidestination mode of leisure travel is most strongly pronounced in overseas trips (for supporting references, see Ayala, 1985). The themed nature of heritage product development, which invites the linking together of multiple sites for the benefit of the product’s interest, appeal and immunity to competition, will further heighten the importance of multidestination itineraries in both demand and “supply” for international tourism.

The Prospects of a Regional Heritage Bank

The overwhelming emphasis of tourism planning and marketing in the South Pacific on “tropical island paradise” has homogenized and standardized the extraordinary diversity of the region’s biological, scenic and cultural diversity. From the point of view of both conservation and tourism interest, this diversity offers a wealth of complementary experiences among sites in various parts of the region. While the region, as a whole, contains a high number of endemic species, each of these species is typically found only on a single group of islands and often on only one island. Mangrove ecosystems are confined to the western part of the region; they are not met east of Tonga and Samoa. Remains of primary rain forest exist, for example, on larger Fiji islands and in Samoa. Most of the lowland sides of islands are today covered by savannas and grasslands; however, relics of dry evergreen forest survive in Fiji and in the Marquesas.

More chapters can be added to the already fascinating story that Fiji reveals about the geological history of islands, including coral island- and coral island-adorned barrier reefs that frame a lagoon where low volcanic hills still rise above surface, as in the Gambier Islands in French Polynesia. The manifestations of cultural history are no less complementary across the region. Hausine’s outstanding early Polynesian sites and numerous archaeological remains in the Marquesas in French Polynesia; man-made rock formations on Savai’i in Western Samoa; fortified fortifications associated with a time of Melanesian population migration into Fiji; and the distinctive cultural milieu of the Lau Group that derives from the Tongan influence are just a few examples.

This by no means exhaustive list of examples indicates the potential and desirability of extending the
Vaka Moana: The Ocean Roads of the Pacific

Integral to this new regional approach to tourism strategy, and development of alternative forms of tourism, such as village-based guest houses, that can generate additional income for the villagers. In its focus on the needs and aspirations of the people of the region, Vaka Moana could also provide a rationale and action framework for the expansion of the biosphere reserve concept.

The layered approach to the coordination of tourism and conservation strategies in the region could be used in an innovative, layered approach to the development of biosphere reserves. In this approach, more or less biosphere reserves established within national contexts would become core elements of a larger biosphere reserve that would address conservation and sustainable development issues of regional concern. Such an approach could become a model for the formation of "regional units of sustainable development," which has been proposed for the Man and Biosphere Programme (Acaraz, 1993). It would also fully exploit the potential that the United Nations Environment Program and the South Pacific Commission, a regional university, could play in making the tourism-conservation-sustainable development system interactive, system visible and self-sustaining.

References


INSULA's Guest

Interview with Masahide Ota, Governor of Okinawa Prefecture

INSULA: Okinawa and the Ryu Kyu Islands with their original culture, have been, for centuries, a natural bridge for the exchange of goods, news and people among the Japanese Empire, Korea, China and the Philippines. Nowadays, and in the forthcoming years, these islands are bound to recover their appeal for continental and South Pacific travellers. Is Okinawa ready to confront these trends?

Governor Ota: It is necessary for the Okinawa Prefecture to establish itself as an international resort area if it wishes to develop a sustainable tourism industry.

Our Prefecture is blessed with outstanding resources which will enable us to develop an international resort area. Thus, through comprehensive planning and systematic policy development, it is possible to make Okinawa one of the resort capitals of the Pacific Rim.

As regards to lodging facility, Okinawa already has hotels of equivalent quality as other countries. Moreover, our Prefecture has established various branch offices abroad (Korea, Taiwan and Hong Kong) which cooperate with Okinawa Prefecture in promoting tourism campaigns and in conducting market research in order to actively attract tourists to Okinawa.

INSULA: Telecommunications, efficient air and sea transport, health, water, security requirements and after all the social acceptance of the islanders communities are a must to enter successfully in the international tourism competition. To provide these basic facilities in such a largely spread out archipelago as yours is not an easy task. Are these requirements already in place or planned from your government's side so as to enable the expected progress to materialise?

Governor Ota: We are systematically developing policies, based on the Okinawa Promotion and Development Plan, to provide for the basic facilities necessary to support an active tourism industry. In particular, we are currently making great progress on water resources development, energy accumulation and the development of related infrastructure such as an improved transportation system.

In order to gain acceptance from the Okinawa people, we are presenting a Tourism Proclamation in October 1995. With the cooperation of the community, we will be able to work together on the establishment of an attractive resort area and the development of a sustainable tourism industry.

INSULA: During the Lanzarote Conference, several statements were made by participants stressing that tourism can be sustainable on condition that other economic and cultural sectors are jointly developed. Is such a policy also pursued in the Ryu Kyu Islands? What is the role of the university and the scientific institutions there?

Governor Ota: We consider tourism as an inclusive industry which generates demand (economic effects) not only to hotels, gift shops, sea and air transporters and travel agents, but also to other sectors of the economy, including the agriculture, forestry and fishery industries and the manufacturing and processing industries.

Regional culture is a very important tourism resource. We believe that instead of ruining the cultural aspects of the region, tourism should incorporate cultural factors into its development plan.

In our universities and academic research institutions, we are exploring the effects of tourism on regional economics and considering ways in which we can promote tourism without spoiling our cultural events, ceremonies and entertainment.

INSULA: An important issue was raised in Okinawa last year during the Islands Matter-Islands Matter International Conference, which INSULA contributed to organise. Was the creation in Okinawa of an international multidisciplinary institute for island research and development? A challenging task indeed. How do you envisage INSULA's participation in such an endeavour?

Governor Ota: We have settled on a plan called the "Basic Establishment Plan for the Subtropical Comprehensive Research Foundation" (tentative name) which will conduct research on various island-related issues.

We are working to establish this institution as soon as possible. With cooperation from INSULA, we would like to open, as one of the institution's project, an administrative office for the International Scientific Council for Island Development.

We are trying to encourage island studies and promotion of cooperation between island regions through the establishment of an information network among island communities.

Therefore, the guidance and support we can receive from specialists in fields related to island development is extremely useful and is very much appreciated.

INSULA: Finally, Governor Ota, tourism is also called "a passport to peace" and its development undoubtedly needs an international peaceable framework. Okinawa has experienced the bitter fruits of war. Memories from the past are intermingled with expectations for the future. What are your people's hopes in this respect?

Governor Ota: This year marks the 50th anniversary of the end of the Pacific War and the Battle for Okinawa. Okinawa Prefecture was the site of the only land battle fought in Japan during World War II. As a result, Okinawa lost many precious lives, cultural assets and property.

We must not stop praying for everlasting world peace if we want to ensure that such a foolish war does not happen again. "The Cornerstone of Peace" has been constructed to commemorate the spirit of those who lost their lives during World War II and to create a place where one can find peace of mind and study about peace. In addition, we have recently made a Peace Declaration and we hope to make Okinawa a centre for the promotion of world peace.

The Okinawan people's hope for everlasting peace is very strong. Tourism is also referred to as a peace industry. Thus, as both the people and the government of Okinawa Prefecture pledge to keep everlasting peace, it is appropriate to further promote tourism as a main industry.

Okinawa is a prefecture of Japan. Recently the prefecture and its governor, Mr. Masahide Ota, featured prominently in international news bulletins, with regard to the relatively large American military presence on the island.

