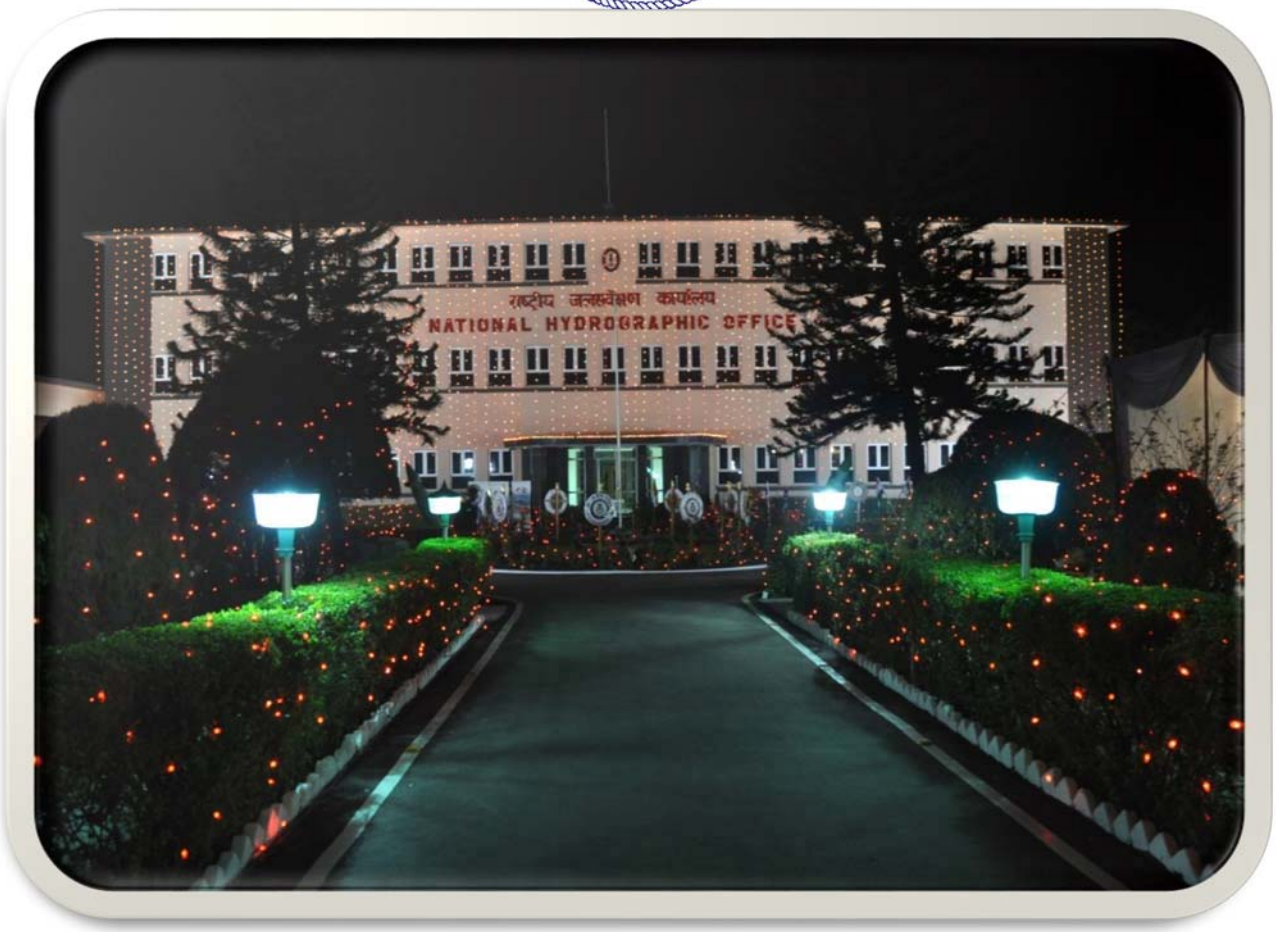


NATIONAL REPORT
NATIONAL HYDROGRAPHIC OFFICE
INDIA

NATIONAL REPORT TO REGIONAL HYDROGRAPHIC COMMISSION
REPUBLIC OF INDIA- FEB 2016

1. Hydrographic Office /Service

1.1 The Indian Naval Hydrographic Department (INHD), with the National Hydrographic Office located at Dehradun, is the sole national authority mandated with the responsibility of publication of nautical charts and 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 latest hydrographic and oceanographic sensors. Six more ships including a dedicated training vessel is presently under construction at various shipyards in the country.

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 Govt of India. The Institute conducts courses for hydrographic officers, technicians, civilians as well as personnel from the Indian Ocean littoral states. The Long 'H'(IHO recognised Cat 'A' course) and Basic 'H'(IHO recognised Cat 'B' course) courses are conducted by the Institute. The courses conducted along with duration are as follows:-

Sl No	Course	Duration
(a)	**Long H Course** A Cat 'A' course recognised by IHO and on completion eligible students are also awarded a MSc degree from Goa University.	49 Weeks
(b)	**Basic H Course** A Cat 'B' course recognised by IHO	29 Weeks
(c)	**PO 'Q' SR** An advanced level sailor course. On successful completion of PO 'Q' Course a Diploma in Hydrography is awarded from Cochin University of Science and Technology.	25 Weeks
(d)	**Basic 'Q'** An entry level sailor qualifying course.	16 Weeks
(e)	**LS SR 'Q' Refresher** A mid-level sailor refresher course.	13 Weeks

2. Surveys

2.1 **Coverage of New Surveys**. Indian Naval Hydrographic Department (INHD) has undertaken Hydrographic Surveys both at National and International levels. On the national front, various hydrographic surveys are being undertaken towards the updation of existing charts of the Indian coast and Island territories. An average of 45 navigation and defence surveys are conducted annually. In the year gone by four navigation surveys were undertaken in the countries of the IOR.

2.4 **New Technologies.** The Indian Naval Hydrographic Department (INHD) is at the forefront in the induction and utilization of modern and high end surveying equipment/ technologies. One ROV and two AUVs have been commissioned successfully onboard INS Makar. All the future Catamaran survey vessels will also be equipped similarly. INS Makar has been operating the AUV for the last four years. Technology absorption for data collection and processing is being done with skills developed internally by the Department.

