



NATIONAL REPORT
NATIONAL HYDROGRAPHIC OFFICE
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NATIONAL REPORT TO 17TH CONFERENCE OF THE SOUTH AFRICAN AND ISLANDS HYDROGRAPHIC COMMISSION (SAIHC)

REPUBLIC OF INDIA - DEC 2020

1. Hydrographic Office / Service.

1.1 The Indian Naval Hydrographic Department (INHD), with the National Hydrographic Office located at Dehradun, is the national authority mandated with the responsibility of publication of nautical charts and other publications for navigation at sea. As part of its international responsibilities, the department provides coverage for Maritime Safety Information (MSI) in the region NAVAREA VIII comprising of Indian Ocean, Arabian Sea and Bay of Bengal. The department has a fleet of seven modern ocean-going survey ships and one twin hulled catamaran survey vessel, fully equipped with modern hydrographic and oceanographic sensors.

1.2 The National Institute of Hydrography (NIH), Goa, an integral part of the INHD, has the national responsibility for conduct of hydrographic training and functions under the overall professional supervision of the Chief Hydrographer to the Government of India. The Institute conducts courses for hydrographic officers, technicians, civilians as well as personnel from the Indian Ocean littorals including Area H nations. The Long 'H' (IHO recognised Cat 'A' course) and Basic 'H' (IHO recognised Cat 'B' course) courses are conducted by the Institute.

2. Surveys.

2.1 Indian Naval Hydrographic Department (INHD) has undertaken Hydrographic Surveys both in Indian and International waters. On the national front, various hydrographic surveys are being undertaken for updating existing nautical charts of the Indian coast and Island territories. At an average about 40 navigation and defence surveys are conducted annually. In the year gone by, four navigation surveys were undertaken in the countries of the Area 'H'.

2.2 **New Technologies.** The Indian Naval Hydrographic Department (INHD) is at the forefront of utilisation of modern and high end survey equipment and technologies. Technology absorption for data collection and processing is being undertaken with in-house skills and techniques. Two AUVS are being deployed periodically for data collection. Shallow and deep sea multibeam systems are being exploited by skilled manpower regularly to update production data base. Two new deep sea MBSE are being installed on board ships to enable augmentation of bathymetric data collection. The Department is employing the latest software for data acquisition, quality control and chart production.

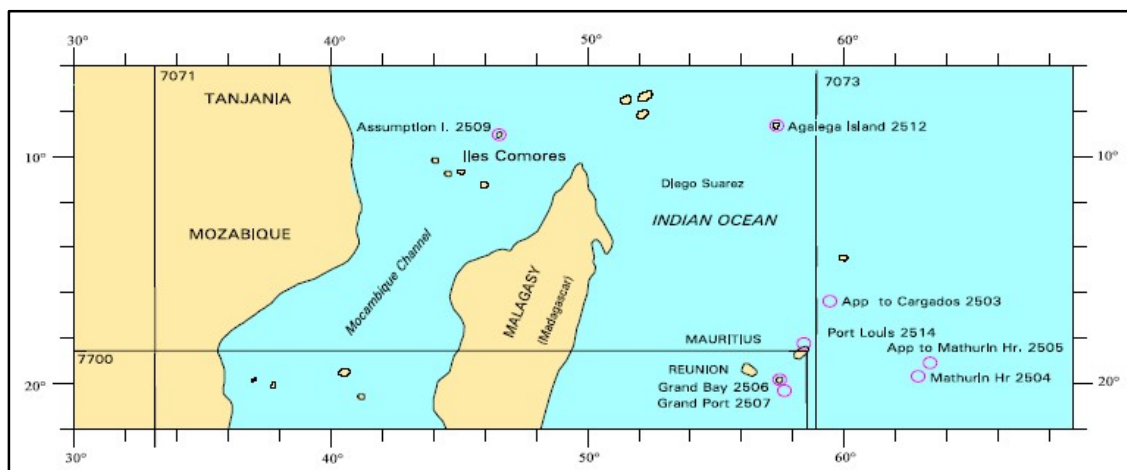
2.3 **Problems Encountered.** Nil

3. New Charts & Updates.

3.1 **ENCs.** The Hydrographic Production Database is being seamlessly populated from usage band 6 upwards. NHO has reviewed the CATZOC classification and categorized all surveys appropriately. Currently the thrust is to populate the database in usage bands 2 and 1 with most of the ENCs in other bands having been completed. So far, 32 ENCs and 29 equivalent paper charts have been published for Area H. This includes INT charts produced by the INHO, India in Area H.