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Koster Health

Recent Evolution of a Swedish Interdisciplinary Model for a Holistic View on the Condition of Man

Guy Heyden

Photographic documentation, picture analysis and health-promoting communication based on the photographic material, are key concepts in the model. Methods of Digital Image Analysis (DIA) and telematics are developed in collaboration with, among others, Hasselblad Electronic Imaging AB, Göteborg (Mattsson et al. 1994, Mattsson et al. 1995). The methods of utilizing high resolution scanning of clinical colour slides and sending digitized images by means of modern telematics to different medical and odontological specialists for distance consultations have been found to be most valuable resources for the scientists as well as for the participating islanders and their society.

At present (in 1995) the Koster Health Library contains more than 35,000 clinical and ecological colour photographs (for a review, see Eliasson and Heyden, 1990). This library and the Koster Health Database, containing all data from the annual interviews since 1987, facilitate retrospective analyses and constitute valuable resources for education and research.

A temporary ISDN-network has been established on Koster to facilitate direct communication (for bilateral discussions and conferences) between the island population and the regional authorities on the mainland. This technique has been found to be most useful for the schoolchildren on Koster and their teachers by increasing their possibilities of utilizing their educational resources in institutions in other parts of Sweden. It may also serve as an important means of communication between the Koster Health scientists and other national or international research groups for exchange of data and experiences.

Recent Results

Water, which is the prerequisite of human life, seems to be an increasing threat to the health of man (the water paradox). Stomach disorders are rather common among the islanders. More than 50% of the participants in the project declared that they suffer from recurrent stomach illnesses. Some analyses, performed in 1994, demonstrated that there is no over-representation of Helicobacter pylori – infections (possibly inducing gastric-duodenal ulcer disease) in the adult island population. The islanders are, however, subjected to drinking water with periodically high contents of, among others, met- als (copper, zinc, iron and aluminium) mainly released from the water pipes. Such factors may induce or enhance stomach problems in sensitive persons.

The water of individual wells may be corrosive due to the constant acid rain (recorded monthly since 1980) in the region, lowering pH, and to entry of chlorides from the sea into the groundwater at periods of high water consumption. Growth of microorganisms and other pollutants from under-dimensioned and partly defective sewage systems of the households may also threaten the quality of the drinking water. Furthermore, during the tourist season the available quantity of drinking water may be insufficient to a tenfold increase in the island population. In summary, the water problems may be serious threats to human health. They may also jeopardize a peaceful co-existence on Koster, as is the case in all other living areas on earth with a limited and easily polluted water supply (for a review, see Heyden, 1995).

Water may be "the mirror image" of the health of the environment because of its unique chemical properties as a solvent. Regular declarations of the quality of water (in rain showers, local water courses, coastal sea-water regions, drinking-water wells and house- holds taps) on the Koster Islands have been found to enhance the watchfulness of the local inhabitants with regard to environmental threats and increase its motivation to protect the environment from being polluted. Since 1992, however, it has been observed that the environmental changes are consistently threatening the quality of drinking water on Koster. Technical and hygienic interventions, temporary improving the quality of water, have to be repeated regularly in order to compensate for the environmental impact.

Life Styles

Adoption of negative life styles, hazardous to human health, are influenced (directly and indirectly) by circumstances in the social, psychological and cultural environment on the islands. Such factors seem to exert a greater influence on the islander's pattern of behaviour than the individual's knowledge about existing health risks involved in different kinds of abuses. The outbreak of growth of poisonous algae is polluting the sea around the Koster Islands and frightened away the tourists.

The economic depression in 1993-94 is an example of events having a great impact on the living circumstances, on the choices of lifestyle and on the quality of life of many islanders. However, personal print-outs from the Koster

Islanders at Work

Group of the Koster Project Partners from Sweden, Estonia, Lithuania and Finland (Photo: Dr. Piero Giovanni d'Ayala)

Health database and regular demonstrations of oral photographs, have proved to be important tools to motivate participants to change some of their negative lifestyles, hazardous to health.

Solar radiation, especially UVB-radiation, seems to be an increasing threat against the health of the islanders and their environment. The radiation, monitored on Koster every 20 second since early 1994, is rather high due to the comparatively clear air in the region. Lip changes and advanced ageing of the skin are particularly manifest in the population. The year-round inhabitants and the tourists are continuously informed about current radiation levels by the Koster Health scientists and given recommendations to prevent damage to the skin, the lips and the eyes. Plant life changes, possibly induced by UV-radiation, are monitored photographically by professional photographers, as well as by school children and their teachers on Koster.

The cultural landscape in Koster is, at present, undergoing rapid changes with increased growth of buildings. Farming is no longer profitable. This favours inbreeding of local strains of wild animals which may transmit, among others, tick-borne Borrelia infections and encephalitis to man. Un- treated Borrelia infections may result in long-lasting disorders in human muscle, nerve and joint tissues. Serum analyses, performed in 1994, have demonstrated that more than 14% of the adult island population has been infected by Borrelia burgdorferi microorganisms. In general, the frequency of insect-borne infections seems to have increased in the region during the last few years and preventive measures are in progress in collaboration with the islanders.

A New Unit

Since late 1995, Koster Health...
Koster Health

man of Koster Health and Dean of the Committee for Intersectoral Education and Research at Göteborg University, was appointed Chairholder for a two-year period.

UNESCO-MAB Biosphere Reserve?

In September 1995 the Swedish UNESCO-MAB Committee, Stockholm, has initiated negotiations with UNESCO in Paris and Swedish authorities to explore the possibilities of having the Koster Archipelago declared as a UNESCO-MAB Biosphere Reserve in the future.

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Islanders at Work

I Kouri

Vouniatades, Corfu

Jordan Arzogliou

I Kouri (The Courtyard) used to be the estate of Count Voulgaris of Meliti on the Greek island of Corfu. In addition to a white-washed two-storey house with green doors and windows, and much of the olive groves and vineyards on the steep slopes that look east and west onto the Ionian Sea, he owned the donkey-driven olive press and the man-powered wine press, adjacent to the house, which monopolized the processing of the region's products at the village of Vouniatades.

The court's descendants have sold the house. The olive groves and vineyards are still there, accentuated by darker-green Cypress trees that stand like sentinels on the hillside. Unlike in the Count's heyday, the beaches are colourful with tourists who pour in and out of the airport and the new port of Corfu. This type of tourism, for very different reasons, is also unlike the plans of those who run I Kouri today.

Until the summer of 1994, few foreign visitors asked to be taken to Vouniatades, 120 meters up in a dip on the hills. Now the Corfiote taxi-drivers are not only fully familiar with the half-hour winding drive to the village, they also know about I Kouri, the Athenian who bought it (that's me), and his Corfiote friends (women and men) who are turning it into an international cultural centre.

Mr. Jordan Arzogliou is an economist, translator and printed media commentator. This paper draws from International Herald Tribune articles by Jacob Akidele and Peter Lam.
islanders at work of 1970s.

More than a decade after the events of 1967, the most populous and popular of the Ionian islands that dot the northwestern coastline of mainland Greece, Corfu, or Kerkyra in Greek, has often been likened to a bridge or stepping stone for the ideas — and the armies — of East and West. The Ionian islands were the only part of Greece to stay out of Ottoman domination, but Corfu in the last 700 or 800 years has been something of a pawn in battles between countries anxious to maintain control of trade in the area.

