

21st Conference of the Mediterranean and Black Seas Hydrographic Commission
(MBSHC)11 - 13 June 2019, Cádiz, España (Spain)

NATIONAL REPORT FROM EGYPT TO THE (MBSHC)

Reference: IHO Resolution 2/1997 as amended

Executive summary

1. Hydrographic Office / Service:

a) Name of the institution: Egyptian Navy Hydrographic Department (ENHD)

b) Description:

The Egyptian Navy Hydrographic Department (ENHD) was established in 1950, originally formed to serve the Egyptian fleet, and following the chain of command of the Egyptian Navy HQ. ENHD has evolved considerably throughout the years to become an active participant in the field of hydrography, and serving in the provision of the hydrographic services to both military and civilian sectors. ENHD is the national hydrographic office of Egypt, and the official representative of the Egyptian government in the International Hydrographic Organization (IHO) and the respective hydrographic commissions of the Mediterranean (Mediterranean and Black Seas Hydrographic Commission (MBSHC)) and Red seas (North Indian Ocean Hydrographic Commission (NIOHC)).

ENHD's Experience has been gained by over 70 years of rigorous survey practice, and the implementation of a well-balanced strategy aiming to mix practice and education of all involved personnel to build upon the office's strong foundation. This went along with the support of the Egyptian Government in providing the most up to date hardware and software to ensure reliable and consistent hydrographic service.

Considering the missions of ENHD, and in order to grant the highest possible service efficiency, it has been structured to include several divisions as follows:

- The Hydrographic division.
- The Navigation Division.
- The Meteorological and Oceanographic Division.
- The Logistics Division.
- The Technical Support Division.

Key missions of ENHD:

- Collecting hydrographic data according to related IHO standards, primarily fed into the navigational charts data base. Also used to ensure the safety of surface navigation and the protection of the marine environment.
- Paper and Electronic charts production, distribution and updating for the Egyptian Territorial waters using fresh hydrographic data.
- Maritime Boundary Delimitation (Law of the sea implementation).
- Coastal zone management.
- Scientific studies related to the sea and near-shore zone
- Physical properties of the water column, tides, currents data gathering and processing.

- Ensure the timely dissemination of Maritime Safety Information.
- Hydrographic and oceanographic Support of naval operation.
- Providing the fleet with navigational equipment and publication.
- Maintaining and repairing navigational equipment.

c) **Submitted by: ENHD**

2. **Surveys:**

a) **Coverage of new surveys:**

- Early Efforts that have been made to plan, implement and prioritize the survey of the Egyptian waters led to a 100% coverage of the Med sea and specially with the continuous bid rounds of oil and gas industry.