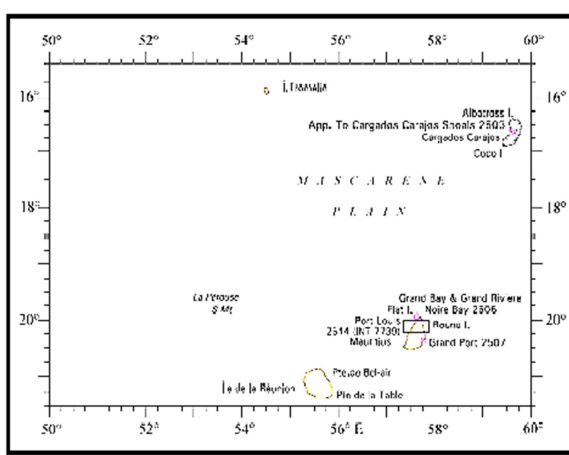
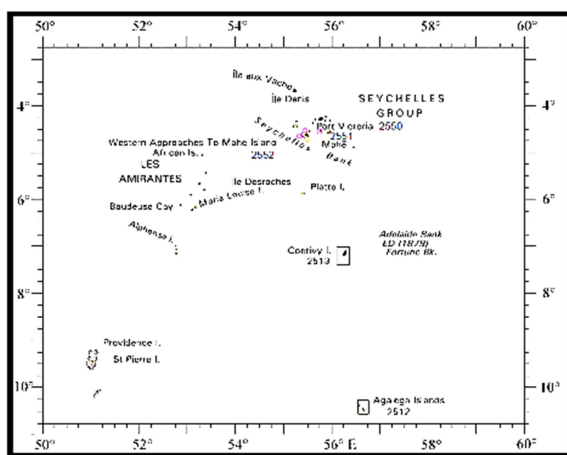
3.2 **INT charts.** The details of the INT charts produced by the INHO, India in Area H is as tabulated below: -

INT No.	Prod.	National No.	TITLE/ TITRE	Scale/ Echelle		
				1:	Lat	ENC
7739	IN	2514	Approaches to Port Louis	37500	20°00'S	Yes
			Port Louis	12500		
77391	IN	2503	Approaches to Cargados Carajos Shoals (Saint Brandon)	75000	16°33'S	Yes
77392	IN	2504	Mathurin Harbour	12500		Yes
77393	IN	2505	Approaches to Mathurin Harbour	25000	20°00.00'S	Yes
77394	IN	2506	Plan A- Grand Bay	25000	20°00.00'S	Yes
			Plan A- Grande Riviere Noire Bay	25000		
77395	IN	2507	Grand Port	12500		Yes
77396	IN	2512	Agalega Island	37500	10°00.00'S	Yes
77397	IN	2527	Mauritius	125000	20°00'S	Yes



