



**THE HYDROGRAPHIC  
AND  
TOPOGRAPHIC BRIGADE  
OF THE SEYCHELLES COAST GUARD  
REPORT FOR 2006**

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## 1.0 General

The Hydrographic and Topographic Brigade of the Seychelles Coast Guard was established in 1981. The function of this unit is to conduct hydrographic surveys of the harbors and adjoining coastal waters of Seychelles. The data collected by this unit includes bathymetry, tides, currents, topography and geodesy. The data are used for updating of navigational charts, publications, civil engineering (such as building of jetties, reclamation works etc) and for military purposes.

This unit headed by Major Michael Rosette of the Seychelles Coast Guard.

## 2.0 S55 Update

Needs to be updated as new surveys have been conducted around Coetivy Island and Northern Approaches to Mahe Island:

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Seychelles Updated 28 September 2005 INT Region II

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Status of Hydrographic Surveys

A1/A2 = % adequately surveyed 0-200m/>200m  
 B1/B2 = % requiring re-survey at larger scale or to modern standards 0-200m/>200m  
 C1/C2 = % which has never been systematically surveyed 0-200m/>200m

A1	A2	B1	B2	C1	C2
15	0	50	0	35	100

**Comment:**

1. Depths beyond the shell edge fall away dramatically from 50m to 2000m. The majority of this area is covered only by passage soundings.
- 2 Priorities are:
  - a. Internal Routes: cruise liner and yacht routes from Port Victoria to Praslin and La Digue Island.
  - b. Port and Approaches: resurvey program following dredging and other harbor works.

Status of Nautical Charting

A = % covered by INT Charts, B = % covered by RNC, c = % covered by ENC

Offshore passage/Small			Landfall coastal passage/Medium			Approaches Ports/Large			<b>Comments</b>
A	B	C	A	B	C	A	B	C	
100	100	0	100	100	0	100	100	0	

Status of Maritime Safety Information.

Local Warning <b>YES</b>	Coastal Warning <b>NO</b>	Port Information <b>YES</b> Passed UKHO	NAVAREA Warning <b>YES</b> Via NAVAREA VII Co-coordinator.
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### **3.0 Surveys**

#### **3.1 Coverage of new surveys:**

Upon requests made towards the Indian Navy Hydrographic Services to assist Seychelles in resurveying part of the approaches to Port Victoria to see if there have been any changes in the underwater topography after the tsunami. This has been realized in 2006 and part of that a few other surveys were covered. also to survey an area north and west of Mahe island, an area around Coetivy Island and establish Geodetic stations (GPS) on certain other islands in the Amirantes group.

Surveys covered in year 2006:

- (a) The hydrographic Brigade conducted a survey on the Western side of Anonyme Island for the development of a five star resort in 2007.
- (b) The resurvey of the second main island i.e. Praslin's port areas. The port will be modernized and extended to accommodate bigger vessels and give a better atmosphere to the tourism clientele.
- (c) The positioning of cables for a five star resort on Round Island off Praslin.
- (d) A survey for best approach and navigable waters for a five star resort on Long Island that is undergoing constructions.
- (e) Assistance rendered by the Indian Hydrographic Services from the 5<sup>th</sup> March to 4<sup>th</sup> April 2006 enabled the survey of the Victoria's Port approaches; Northern approaches to Port Victoria and around Coetivy Island.

#### **3.2 Equipments**

Due to the requirements of IHO for 2009, Seychelles are trying its best to attain professional and respectful standards. The year 2006 have been fruitful, regardless of our budgetary constraint our organization have made a first step to upgrade the equipments at our use though yet we still remain open for assistance from other countries. We have acquired a new Tamaya 9000A digital echo sounder (single beam), a Sokia total station, and an electronic theodolite, electronic level as well acquired two new computers. The UK HO has donated 2 Atlas Deso 25 echo sounders.

The aim of the year 2007 is to acquire a DGPS positioning station that can enable automated data logging and positioning systems for the coastal surveys we do.

#### **4.0 New Charts & Updates**

The Hydrographic Brigade has no capacity both manpower and equipment to produce charts. All charts are still being published by the UK Hydrographic Office. (UKHO)

The hydrographic Brigade continues to supply the UKHO with information for updates of charts. We have decided to sensibly further commitment for national interests that Seychelles capacity to produce its own chart by training and recruiting more personnel and acquire new equipments to achieve the goals.

#### **5.0 New Publications & Updates**

All publications for Seychelles are compiled and published by the UKHO. The Hydrographic Brigade supplies the UKHO with information for updates of publications.

#### **6.0 Maritime Safety Information (M.S.I)**

The Seychelles Radio Coastal Station operated by a private company (Cable & Wireless Seychelles Limited) broadcast radiograms navigational warning on HF and VHF radio. No GMDSS facilities are available presently.

Seychelles Coast Guard through a Regional Search and Rescue Project has acquired two INMARSAT fleet 77 and one INMARSAT C. One Ship Security Alert System (SSAS) was procured and installed at the Coast Guard Rescue Coordination Centre.

#### **7.0 Oceanographic activities**

Various changes in the oceanic activities are taking place, but till date we are not equipped with any tide gauge systems as the previous ones are not in an operational status. Therefore we rely mainly on the tide prediction tables provided by the UH Sea Level center in the university of Hawaii as well as consultation of the internet site provided by SHOM. The Brigade also has five current meter type Aanderra RCM 7.

The Brigade also works closely with other local centers listed below that are involved in gathering of oceanographic data.

(a) The Seychelles Fishing Authority (SFA) collects oceanographic data and maintains a good data base for Seychelles however the data collected are mostly related to fisheries projects.

(b) The Seychelles Centre for Marine Research and Technology (SCMRT) collects data for scientific purposes. This institution is quite new and its objective is to promote marine science research and develop an information system for the management of marine data.

(c) The Seychelles Meteorological Services is responsible for all tidal observation in Seychelles. Presently they have one tide gauge in operation at the Seychelles International Airport and have planned to upgrade this tide gauge in the future.

## **8.0 Capacity Building**

### **8.1 Training**

The main objectives for the coming five year are to train enough personnel to undertake hydrographic work as well as to expand the organization. We have one petty officer that has completed Survey Recorder class I course which took place from October 2005 to January 2006 at the Hydrographic School in Goa, India and one will be leaving for Survey class III from Feb till June 2007 in Goa, India.

### **8.2 Bilateral Agreement**

The Hydrographic Brigade and the UK Hydrographic Office signed an agreement in April 2005. This agreement is a recommendation of the International Hydrographic Organization (IHO) that hydrographic services of member states should conclude bilateral arrangements for the exchange and reproduction of products, and sharing a desire to promote cooperation between them in the field of hydrography and related disciplines, to avoid duplication of effort and to enhance maritime safety and the protection of the environment. .

## **9.0 Conclusion**

The Exclusive Economic Zone of Seychelles is more than 1.2 million kilometer square, therefore hydrographic data is important for exploitation of resources and new development that Seychelles have embarked on in the sea ward aspects, namely tourism, fisheries and reclamation of new land to enables the development of the country. As mentioned earlier with limited capacity to conduct hydrographic survey, the Hydrographic Brigade has embarked on a journey to acquire and train more personnel as well as equipments to be more autonomy, until then we await and rely on assistance from other countries to conduct certain surveys.