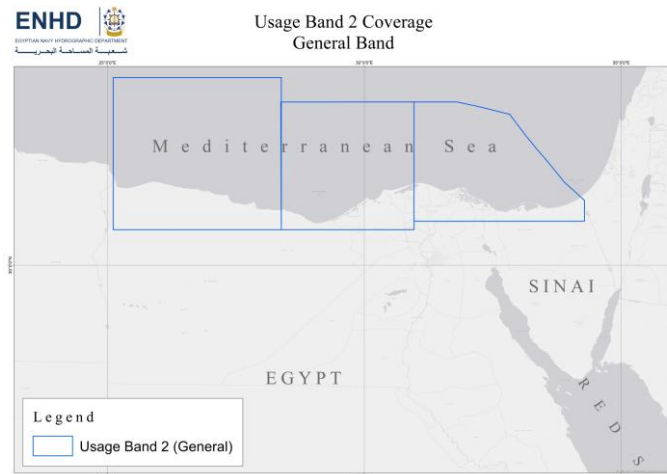


Figure 1: Med Sea Current Coverage

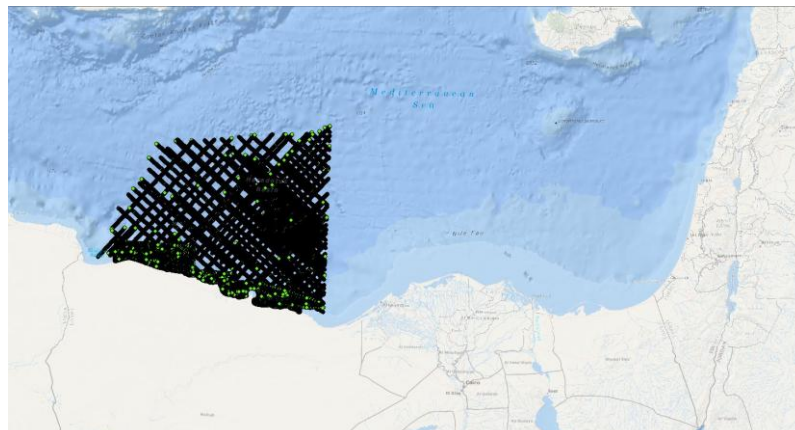


Figure 2: Med Sea 2019 Surveying blocks

- **Gargoub Area:** As maintaining safety and security of navigation within our territory is a high priority strategic target, the Egyptian government has developed 2 New Naval Base and Commercial port at the area of Gargoub (MarsaMatrouh, Long 26°35' E) west coast of Egypt. Extensive surveys have been conducted for a production of ENC and a National Chart.

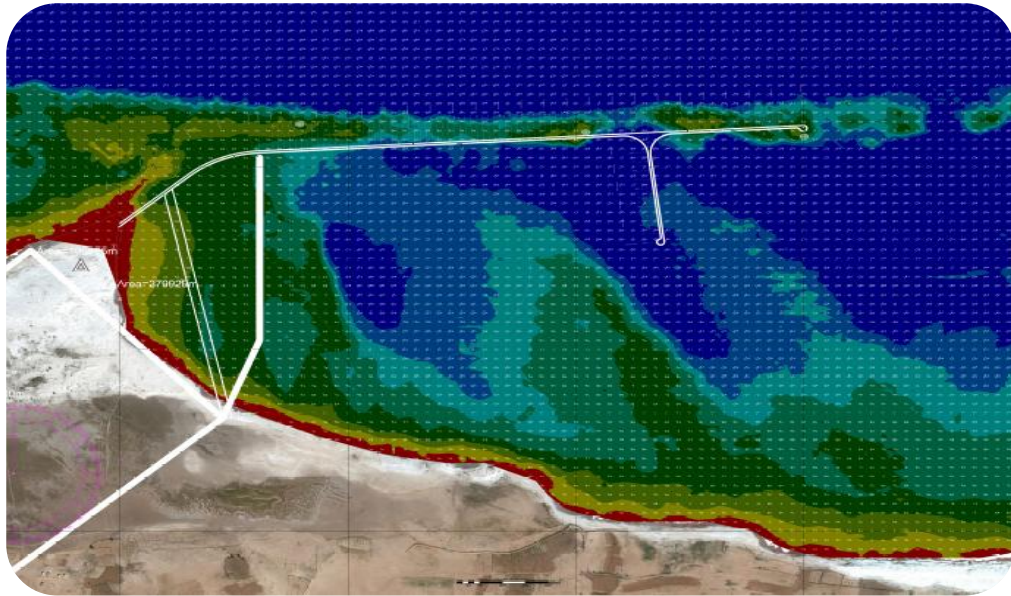


Figure3: 3D profile of Gargoub seabed area

- **Portsaid Naval Base:**

Participating in a Mega project known as "East portsaidTerminal " the participation include Pre and post survey of the harbour area and the approaches as shown in figure (2),



Figure.4East portsaid Terminal and New Naval base .

- **New technologies and equipment**

ENHD looks forward to using the most recent Technology and equipment. Therefore, we have complete set of Hydrographic and oceanographic equipment capable of serving the ongoing development projects through the project phases.

- **New technology:**

ENHD starts testing its "own-developed" Unmanned Surveying System to conduct confined Watersurveys.



Figure 5 Unmanned Surveying Vessel (HORUS)

Ocenographic Station

New equipment:

1. Unmanned surveying vessel (HORUS)
2. Deep-Water Multibeam Echo sounder.
3. Motion sensor.

b) New ships: Nil

3. New charts & updates:

a) ENC:

In 2018, 3 New ENCs have been added to ENHD's Med sea Catalogue. a consistent 30 reliable ENCs with different bands have been produced till now.

ENHD is planning to concentrate in covering the Red Sea during 2019\2020 with 3 Coastal Band ENCs.