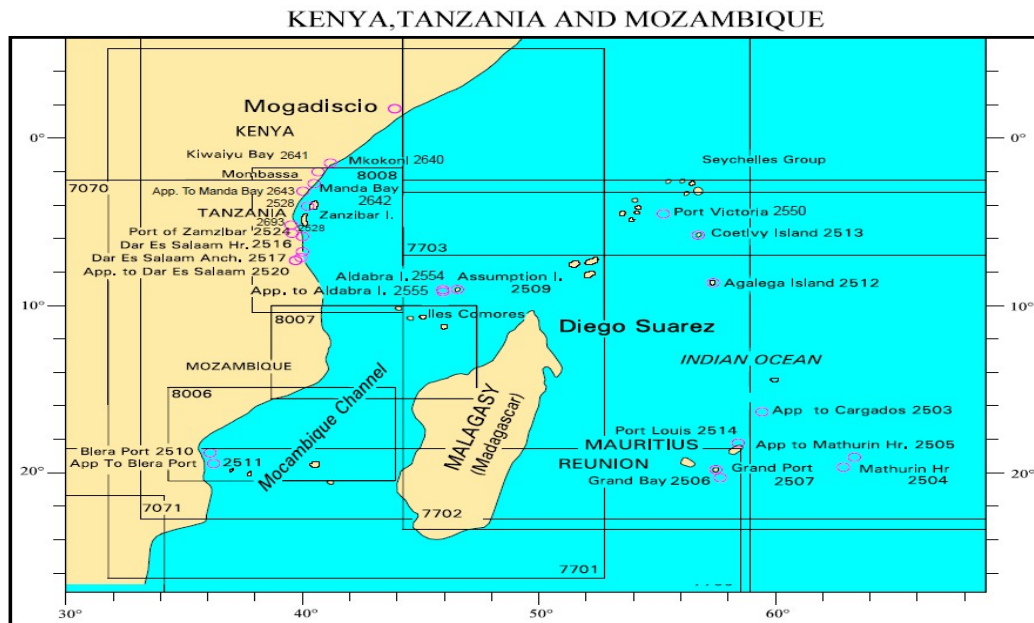
3.3 **National Series Charts and ENCs in Area H.** INHD has so far, published 32 ENCs and 29 equivalent paper charts of Area H in National Series for Mauritius, Seychelles, Kenya, Tanzania, and Mozambique. The details of charts for these nations are as follows:

SEYCHELLES				
National No.	Title	Scale	Publication date	ENC Released
2552	Western Approaches To Mahe Island	37500	30 Nov 2017	Yes
2509	Assumption Island	25000	15-May-2014	Yes
2513	Coetivy Island	37500	15-Nov-2013	Yes
2550	Port Victoria	7500	31-Mar-2017	Yes
2551	App. To Port Victoria	35000	30-Nov-2017	Yes
2554	Aldabra Island	15000	15-Jun-2017	Yes
2555	Approaches to Aldabra Island	37500	15-Jun-2017	Yes



KENYA				
National No.	Title	Scale	Publication date	ENC Released
2642	Manda Bay	25000	31-Mar-2017	Yes
2641	Kiwaiyu Bay	25000	31-Mar-2017	Yes
2640	Mkokoni	25000	31-Mar-2017	Yes
2643	App. To Manda Bay	37500	31-Mar-2017	Yes
TANZANIA				
2516	Dar Es Salaam Harbour	7500	31-Aug-2014	Yes
2517	Dar Es Salaam Anchorage	15000	31-Oct-2014	Yes
2520	Approaches to Dar Es Salaam	30000	15-Jan-2015	Yes
2524	Port of Zanzibar	20000	15-Jan-2015	Yes
2528	Appr. To Mkoani Hr	50000	30-Jun-2016	Yes
	Mkoani Hr	25000		Yes
2693	Tanga Port	15000	30-Nov-2017	Yes

MOZAMBIQUE				
2510	Beira Port	15000	15-Feb-2013	Yes
	Pungoe Wharf	7500		Yes
2511	Approaches to Beira Port	20000	15-Feb-2013	Yes
MAURITIUS				
2529	Northern Islets of Mauritius	50000	31-Dec-2018	Yes
2530	App. To Grand Port	30000	31-Mar-2020	Yes



4. **New Publications and Updates.**

4.1 Summary of charts/ publications printed since last report as follows: -

SI No.	Chart No.	Chart Title
(a)	2527	Mauritius
(b)	2530	Approaches to Grand Port

4.2 **Paper Chart Distribution.** The paper charts and associated publications are made available through chart agents. The latest list of chart agents is available on the NHO website. These paper charts are updated by fortnightly Notice to Mariners, which are available on the NHO website www.hydrobharat.gov.in. NHO has incorporated a digital chart catalogue in the web page to enable the mariners to easily identify the required charts.