Having been ruled before the 12th century by (among others) Venice, Genoa and Naples, the Corfiots in 1386 requested the protection of Venice, under whose sovereignty they remained for 400 years. After the Venetian empire fell, Corfu was ceded to Bonaparte’s French Republic, then ruled briefly by the Russians, given back to France and in 1865 taken over by the British. The island was united with the modern state of Greece in 1864. All these rulers (especially the Venetians, French and British) have left their mark on the island. But the Venetians were responsible for the pastel palette of the houses, much of the architecture and a passion for the opera. In addition, in 1623 they began promenading 10 pieces of gold for every 100 olive trees planted on Corfu. Today, there are groves of olive trees, spreading and gnarled with age, all over this small island (3 percent of the world’s olive oil comes from it).

Multicultural Town-Skipping

The start of our multicultural “town skipping” was made in July 1994, when Gerda Hartman, the internationally renowned soprano, and John Whitelaw, the distinguished pianist and harpsichord player, conducted a piano and song course. Sixteen participants came from all over Europe.

The following week, a 16-member theatrical group from the University of London, under Pierre Lamy, play director, staged Jean Anouilh’s Antigone, a French modern adaptation of the ancient Greek tragedy. The shows were held under the stars and among olive trees outside a hilltop church behind I Kourtii. The play, written during the occupation of France split between those willingly submitting to dictatorship and those rebelling against oppression, has two such opposed outlooks, illustrated by Creon and Antigone. Antigone uses faithfulness to her moral principles as a pretext for violating a royal edict and is praised for her noble sacrifice. Creon, used to the story of an adolescent girl demanding perfection. She will never deviate from what she believes to be right: what a portentous, existential and aesthetic message for the girls and women of an agricultural village amidst the 20th century (fighting for riddance from the Scylla of tradi-tional sexism, not to fall prey to the Charybdis of cultural death), as a counterweight to televised intellectual dehumanization!

Following this, Arnaud Duman, top French classical guitar player and composer, gave a recital at I Kourtii.

The week after, Pierre Lamy, also a literary scholar, conducted a piano workshop, in which of course Corfu features prominently, offering a reviving reading and a revealing conception of the geography and the Homeric epic. Ulysses, the man who “knew many cities and many mentalities”, is an apt symbol of I Kourtii. Are the Scilly Islands the Insulas conterraneas? With simultaneous interpretation into different languages, Lamy took his multicultural audience on an exciting, speculative route laid out as a code in the Odyssey, leading, according to the theory of the French historian Robert Philippe, to northermost Europe.

The last 10 days of August were devoted to an exploratory seminar on humanistic computing based in the University of London. The Professor of Computer Science at the University views that computers can be personally enhancing; they need not be exploitative tools designed only for increasing productivity. On this basis, it was shown, possible top-ics for further research by interested individuals include idea processors, ganes, visual thinking, visual mathematics, visual statistics, psychological models and music. Clearly, there are innumerable possible epistemologi-cal spin-offs.

An International Event

However, the stage and the tone for all these international activities were set by an eminently in-ternational event.

Nineteen men and women in their 40s and 50s, some accompanied by spouses or friends or teenage children, coming from Singapore to Canada and from Sweden to South Africa, gathered in the spacious rooms of I Kourtii.

The space that once housed a little kitchen, stables for horses and carriage, and stores and water-tank, now accommodated the New York Herald Tribune Youth Fe-veraum alumni, holding their first international reunion. Emotions and breathless reminiscences were followed by a moment of si-lence as they remembered a fel-low-delegate who shared their “The World We Want” experience in 1966 and who died from a stroke in January 1994 — more months after brokering the secret talks that led to the momentous agree-ment between Israel and the Palet-tine Liberation Organization.

In Oslo on January 22, 1994, US Secretary of State Warren Christopher was one of the mourners from many countries at the funeral of Johan Jotgen Holst, Foreign Minister of Norway. “His- tory will record that he played an essential part,” said Christopher in the eulogy. “Johan saw the handshake of November 13, 1993 (between Yitzhak Rabin of Israel and Yasser Arafat of the PLO on
the White House lawn as the beginning not the end of the Middle East peace process. Holst himself had said in an article he wrote for the alumni group: "A small Norwegian team was able to facilitate and assist in the conclusion of the agreement because we had maintained the trust of the parties. We did not have leverage, our role depended on confidence. After the end of the Cold War, states and other international actors have obtained greater freedom to settle their own affairs. But such settlement often requires facilitation by small, even-handed parties....

We have managed to project a promise of peace. Now it has to be converted into sustainable reality by the engagement and commitment of the international community at large." 

Holst's words encompass the spirit of the Youth Forum, to which he represented Norway in 1956. Between 1947 and 1972, some 900 high school students from nearly 90 countries went to the United States after writing essays on the world they wanted, to attend a program run by the New York Herald Tribune. Most of the essays enunciated youthful ideals and hopes for a much better world. Some said that the far from perfect world was good enough, for it provided both challenge and opportunity for improvement. One essay said that the realities of today are consequences of yesterday's ideas and thinking... let us change the thinking and the realities will also change.

Johan Holst participated in the Forum in 1959. I remember that Johan, our senior, helped out at the 1980 Forum which I attended. He spent a lot of time with delegates who had serious disagreements. And, eventually, fellow-delegates understood each other, and became friends. Thirty-three years later, Johan Holst was peace maker again, between Israel and the PLO. "Before and after

formal rounds", he wrote in The Delegate, "they were invited to my house for consultations and in order to conclude them in the human warmth of a private home".

**The Reunion**

It was this "human warmth of a private home" that I wanted the Youth Forum alumni to find at I Kourtí. More than a year before the reunion, I started issuing invitations from Paris, sending out hundreds of letters calling addresses from decades-old lists, with the help of Gerry Bray (Rhodesia 1960), now in New York, who also took advertisements in the International Herald Tribune, issued a newsletter and called for participation at the reunion. I knew there had been sporadic regional reunions but I wanted to offer a reunion for delegates from around the world.

Many letters came back undelivered; some alumni said they would like to but could not attend; and the 19 who could, flew in from Austria, Canada, Denmark, France, Germany, Greece, India, Israel, the Netherlands, Nigeria, Singapore, South Africa, Sweden, Turkey and the United Kingdom. Among the 19 were ambassadors, civil servants, architects, full-time homemakers, teachers, administrators, journalists, translators and businessmen.

**Planned Events**

Analogous events are now being planned for 1986: A Forum reunion, with cultural projects for the entire Balkan peninsula; theatre; music; a seminar on artificial life (a misleading appellation for an exciting new area of humanistic computing); and a seminar on the theory of translation.

Years from now, when I Kourtí will have behind it a "critical mass" of post-urban culture and, hopefully, found important in other villages, theoretical models may be devised about the viability and function of "town skipping" to join the global village. For the time being, our approach is extremely down to earth. A great deal of organization work goes into I Kourtí, our main scarce resource is time (even the preparation of the article is in competition with other things to do tonight), and we try to devise ad hoc schemes to cover costs.

When we arrive at the stage of sailing at cruising speed, we shall of course take the time to recount how we managed, materially, to bring together "many cities and many mentalities" on an island, on the way to an Ihaca.

**Sandalwood: a Natural and Cultural Heritage of the Marquesas Islands**

Sandalwood represented a valuable article of trade which attracted foreign ships to the Marquesas islands during the nineteenth century. The local sandalwood — a red wood identified by Fosberg and Sachet as Santalum mackinowense and Santalum deckeri, varieties of Santalum insulare (Fosberg and Sachet 1985: 492; Shinsuke 1967: 7) — was better known by the Marquesans as kouina or puahi.

