



COUNTRY REPORT

REPUBLIC OF MAURITIUS

15TH MEETING OF NORTH INDIAN OCEAN HYDROGRAPHIC COMMISSION

Muscat, Sultanate of Oman
16 - 18 March 2015

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1. Hydrographic Office and Services

1.1. Introduction

Mauritius is an Island nation of 2040 sq. km. situated 20° South of the Equator and on longitude 57.5° East. Mauritius is a maritime state with a large Exclusive Economic Zone (EEZ) of 1.9 million sq. km. The United Nations Commission on Limits of Continental Shelf has endorsed the joint submission by Mauritius and Seychelles for 396,000 square kilometres of additional seabed in the Mascarene region which is being managed jointly by the two countries. Mauritius also being signatory to International Maritime Organisation (IMO) Convention of Safety of Life at Sea (SOLAS) has national and international responsibilities to provide safety of navigation in its area of jurisdiction. For the exploration and exploitation of the potential marine resources, it is imperative that systematic data is collected in the ocean surrounding the island territory.

1.2. Cooperation between India and Mauritius

A Memorandum of Understanding (MoU) between the Republic of Mauritius and the Republic of India in the field of hydrography was signed on 24 October 2005. The MoU provides for the promotion of development and cooperation in the field of hydrography between the two countries and provides for the assistance in the production of navigational charts, training of staff and expertise for setting up of a hydrographic infrastructure and office in Mauritius. There is also a provision for assistance by the Indian Hydrographic Office for the hydrographic surveys in our EEZ, ports and lagoons.

1.3. Setting up of Hydrographic Infrastructure

The Indian National Hydrographic Office has deputed a Hydrographer and two Surveying Records on 31 October 2013 for capacity building and to assist in the initial set up of the hydrographic infrastructure. The Hydrographic Unit has been established at the Ministry of Housing and Lands to prepare up-to-date nautical charts for safe and efficient operation of maritime traffic, conduct of

minor surveys and protection of marine environment.

I. **Objectives.** The objectives set for the Hydrographic Unit are as follows:-

- (i) Setting up of infrastructure.
- (ii) To carry out hydrographic surveys of ports and passes.
- (iii) To provide quality training in the field of hydrography.
- (iv) To develop and strengthen hydrographic research.
- (v) Provide nautical information to the international marine community for safe navigation.
- (vi) Provide hydrographic and geodetic data for the delimitation of maritime zones.

II. **Human Resources and Infrastructure.** The Hydrographic Unit has been reinforced with additional staff consisting of one 'Cat A' qualified officer and one Survey Technician.

2. Surveys

The basic infrastructure available for survey at the Hydrographic Unit is listed below:

- (i) Inshore Survey Vessel – Pathfinder, donated by India
- (ii) Atlas Deso-30 Echo sounder with 210 kilohertz and 33 kilohertz transducers.
- (iii) Hemisphere R-131 Satellite DGPS.
- (iv) TSS Dynamic Motion Sensor 25.
- (v) HYPACK software
- (vi) Side Scan Sonar 4200 FS with Discover and Sonar wiz software
- (vii) CTD 48M Sound Velocity Profiler
- (viii) Precision Depth Recorders – PDR 601
- (ix) Differential GPS – Aquarius 5000 Series (Dassault Sercel)

2.1. Achievements.

The achievements of the unit so far are as follows:-

- (i) **Inshore Survey Vessel Pathfinder.** The team has made Inshore Survey Vessel Pathfinder operational and has successfully streamlined the hydrographic survey procedures.
- (ii) **Synergy with National Organisations at Mauritius.** Synergy has been carried out with various stakeholders of nautical products, on issues of cooperation, smooth conduct of hydrographic surveys, to facilitate the delivery of all nautical information necessary for safe navigation, offshore activities, research, delimitation of maritime zones and maritime trade.
- (iii) **Utilisation of Helicopter for Coastline Delineation.** A methodology for coast line delineation utilising helicopter was framed and successful delineation carried out in various areas with challenging terrain.
- (iv) **Training of Surveyors.** To convey the training for various stakeholders, fortnightly capsule courses were planned. Training programmes included ashore and afloat training. A total of 09 land surveyors and 03 coast guard personnel have been trained so far.
- (v) **Corrections on Existing Charts.** All Navigational charts available for sale at the cartographic section of the Ministry have been updated.
- (vi) **Survey of Port Louis Harbour.** Recently the unit completed its maiden survey of Port Louis harbour. The survey was aimed at updating nautical chart of Port Louis harbour and imparting training on hydrography. The collected data was forwarded to concerned charting agencies for updating nautical charts and products on completion of work.
- (vii) **Other Surveys.** Other surveys effected include *inter-alia* survey of oil jetty for port, post Cyclone Bejisa, Helicopter Coast lining of entire mainland Mauritius and survey of Mahebourg Fish landing station.

