

## Importance of Marine Tourism and Environmental Protection: in Some Selected Indian Ocean Islands

R. Sathiendrakumar  
Murdoch University, Western Australia Wa 6150, Australia

**Abstract:** Marine tourism activities may have a parasitic relationship with the environment, in which resource are destroyed relentlessly for economic benefits, if not managed in a sustainable manner. Therefore environmental protection is necessary in order prevent any irreversible environmental degradation that may arise from marine tourism. Such degradation includes sedimentation over coral organisms by sheer human physical impact, beach erosion, mangrove clearance etc. This article consider the consequences of marine tourism form island states such as Seychelles, Mauritius, Madagascar and the Maldives and the importance of environmental management for sustainable marine tourism development. Finally the article consider the importance of monitoring the marine tourism environment using the Limits of Acceptable Change (LAC) approach as opposed to the 'carrying capacity' analysis.

**Key Words:** Marine Tourism, Environmental Protection, Parasitic Relationship

### Introduction

International tourism is an important invisible export to many countries because these countries face considerable barriers to developing their trade in manufacturing and merchandising goods. The other contributions of international tourism to the domestic economy are as follows:

- To the balance of payments
- Adding to domestic employment and income
- Adding to taxes and other government revenues

But tourism is a risky industry because the sale of the product to international tourists requires them to visit these countries. The demand for tourism depends on the political and social stability of the host country. Also the assets used by the tourist industry is relatively specific to each country. Therefore, a decline in tourism demand will result in large sunk costs. With all these problems, still international tourism contributes to the economic growth of the island economies in the Indian Ocean. The island countries that are considered in this paper include the Republic of Maldives, Mauritius, Madagascar and the Seychelles.

The demand for international tourism is predicted to increase in the future. The reason for the growth in international tourism include:

- Increase in the leisure time due to growth in modern technology, coupled with paid vacations in the developed nations.
- Rise in real per capita income and the fall in real price of air transport (Sathiendrakumar and Tisdell, 1989).
- The relatively high-income elasticity of travel expenditure.
- Spread of education, which stimulates greater interest in foreign places and culture.

**Extent to which Tourism is Ocean Based:** Many international tourists are attracted to their host country due to environmental (ocean beaches), historic or cultural reasons. In the island economies of the Indian

Ocean, the environmental attractions are marine environment and they are the major tourist attractions rather than their historical or cultural features.

**Seychelles:** Seychelles archipelago is located in the Indian Ocean, about 1,600km. from the cost of Kenya, north of Madagascar. The total land area of its 100 or so islands is about 443 square km. Because of its small size, limited industrial resource-base and infertile soil, the economy is largely dependent on tourism. Tourism is said to generate about 30 to 35 percent of GDP and is the major source of foreign exchange earnings.

Tourism in the Seychelles is entirely ocean-based and tourism development is based on the islands' natural beauty, year-round sunshine and its sandy beaches. The tourism slogan is "unique by a thousand miles".

**Mauritius:** Mauritius is situated about 1000km., off the cost of Madagascar. Mauritian tourism is based on its attractive natural resources: white sandy beaches and translucent lagoon couples with the sunshine. Tourism is its third major foreign exchange-earner after sugar and manufacturing. The direct contribution tourism makes to GDP is quite small.

At present, tourism in Mauritius is essentially based on beach resorts. To protect the fragile beach environment, the aim of the government should be to keep the beaches free of high-rise hotels. Also, the lagoons along the beaches should be protected from the destruction of their sea shells and marine life.

**Madagascar:** Madagascar is an island continent with an area of about 225,000 square miles and a cost-line of 2,700 miles. The beach holidays are taken in Nosy Be, located in the virgin island cost in the north and on the beaches of Ile Ste Marie. Here the best months for holidays are July, August and September. At present about 40 to 50 percent of the country's visitors are to the coves and reefs of Ile Ste Marie and Nosy Be. Thus marine-based tourism accounts for a share of tourism

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in Madagascar. Compared to Seychelles and Mauritius, tourism in Madagascar is quite small.

**The Republic of Maldives:** The Republic of Maldives is an archipelago consisting of 26 coral atolls situated in the Indian Ocean, south west of India and Sri Lanka. The 26 coral atolls contain about 1,190 very small islands of which only about 200 are inhabited. Tourism is the largest (gross) earner of foreign exchange of any industry in the Maldives (Sathiendrakumar and Tisdell, 1985).

In the Maldives, international tourism is synonymous with 'resort islands'. The attraction of the Maldives as a tourist destination is limited entirely to the sun and sand. White beaches and clear waters full of multi-coloured coral reefs with an abundance of marine life are the main attraction to tourists.