These small trees which grow generally to three or four meters in height, sometimes to eight meters and often in clumps, are still found at an altitude of 800 to 1000 meters, in dry mountain ridge areas. For the ena/ena or Marquesans themselves, puahi was always a useful and favourite natural resource, used regularly in ritual, medicine and for beautification, but did not have the extreme scarcity value it held for early traders who travelled immense distances, often risking their lives to gather it. Nor did it have the tremendous commercial value it began to acquire at the beginning of the nineteenth century.

**Stephanie Sears** has a doctorate in Ethnology from the EHESS, Paris. She currently works for Cultural Survival, Boston, USA. The passion of the English and the Australians for tea created a need for exchange which could be met by the Chinese demand for sandalwood. The traders, mostly from America and Australia acquired in their own days a universal reputation, if not always justified, for roughness and unscrupulousness because of men, such as Captain Michael Fodger who held a chief on Raivavae as hostage in exchange for a ransom of 1.5 tons of sandalwood (Maude and Crocombe, 1962: 34). Their expeditions were of a purely commercial nature, with the need to load cargo with utmost rapidity. From
1811 on, a feverish dilapidation of Marquesan sandalwood ensued. On the island of Ua Pou, however, local political concern probably restrained trading and forest deple-tion.

The rarity of sandalwood trees today appears to the inhabitants as an important less for the environment and for Marquesan cultural resurgence. The interaction between local tradition, artistic expression and the search for a cultural identity is impeded because sculpture using sandalwood appears as a salient traditional element in Marquesan culture and has gained a new role as a source of cash. But its success at the same time endangers the last sandalwood trees.

Use of Sandalwood in the Past

In the past, sandalwood used by the Marquesans in medicine/ritual had particular value as an exorcising agent; the burning wood exuded a scented smoke detected by evil spirits which could only survive near stench. The smoke also healed ear infections (Petard, 1974: 156). Grated and mixed into coconut oil to become pani, huhe, pou pou, the latter being distinguished by Handy as being used both on the head and the body. (Handy, 1923: 292), it was used in massage, on newborn babies, the sick, the dead for embalming and for healing cuts, like the ginger called kogou in Taiohae (Nuku Hiva). Inhaling vapour from boiled sandalwood powder treated the ailment taoke, which caused a rash, a fever and temporary paralysis of hands and feet - 'a most alarming pain' in Dordillon's dictionary (Lemaitre, 1988).

In fact, the Marquesans' frequent and specialised use of sandalwood led them to distinguish different aspects of a single variety:

- The pahi kau on Nuku Hiva is a tree with white blossoms, a rough dark gray bark, a white, hard sapwood with a very fragrant, deep red heartwood;
- The pahi kau on Nuku Hiva is a tree with fragrant olive green blossoms and a light, reddish-brown heartwood;
- The pahi fiti is an ubiquitous tree on Tahuta and has thick dark brown bark with fine scoring; the sapwood is hard and white, the heartwood hard and yellow;
- The pahi avao is much like the pahi fiti except that its heartwood is very fragrant and very much in favour for rituals (Petard, 1974:156).

The Sandalwood Trade

The search for sandalwood, described by Shireneworth as a sort of gold rush, required that a captain keep secret his destination. The expression 'captive captain' used to disguise a captain's intention (Shineberg, 1967: 30). Even though competition was keen, the financial benefit justified only to a degree the risks undergone by the traders (Shineberg, 1967:136; Dodge, 1965:182). Risks of being robbed or killed, either in the native or to the sandalwood, were more or less the same throughout the Pacific, though Melanesia seems to have been more dangerous than the Marquesas Islands.

Westerners, however, tried to avoid conflict as much as possible, for they needed the help of the natives to uproot the trees, cut, carry and clean the wood, particularly as its names vary. The whole process forced them to search for it, further and further towards the interior of the islands. Traders travelled to Fiji (1805 to 1820), then Hawaii (1811 to 1828) and the Marquesas (1811 to circa 1820), to Erromangan and New Hebrews (towards the end of the 1820s), New Caledonia, Pine Island and the Loyalty Islands (in the 1840s). Espiritu Santo (in the 1850s); the trade continued in Melanesia until about 1865 (Shineberg, 1967: 7). The trading history of Marquesan sandalwood began when Captain W. Rogers arrived in the archipelago in 1811 on the ship Hunter. Edward Roberts who wrote in Ua Pou (Robarts, 1823: 333) on 7 to 106, mentioned in his journal that sandalwood grew in great quantities on Nuku Hiva and that he regretted not having its commercial value when living there (Robarts, 1974: 247). Glass beads and other such trinkets could not be exchanged for sandalwood in the Marquesas as they were in Melanesian islands such as Erromango and New Caledonia. Axes, knives, red cloth, fish-hooks, tobacco, guns and powder were the trade items of choice, but the greatest demand in the Marquesas was for sperm whale's teeth (Pritchard, 1866:332). Guns at first offered little in return.

Problems occurred when Marquesans realized that Capt. Rogers was trying to trick them with ivory carved in the shape of sperm whale teeth. Even without pretext of this kind, other conflicts and casualties occurred: four sailors of the 'Pennsylvania Packet' were killed in 1812; Camille de Roquefeuill mentions the incident when he was almost hit by a Marquesan club during an exchange of sandalwood for guns (Roquefeuill, 1865: 289-290). Nonetheless, for a time, the trade proceeded at a brisk pace and the American commander noted that in 1816 without ten large sperm whale teeth, he could fill a 30 ton ship (Porter, 1922: 22). This trade indicates the extremely high demand for sandalwood on the Marquesas on whole teeth as ornaments (hei or tahi) worn by chiefs or hau'ula (1842 members of chiefly families) and not the low value of sandalwood.

The British ship 'Seringapatam', captured by Porter during the British-American war known in the United States as the 'War of 1812' was recaptured in 1814 by the seamen on board and taken to Australia where news of the Marquesan sandalwood was spread. The course of the year 1815, five ships would go to the Marquesas for sandalwood, among them, the first voyage of the great merchant of the early 19th century, William Campbell. On his third trip to the Marquesas, he was still able to collect over 50 tons of the wood (Mauade and Crocombe, 1962: 48). But the trade was already in a decline in the Marquesas when the French for merchant Camille de Roquefeuill stayed at Nuku Hiva between December 1817 and February 1818. He met two Americas, one named Ross who had been residing on the island for several years as negotiator in sandalwood between the natives and the trading ships, and C. Person from Boston, who was trying to do the same, but was left to carry the archipelago after the Marquesans stole his trading supply of guns and powder (Person then went on to Fiji where he attempted the same trade). Roquefeuill also met Captain Bowle who in five months, succeeded in collecting 60 tons of sandalwood throughout the archipelago. In a month, Roquefeuill himself loaded only ten to twelve casks of sandalwood (Roquefeuill, 1823: 292). The terms of trade by that time were 500 to 700 pounds of wood for a gun or a 100 pounds for two and a half pounds of gun powder or one sperm whale tooth (Roquefeuill, 1823: 287).