2.2. Interaction with other Agencies. Other Government Agencies dealing with hydrographic activities are as follows:-

- (i) The Mauritius Ports Authority (MPA) setup under the Ports Act in 1998 is responsible to regulate and control the port sector, provide marine services, dredging of the port area and provision of navigational aids.
- (ii) The Mauritius Meteorological Service which is responsible for the maintenance of tide gauges and production of tide tables.
- (iii) The Shipping Division of the Ministry of Ocean Economy, Marine Resources, Fisheries, Shipping and Outer Islands is the maritime administrator responsible for the development of maritime activities such as registration of ships and implementation of the Merchant Shipping Act.
- (iv) The Mauritius Oceanography Institute (MOI) advises Government on the formulation and implementation of policies and programs in respect to oceanography and marine resources.

2.3. Surveys by Indian Naval Ships

Eight Joint Indo- Mauritian Committees have been held since 2006 to discuss and finalise hydrographic tasks. So far, under the provisions of the MoU, the Indian Authorities have deployed naval survey vessels each year since 2006 to undertake the agreed survey tasks. Each ship has been deployed in our waters for an average duration of 30 days. A detailed report of the naval survey vessels deployed and the task undertaken are as follows:

SL.	SHIP	PERIOD	SURVEY
(a)	INS Sarvekshak	12 Jan 06 to 25 Feb 06	(a) Port Louis Harbour (b) Approaches to Port Louis Harbour (c) Proposed fishing port at Bain des Dames (d) Agalega & Surrounding waters (e) Deep sea water sampling

(b)	INS Sarvekshak	10 Mar 07 to 09 Apr 07	(a) Port Mathurin Harbour (b) Approaches to Port Mathurin Harbour (c) Bathymetric survey for LBOI at: - Trou d'Eau Douce - Riviere Noire
(c)	INS Investigator	29 Feb 08 to 09 Apr 08	(a) St Brandon Shoals (30%) (b) Profile for MOI –CLCS Survey
(d)	INS Nirdeshak	10 Mar 09 to 06 Apr 09	(a) St Brandon Shoals (up to 70%) (b) Survey of Passes: - Grand Bay - Tamarin Bay - Grande Riviere Noire Bay (c) Lagoon at Riviere des Galets
(e)	INS Nirdeshak	26 Mar 10 to 26 Apr 10	(a) St Brandon Shoals (100%) (b) Flic en Flac (c) Grand Port – Southern Entrance
(f)	INS Sarvekshak	23 Feb 11 to 23 Mar 11	(a) Survey in the East of Rodrigues (b) Survey of Eastern flank of Mauritius (c) Survey of Navigational Channel to SSR Terminal and Quays A/D up to the Fishing Port (d) Rodrigues Island Transects (e) Survey of Passes – Cap Malheureux- Albion
(g)	INS Darshak	24 Apr 12 to 15 May 12	(a) Survey of off lagoon from Bel Ombre to Le Chaland (b) Survey off Albion coast
(h)	INS Sarvekshak	02 Feb 13 to 13 Mar 13	(a) Survey of Poudre D'or region (b) Survey of Off GRSE region.

3. New Charts & Updates

A protocol on the sale of navigational charts was signed on 02 April 2009 between India and Mauritius. This provides for the production, marketing, printing by the National Hydrographic Office and also the criteria for the payment of royalties and commissions. These charts are also kept up-to-date incorporating all correction as promulgated by Notices to Mariners.

The India-Mauritius hydrographic cooperation has further been strengthened with the shift of producer nation status from United Kingdom to India. In that respect, the chart of Port Louis Harbour and its Approaches has been prepared as International series chart (INT 7739).

The following seven charts have been produced by the Indian National Hydrographic Office (INHO) and are on sale at 33 US Dollars per chart as per the protocol on the sale of navigational charts.

<u>Sheet No</u>	<u>Name</u>
2503	Approaches to Cargados Carajos Shoals
2504	Mathurin Harbour
2505	Approaches to Mathurin Harbour
2506	Grand Bay and Grand Riviere Noire Bay
2507	Grand Port
2512	Agalega Island
2514 (INT 7739)	Port Louis and Approaches to Port Louis.

4. New Publications & Updates

New publications and updates are undertaken India, the chart producer nation.

5. MSI (Maritime Safety Information)

Mauritius is located in NAVAREA VIII where the NAVAREA Coordinator is the Chief Hydrographer of India and the Sub area coordinator is Mauritius. A committee is being formed in Mauritius for dissemination of MSI.