2.5 **Processing System/ Software.** The department has acquired full digital capability. The digital hydrographic data collected by ships undergo QA/QC checks at the National Hydrographic Office (NHO) before being inserted into the hydrographic database towards production of paper charts and ENC's. Over the last four years the CARIS HPD has produced about 150 paper charts and 181 equivalent ENC's. Work is in progress to simultaneously populate the database in preparation for S100 standards.

2.6 **New Ships.** One survey training vessel and four New Survey Vessels are also being planned for induction during this decade as replacement for the existing ships.

2.7 **Problems Encountered**. Nil

3. **New Charts & Updates**

3.1 **ENCs**. After the successful customisation and in house training on HPD, in 2010, the database is being seamlessly populated from usage band 6 upwards. NHO has reviewed the CATZOC classification and categorised all surveys appropriately. Currently the thrust area is to populate the database in the usage bands 4 and 3 with most of the ENCs in 5 and 6 having been completed. So far 181 ENCs and equivalent paper charts have been published through HPD with another 40 under various stages of production. As on 31 Jan 2016 India has produced 300 ENC Cells which includes
29 ENCs of other countries. The breakdown of the ENCs released with their respective usage band is tabulated below:-

CATEGORY	USAGE BAND	No OF ENCs
Overview	1	6
General	2	26
Coastal	3	38
Approach	4	44
Harbour	5	119
Berthing	6	67
Total		**300**

3.2 **Foreign Water Charts and ENCs**. INHD has so far published 29 ENCs and equivalent paper charts of foreign waters. More charts of Mauritius, Kenya, Tanzania and Mozambique will be added based on latest IN surveys. In keeping with the aims of IHO, to meet SOLAS requirements.

3.3 **INT Charts**. India has the responsibility to produce 80 INT charts,out of which India has produced **69 INT charts** and the remaining are planned to be produced in the near future in the HPD with associated ENCs.

4. New publications and updates

4.1 Summary of charts/ publications printed during 2015 are as follows: -

Sl	Description	Nos.
(a)	New Charts	41
(b)	New Editions	05
(c)	Reprints	67
(d)	Publications	02

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. Under a bilateral arrangement, UKHO publishes Indian charts for distribution through their agents. These paper charts are updated by fortnightly Notice to Mariners, which are available on the NHO website www.hydrobharat.nic.in

4.3 **ENC Distribution.** Indian ENCs are distributed worldwide through UKHO, M/s Jeppesen Marine and M/s PRIMAR. INHD also provides ENCs in S-63 format to the Indian Navy and other national agencies.

4.4 **Problems Encountered.** Nil

5. Marine Safety Information

5.1 **Existing Infrastructure for Transmission.** The Chief Hydrographer to the Government of India is the co-ordinator for NAVAREA-VIII. The Naval Chart Depot at Mumbai coordinates the broadcasting of all Navigational Warnings. Reports/ Information are directly sent to Naval Chart Depot by various authorities under intimation to National Hydrographic Office, Dehradun.

5.2. **Existing NAVTEX Stations.**

(a) Chennai –non operational
(b) Mumbai – non operational

} Will be replaced by new stations (refer para 5.4)

5.3. Furthermore, all the updated warnings including the Notices to Mariners are available on the INHO website www.hydrobharat.gov.in.

5.4. **New Infrastructure in Accordance with GMDSS Master Plan.** Seven new NAVTEX stations have been established and trials are in progress. They are

going to be operationalised in the following locations:-

(a) Veraval (Gujarat)
(b) Vengrula (Maharashtra)
(c) Muttam Point (Tamil Nadu)
(d) Porto Novo (Tamil Nadu)
(e) Vakalpudi (Andhra Pradesh)
(f) Balasore (Orissa)
(g) Keating Point (Andaman and Nicobar Islands)

5.5 **Problems Encountered**. Nil.

6. **C-55 (Updated Table)**. The updated C-55 table is placed at Annexure to the National Report.

7. **Capacity Building**

7.1 India has been engaging maritime nations of the region for incremental improvements in hydrographic training and conduct of survey. The initiatives include joint hydrographic surveys with onboard hydrographic training, training at NIH and specialized courses for Multibeam training and ENC production. India has thus assisted in capacity building of hydrographic cooperation of IOR countries based on bilateral MoUs.

7.2 **Foreign Cooperation.** INHD has carried out hydrographic surveys in Maldives, Mauritius, Kenya, Tanzania and Seychelles over the last few years as per the request received from respective Governments. Avenues for cooperation are also being explored with other members of the region. Hydrographic cooperation with the following countries has been progressed in the recent past:-

(a) **India -Tanzania.** INS Sutlej was deployed to Tanzania from 19 January to 12 March 2016 to undertake hydrographic survey off Pemba Island, Tanzania. This deployment is in furtherance to the request by Tanzania.

(b) **India- Mauritius.** In the last nine years, post signing of the MoU on hydrography, INHD has completed 24 hydrographic surveys and 07 navigational charts have been published, these are of Agalega Island, Approaches to Port Louis, Port Louis Harbour, Approaches to Cargados Carajos Shoals, Mathurin Harbour, Approaches to Mathurin Harbour, Grand Bay, Grande Rivier Noire Bay and Grand Port - Southern Entrance. A Hydrographic Survey Unit has been

established in Mauritius, since Oct 2013, for undertaking local hydrographic survey and to assist in setting up Hydrographic Infrastructure in Mauritius. India has been conferred as producer nation for Mauritius.

(c) **Indo-Myanmar**: As a follow up on the request received from Myanmar INS Darshak was deployed to Myanmar from 18 March to 16 May 2015 to undertake hydrographic survey off Sittwe Harbour

(d) **Indo-Seychelles**: INS Darshak was deployed to Seychelles from 27 October to 27 December 2015 to undertake hydrographic survey off Port Victoria. This deployment is in furtherance to the request based on the survey requirement forwarded by the Seychelles Govt. India has also signed a bilateral MoU in hydrographic cooperation with Seychelles on 15 Mar 15.