The trade trickled on and in 1832 the missionary W. Alexander met the Englishman Morris, who had been on Nuku Hiva for six years as a sandalwood dealer (Alexander, 1914:117). Upon his arrival on the Venus in 1838, Abel du Petit-Thouars found only remnants of the sandalwood forest. He noted with a certain chagrin that neither traders nor Marquesans thought of protecting the forests in view of future trade (du Petit-Thouars, 1841: 364-365). In fact, Roquefeuill had mentioned that a tapu had been laid on sandalwood on the island of Ua Pou (Robarts, 1823: 333). In this case, the outlawed trade may, as suggested by Goldman (Goldman, 1970: 135), have been the result of the greater clan's authority and centralization, with a consequent sanctity of the land and trees owned by the chief. The chieft or king would thus have prevented the disruptive effect of trade for firearms on tribal unification. Though sandalwood was regulated in medicine and as a cosmetic by Marquesans before Western trade, they probably did not need great quantities of it. But once introduced, trade was passionately indulged in on both sides and most chiefs ignored the destruction of sandalwood forests. This was the case throughout the Pacific, particularly in Hawaii.

Recent Years

Although the Marquesans' over-all efforts in cultural renewal of these past fifteen years have been successful (Sears, 1993), today they are thwarted in the traditional use of native sandalwood through lack of the raw material. By its rarity, the fragrant wood has acquired added value as a symbol of the groups, whose members are the Marquesans in the past; as a result, it has caused destructive bittersomeness among some Marquesans and probably to those who want to protect the remaining wood and those wanting to use it at any cost.

One Marquesan report that until the 1930s, red sandalwood could still be found in abundance on Tahuta and that large pieces were still available to everyone (that is, for local consumption and small scale commerce). The wood was usually gathered while hunting feral pig, a favourite activity in the Marquesas.

Sandalwood sailors working on shuttle schooners were in the habit of asking their families to find them some wood which could then be sold in Tahiti. Roberts noted in his journal that sandalwood in Nuku Hiva was the best and it does appear today that Nuku Hiva has suffered more from the depletion of sandalwood than other islands. From 1958 to 1987, anyone wanting to cut down a sandal-
Wood tree was required to obtain an authorization by the forestry service. But in 1937 only dead sandalwood was distributed. Since 1989, even this limited distribution has ceased, since poachers have continued to uproot trees in the uninhabited areas of the islands, jeopardizing the survival of the few remaining, (trees today have an average diameter of 8 to 16 inches, more rarely, up to 35 inches).

In addition to the uses previously mentioned, round bowls or ko'oka were made from logs in the 1930s. The small quantities of sandalwood still procured are used in traditional medicine, to make perfumed coconut oil (puahi panu) an year round (Sears, 1993:136), for necklaces from shavings worn at dancing performances; or sold to Marquesans and tourists, (a sandalwood necklace is a symbol of wealth and prestige); and for little curios such as tikau statuettes; sometimes pieces are sent to Tahiti, to a parent or a friend, usually for commercial purposes.

Contemporary Value

In the present situation, three main factors will contribute to the final destruction of Marquesan sandalwood if not checked:

- inadequate preservation of the remaining trees;
- poaching by local inhabitants;
- the absence of specific technical research on environmental conditions for the re-introduction of Marquesan sandalwood in its natural surrounding.

Its disappearance would not only impoverish the natural environment, but also affect the content of a restored and reinvented Marquesan tradition.

The re-conquering of tradition, in the sense in which it is meant by Hanson, as 'self-conscious identity' (Hanson, 1990: 3), has brought sculpture and carving to the forefront in the Marquesas. This art has become both a major vehicle of cultural identity and an aid to economic autonomy in contemporary Marquesan society. Tourism has had a determining role in the success of sculpture in both cultural and economic aspects, yet it still has a local functional use, essentially in the form of containers, as wedding gifts, sometimes as furniture (church chairs, religious statue), ordered by Catholic priests in situ or in Tahiti, or again as part of public buildings (posts, doors).

The majority of sculptors keep to the Marquesan style of the past illustrated in books such as 'Tattooing in the Marquesas' by Willowes Handy, (a Frenchman living on Fatu Hiva for several years) made several photocopied images of the drawings in this particular book and distributed them to local sculptors to help them regain knowledge of the traditional pattern; Karl von der Steinen's 'The Marquesaner and Their Kunst' is little used by Marquesans only because this is harder to obtain. Contrary to the foreign influences found in contemporary Marquesan sculpture, noted by Philip J.C. Dark, some of which is Marquesan (Dark, 1990: 260), sculpture in the Marquesas is mostly typically local in style owing both to help from the books and to the distinctiveness of traditional art and its complexity which offers diversity to the artists. Foreign influence is usually limited to a few Christian motifs.

Sculptors belong traditionally to the prestigious category of Marquesan specialists - an important category found throughout Polynesia - called tuhuka in the North, tuhuna in the South who controlled all domains of the past. Some talented sculptors are still recognized by that term today, (tuhuka ho' a tiki). They are unquestionably main vectors of a recovered Marquesan identity after a long and painful epoch of epidemics, intensified warfare, alcoholism and a general loss of motivation in life with the disappearance of a social structure, the Marquesan population is reduced from estimated 50,000 to 100,000 at the end of the eighteenth century to a mere 2,075 in 1929. This dramatic depopulation is considered the worst example in French Polynesia with Tubuai in the Australias. Population today is around 7,388. Sculptors are numerous because sculpture has been found to be an efficient way of earning money ever since tourists have begun to visit the Marquesas. Sculptors usually learn their skills from someone in their family or from a friend, or become apprentices at the CETAD (Centre d'Education aux Technologies Appropriées au Développement rural). But here the student sculptor earns a diploma as an accomplished artisan rather than as an artist. Wood carving is also favoured by Marquesans because it allows the artist to work at home, which besides the benefit of working in familiar surroundings, has the practical advantage of permitting attention to domestic chores.

Among woods used for carving, some of which is sandalwood, and Cordia cubifolia (Carite cubifolia) are far more common than sandalwood. Much of the sculpture made from mōtu or tō is destined to tourists, and in some cases possibly the repetitive production of the same type and size in fairly large quantities; other woods such as Cedar (Ondreia aodio) and American mahogany (Swietenia macrophylla) have been imported to add to the wood resources for sculpture and cabinet work but are still more rarely available. Sandalwood (puahi) is the rarest and allows for no such repetition in the manufacture of objects as mōtu or tō. Scuplture made from puahi is necessarily small; in 1988 the author had to resign herself to a tiki statue 15 centimetres in height and one hairpin made from a single piece of sandalwood. The sculptor had only the one piece and he made the most of it by carefully carving out the two objects. The precious quality of sandalwood owing to its scarcity adds a more personal dimension to the relation between client and sculptor and a greater value to the finished object. The artist knows that he is expending a rare raw material which will be hard to replace, while the client understands that the sculptor must be partially skilful to avoid spoiling the precious wood. Both know that the exchange is not likely to be repeated. This is particularly true for carving but less so for the sale of sandalwood scented coconut and necklaces.

Considering the great attraction of sandalwood objects for both inhabitants and tourists, its rarity is felt increasingly as a distressing limitation by sculptors. They are frustrated in both the fulfillment of their cultural tradition and in their current economic interest.

