



Furthering Coastal Stewardship in Small Islands: Country Report - Seychelles

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Background

The Republic of Seychelles consists of 115 islands scattered over an Exclusive Economic Zone of 1.4 million km² in the eastern Indian Ocean. The Seychelles group is geologically part of a submerged micro-continent. The granite islands, the only mid-oceanic group of islands in the world, are over 700 million years old, while the coralline islands and coastal plateau only emerged in the late Tertiary period.

The climate of the Seychelles is dominated by two monsoon seasons, the Northwest season is typically wet whilst the Southeast season tends to be drier. Average yearly rainfall is 2334.7 mm (Mahe Airport) and average temperature is 26.9°C.

Seychelles is classified as a middle-income country, however, Seychelles has been ranked as the third most economically vulnerable country in the world. The island is also highly vulnerable to sea level rise as the majority of economic activities are located on the coastal plains. In 1998, per capita gross domestic product stood at US\$6,837, an increase of US\$536 from 1996.

Table 1. Characteristics of the islands of Seychelles

Characteristics	Granite Islands	Coralline Islands
Number of islands	41	74
Population	73,846	485
Surface area	241.3 km ²	201.9 km ²
Population density	306 inhabitants/km ²	2.4 inhabitants/km ²
% area coastal plain	~9%	100%
Coastal population density	4128 inhabitants/km ²	2.4 inhabitants/km ²
Infrastructure development	High	Very low
Water resources	Surface	Ground
Number of hotel rooms	2515	89

Major Coastal Problems

Key threats to coastal habitats include urbanisation, increased tourism and industrial developments, over-exploitation of coastal resources, coastal degradation and erosion, marine pollution and sewage.

On a global scale, the 1998 abnormally high sea surface temperatures affected coral reefs in the entire Indian Ocean, with the most severe impacts within the Seychelles. A study by the University of Cambridge in the 1990s on Aldabra showed that the atoll's coral reefs had been affected by bleaching of different intensities. Although recovery is expected in the long-term (20 years), the resulting breakdown of the reef structure may significantly reduce fish productivity and affect coastal stability leading to increased erosion. Several cases of beach erosion have been identified on islands of the Seychelles due to human activities and natural coastal processes. Socio-economic impacts include direct losses of tourism income, fish productivity and coastal erosion. Increases in coastal activities and human pressure on these stressed habitats will also likely impede recovery.

Ecological stability therefore needs to be strengthened by improving management of coastal activities,

sustainable use of coastal resources, and protection of critical and stressed habitats. However, ecological and coastal integrity is threatened by the impacts of mass coral bleaching as a result of warming of the ocean, sea level rise as a result of climate change, and the propagation of ecotoxic marine organisms and diseases.

Intense development, particularly in the tourism industry where a large hotel construction boom is taking place, and increasing urbanisation, results in an increasing demand for land. The implementation of integrated coastal zone management (ICZM) is a matter of priority. Coastal policies should look at how activities interact to enable sustainable use of available resources, as well as providing a framework for consistently improving coastal environment quality. This will involve managing resources within a long term sustainable development strategy and vision, taking into consideration issues of global change and increasing population pressure. The lack of harmonised policies, approaches and enforcement mechanisms for integrated coastal management will also need to be critically addressed. The creation of the Policy, Planning and Services Division in the Ministry of Environment will help in the realisation of such objectives.

Beach Management and Coastal Stewardship in the Seychelles

Though ‘coastal stewardship’ is still a new concept, the government of Seychelles is intensifying its efforts towards the more effective management of coastal areas. Geographical information will be utilised with the introduction of geographical information systems and remote sensing data. Land use planning and management of coastal areas is still inadequate, with many areas undergoing development without proper land use plans. The new Environmental Management Plan, 2000-2010, prepared under the Coastal Management and Land Use Programme, outlines some of these issues. However, this programme is yet to attract any external support.

There are no programmes being implemented to address sustainable coastal tourism, though this is becoming one of the most significant issues for coastal managers in Seychelles today. Beaches are important resources for islanders and tourists. With the present increase in hotel construction in the islands, the potential for conflicts amongst beach users is a concern for coastal managers.

Conflicts between coastal developers especially in the hotel industry and members of the public over the right of access to the beaches have been rare. With the increase in hotel construction there is a concern, however, that beach users might feel like ‘intruders’ on beaches adjacent to large hotels.

Like other islands, Seychelles’ beaches are under constant pressure either from human activities or natural processes. There have been numerous efforts over the years to deal with beach erosion, different methods, including seawalls and breakwaters, have been used to protect coastlines. Human activities have had some adverse effects on the beaches; particularly sand mining for the construction industry. Now it is against the law to remove sand from any beach and barriers have been installed on certain beaches that have suffered from sand mining in the past. Unfortunately, in the absence of any beach monitoring, it is not known if the problem has been solved. Trampling is still a problem on certain beaches, although some barriers have been placed to prevent this problem.

Beaches are very important for the people of Seychelles, both for recreational and economic reasons. The people already have a sense of pride in the beaches, but still more education about the economic importance of this resource is needed. The media plays an important role in this process through environmental programmes and newspaper articles.

Educating the youth about the importance of the environment, including beaches, has been a success in the Seychelles. Local school children have participated in the planting of coastal vegetation on beaches suffering from coastal erosion and beach cleaning activities.

Community involvement is very important in the management of coastal resources. Local people are the ones using the resources and they will be affected if the resource is degraded or used in an unsustainable way. So the more the local people are involved in any planning and management decisions for the beach, the more effective the whole process will be. There has been community consultation during the planning stages of an ICZM pilot project on the main island of Mahe.

With the idea of coastal stewardship in mind, the local communities should have more ‘control’ and have more involvement in the management of their coastal resources. Voluntary initiatives should be encouraged.

Selected members of the local community can help in the everyday monitoring of their local beaches and other coastal resources and also educate others about the importance of their beaches. These volunteers could work in collaboration with the Ministry of Environment and other environmental authorities. They can report problems such as sand mining and make suggestions on how to manage their beach and coastal area better. Both adults and children can be involved, clubs, such as ‘Friends of Beaches,’ can be set up to raise additional funds.

Increased participation by local people in the management of their resources can help to instil in the local community a sense of responsibility for the care of their beach and also a sense of pride that the beach belongs to the community, as well as being necessary to the tourism industry.

The future of coastal stewardship in the Seychelles is promising and will be implemented through the second Environment Management Plan of Seychelles 2000-2010. Programmes include:

- Revise and implement existing land use and coastal zone management policy and legal mechanisms.
- Develop tools and sustainable mechanisms for better land use and coastal zone management.
- Enhance human resources, and develop partnerships to promote and facilitate ongoing community involvement in coastal zone management issues through education and activities.

Although the tourism industry depends heavily on coastal resources, the primary goal of beach management should be for the benefit of islanders, thus reinforcing the idea that financial considerations (tourism) should not only be the only ones considered.