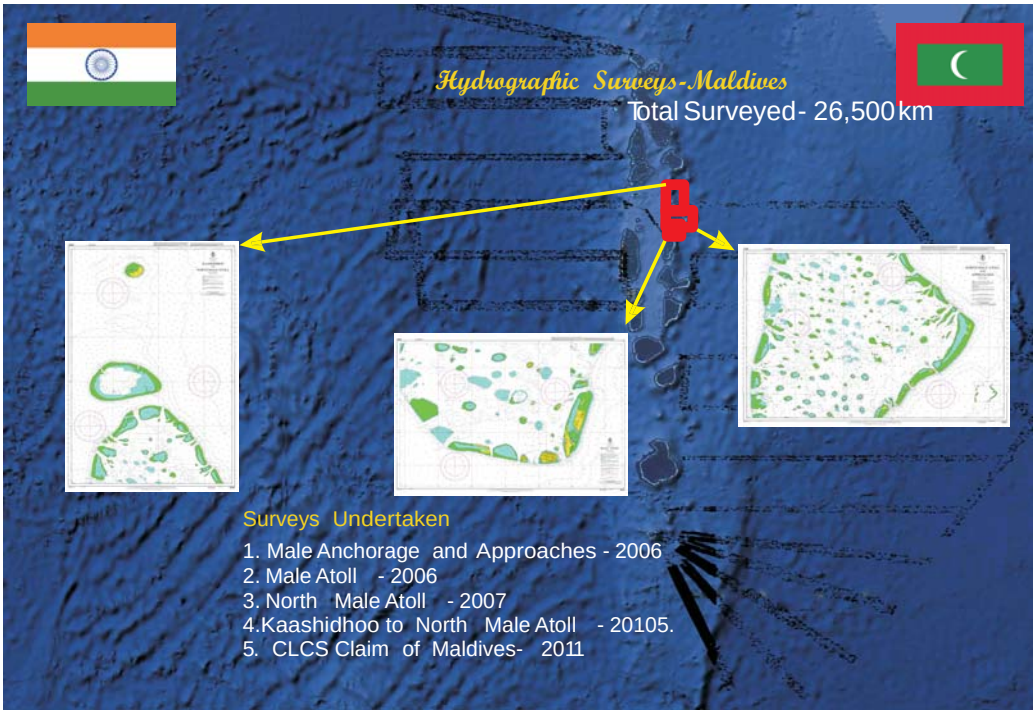
(e) **Antarctica Survey Programme**. India is a member of the Hydrographic Committee on Antarctica. A delegation from INHD participated in the 35th Indian Antarctic expedition and are expected to return by mid April 2016. India is committed to fulfilling the survey and charting requirements in Antarctica.

8. **Training**. The Long Hydrographic Cat 'A' Course and Basic "H" Cat 'B' course programmes conducted at National Institute of Hydrography (NIH), Goa were re-certified by IHO constituted International Board on Standards of Competence (IBSC), for a further period of six years in April 2013. Since its inception, a total of 597 foreign nationals have been trained at National Institute of Hydrography (NIH), Goa. Trainees from Australia, Bangladesh, Fiji, Indonesia, Kenya, Mauritius, Myanmar, Myanmar, Nigeria, Seychelles, Tanzania Tongo and Vietnam attended various courses conducted at the NIH during the past one year. The number of foreign personnel trained in the year 2015-16 are as follows:-

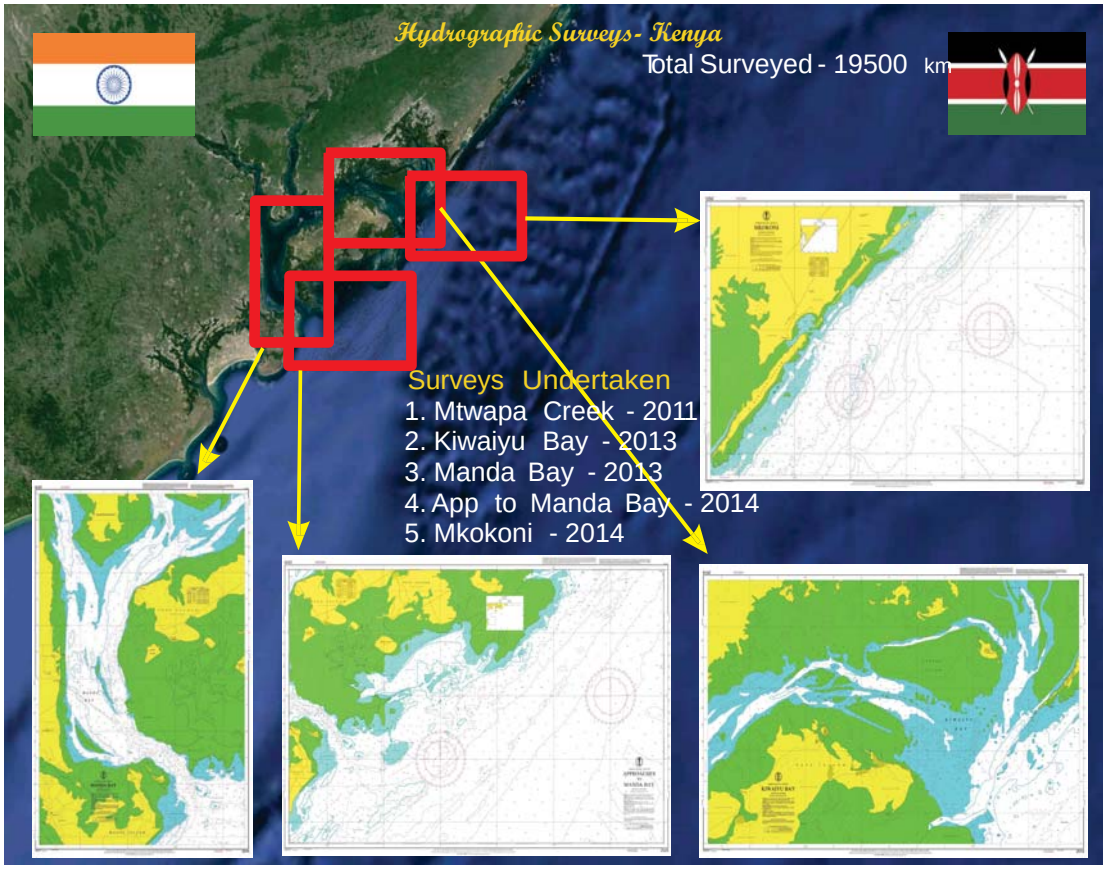
Sl No	Course	No of Foreign Trainees	Countries
(a)	Long 'H' (IHO Cat 'A' recognised course)	06	Australia –1, Bangladesh-1, Indonesia-1, Seychelles-1, Sri Lanka -2
(b)	Basic 'H'(IHO Cat 'B' recognised course)	10	Bangladesh-1, Kenya-1,Myanmar – 2, Nigeria – 1, Sri Lanka – 2, Tanzania-1, Tongo-1, Vietnam – 1
(c)	PO 'Q' SR	05	Bangladesh-1,Fiji-1, Nigeria-1, Sri Lanka – 2
(d)	Basic 'Q'	04	Bangladesh-1, Fiji-1 Mauritius-1, Tongo-1
	Total	**25**	