Accordingly, some Marquesans prefer to continue cutting sandalwood illegally, feeling that its rarity is not their fault and that the wood is theirs to use as long as some is left. Others have a more positive approach and think only to protect the last of their heritage in the hope that organised reforestation will replace the loss. Public sentiment in this case, is not only against past destruction (which is perhaps seen by this group as the joint fault of Westerners and Marquesans at the time of sandalwood trade) but also against poachers. This last seems to be the opinion of a majority of Marquesans. But the existence of even a minority of poachers can make irreversible damage considering the few trees left; if sculpture does serve in the case of the Marquesas to prove historical continuity and cohesion' (Kniech, 1990:160), it also acts, through the need for sandalwood, to create a rift in the population between the poachers and the non-poachers. However, reforestation with pine (Pinus caribea) an 'outside' tree, which has been extensive on Nuku Hiva and Hiva Oa, has irritated both sides of the rift. Reforestation with pine is seen as one more foreign intrusion, detrimental to their native trees since the pine is said to impoverish the soil. There is persistent antagonism between the governmental authorities managing forests and sandalwood poachers in which economic considerations are strongly linked with a cultural possessiveness of natural resources. Poachers regard sandalwood scarcity as the fault of for-
Sandalwood: A Natural and Cultural Heritage of the Marquesas Islands

Margaris in cooperation with Mrs Emmanuela Dousi. As you may see from the interview with Mr. Ota, Governor of Okinawa, carried out in the issue of the journal, an INSULA section is expected to be set up in Okinawa, main island of the Ryu Kyu Archipelago.

Two important meetings have also been put on schedule for INSULA during the General Assembly. The first is the "International Conference on Social, Cultural and Economic Development of Insular Territories", to be held in Minorca (Balcaric Islands) in late 1996 and the second is the "World Conference on Man and Ocean Resources" to be held in 1997. The venue of this second conference is still to be decided.

Project Proposals

INSULA has been the initiator of the following project proposals submitted to the European Union Commission:

EURO-INSULA – European Network for Sustainable Tourism Development in Islands and Coastal Zones.

HYDRO-INSULA – Mediterranean Network on Water Management, Sewage Systems and Water Re-use on Islands and Coastal Zones.

MED-INSULA – Training Programme for Journalists from Mediterranean Islands and Coastal Zones working with local media (press, radio, television). The Training Programme aims at enhancing the journalists' professional skills in the areas of cultural and natural heritage.

TERMINALS – project supported by the European Programme ADAPT. The project brings together partners from Spain, Italy and France and aims at developing new professional profiles and innovative initiatives in sensitive areas such as the environment, tourism, industrial design etc., through a permanent on-line distance learning system based on telematics technologies.


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UNESCO's Home Page

Good news for INTERNET navigators! UNESCO's Home Page with information about its activities, programmes, data bases, publications and events is now available on: http://WWW.unesco.org.

As regards the Man and the Biosphere Programme (MAB), its home page is accessible on the following address: http://WWW.unesco.org: 80/mab/the mabnet.html

Improvements in the Network of Biosphere Reserves

THE MAB programme is improving its international network of Biosphere Reserves.

INTEL, the huge US corporation has recently made a donation to MAB via Conservation International, towards the provision of computer and networking equipment for some 20 Biosphere Reserves located in developing countries, of which several are islands.

Appropriate training to use the telematics system will be provided to the managers of selected Biosphere Reserves.

The system will thus be pilot tested and will later evolve into the electronic networking of 300 Biosphere Reserves throughout the world.

Research on Islands

MAB is also taking stock of its more than two decades of multi-disciplinary research on islands. INSULA is in charge of compiling a critical appraisal of the work done and its future perspectives. A timely publication indeed!

Other UNESCO sectors are also active in areas of concern to islands. The debate on sustainable tourism and cultural heritage is on the agenda of the sector of Culture, with the preparation of important international round-tables and expert meetings for 1996.

The Tourism Issue

All UNESCO's sectors will be more and more active through a transdisciplinary approach in the several aspects of concern to the tourism issue.

Mr. Federico Mayor, UNESCO's Director General, will chair a round-table on this topic at the International Tourism Fair, to be held in early 1996 in Milan, Italy.

Small Island States and Sustainable Development: Strategies, Issues and Experience. In Environmental Planning Issues, No. 8, September 1995

Stephen Bass and Barry Dalal-Clayton.

International Institute for Educational Planning (IIEP), Environmental Planning Group, International Institute for Environment and Development, 5, Endsleigh St., London WC 1H 6DL, UK.

UNCED, Agenda 21 and, of course the UN Global Conference on Sustainable Development of Small Developing Island States have undoubtedly opened a Pandora's box as regards small island states and their sustainable development.

Evidently, small islands and island states have been too many, a particularly attractive topic resulting in the production of a vast array of literature in recent years on several intriguing island issues.

A significant step was made from the widespread romantic or Hard-Science's approach. Real island problems are now taking centre stage, and islands are not being considered merely in the traditional romantic setting.

Among a great variety of more publications dealing with island topics, I was delighted to go through the IIEP brochure by Bass and Dalal-Clayton, a concise synthesis of the main areas of concern to islands, to which decision-makers should pay attention.

While it is not possible for islands to create new resource frontiers, as the authors state in one of the first chapters, the challenge for islands is to build up policies, institutional and technical frameworks for a 'Post frontier' development. The concept is original and the ways to put it in practice described. However the capital and the human resources needed are unfortunately not given due importance, thereby neglecting an important dimension in island development.

Foreign aid and its contradictory consequences are well analysed as well as the dependency conditions from the former colonial powers. The reader however, might be struck by the very few options - if any - left for concrete island sustainable development policies. A pessimistic scenario indeed.

Some hope would seem to stem, according to the authors, from traditional island practices, a cultural heritage of resilience and subsistence capabilities left over by pre-colonial societies.

L'insularité – Thématique et représentations. Actes du colloque international de Saint-Denis de la Réunion, Avril 1992

Edited by Jean-Claude Marimoutou and Jean-Michel Racault.

Centre de Recherches Littéraires et Historiques


What is the deep meaning of islandness, what are its inherent themes and its representations through the centuries for islanders, writers, travellers, philosophers, clerks, human and social scientists?

Such and many other meaningful questions for the contemporary islanders and the island academic world are addressed within this volume by the scholars brought together by the University of the Île de Réunion in the Indian Ocean on the occasion of a recently held international symposium in an attempt to explore, without intending to be exhaustive, the many meanings of the islandness concept.

The volume consists of eight thematic chapters, presenting multiple disciplinary approaches and viewpoints, from...
Book Reviews

Gozo and its Culture
Edited by Lino Briguglio and Joseph Bezzina.
Published by Formatek Ltd, Malta.
ISBN 99099-49-02-6

The history of human settlement in Gozo goes back seven thousand years. It could be said that Gozitan culture started to develop with the arrival of the first settlers from nearby Sicily, and reached a zenith during the Temple period as evidenced by the monumental Ġgantija temples. Subsequent historical phases left their mark on the Gozitan way of life, and this has led to the development of contemporary Gozitan culture with its own distinct identity and character.

The purpose of this book is to present, in one volume, a number of papers on Gozitan culture, originally presented during the 1995 Löwenbrau seminar “Gozo and its Culture” held at L-Impjarr Hotel, Gozo, on 3 March 1995. The themes of the papers can be grouped into three:

Island Tourism
Management, Principles and Practices
Edited by M.V. Conlin and T. Baum.
Published by John Wiley and Sons, Sussex, U.K.
ISBN 0471 955566

The special problems of islands and opportunities presented by island tourism is a major area of interest for both tourism academics and professionals, prompting much discussion and debate. This is the first book to focus on how management and organizational issues affect small islands and their tourism industries.

