



National Report
Myanmar Naval Hydrographic Centre-MNHC
Myanmar



**19th MEETING OF THE NORTH INDIAN OCEAN HYDROGRAPHIC COMMISSION
(NIOHC-19)
Muscat, Oman, 25 - 28 March 2019**

NATIONAL REPORT TO REGIONAL HYDROGRAPHIC COMMISSION

The Republic of the Union of Myanmar - March 2019

1. Hydrographic Office/Service

1.1 Myanmar Naval Hydrographic Centre-MNHC is located at Thanlyin, Yangon Division and directly under control of Myanmar Navy. Although it is under command of Myanmar Navy, MNHC is the official recognized organization which is solely responsible for chart production in Myanmar. MNHC provides necessary information required for safety of navigation and also it is coordinating with other relating governmental organizations regarding MSI concerns. There are three hydrographic ships operating hydrographic surveys in Myanmar under command of MNHC as follow-

No	Name/Hull No	Type	Equipment	Remark
1.	MNS Innya (Hull No 57)	Offshore Survey Ship	Singlebeam and Multibeam System with Satellite GPS Correction Signal	
2.	MNS 807 (Hull No 807)	Nearshore Survey Ship	Singlebeam with RTK System	
3.	MNS 115 (Hull No 115)	Nearshore Survey Ship	Singlebeam and Shallow Water Multibeam with RTK System	



MNS INNYA



MNS 807



MNS 115

1.2 MNHC has a sub-department which is attached to Naval Training Command for Hydrographic Trainings. Officers and Sailors who initially joined to Hydrographic Service are to undertake the basic hydrographic trainings at Naval Training Command. The selected outstanding officers and sailors are later sent to abroad training courses to apply IHO recognized Cat'A' and Cat'B' competencies. The IHO recognized competencies courses are annually offered by India.

2. Surveys

2.1 MNHC conducted hydrographic survey in the area of INT-7438 by Survey Ship INNYA by multibeam and simultaneously MNHC Schemed Chart No.07a (Entry of Pathein River) in coastal surveys by multibeam in 2018. In early of 2019, a joint survey has been carrying out by Myanmar Survey Ship INNYA and Indian Survey Ship INS Darshak near Andrew Bay on harbor approach scale.



2.2 Upon MNHC coastal chart scheming, the following coastal and river channel areas have also been surveyed by survey ship No.115 by multibeam-

- (a) Update Survey near No-1 Navy Jetty in Yangon River
- (b) Four charts in river channel along Pathein River

2.3 **Technologies used in Surveys:** INT-7438 area as surveyed by INNYA with Kongsberg Multibeam System EM-2040C and 07a area was surveyed by Geoswath Plus Shallow Water Multibeam System. Four charts in river channel along Pathein River were surveyed by Bathy-500 MF Singlebeam Echo Sounder.

2.4 **Data Logging Systems:** The following software were used for data logging-

- (a) Kongsberg SIS (Seabed Information System) Software

(b) HYPACK

2.5 **Data Processing Software:** Caris HIPs and SIPs software is used to process the logged data by both multibeam and singlebeam ES.

2.6 **Cartographic Software:** The following software are used for cartographic works-

(a) Caris S-57 Composer

(b) Dkart Office

(c) Dkart Publisher

2.7 **Problem Encountered:** NIL

3. Chart Production

3.1 **ENCs:** MNHC has so far published 4 ENC cells as follow-



(a) MM4009A0

(b) MM4009A1

(c) MM40024A

(d) MM40024B

3.2 **Paper Charts:** MNHC has published the following paper charts of coastal and riverine areas of Myanmar Waters in 2018-

Chart No	Surveyed Year	Location	Scale	Remark
07a	2018	Pathein River Entrance	1:40000	
07b	2018	Pathein River Channel	1:50000	
07c	2018	Pathein River Channel	1:25000	
07d	2018	Pathein River Channel	1:25000	

3.3 **ENC Distribution:** MNHC has distributed its ENCs to mariners through UKHO as VAR in last years and now MNHC may establish a new distribution method with appropriate VAR.