Table 1 Egyptian ENC Usage Bands

Egyptian ENC Usage Bands	
Band	Number of cells
Overview (1)	0
General (2)	3
Coastal (3)	1
Approach (4)	10
Harbour (5)	16
Berthing (6)	0
Total	30

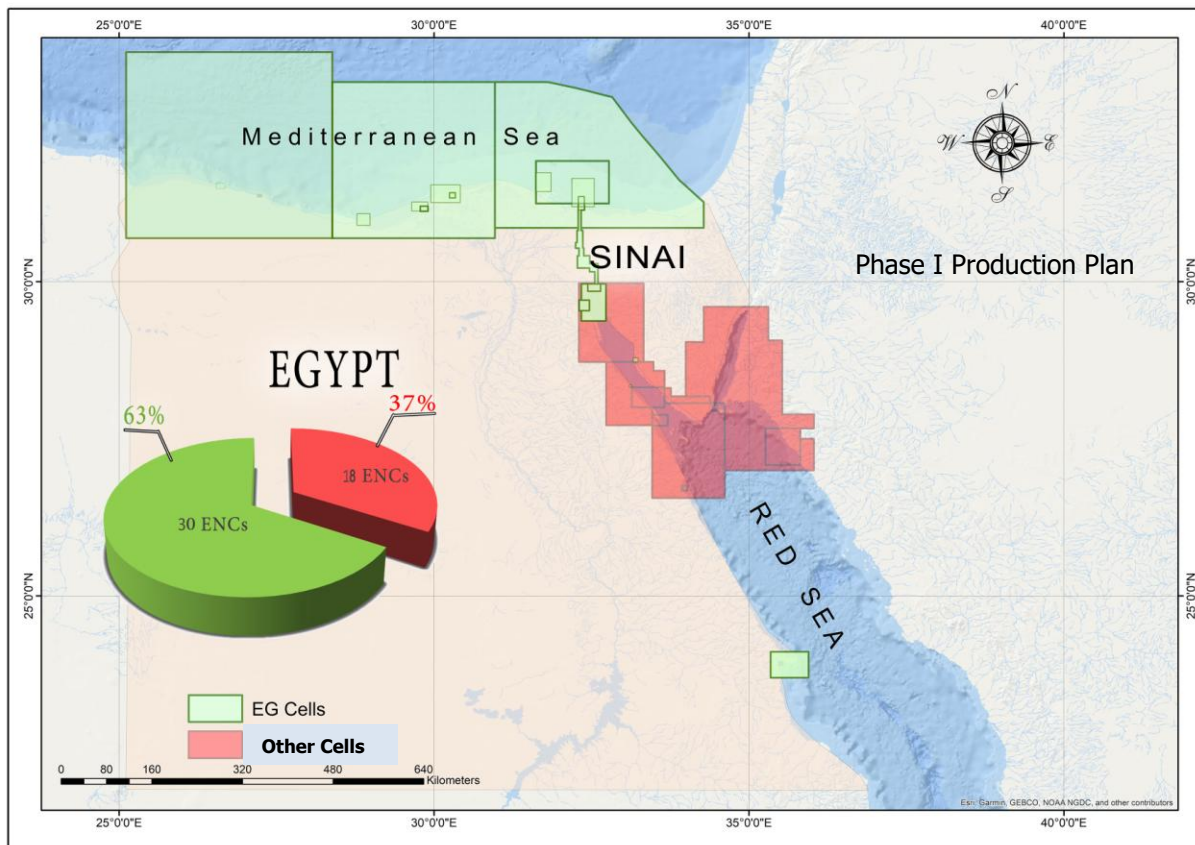


Figure 6: ENC current Coverage

ENC Distribution method:

In order to ensure greatest possible standardization, consistency, reliability and availability of ENC, and as a result of IHO encouragement for member state to distribute their ENC through a RENC, ENHD has joined the Regional ENC Coordinating Centre (ICENC) since 2015 as a response to the Worldwide Electronic Navigational Chart Database (WEND) principles of the IHO.

b) RNCs:

ENHD doesn't produce RNCs.

c) INT charts:

No changes

d) National paper charts

ENHD produced through the last year 4 new national Paper chart within region F.

Table 2 New National Charts

No.	Local Number	Description	Scale 1:	Format (mm)
1	M23	Rafah to El-Burullus	300 000	A0
2	M33	El-Burullusto El-Dabaa	300 000	A0
3	M43	El-Dabaato El-Sallum	300 000	A0
4	M24	Outer Approaches to Port Said	50 000	1000 X 670
6	M12	Approaches to Abu Qir Gulf	40 000	670 X 1000
5	M21	Damietta Port	35 000	670 X 970
7	M18	Port of Alexandria And Dekheila	20 000	1180 X 770
8	M10	Gargoob Port	12 500	1000 X 670