The book contains 20 papers, the first ten dealing with management principles and the other ten dealing with case studies. The issues covered include marketing of tourism, competitiveness, sustainability, cultural tourism, private and public sector partnerships, human resources, managing demand fluctuations and redevelopment of mature resorts. The book is very attractively presented, and the diversity of inter-related themes it covers make it useful reading for tourism researchers, students and practitioners.

Small Island States and their Economic Vulnerability
Lino Briguglio
In World Development Vol. 23 (9) September 1995.
Published by Pergamon Press.

Many small island states face special disadvantages associated with small size, insularity, remoteness and proneness to natural disasters. These factors render the economies of these states so vulnerable to forces outside their control – a condition which sometimes threatens their very economic viability. The GNP per capita often hides this reality. In this paper Briguglio discusses the major vulnerabilities of small island states and attempts to quantify them in the form of an index.

Letters to the Editor

Dear Dr. d'Alaya

I am writing to express my deep appreciation for the support and cooperation you have given the Prefecture of Okinawa.

Mr. Masahide Ota (centre) during an informal gathering at the Lanzarote conference

A Plea to Avoid the Destruction of a Rare Natural Habitat in Rhodes

Dear Editor,

Your readers will perhaps remember the article published in insula (December 1993), entitled 'The Rodus, his-fact, concerning the projects PHILIA and Rodosman-environment' for the protection and the 'sustainable' development of an important natural area located in the south-west of the Greek island of Rhodes (and particularly of the Apokalakkia's maritime dunes area).

The characteristics of Apokalakkia Bay (flora of the Mediterranean, dunes, large sedentary fauna and a number protected species such as Caretta caretta, etc.), make it a priority site of European interest (according to the E.U. Directive 92/43-enclosure 1). This requires protection a careful use (environment impact assessment before any industrial settlement, E.U. Dir. 85/397).

Now, two years after the article was written, an interesting development is taking place in relation to the island. A consortium formed by the experts of the Goulendris Foundation and those of the Helenic Centre for Biotopos and Igrotopos has proposed to the Greek Ministry of Environment to protect actively and to include in the U.E. system NATURA 2000’s wide part of the south-west of Rhodes, including the coastal area from Papagiorgis Bay to Apokalakkia Bay. It really seems to be an appropriate and important decision, considering also that the sand dune inventory of Europe, by the European Union for Coastal Conservation, mentions the dunes of Apokalakkia Bay amongst the major sites.

Unfortunately someone does not agree with this. The Public Power Company (DEE) of Rhodes has chosen as a spot – Fourni, Apokalakkia – right in that area, to build another large thermoelectrical power plant for the island. Regrett without saying that thermo-electrical power plants are not exactly recommended for the small Mediterranean islands like Rhodes.

Masahide Ota
Governor Okinawa Prefecture
May 15, 1995

The recent World Conference on Sustainable Tourism held in Lanzarote in the Canary Islands was invaluable for us. It gave us the opportunity to discuss various issues and to present measures taken by Okinawa Prefecture in promoting sustainable tourism.

Please extend my respect and appreciation to all those who have been involved in planning and preparing the conference over the past year. Their unceasing efforts afforded myself and others the opportunity to hear many presentations. It was a meaningful and fruitful experience.

I expect future Okinawa policies to reflect the knowledge I harvested from this conference. To this end, I hope to count on your continued advice and support.

With best wishes for the continued health of all.

Masahide Ota
Governor Okinawa Prefecture
May 15, 1995
Letters to the Editor

It must be added here that the place chosen by the DEI is only the fourth (out of five) in the preliminary study made by an expert of the Ministry of Environment for the possible location of the above mentioned place. One wonders therefore, why the DEI chose this site.

Moreover, the plant will require asphalt roads, a port (for oil tankers), etc. These constructions and infrastructures will probably be more expensive there than in every other site considered (due to, amongst other things, the distance of the above mentioned site from Rhodes). Again, it is pertinent to ask why does DEI insist on building the plant there.

An important issue in this regard is the cooling system. Will the DEI cool the engine with sea water, returning hot water to the sea? What about sea life? And what about impact on other wild life? This is the wildest coastal area in Rhodes, with certain specific characteristics, and the last one with a semi-preserved coastal dunes' chord. No matter how cautious the developers are, the ecological damage will be unavoidable. There will be night lights, noise, smoke, changes in water temperature and possible oil leaks from a ship or the plant itself.

Why there is a need to construct a thermoelectrical power plant there, considering too that a large part of the island has already been so exploited that it has lost many of its natural characteristics?

Statements against the location of the power plant have been made by the major and the inhabitants of Apollakia and Monolithos (the two villages to whom the Fourni area belongs) and they have been published by local newspapers. Has DEI at least considered the objections raised in these statements? Will it be necessary to apply to the competent Courts in Greece and in Brussels to have an authoritative evaluation?

We have already asked individual experts and organizations to support our defence of Fourni. Some articles have already been published in the local press on this matter. Now, through your review, we wish to ask the Greek Minister of Environment, Mr. Costas Laliotis, for cooperation in order to avoid the destruction of a rare natural habitat, so important for its beauty as well as for the ecological balance of the Mediterranean. We trust in Mr. Laliotis sensibility and authoritative. Thank you.

Paris Paphetheodorou
President of the Circle for the Protection of the Environment of Rhodes, Greece

Letter from an Egyptian Girl .......... and a reply by Dr. d’Ayala

Dear Hanan,

It was a great pleasure to receive your letter and those of your friend Ezrat and Manouer.

You asked me how you can build an island. “This is a very good question” I said to myself and, I started thinking. Little by little, I started building my own island, not too cold, not too hot, not too big, not too small, with a blue sea and blue horizon.

There, I would like to live with children like you and, everyday when the sun goes down, I would tell them the story of a faraway island. The number of islands is infinite – as many as the stars that God the Merciful spread out in the sky.

I would perhaps start with that island encountered by Sinbad the sailor in his journeys. This island was actually an enormous fish asleep in the sea. It was so old and had been sleeping for so long that bushes, flowers and palm trees had grown on its back. As you can see, the most beautiful islands are those which are built in our minds. I therefore invite you to imagine and build your own island and to write to me again.

I promise that I shall publish, on our journal insula, the most beautiful description that you and your friends will build, so that other children in the world can read it and in turn build their own island.

I am sending you copies of our Journal.

Best wishes with your work and good health,

Your friend

Pier Giovanni d’Ayala

Announcements

International Experts Seminar on

CULTURE, TOURISM AND DEVELOPMENT: THE CHALLENGES OF THE 21ST CENTURY

13-15 March 1996

Organized by UNESCO’s sector of Culture.

Further information can be obtained from Mr. Hervé Barré, Office of the Assistant Director-General for Culture, UNESCO, 1 rue Miollis, 75732 Paris cedex 15, France. Tel: (33-1) 4568 4289 Fax: (33-1) 4273 0401

International Conference on

SOCIAL, CULTURAL AND ECONOMIC SUSTAINABLE DEVELOPMENT OF INSULAR TERRITORIES

The following issues will be addressed:

- Telematics applications for islands services
- The cultural and natural heritage: A challenge to sustainable tourism
- Water and waste management
- Renewable energies
- Economic diversification for a global sustainable development

The Conference is organized by the Insular Council of Minorca, Balearic Islands, Spain, the Spanish authorities and INSULA in cooperation with UNESCO and other relevant international organizations.

