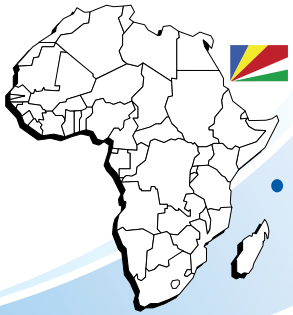
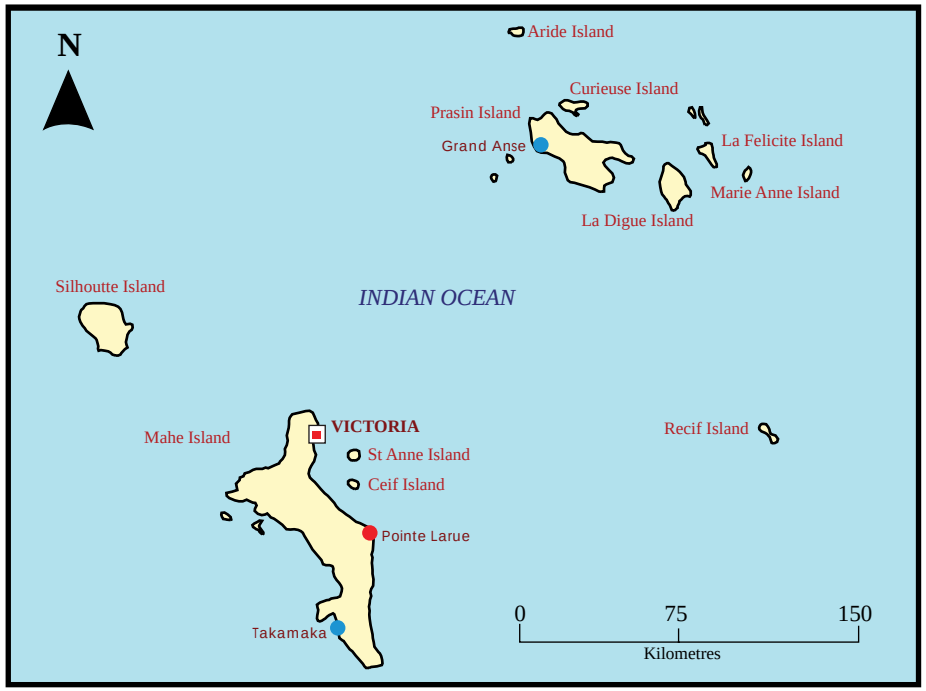
7.16 Seychelles



Mr. Calvin Gerry

Seychelles Fishing Authority
P.O. Box 449
Fishing Port, Victoria, Mahe Seychelles
E-mail: cgerry@sfa.sc

Capital city	Victoria
Population (2005 est.)	86,956 (2.2% growth) with approximately 90% on the main island of Mahe (NSB, 2008).
GDP per capita (USD 2005 est.)	$16 106
Life expectancy at birth (2005 est.)	72.7 years
Land and water area	455 km^2
Length of coastline	491 km
Coral reef area (2001 est.)	1 690 km^2
Mangrove area (2005 est.)	2 500 ha
Marine protected areas (2007 est.)	194.56 km^2 (0.40% of total territorial waters)
Capture fisheries prod. (2006 est.)	92,623 metric tones
Aquaculture fisheries prod. (2006 est.)	704 metric tones



Geographic Location: Seychelles is located in the Western Indian Ocean between 4^0 South and 11^0 South and between 45^0 East and 56^0 East. Seychelles is an archipelago of more than 115 islands with two distinct collections of islands, some comprised of granite and others of coral. The main islands are Mahe, Praslin and La Digue, with a total area of 455 km^2 and coastline of approximately 746 km.

Rivers to the country's Coast: Mahe has approximately twenty five major rivers, Praslin has eight major rivers and La Digue has only one major river. The rivers' main sources are from the mountains and discharge into the sea.