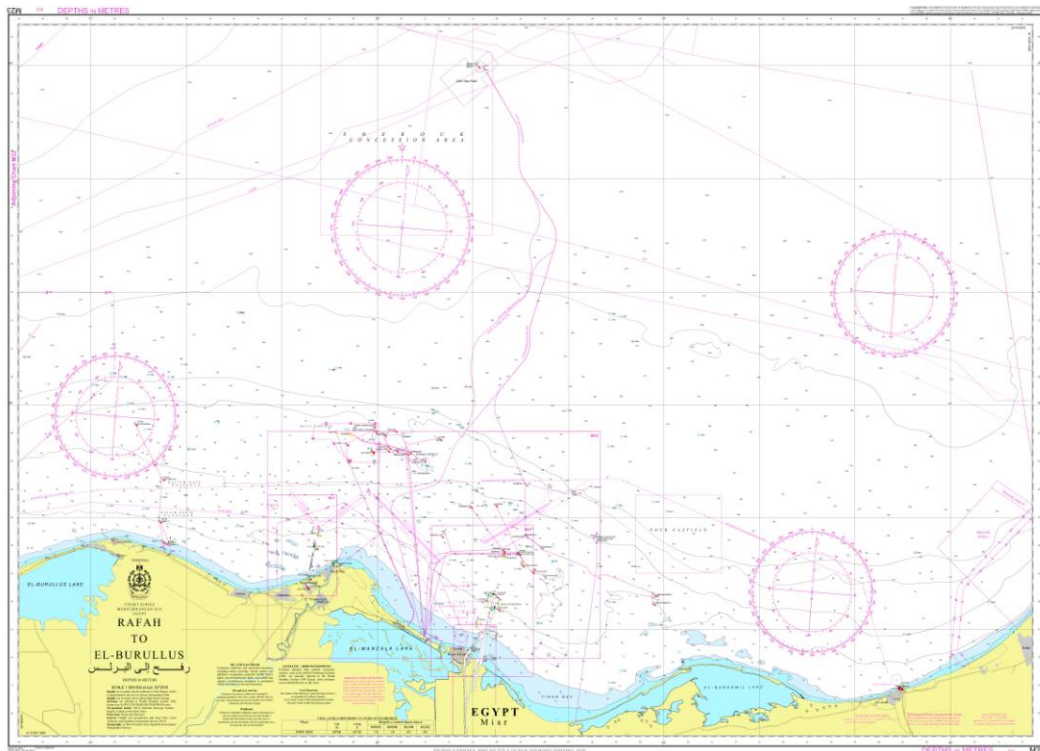


Figure 7: Rafah To El-Burullus

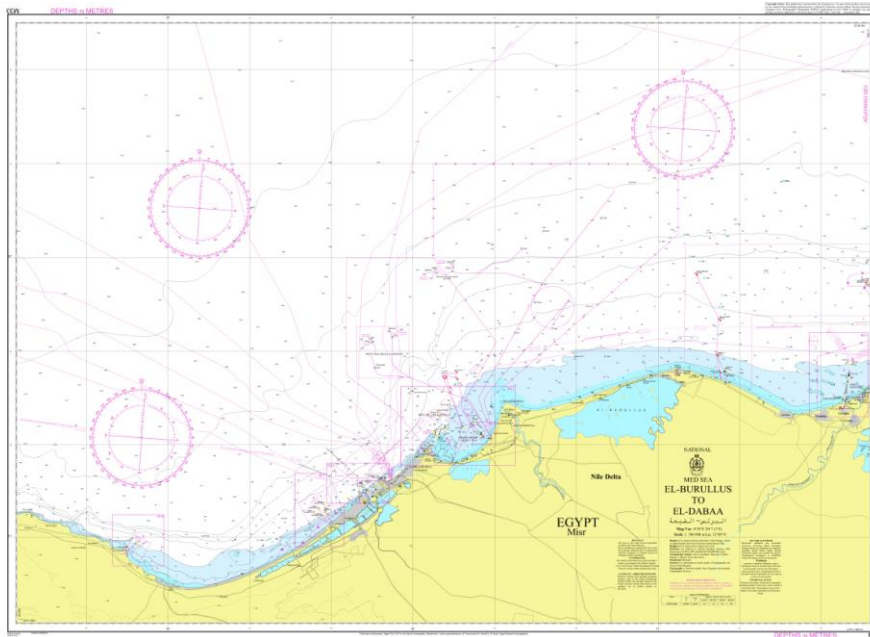


Figure 8: El-Burullus To El-Dabaa



Figure 9: Outer Approaches to Port Said

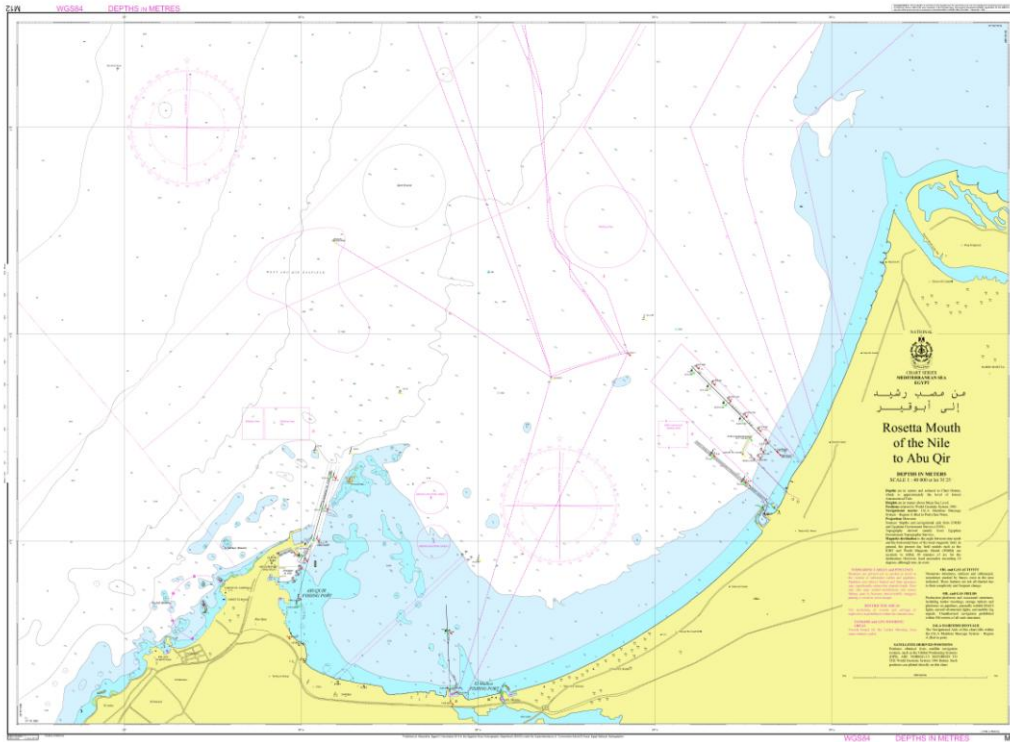


Figure 10: Approaches to Abu Qir Gulf



Figure 11: Damietta Port

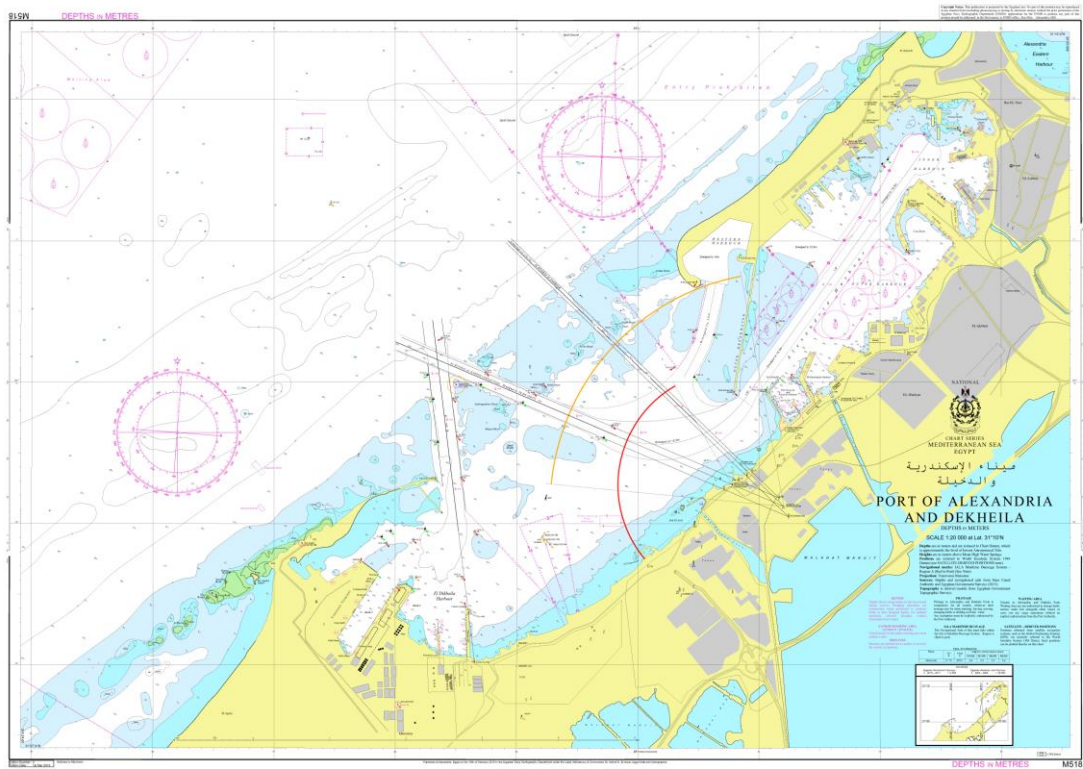


Figure 12: Port of Alexandria And Dekheila

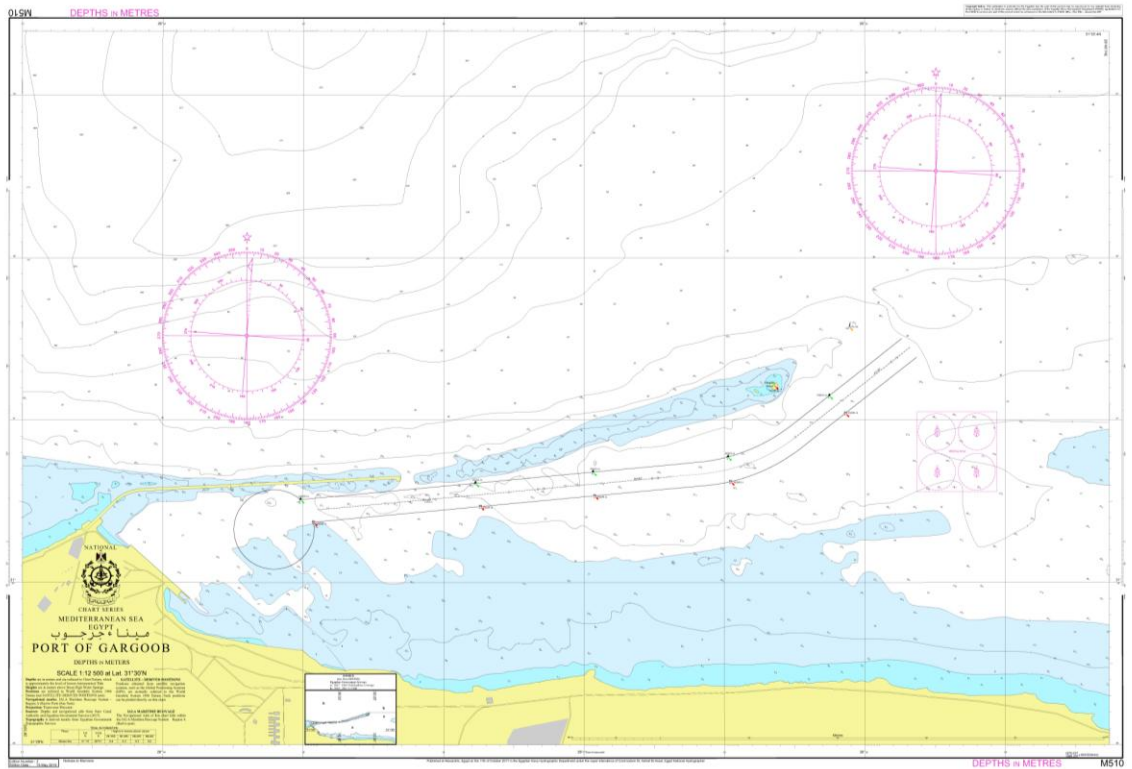


Figure 13: Gargoob Port

a) Other charts : Nil

4. New publications & updates:

New Publications under progress: ENHD is working on producing a new updated sailing direction book for Egypt's ports with cooperation with The Egyptian Authority for Maritime Safety (EAMS). EAMS Periodicals & Publications include:

- Statistical Yearbook: Analyzed statistical and economical reports related to the Egyptian Ports and Suez Canal traffic.
 - Maritime Ports Guide: Includes data on characteristics of the Egyptian main and specialized ports and Suez Canal.
 - Specialized Subjects (Selective Dissemination, Researches and Studies): Includes abstracts on different maritime researches and studies and the latest maritime topic and articles in the field of Maritime Transport industry.
 - Maritime Yellow Pages: It includes the main data on companies, agencies, entities and bodies operating in the field of Maritime Transport.
 - E-Bulletin: A monthly e-bulletine concerned with the latest news and information of international and Egyptian maritime transport.
 - Maritime Legislation: Laws, decrees and resolutions that regulate the maritime transport activities within Egyptian territorial waters.
- b) Updated publications: Egyptian Authority for Maritime Safety (EAMS) manages safety of maritime navigation in accordance to the International Conventions and regulations. Updated publications can be reached on the website <http://www.eams.gov.eg> or the **Egyptian Maritime Data Bank** <http://www.emdb.gov.eg> .
- c) Means of delivery: Digital, hard copy or through Egyptian Maritime Data Bank <http://www.emdb.gov.eg> .