6. S-55

With India becoming the chart producer nation for Mauritius, updates for S-55 is being undertaken by India.

7. Capacity Building

7.1. Capacity Building Programme

In the context of MoU the Government of India has deputed a Hydrographic team to set up a hydrographic infrastructure. The functions of this team are as follows:-

- (a) Prepare and regulate long-term program of hydrographic surveying and charting of Mauritian Water.
- (b) Carry out specialized survey with other government departments such as Oceanographic, Fisheries, Meteorological and Port authorities. Supervise and provide advice for any hydrographic survey work carried out by a private contractor.
- (c) To represent Government of Mauritius at International and regional level on Hydrographic matters.
- (d) To act as focal point and repository for hydrographic and nautical information.
- (e) To coordinate training facilities at national and international level for hydrographic surveying and technicians
- (f) To recommend national policy and take steps for improvement of hydrographic survey services.

7.2. Training received

- (a) Twelve officers have followed Cat B Hydrographic course in India, Holland, and Japan. One officer has undergone CAT 'A' course at Mississippi, United States of America.
- (b) Three officers have undergone training in Marine Cartography and ENC at United Kingdom Hydrographic Office. One officer followed a regional training course in Basic Electronic Navigational Charting (ENC) and ENC production at the School of Ports in Durban, South Africa. One officer has followed a short course on Maritime Safety Information (MSI) in

Oman. Eight officers have followed the multi-beam sonar course in Australia, Germany and India.

(c) On job training has been provided onboard the Indian Navy ships during each survey mission.

(d) On job and in house training was conducted by Hydrographic Unit during the survey of Port Louis Harbour at Mauritius from January to June 2014 and the data was incorporated in the new INT chart 7739. The Hydrographic Unit has developed a strategy to train and upgrade the staff.

7.3 Training Needed

Additional capacity building and training are required in the following areas: -

- (a) Hydrographic Surveys
- (b) Nautical Cartography (Paper Chart and ENC)
- (c) Hydrographic equipment maintenance
- (d) On- job training for hydrographic surveys and chart production.
- (e) Hydrographic Surveying Category 'A' and Category 'B' Courses.

8. Oceanographic Activities

The Mauritius Meteorological Service is responsible for the maintenance of tide gauges and production of tide tables in Mauritius. The following tide station are in use:

- I. Trou Fanfaron, Port Louis:
 - a) Vaisala, MAWS301
 - b) Sutron, Satlink
- II. Blue Bay: Sutron, Xlite 9210

- III. Rodrigues:
- a) A71 Chart Recorder
 - b) Sutron, Satlink

- IV. Agalega : Sutron, Xlite 9210

The Mauritius Oceanography Institute (MOI) advises Government on the formulation and implementation of policies and programs in respect to oceanography and marine resources.

9. Other Activities

9.1 The 9th Indo-Mauritian Joint Hydrographic Committee.

The 9th Indo-Mauritian Joint Hydrographic Committee is scheduled in the month of June 2015 in Mauritius in continuation to the bilateral cooperation between both Governments.

9.2 Southern Africa and Islands Hydrographic Commission (SAIHC)

The Southern Africa and Islands Hydrographic Commission (SAIHC) was constituted and inaugurated in Cape Town, South Africa on 29 August 1996. SAIHC is a regional hydrographic commission of the IHO (International Hydrographic Organisation) which is active in Africa. SAIHC comprises inter-alia of the following African countries: Angola, Kenya, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Norway, Portugal, South Africa, Comores, Seychelles and Tanzania.

Mauritius has signed the original Statutes SAIHC at the inaugural meeting of SAIHC i.e in August 1996.

The main aim of SAIHC is to contribute in assessing the survey requirements by enhancing the Maritime – Safety Information dissemination and improving the publication of the International Nautical Charts in the South African charting region.

The 11th SAIHC conference was held from 12-13 August 2014 in Maputo where the Chief Technical Officer, Mr V. Seebun represented Mauritius. Captain Abri Kampfer (South Africa) was re-elected as Chairman and Mauritius was re-elected as Vice-Chairman, a portfolio which Mauritius is holding since September 2009. The next SAIHC Conference is scheduled from 23-25 September 2015 at a country which has not been determined yet. It is however to be noted that Mauritius indicated its willingness to host the next SAIHC conference; however

UK offered to host the meeting at a country in the region which has not yet hosted the conference. Priority was given to the proposal by UK to determine a suitable country.

9.3 Mauritius Port and Shipping Statistics

According to the port trade statistics, the overall traffic for last year was as follows:

- (a) Vessel Traffic 2418
- (b) Import- 5686342 tons
- (c) Export-1252878 tons