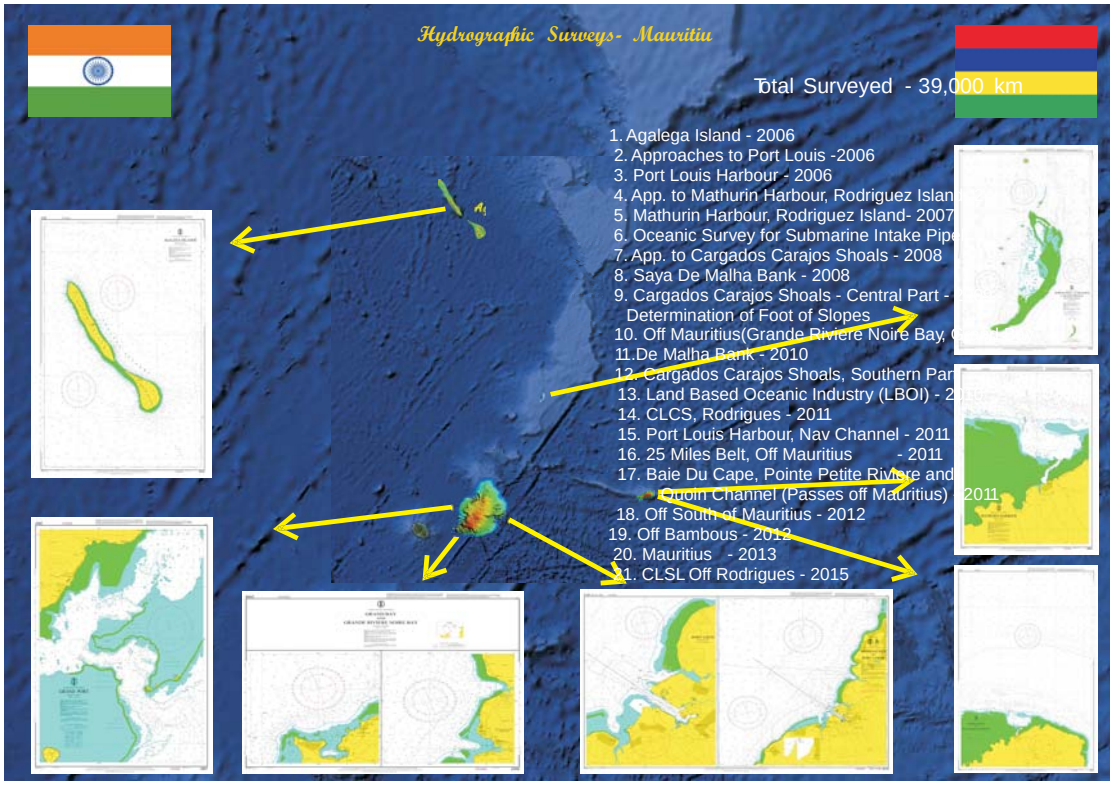
9. **MISCELLANEOUS**

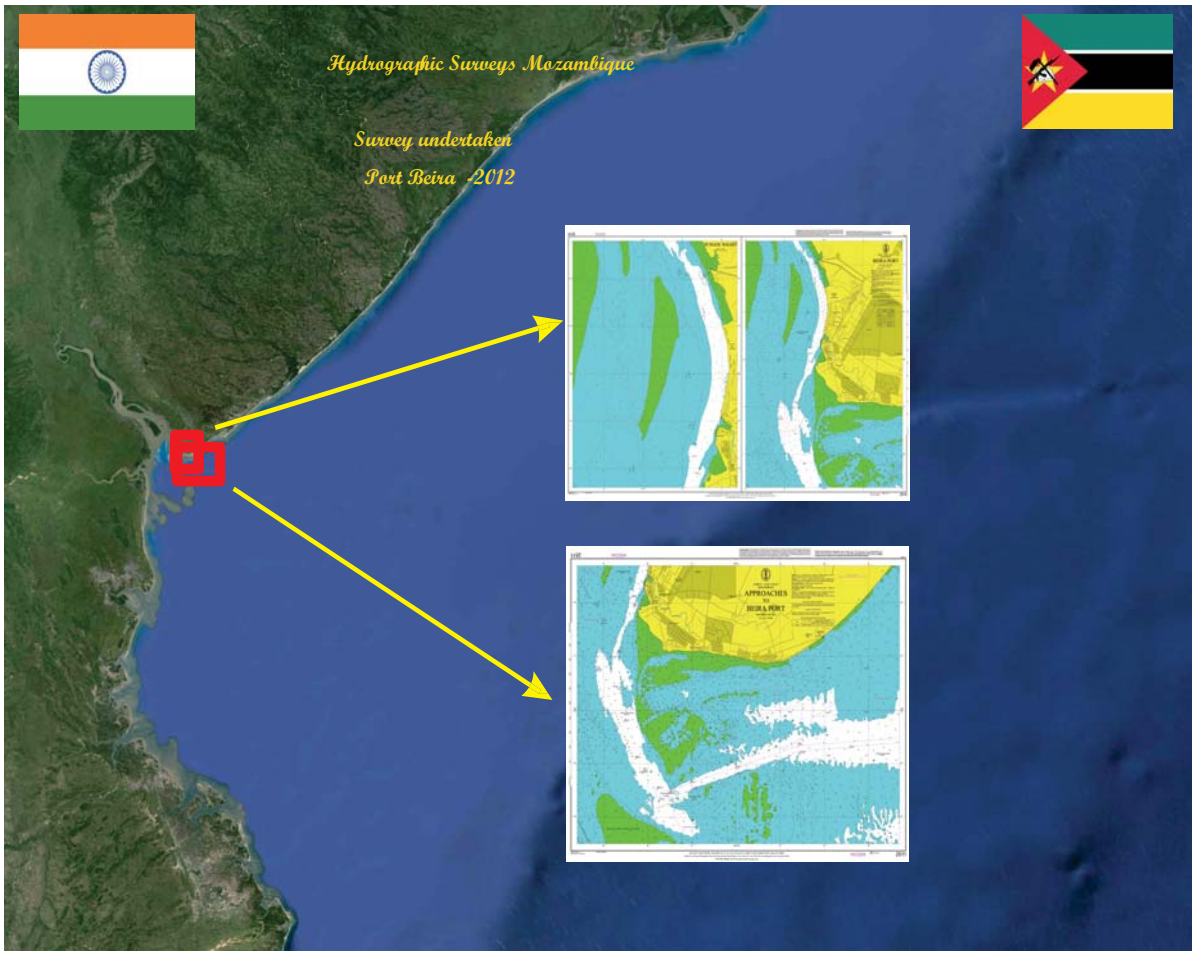
9.1 **World Hydrographic Day Celebrations**. The World Hydrographic Day was celebrated in India at NHO Dehradun, National Institute of Hydrography (NIH), Goa and onboard ships at Visakhapatnam, Kochi, Port Blair and Karwar. Keeping in view the theme ''Our Seas and Waterways - Yet to Be fully Charted and Explored'' workshops, lectures, demonstrations and visits by undergraduate and senior school students were organised at these locations.