5. MSI

a) Existing infrastructure for transmission:

In compliance with Regulation 4 & 9 of Chapter V of the International Convention on the Safety of Life at Sea (SOLAS), Egypt ensure timely dissemination of MSI by robust national Maritime Safety Information infrastructure through active 3 NAVTEX stations located at (Alexandria, Kosseir, and Ismailia) are transmitting MSI warnings in English on 518 & 490 KHz.



Figure 2: EGY NAVTEX Stations

Table 3 NAVTEX Stations

frequency (KHz):	Call	Station Name:	Range (nm):	Transmission Times-All UTC:						Area
518.0	SUH	Alexandria	350	0210	0610	1010	1410	1810	2210	3
518.0	SUK	Kosseir	350	0330	0730	1130	1530	1930	2330	9
490	SUZ	Ismailia	400	0350	0750	1150	1150	1550	2350	9

b) New infrastructure in accordance with GMDSS Master Plan: No new infrastructure has been added to Egyptian GMDSS master plan.

6. C-55

C-55 has been provided to the IHO.

7. **Capacity Building Offer of and/or demand for Capacity Building**

Training received:

Since NIOHC 17 Egypt has not received any CB training.

Training Needed:

- MBES Processing
- ENC Validation
- Workshop on Law of the Sea
- Regional MSDI Workshop

8. **Oceanographic activities**

a) General:ENHD in cooperation with National Institute for Oceanography & Fisheries, Coastal Research Institute and and Survey Research Institute (SRI) are in fully integration to provide the oceanographic data according to the international standards.

b) **GEBCO/IBC's activities:**

Planned to share Bathymetric Contours with GEBCO: (subject to approval from the competent authorities).

c) **Tide gauge network:**

In 2008 a joint project between ENHD and Ministry of Water Resources and Irrigation has established to install a network of tide gauges (pressure sensor) along the Egyptian coast, in both Mediterranean and Res Sea. The objective of this project is to measure the sea surface and sea rise. Recently in 2018 a new phase of this project has started by adding microwave tide gauge to increase the accuracy and availability of the measured data.



Figure:3Tide network

- d) New equipment: ENHD ensure that all the equipment used throughout the different divisions are up-to-date and capable of collecting data according to the IHO standards and fulfil the needs of the military and private sector demands.

9. Other activities

- a) Participation in IHO Working Group: No
- b) Meteorological data collection:
ENHD provides an hourly meteorological forecast for the Red sea.Four metrological stations with the cooperation of Egyptian Meteorological Authority – (EMA)
- c) Geospatial studies: ENHD carries out field data collection and analysis with cooperation protocol with National Institute For Oceanography & Fisheries and Coastal Research Institute.
- d) Disaster prevention: ENHD cooperate with different research institutes, National Center for Crisis Management and universities by supplying them with all the fresh data needed and reporting any situation that assess the ability of disaster and crisis management in the Egyptian waters.
- e) Environmental protection: ENHD has the capability of performing the studies needed for environmental studies of different projects.
- f) Astronomical observations Nil
- g) Magnetic/Gravity surveys: ongoing Co-operation with Oil and Gas industry as a result of the new explorations and round bid of the Red sea.
- h) MSDI Progress:
Policy and Governance: Marine Spatial Data Infrastructure (MSDI) to support the distribution of navigational information to commercial shipping.
- i) International Meetings for Cooperations: ENHD held 2 meetings in May 2019 with SHOM (France) and NOAA (USA) for future cooperations in data exchange and update of charts.
- j) New infrastructure: ENHD completed anew building to support the future plans. Moreover, ENHD started implementing civilian engineers with GIS background in the charting branch. This is done to ensure the continuity of expert teams in charts production and maintainance.