Tourism in the Maldives is based on the principle of isolation of tourists from the bulk of the indigenous population (Sathiendrakumar and Tisdell, 1985). This isolation is practical because of the availability of a large number of uninhabited islands that can be developed into tourist resorts.

Tourists and sometimes resort operators pollute the resort islands, though not on a large scale. However, the dumping of waste material by the tourist and resort operators can assume greater proportion and become a threat to the marine environment of the Maldives. Disposal of sewage from tourist resorts into the sea can be quite damaging to corals. If there were a decline in the quality of marine environment around the resort areas, it would deter those tourists who come to the Maldives for scuba diving and those who come to enjoy its scenic beauty.

### **Environmental Management for Sustainable**

**Tourism:** Since the major tourist attraction in these areas is the marine environment. The relationship between external agents (tourists and providers of tourism resources) and the local resources (local population and local environment) determines the relationship between tourism development and the environment (Sathiendrakumar, 1998b). In many instances the power of external agents outweigh those of local resources (local population and natural environment).

Three groups of agents are important for their actions on the environmental system of tourism areas namely:

- The market
- The local resident
- The government

"The success in attracting tourists to enjoy and support significant local features, unfortunately, carries the seed of its own distraction" (Smith, 1985:5). That is, there is widely believed to be an adverse relationship between the extent of tourism in an area and the environmental quality (Pigram, 1980, Tangi, 1977, Budowski, 1976). This relationship may only be present, however, once the level of tourism exceeds some threshold quantity. Therefore, the amount of tourism, at least beyond a threshold, does have environmental consequences.

Since marine-based tourism is based on the environment, the market failure aspects such as,

externality, common property and public good aspects of the environment have to be taken into account in the management and planning of marine-based tourism. It is important to internalise all externalities and prevent any irreversible damage to the environment (Sathiendrakumar, 1998a). That is, sustained tourism growth will depend on government action to sustain efficient allocation of resources. In the absence of such actions by the government, the market allocation on its own will not result in the maximisation of the present value of net benefits to the members of the public in the recipient country.

**Monitoring the Tourism Environment:** Monitoring of the environment is necessary for the development of a management system that will utilise an area's resources for tourism in an environmentally sustainable manner. The system of monitoring should not only focus on measuring the impacts at sites as a result of tourism, as in the case of carrying capacity studies, but also should identify the forms of change and damage that will require management measures to be undertaken. The Limits of Acceptable Change (LAC) involves a wider assessment of social and economic conditions in the area, in order to examine whether tourism is having detrimental effects in a wider context. Some of these detrimental effects are: encouraging too many newcomers to the area of concern due to the creation of seasonal employment resulting in the overloading of local services, or even leading to an increase in the local crime rate and/or prostitution.

The objectives of the LAC system are as follows:

- Fix acceptable resource condition that can be defined by measurable parameters.
- Identify management tools that we need to move towards the target condition.

Therefore, rather than trying to establish the causal links between the levels of

damage and levels of use, the LAC system relies on the judgements about the acceptability of the level of impact identified by monitoring. Thus LAC system reduces the need for detailed visitor counts (as in carrying capacity studies) which may be a very costly exercise. Also note that, there is no objective figure for the number of people a site can take without irreversible damage. This is because, even if the number of tourists visiting two similar areas may be the same, the tourists in these two areas may undertake different recreational activities. Some recreational activities may be more damaging to the environment, than other recreational activities. It is purely subjective. Implicitly rather than explicitly, the carrying capacity studies set the status quo as a target to defend (Lime and Stankey, 1979; McCarthy and Downer, 1979).

### **Conclusion**

Coastal and marine environment are the main features attracting international visitors to the Indian Ocean Islands. The smaller the island countries, the greater appears to be their economic dependence on international tourism, particularly coastal and marine-

based tourism. Thus, the Maldives and the Seychelles are highly dependant on this activity, Mauritius moderately so and Madagascar less so. Many Indian Ocean states seem unprepared policy-wise for the environmental side effects of tourism growth. For most, natural coastal-marine environments are their greatest tourist assets. If they are to avoid growing and irreversible damage to these environments in the near future and are to achieve sustainable tourism development, they must appreciate and act on the need to balance conservation and development appropriately. The problem will not solve itself. Therefore the government of these countries should take responsibility for the assessment of the effects of tourism on the environment, cultural and economic factors. Without adequate information it may not be possible for the government to have policies that may direct tourism towards sustainability with any degree of confidence.

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