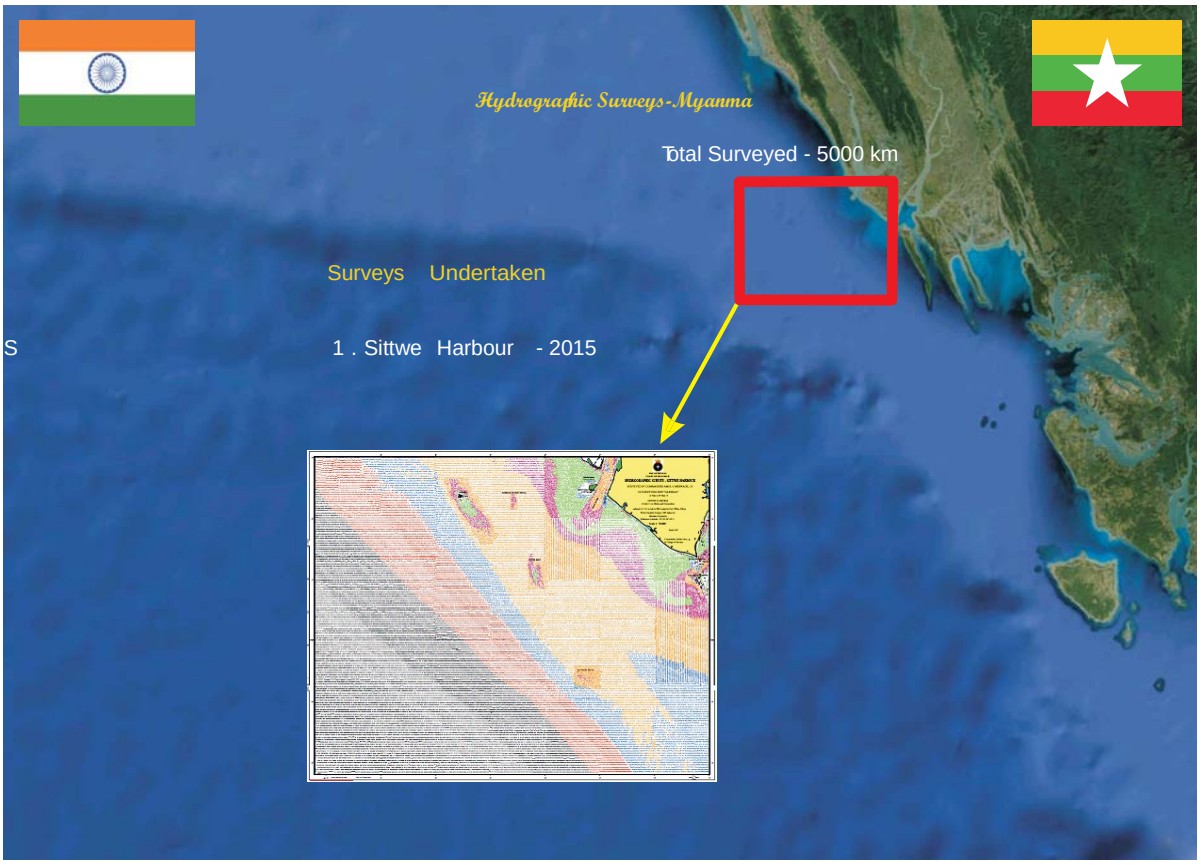


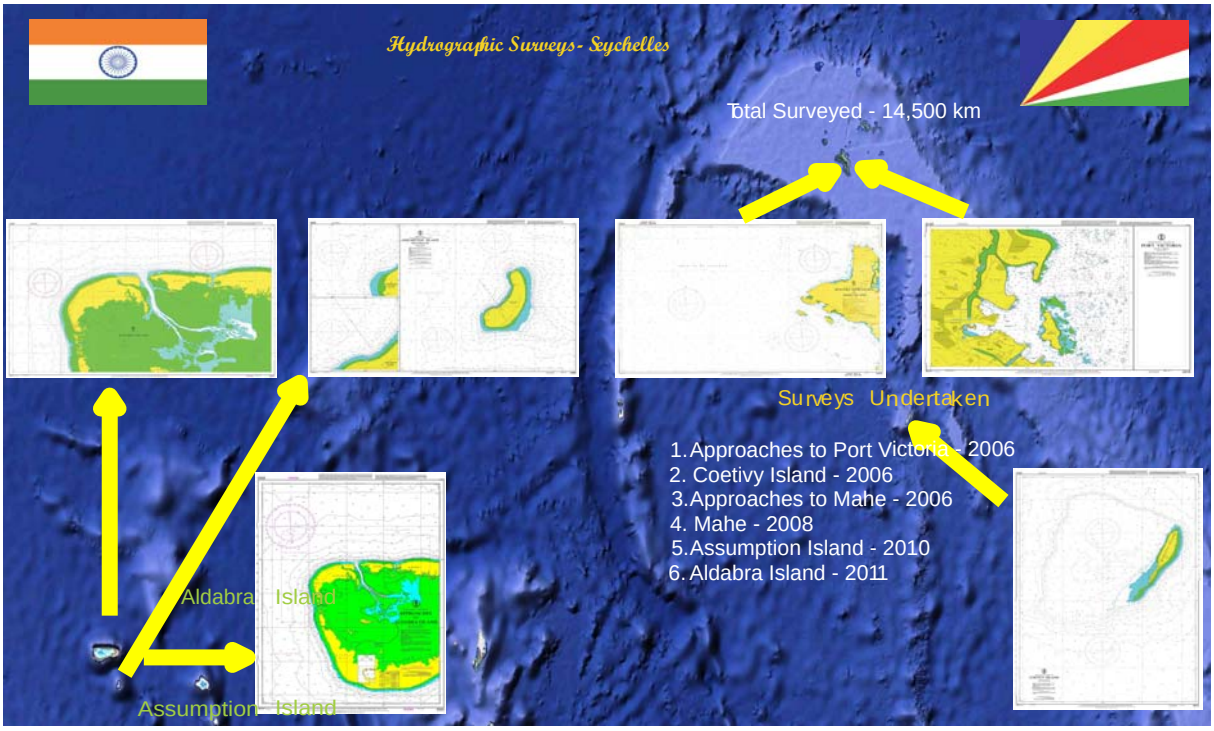
S


Hydrographic Surveys- Kenya
Total Surveyed - 19500 km
Surveys Undertaken
1. Mtwapa Creek - 2011
2. Kiwaiyu Bay - 2013
3. Manda Bay - 2013
4. App to Manda Bay - 2014
5. Mkokoni - 2014

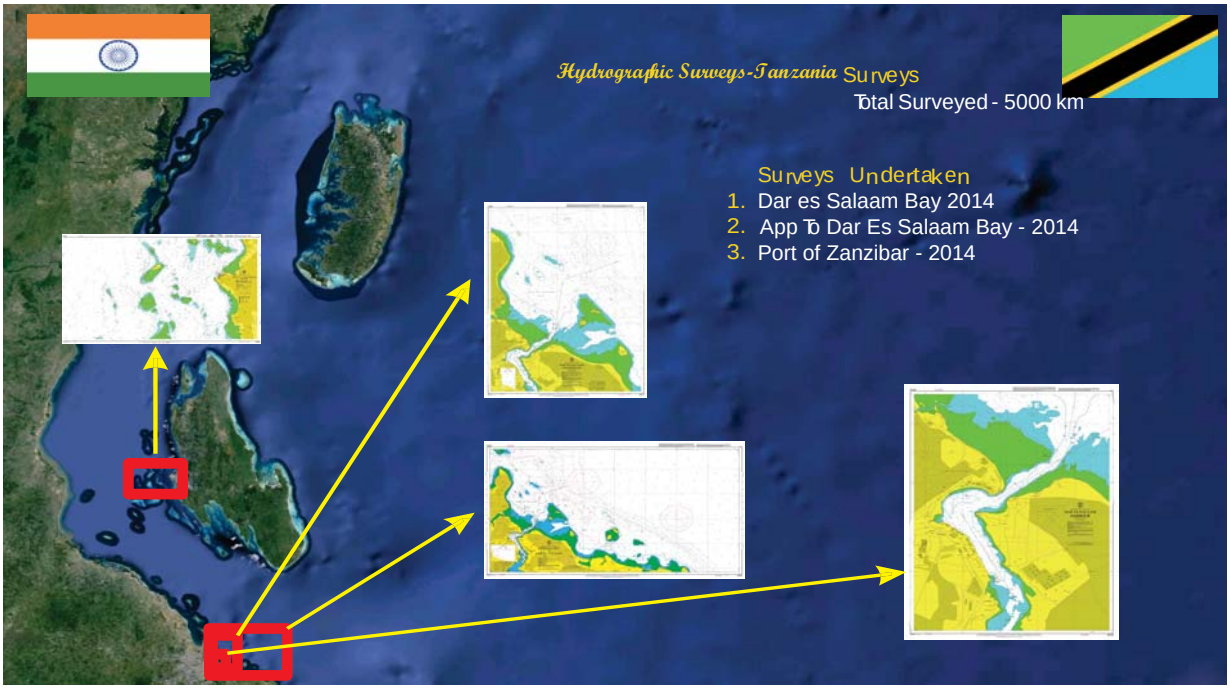

Hydrographic Surveys- Mauritiu
Total Surveyed - 39,000 km
1. Agalega Island - 2006
2. Approaches to Port Louis -2006
3. Port Louis Harbour - 2006
4. App. to Mathurin Harbour, Rodriguez Islan
5. Mathurin Harbour, Rodriguez Island- 2007
6. Oceanic Survey for Submarine Intake Pip
7. App. to Cargados Carajos Shoals - 2008
8. Saya De Malha Bank - 2008
9. Cargados Carajos Shoals - Central Part -
Determination of Foot of Slopes
10. Off Mauritius(Grande Riviere Noire Bay,
11.De Malha Bank - 2010
12. Cargados Carajos Shoals, Southern Par
13. Land Based Oceanic Industry (LBOI) - 2
14. CLCS, Rodrigues - 2011
15. Port Louis Harbour, Nav Channel - 2011
16. 25 Miles Belt, Off Mauritius - 2011
17. Baie Du Cape, Pointe Petite Riviere and
Goulin Channel (Passes off Mauritius) 2011
18. Off South of Mauritius - 2012
19. Off Bambous - 2012
20. Mauritius - 2013
21. CLSL Off Rodrigues - 2015


Hydrographic Surveys Mozambique
Survey undertaken
Port Beira -2012


Hydrographic Surveys-Myanma
Total Surveyed - 5000 km
Surveys Undertaken
S
1 . Sittwe Harbour - 2015