Input to the IHO Publication P-5 (*Yearbook*)

Country:**EGYPT**

Organization: **EGYPTIAN NAVY HYDROGRAPHIC DEPARTMENT**

Contact information/ Informations de contact / Información de contacto	
-National Hydrographer or equivalent	Post:Director of ENHD Name: Commodore Dr./ Ashraf EL-ASSAL Postal address:Postal address: Ras el Tin, ALEXANDRIA, Egypt Tel:+ 20 3 480 1006 Fax:+ 20 3 480 2233 Email: hydro@enhd.gov.eg
-Head of the Hydrographic Office (if different from the person indicated above)	-
-Other point(s) of contact	Deputy National hydrographer Commodore Dr./Mohamed Ismaeel Mohasseb E-mail: hydro@enhd.gov.eg Head of Hydrographic Survey Division Captain/ Yacout Mohamed Abdelmoniem E-mail: hydro@enhd.gov.eg Head of Meteorological Division Captain. / Mohammed El-Bessa E-mail: hydro@enhd.gov.eg Head of Paper Chart and ENC Division Commander/ Ahmed Hosni Azab E-mail: hydro@enhd.gov.eg Head of ENC Production Commander/ Hassan Atef EL-Halawany E-mail: hydro@enhd.gov.eg
-Web site	

Country information				
-Declared National Tonnage	Tonnage:1 100 000 Date:Jun 2015			
-National day	23, July			
-Date of establishment and Relevant National Législation	1 May 1951			
-Date first joined IHO	25/05/1922			
-Date ratification Convention	13/12/1968			
-Remarks on membership:	-			
Agency information				
-Top level parent organization	Ministry of Defence. Naval Forces HQ			
-Principal fonctions of the organisation or the département	<ul style="list-style-type: none"> - Hydrographic Survey. - Nautical Charts production. - ENC Charts production. - Notices to Mariners and Sailing Directions. - Geodetic Survey. - Oceanographic and Geophysical data provision. - Provision of tidal data. - Marine Safety Information and Aids to Navigation. - Environmental studies. 			
-Annual operating budget	Varies			
-Total number of staff employed				
-Number of INT charts published	37 Produced by GB 3 Produced by EG			
-Total number of paper charts	30 Local Paper Charts			
-Number of ENC cells published	30 Produced by EG 18 Produced by GB			
-Number of Other charts	-			
-Type of publications produced	-			
-Détails of surveying vessels/ aircraft	-Name	-Displacement	-Date Launched	-Number of crew
	RSV 1 RSV 2	1750 tons	1998	23
-Other information of interest	-			

Input to the IHO Publication C-55 (*Status of Hydrographic Surveying and Charting Worldwide*)

Country: EGYPT

C-55 Summary for:				Comments on Charts:
Country:				
Country Iso Code:				
Country Sub Code:				
INT Region:				
Country/Depend:				
Last updated:				
Provided by:				
Chart coverage	Passage (%)	Coastal (%)	Port (%)	Comments on Surveys:
INT				
RNC				
ENC				
Status of Paper Charts				
Paper charts with depths in meters (%)				
Paper charts referenced to a satellite datum (%)				
Status of surveys	Adequate (%)	Resurvey (%)	No survey (%)	
0-200m				
> 200m				

MSI	Y/N	Comments on MSI:
Local warning	Y	
Coastal warning	Y	
Nav warning	Y	
Port warning	Y	
GMDSS	Y/N	Comments on GMDSS:
Master Plan	Y	
Area A1	Y	
Area A2	Y	
Area A3	Y	
NAVTEX	Y	
SafetyNet	N	

National MSI Self-Assessment

Country: Egypt

Organization: *Egyptian Authority for Maritime safety (EAMS)*

1. Maritime area

Egyptian territorial waters in Mediterranean and red sea in addition to suez canal.

2. Operational Points of Contact for the National Coordinator

INSTITUTION	TELEPHONE	FACSIMILE	EMAIL
Egyptian Authority for Maritime safety (EAMS)	+203 4842119 +203 4842058	+203 4842096	contact@mts.gov.eg

3. GMDSS Master Plan

GMDSS Master Plan is up to date and last update 2018.

Equipment Type for Ports and Local Area	Software Version	Date of Up-date
VHF- MF and HF		

Year Y-2		Year Y-1		Year Y	
Total	Average elapsed time	Total	Average elapsed time	Total	Average elapsed time
xx	xx.x Mins	xx	xx.x Mins	xx	xx.x Mins

4. NAVTEX Coverage: NAVTEX stations located at (Alexandria, Qusseir, and SERAPEUM (ISMILIA)) and transmitting MSI warnings in English on 518 & 490 KHz .
5. Operational Issues: Operational with cooperation of National Telecommunication Regulatory Authority.
6. Contingency Planning : A complete contingency plan between Egyptian Authority for Maritime safety and *Egyptian Search And Rescue Center (ESARC)*. ESARC under the *Egyptian Ministry of Defense* provides its services using *Helicopters, Maritime units, Fixed wing aircraft for Search operations, Medical evacuation, and providing rescue boats-first aids.*
7. Capacity Building : Needed
8. National Maritime Website: contact@mts.gov.eg
contact@emdb.gov.eg