4.3 **ENC Distribution.** Indian ENCs are distributed worldwide through UKHO, Navico Norway AS and M/s Primar, Norwegian Hydrographic Service.

5. Marine Safety Information.

5.1. Existing Infrastructure for Marine Safety Information Transmission. All Radio Navigational Warnings for NAVAREA-VIII are issued by the Chief Hydrographer to the Government of India. The Naval Chart Depot at Mumbai coordinates the broadcast of all Navigational Warnings. Reports/ Information may be directly sent to Naval Chart Depot with a copy marked to National Hydrographic Office, Dehradun. The schedule of transmission of Navigational Warnings through Safety Net and Iridium is as follows: -

(a) Scheduled Broadcast of NAVAREA Warnings

- (i) NAVAREA VIII Warnings are broadcasted at 1000 and 2200 UTC. Urgent warnings are broadcasted as occasion demands.
- (ii) Coastal warnings for Reunion are broadcasted at 0040 and 1240 UTC.
- (iii) Coastal warnings for Mayotte are broadcasted at 0330 and 1530 UTC.

(b) Scheduled Broadcast of Meteorological Warnings

- (i) METAREA VIII (North) Warnings are broadcasted at 0900 and 1800 UTC.
- (ii) METAREA VIII (South) Warnings are broadcasted at 0130 and 1330 UTC (for Mauritius/ Reunion and South of Equator). Tropical Cyclone Warnings prepared and issued by Reunion at 0000, 0600, 1200 and 1800 UTC.
- (iii) Tropical Cyclone Warnings for Australia, if any are prepared and issued by Australia as unscheduled broadcasts for area South of Equator and East of 90°.

5.2. All the updated warnings including Notices to Mariners are available on the INHO website www.hydrobharat.gov.in

5.3. NAVAREA Warnings.

(a) A total no 798 NAVAREA messages were promulgated in 2020 as follows: -

<u>Type of NAVAREA</u>	<u>Nos 2020</u>
Nav aids	113
Seismic/survey	92
Rig	90
Firing	236
Man overboard	03
Miscellaneous	264

(b) The country wise list of NAVAREA warnings received from the region is as follows:-

<u>Country</u>	<u>Number of Messages</u>	<u>Topics/ Subject of Messages</u>
Kenya	02	Survey, Aid to Navigation
Mauritius	15	Aid to Navigation, Hydro Note
Reunion Island	08	Firing Exercise, Aid to Navigation
Tanzania	01	Aid to Navigation

5.4. **Problems Encountered.** The late receipt of NAVAREA warning messages post commencement of offshore work/ Operations.

6. **C-55.** INHD is assisting countries within Area H to update C-55, where the INHD is the primary charting agency.

7. **Capacity Building.**

7.1 India is providing hydrographic assistance to maritime nations of Area 'H'. This includes joint hydrographic surveys with onboard training, structured training at NIH and specialised courses for ENC production at the National Hydrographic Office.

7.2 The Long Hydrography CAT 'A' and Basic Hydrography CAT 'B' programmes conducted at National Institute of Hydrography, Goa are certified by IHO/FIG/ICA Board on Standards of Competence. The Institute has adopted S-5A and S-5B versions of the syllabus for CAT 'A' and CAT 'B' courses as promulgated by IHO and implemented the same for the ongoing programmes. Long 'H' and Basic 'H' hydrographic courses at NIH Goa recertified as CAT A and CAT B respectively for further six years by FIG/IHO/ICA International Board on Standards of Competence for Hydrographic Services and Nautical Cartography. The Indian Naval Hydrographic department has till date trained 786 foreign nationals of Indian Ocean Region in various programmes.

8. **Miscellaneous.**

8.1 **World Hydrographic Day Celebrations.** The World Hydrographic Day was celebrated in India at NHO Dehradun, National Institute of Hydrography (NIH), Goa and onboard Ships at Visakhapatnam, Kochi, and Karwar. Keeping in view the theme, Bathymetry- the foundation for Sustainable Seas, Oceans and Waterways' Workshops, lectures, demonstrations and visits by undergraduate and senior school students were organised.