Hydrographic Surveys- Seychelles
Total Surveyed - 14,500 km
Surveys Undertaken
1. Approaches to Port Victoria - 2006
2. Coetivy Island - 2006
3. Approaches to Mahe - 2006
4. Mahe - 2008
5. Assumption Island - 2010
6. Aldabra Island - 2011
Aldabra Island
Assumption Island

7


Hydrographic Surveys-Tanzania Surveys
Total Surveyed - 5000 km
Surveys Undertaken
1. Dar es Salaam Bay 2014
2. App To Dar Es Salaam Bay - 2014
3. Port of Zanzibar - 2014

IHO SPECIAL PUBLICATION C-55
"STATUS OF HYDROGRAPHIC SURVEYING AND NAUTICAL CHARTING WORLD-WIDE"
QUESTIONNAIRE

Country : **India**

Date of validity of Information : M**ar 2016**

Are any amendments required to your entry in the IHO Year Book? If so, enter below.
Update is particularly important on your outsourcing strategy and on your ability to provide contract survey or charting support to other states in your RHC area.

INDIA (REPUBLIC OF)

NATIONAL HYDROGRAPHIC OFFICE **Post Box No. 75** **107 - A Rajpur Road** **DEHRA DUN – 248 001 (UTTARAKHAND)**	
Department of which the Hydrographic Office is part – *Ministère don't dépend le Service Hydrographique – Ministerio del que depende el Servicio Hidrográfico*	Indian Navy, Ministry of Defence.
Principal functions of the H.O. – *Attributions principales du S.H. – Principales funciones del S.H.*	Hydrographic surveys, Project surveys, Nautical charts, Electronic Navigational Charts (ENC), Notices to Mariners (Fortnightly), Radio Navigational Warnings, List of Lights, Sailing directions, Nautical Almanac, Tides, Tidal streams and currents, Oceanographic data analysis and publications, Marine and earth sciences, Coastal Zone Regulation Plan Charts, UNCLOS Charts, Fisheries Charts, Procurement & Maintenance of Hydrographic Oceanographic and Cartographic equipment for the department, Consultancy, Hydrographic & Cartographic Training for International Hydrographic Cooperation.
National day day – *Fête nationale - Fiesta nacional*	Independence Day 15 August Republic Day 26 January
Telephone :	+ 91 (135) 2747 365
Fax :	+ 91 (135) 2748 373
E-mail :	inho@navy.gov.in
WEB site:	http://www.hydrobharat.nic.in
Date of establishment and Relevant National	1776

Legislation – *Date de fondation et législation nationale concernée*– *Fecha de establecimiento y Leyes nacionales de referencia*	Govt. of India. Rules of Business; The Territorial Waters. Continental Shelf. EEZ & Maritime Zones Act 1976.
Name and rank of the Director or Head– *Nom et grade du directeur – Apellidos y graduación del Director*	**Rear Admiral Vinay Badhwar, NM** **Chief Hydrographer to the Government of India**
Tonnage– Tonelaje	2011 = 11113181 tons
Total Budget-*Budget total – Presupuesto Total*	Rs. 1000 millions approx (Annual Revenue Budget) including survey ship operations
Staff employed - *Effectifs -Plantilla*	**Commodore Adhir Arora, NM** **Principal Director** **Commodore Ravi Nautiyal** **Principal Director** **Commodore AK Jolly** **Principal Director** **Captain Peush Pawsey** **Director of Hydrography** **(Operations)** **Captain HA Hardas** **Director of Hydrography** **(Chart Branch)** **Captain J Gurumani** **Director of Hydrography** **(Perspective Plan)** **Captain A Muralidhar** **Director of Hydrography** **(Material)** **Captain RB Menon** **Director of Hydrography** **(Materials)** **Captain RM Thomas** **Director of Hydrography** **(Hydrographic Data Mangement)** **Commander Ashish Arya** **Joint Director of Hydrography** **(International Affairs)**

	Commander BK Prasanna **Joint Director of Hydrography** **(Personnel & Training)** **Commander Amit Pant** **Joint Director of Hydrography** **(Territorial Water)** **Commander Ajay Chauhan** **Joint Director of Hydrography** **(Staff Officer to Chief Hydrographer)** **Commander GA Mathew** **Joint Director of Hydrography** **(Chart Sales & Distribution)** **Commander SK Sajan** **Joint Director of Hydrography** **(Maritime** **Commander Kamal Ashraf** **Joint Director of Hydrography** **(Operations)** **Safety Services)** **Mr. SS Chauhan** **Deputy Chief Civil Hydrographic Officer** **Mr. Rajesh Kumar** **Deputy Chief Civil Hydrographic Officer** **Dr. RB Singh** **Assistant Chief Civil Hydrographic Officer** **Dr. RA Prasad** **Assistant Chief Civil Hydrographic Officer**
N° of charts published -*Nombres de cartes publiées - N° de cartas publicadas.*	370

N° of INT charts published -*Nombres de cartes INT publiées - N° de cartas INT publicadas.*	(a) Small scale	05
	(b) Medium & Large Scale	64

N° of ENC cells published -*Nombres de cellules ENC publiées - N° de células ENC publicadas.*	300		
Type of publications produced (e.g; Tide Tables, Sailing Directions, List of Lights etc.) -*Type de publications produites (par ex: Tables des marées, Instructions nautiques, Livres des Feux, etc. -Tipo de publicaciones producidas (por ej: Tablas de mareas, Derroteros, Libros de Faros etc)*	1. West Coast of India Pilot. 2. Bay of Bengal Pilot. 3. List of Radio Signals (Vol – I) 4. List of Radio Signals (Vol – II) 5. List of Radio Signals (Vol – V) 6. List of Radio Signals (Vol – VI) 7. List of Light & Fog Signals (Vol D&E). 8. List of Light & Fog Signals (Vol F&K) 9. Notices to Mariners (Special Edition). 10. Notices to Mariners (Annual Edition). 11. Notices to Mariners (FortnightlyEdition). 12. Symbols and Abbreviations 13. Nautical Almanac. 14. Tidal Predictions.		
Surveying vessels/ Aircraft – *Bâtiments hydrographiques/aéronefs - Buques hidro-gráficos/ Aeronaves*	Displacement	Date Launched	Crew
SANDHAYAK	1820	1981	200
NIRUPAK	1820	1985	200
INVESTIGATOR	1820	1990	200
JAMUNA	1820	1991	200
SUTLEJ	1820	1993	200
DARSHAK	1820	2001	200
SARVEKSHAK	1820	2002	200
MAKAR	594	2012	50
Outsourcing strategy -*Stratégie en matière de travail exécuté sous contrat à l'extérieur -estrategia de contratación de trabajos.*	1. Nil on Survey 2. Nil on ENC Production		
Other information of interest -*Autres informations utiles - Otra información de interés.*	1. National Institute of Hydrography is the Institute for Hydrographic Training. The Long Hydrographic Course and Basic "H" Course conducted by National Institute of Hydrography have been recertified CAT "A", CAT "B" accreditation by International Board on Standards of Competence for Hydrographic Surveyors(IBSC). In April 2013 the accreditation has been renewed for a further period of six years. 2. ENCs of 100 % of National Water have		