Coastal Climate: The climate in Seychelles can be divided into two main seasons, the Northwest Monsoon (December - March) and the Southeast Monsoon (May - October), separated by two relatively short inter monsoon periods in November and April respectively.

The following are the average annual meteorological features characterizing the Seychelles climate:

- Rainfall: 2 942 mm
- Sunshine: 6.9hrs per day
- Mean max temp: 30.1^{0}C
- Mean min temp: 25.0^{0}C
- Humidity: 78%

Coastal Geomorphology: The natural coastline of Seychelles can be classified as either steep granitic shoreline or the flatter coastal plains. The steep granitic shoreline is highly resilient to waves and comprised of large boulders, thus waves break directly onto granitic rocks. The flatter coastal plains are fronted by fringing reefs and comprise of sandy shores and they are most vulnerable to wind and wave action.

Coastal Currents and Tides: The tides of the Seychelles can be characterized by the following (De Comarmond, 2008):

- Astronomical tide: 2.10 m
- Mean high water spring: 1.63 m
- Mean high water: 1.45 m
- Mean high water neap: 1.27 m
- Mean Level: 1.10 m
- Mean level water neap: 0.81 m
- Mean level water: 0.63 m
- Mean level water spring 0.45 m
- Lowest astronomical tide: 0.20 m

Coastal Observations: A tide gauge is operational at Pointe de Larue.

Coastal Economy: The main economic activities along the coast are related to tourism and fisheries. This also includes related goods and services such as tourism infrastructure support (hotels, restaurants), marine parks, and fishing activities.

Fisheries: Fishing is one of our main industries, and it is practiced all over the main islands. Seychelles' fisheries industry is divided into three groups:

- Artisanal fisheries which is done by the local fishermen and most of their catch is for the local market
- Semi industrial fisheries which comprises both local and foreign owned vessels and the catch are distributed among the local and international markets
- Industrial fisheries comprising of mostly foreign owned purse seiners who mostly target tuna, to be processed by the tuna canning factory located at the port and the majority of the products are for the international market

Mineral Resources: No significant quantities of minerals are being extracted in the Seychelles.

Agricultural products: Agriculture is scattered all over the main islands and is done on a small scale to support local demand.

Addressing Key Coastal Issues: Most of the coastal issues fall under the responsibility of the Ministry of Environment. It is important to note that there are other local authorities working in close collaboration with the Ministry of Environment on issues relating to coastal and marine resources. These include: Seychelles Centre for Marine Research and Technology, Marine Parks Authority, Seychelles Fishing Authority, Port Authority and numerous Environmental Non-Governmental Organization (ENGO's).

Experts taking part in a national assessment of environmental and social issues and impacts identified a number of hot spots (currently suffering measurable degradation), sensitive areas (likely to be subjected to some degradation in the future); and major issues of concern. These are reproduced in Table 1 (ACOPS, 2002d).

Table 1. Results of the Integrated Problem Analysis undertaken for the Seychelles (ACOPS 2002d). All are number in order of precedence where prioritized.

Major issue of concern overall for the country
1. Pollution (eutrophication) 2. Habitat and Community Modification (modification of ecosystems and ecotones) 3. Global Change (sea level rise)
Hot spots:
La Digue – West Coast Plateau: impacts include removal of forest cover, loss and modification of remaining wetlands, changes in hydrology (flooding, shortage of groundwater, etc.), increased pollution, and coral bleaching *East Coast Mahe (from North Point to Anse Forban):* impacts include silt from reclamation, and those caused by increased tourists to the park Anse Volbert, Praslin: issues include coastal erosion, discharge of wastewater and coral bleaching from elevated sea surface temperature events
Sensitive areas
1. ***Port Launay and Baie Ternay Marine Parks/Port Glaud Mangroves and islands of Conception and Thérèse:*** threats include changes in water flow; pollution (microbiological, eutrophication, chemical, solid wastes); modification of eco-systems (mangroves, coral reefs, seagrass beds); over-exploitation of coral reef resources and coral bleaching
2. ***Cosmoledo Atoll:*** threats include illegal fishing, poaching, invasive species, diseases and coral bleaching
3. ***Mahe Wetlands:*** threats include modification, agricultural septic tanks and other runoff, excess siltation from clearing of uplands, extraction, and potential salination of freshwater marshes from sea level rise