Further information can be obtained from INSULA, c/o Division of Ecological Sciences, 1 rue Miollis, 75732 Paris cedex 15, France. Tel: (33-1) 4568 4056 Fax: (33-1) 4065 9897

Regional Seminar

INTEGRATED WATER RESOURCES MANAGEMENT IN THE CARIBBEAN ISLANDS

9-12 April or 15-18 April 1996
Port of Spain, Trinidad, Trinidad and Tobago.

Organized by the Economic Development Institute of the World Bank and the Government of Trinidad and Tobago in cooperation with INSULA.

Further information can be obtained from Mr. François-Marie Paonori, Water Resources, Environment and Natural Resources Division, Economic Development Institute, The World Bank, 1818 H Street, N.W., Washington, D.C. 20433, USA. Tel: (1) 202 - 473 0265, Fax: (1) 202 - 674 0978.
Announcements

**International Conference**

**INTEGRATING ECONOMIC AND ENVIRONMENTAL PLANNING IN ISLANDS AND SMALL STATES**

14 - 16 March 1996, Valletta, Malta

Organised by the Islands and Small States Institute Foundation for International Studies, Malta in collaboration with the Directorate of the Planning Authority, Malta.

Further information can be obtained from Ms. Maryrose Vella, Secretary, Islands and Small States Institute, Foundation for International Studies, Valletta, Malta.

Tel: (356) 248218, 234121, Fax: (356) 230551

**International Conference on Human Ecology**

**ON THE NORTHERN SHORES AND ISLANDS: HUMAN WELL-BEING AND ENVIRONMENTAL CHANGES**

Hotel Laholmen, Strömstad, Sweden

August 16-18, 1996

Organised by the Nordic Society of Human Ecology

More information can be obtained from: Richard Langlaas, Chairman of the Organising Committee, Tel: (46) 31773 4933 or Guy Heyden, UNESCO-Haslum Ektekstus Chairholder, Fax: (46) 3182 6905

**WORLD CONFERENCE ON MAN AND THE OCEAN RESOURCES**

to be organised by INSULA in 1997

Venue to be Decided

INSULA will seek collaboration with UNESCO's Intergovernmental Oceanographic Commission (IOC) and other relevant international organisations in the convening of this conference.

Further information can be obtained from: INSULA, c/o Division of Ecological Sciences, 1 rue Molliès, 75732 Paris cedex 15, France.

Tel: (33-1) 4568 4056
Fax: (33-1) 4065 9867

The editors of the journal wish to dedicate one of the forthcoming issues of *insula* to the prevention, mitigation and control of natural hazards (earthquakes, volcanoes, hurricanes etc.) and man-made disasters (destruction of insular and coastal environments such as coral reefs, sand dunes, deforestation, wildfires, coastal flooding industrial, chemical and nuclear risks etc...). As usual this issue will focus on local experiences and innovative solutions.

We are calling for papers on these themes, to reach INSULA's Secretariat by April 15, 1996. For further details, please see the "call for papers and instructions to the authors" in this issue or contact us at our address: INSULA c/o MAB - UNESCO, 1 rue Molliès, 75732 Paris, France.

Tel: (33-1) 4568 4056; Fax: (33-1) 4065 9897.

**Join and Support INSULA**

The International Scientific Council for Island Development (INSULA) was formally created in November 1989, on the occasion of the MAB island meeting in Brest. It is an international non-governmental organization which aims to promote the sustainable development of small islands in all regions of the world.

The Council's objectives are:

- to encourage technical, scientific and cultural cooperation;
- to assist island communities in integrated planning;
- to contribute to the protection of island environments; and
- to promote the development of the islands' resources, with a special interest in island cultures and human resources development.

Three main lines of action have been proposed within INSULA:

1. **Management of island resources.** This includes attention to administrative procedures (including organization and systems definition, operation and formation); natural resources (terrestrial, coastal and marine, including identification, management, conservation and training); cultural resources (identification of built and non-built cultural heritage and non-material cultural heritage such as tradition and music); human resources (identification of potentialities and needs, educational strategies and multisectoral training).

2. **Technical assistance.** This is envisaged in such fields as fisheries, agriculture, forests, tourism, transport and communications, parks and natural reserves, appropriate technologies, renewable energy sources, management and treatment of water and waste; management of coastal zones; perception and prevention of natural and man-induced risks and mitigation of adverse effects on populations and the environment; nutrition and health; social and economic development.

3. **Strategies for Sustainable Development.** This line of action covers definition and diffusion of principles and models for integrated development of island environments; field studies and analyses for facilitating procedures for optimal use of island resources, and evaluation of strategies promoting sustainable development, applied to the special conditions of small individual islands or groups of adjacent islands.

The activity of INSULA will be essentially catalytic, designed to promote the application of multidisciplinary scientific research and technology and innovations in education, culture and communications to the specificities of small island situations.

The Council organizes seminars and conferences at national, regional and international levels and promotes a direct dialogue with and between the authorities and the populations of different islands and island groups. It also promotes cooperation and exchange of experience and expertise between islands of a given region as well as at the inter-regional level, particularly through the network of specialists and projects of the MAB Programme of UNESCO.

Through its international and multidisciplinary network of experts and researchers, INSULA contributes towards balanced, sustainable development initiatives undertaken by island authorities. To this end, INSULA will cooperate with national, regional and international organizations that are involved in programmes of island development.

INSULA also publishes its own journal, *insula*, which specialises on island affairs. Every issue contains regular features and a dossier on an important aspect of island development.

For individual and group membership in INSULA, see overleaf.
insula, the International Journal of Island Affairs, is published by the International Scientific Council for Islands Development. The aim of the journal is to create a worldwide forum for all those who consider islands as an important part of mankind's heritage deserving major attention. Contributors can use the journal to share news and views about the islands of the world from a variety of perspectives, including the following:

**Environment**
- Environmental management
- Natural resources conservation
- Water
- Liquid and solid waste management
- Prevention of natural hazards

**Population**
- Demographic trends
- Health
- Human geography, human resources,
- Education and training
- Culture
- Traditional knowledge

**Sustainable development**
- General economics
- Tourism and transport
- Agriculture and aquaculture
- Fishing and ocean resources
- Bio-technologies
- Industry and mining
- Applied communication technologies
- Renewable energy
- International politics and policies

The journal will publish articles and communications that provide new insights and understanding about the subjects mentioned above and invites authors to submit their studies and comments. Guidance of style can be obtained from the editorial office at the address appearing below.

**Application for Membership of INSULA**

I wish to become member of INSULA, the International Scientific Council for Island Development.

Surname: ___________________________ First Name: ___________________________
Institution: _________________________
Address: ____________________________ e-mail: ___________________________
City: _______________________________ Country: ___________________________
Telephone: __________________________
Annual membership:
- Individual 400 French Francs
- Institution 1200 French Francs
- Supporting members 2000 French Francs (or more)

I am paying the amount of ___________________________ by
- □ Cheque  □ American Express
- □ Master Card  □ Visa
- □ Credit card number: ___________________________

Cheques are to be made in French Francs payable to "INSULA"
Expiry date: ___________________________

Signature: ___________________________ Date: ___________________________

**INSULA**, c/o MAB - UNESCO, 1, rue Miollis, 75732 Paris cedex 15, France
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