	been produced. Regular updates of ENCs are promulgated fortnightly. 3 Out of 80 INT Charts to be produced by India, 69 have been published. 4. The Hydrographic Department of India has the required resources, Infrastructure and technical expertise to assist littoral states in capability building by"- (a) Establishing an organisation for MSI and hydrography related matters. (b) Conduct of minor surveys, Port maintenance surveys, coastal zone management / EEZ / Continental shelf surveys. (c) Training in hydrography and cartography. (d) Production of paper charts and ENCs.

1. HYDROGRAPHIC SURVEYING

1.1 **Status of Hydrographic survey of all Navigable Waters, including internal waters, out to the limits of the EEZ** : *(Please refer to the guidance given in the introductory text "Analysis of the Status of Surveys".)*

Survey Coverage, where:

A = percentage which is adequately surveyed.

B = percentage which requires re-survey at larger scale or to modern standards.

C = percentage which has never been systematically surveyed.

	A	**B**	**C**
Depths<200 m	100	0	0
Depths>200 m	90	10	0

Amplifying Information:

(a) The entire navigational area in depths less than 200 meters has been adequately surveyed. There are few small areas where the charted data is based on old surveys. These areas are well away from the shipping routes and are of no interest to the Mariners.

(b) There are some areas in Indian Waters where the seabed is unstable. A cautionary note to this effect is printed on Navigational Charts.

1.2 Significant shortfalls in sea areas of high priority for maritime traffic:

a. Maritime Shipping Routes:

(1) International (i.e. between hub ports): **NIL**

(2) Regional (i.e. between hub ports and feeder ports): **NIL**

(3) Internal (i.e. from feeder ports to other national ports; cruise liner routes): **NIL**

b. Ports and approaches: **NIL**

c. Other (fisheries; offshore industry): **NA**

1.3 Status of Hydrographic survey of all Navigable Waters, including internal waters, out to the limits of the EEZ of dependent territories:

NA

1.4 Status of Hydrographic survey of all Navigable Waters, including internal waters, out to the limits of the EEZ of developing countries where surveys have been, or are being carried out by your hydrographic service:

NA

2. NAUTICAL CHARTING

2.1 **Status of Nautical Charting within the limits of the EEZ**

Coverage of charts published by your organisation, where:

A = percentage covered by INT series, or a paper chart series meeting the standards in M-4.

B = percentage covered by Raster Navigational Charts (RNCs) meeting the standards in S-61.

C = percentage covered by ENCs meeting the standards in S-57.

Purpose/Scale	A	B	C
Offshore passage/small	100	0	100
Landfall and Coastal passage/Medium	100	0	100
Approaches and Ports/Large	100	0	100

Percentage of Group A showing depths in meters	100
Percentage of Group A referenced to a satellite datum	80

Amplifying notes : **Nil**

Significant gaps in coverage : **Nil**

2.2 Status of Nautical Charting within the limits of the EEZ of dependent territories

NA

2.3 Status of Nautical Charting produced by mutual agreement within the limits of the EEZ of other coastal states

NA

3. MARITIME SAFETY INFORMATION (MSI)

NAVIGATIONAL INFORMATION (S-53)

Service	Yes	No	Partial	Notes
Local Warnings	√			
Coastal Warnings	√			
Navarea Warnings	√			
Information of Ports and Harbours	√			

GMDSS IMPLEMENTATION (IMO Publication 970 - GMDSS Handbook)

Service	Yes	No	Partial	Notes
Master Plan	√			
A1 Area	√			
A2 Area	√			
A3 Area	√			
NAVTEX	√			
Safety NET	√			

4. NATIONAL PRIORITIES FOR INTERNATIONAL AND OR REGIONAL CO-OPERATION OR ASSISTANCE

4.1 **If international or regional projects are underway in your waters, please indicate here:**

NA

4.2 **Indicate below any priorities for co-operation or assistance:**

(a) Projects meriting IHO liaison with international funding agencies:

(i) Regional co-operative projects: **India has provided technical expertise and contributed US $ 1.687 mn for setting up of wind, current and tide sensors in the Straits of Malacca and Singapore (Project IV) under the aegis of the Co-operative Mechanism on the Safety of Navigation and Environmental Protection in the Straits of Malacca and Singapore.**

(ii) National Projects:

(a) MoU in the field of Hydrography Cooperation with Mauritius was signed 24 Oct 05 which has been extended for a further period of five years w.e f. 24 Oct 15.

(b) MoU in the field of Hydrography Cooperation with Seychelles signed on 15 Mar 15 for the period of five years.

(c) MoU in the field of Hydrography Cooperation with Tanzania signed on 19 Jun 15 for a period of five years.

(b) Requirements for training assistance: **NIL**

(c) Requirements for assistance with procurement of equipment: **NIL**

5. GENERAL COMMENTS OR ADDITIONAL INFORMATION

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 Vishakapatnam, Kochi, Port Blair and Karwar. Keeping in view the theme "Our seas and waterways –yet to be fully charted and explored" workshops, lectures, demonstrations and visits by undergraduate and senior school students were organised at these locations.

Signature: Commander Ashish Arya
Joint Director of Hydrography
(International Affairs)

Date: 05 MAR **2016**