DEVELOPMENT AND ACHIEVEMENTS OF THE NODC

The National Oceanographic Data Centre is a joint implementation of the Seychelles Fishing Authority and the Intergovernmental Oceanographic Commission of UNESCO under the ODINAFRICA Project. The NODC was established in 1997 and is a member of the International Oceanographic Data Exchange (IODE) Programme.

Objectives:

- To archive and make available to users data or data products (biological, chemical, physical and hydrological)

Figure 1: Map of Mahe the main island of Seychelles.

- To maintain databases/meta-databases
- To maintain contact and exchange data with National Oceanographic Data Centres around the world
- To assist users in ocean data access, management, quality control, and data visualization and interpretation

Products and services available are as follows:

- Metadata base consists of: physical and chemical oceanographic variables; atmospheric variables, and marine species.
- Databases include information on: fisheries, fishermen, marine species; marine organizations and experts; oceanographic and atmospheric variables, and INMAGIC bibliography services.
- Products: atlases, charts, maps, and publications.

MARINE RELATED PROGRAMMES AND ORGANIZATIONS

Programmes and projects

- A national Ocean Temperature Network and database whose main aim is to strengthen knowledge of climate variability and climate change dynamics in marine ecosystems. The output will facilitate the development of adaptation and coping mechanisms for use by marine resource managers. We intend to launch a website to provide information and metadata for the project
- The objective of the African Monitoring of the Environment for Sustainable Development (AMESD) programme is to help African countries to improve the management of their natural resources by providing them with suitable information on their environment, using state-of-the art technology. Member countries of the Indian Ocean Commission work and collaborate on a project and thematic area: 'Management of Marine and Coastal Zone'. This project will provide low resolution Sea Surface Temperature, Ocean Color and Altimetry data for the management of marine resources
- The regional Tuna Tagging Program in the Indian Ocean has been completed but they are still in the process of recovering tags. The data from the tags recovered until now provides promising information for management. No definite conclusion can be deduced until the majority of the tags have been recovered. For more information visit the website: http://www.rttp-io.org.

Marine Related Organizations:

- Seychelles Fishing Authority, P.O. Box 449 Victoria, Mahe, Seychelles, http://www.sfa.sc
- Seychelles Centre for Marine Research and Technology- Marine Park Authority, P.O. Box 1240 Victoria, Mahe, Seychelles, http://www.scmrt-mpa.sc
- Ministry of Environment, P.O. Box 166 Victoria, Mahe Seychelles, http://www.env.gov.sc
- Island Conservation Seychelles, P.O. Box 775 Victoria, Mahe Seychelles, http://www.islandconservationsociety.com
- Seychelles Meteorological Service, P.O. Box 1145, Victoria, Mahe, Seychelles, http://www.pps.gov.sc/meteo
- Seychelles Island Foundation, P.O. Box 853, Victoria, Mahe, Seychelles, http://www.sif.sc
- Seychelles Coast Guard, P.O. Box 257, Victoria, Mahe, Seychelles
- Nature Seychelles, P.O. Box 1310, Victoria, Mahe, Seychelles, http://www.natureseychelles.org
- Marine Conservation Society Seychelles, http://www.mcss.sc

Contacts:

Managing Director
Seychelles Fishing Authority
Fishing Port, Victoria, P.O Box 449
Telephone: +248 670300
Fax: +248 224508
E-mail: management@sfa.sc