4. **New Publications and Updates**

4.1 **Publications:** As its responsibility and function, MNHC has been producing NtM Year book, inland water directory in local language and annual tide table.



5. **Maritime Safety Information (MSI)**

5.1 As MSI concerns, MNHC is working together with International Hydrographic Community nowadays and other local government organizations such as Myanmar Port Authority-MPA, Myanma Oil and Gas Enterprise-MOGE, Ministry of Transportation and Communication- MoTC, Department of Marine Administration-DMA and Directorate of Myanmar Inland Waterway, etc.

5.2 MNHC shares the maritime safety information in the form of Notices to Mariners which are promulgated on NAV AREA WARNING issued by Coordinator and also this information is given to other Foreign HOs. Total (37) Notices to Mariners were promulgated in 2018 and so far (11) NtMs and (1)Nav Area Warning Message have been promulgated in this year 2019.

5.3 **Existing infrastructure for Transmission** MNHC is also working together with Maritime Rescue Coordinating Centre-MRCC which is operating under Myanmar Navy. MRCC is also one of the focal points for MSI which is in the network of Regional Navies. MRCC had installed NAVTEX receiver and GMDSS equipment with VHF, MHF and HF. AIS and GMDSS systems are monitoring the regional seas and the information is shared between Regional Navies. The followings are the contact points for MSI sharing-

MRCC

Telephone +953131642, +953131651

Fax +951202417

E-mail mrcc.yangon@mptmail.com.mm



MSI Network in Myanmar

6. C-55

6.1 Status of Hydrographic Surveying:

A= Percentage which is adequately surveyed.

B= Percentage which requires resurvey at larger scale or to modern standards.

C= Percentage which has never been systematically surveyed

	A	B	C
Depth < 200 m	80%	15%	20%
Depth > 200 m	-	-	90%

6.2 Status of Nautical Charting

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 Electronic navigational Charts (ENCs), meeting the standards in S-57.

	A	B	C
Offshore Passage/ Small Scale	10%	-	-
Landfall and Coastal	-	-	-
Approaches and Ports/ Large Scale	10%	-	60%

7. Capacity Building

7.1 **Local Training:** 4 Officers were trained for Basic Hydrographic Training and Grade 1,2,3 Sailors Hydrographic Trainings were accomplished at Naval Training Command in 2018.

7.2 **Abroad Trainings:** 4 Officers from MNHC participated in ENC production workshop in India from 10 September to 20 October 2018 at INHO. One sailor had completed P.O survey recorder course in India. One officer has been sent to India for NIHOC funded MSI workshop in early of 2019. Currently in 2019, one officer is undergoing Long-H (Cat A) Hydrography course in India.



7.3 **Training Requirement:** MNHC requires more training in ENC Production, ENC Distribution and MSI.

8. Oceanographic Activities

8.1 MNHC representatives participated onboard in research program by Chinese Oceanographic Research Vessel for the activities of climate change, chemical properties of sea water and living stock reservation in Myanmar Waters in 2018.



8.2 One MNHC representative also was onboard Norwegian Oceanographic Research Vessel, RV.Dr Fridtjof Nansen and participated in research program of climate changes, chemical properties of sea water and living stock reservation processes in Myanmar Waters in 2019.



9. Other Activities

9.1 **Aids to navigation activities:** MNHC involves and cooperates with MPA in the maintenance activities of aids to navigations.

9.2 **Meteorological activities:** MNHC collects meteorological data from navy ships along the coast and then shares to DMH- Department of Meteorology and Hydrology for future weather predictions.

10. Conclusion

10.1 MNHC was founded since 1957 and it has been serving for the country in the field of Hydrography and supporting the country in all necessary parts of Hydrographic Data Concerns. The office has been involved in maritime boundaries issues to support technical advices and data which are required in demarcating the maritime boundaries.

10.2 MNHC is now upgrading its capability to meet the IHO standard technical requirements and to support country and worldwide safety of navigation requirement.