

EGYPT NATIONAL REPORT



17th NORTH INDIAN OCEAN HYDROGRAPHIC COMMISSION MEETING NIOHC

Cairo, Egypt
17-20 July 2017



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1. Hydrographic Office / Service:

General, including updates for the IHO Yearbook e.g. reorganization

The Egyptian Navy Hydrographic Department (ENHD) was established in 1920, 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 and Red seas.

ENHD's Experience has been gained by over 50 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 equipment 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.
- Nautical 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 publications
- Maintaining and repairing navigational equipment.



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2. Surveys:

2.1 Coverage of new surveys:

Efforts that have been made to plan, implement and prioritize the survey of the Egyptian waters succeeded to cover Ports and approaches located on the Egyptian Mediterranean coast by reliable ENC's and Local Paper charts. and so, started covering the Red Sea from the southern approaches to the Suez Canal putting into consideration the most significant gaps across the Red Sea.

Extensive surveys have been conducted in the area of responsibility of ENHD along the coastline of EGYPT on the Mediterranean Sea from 2015 to 2017 mainly to serve the Development plans of major Egyptian ports and the huge gas explorations at the Egyptian EZZ waters, such as "ZOHR" giant gas field.

New Port at IDKU
has been developed to serve the EG LNG, west Nile delta project.



Damietta Port
navigational channel has been dredging from 14.5m to a new strike depth 16m.

East Port –Said Container Hub EPCH:

As a part of Egypt's ambitious Suez Canal redevelopment, a new container terminal in Port Said at the Mediterranean end of the Suez Canal is now under construction.

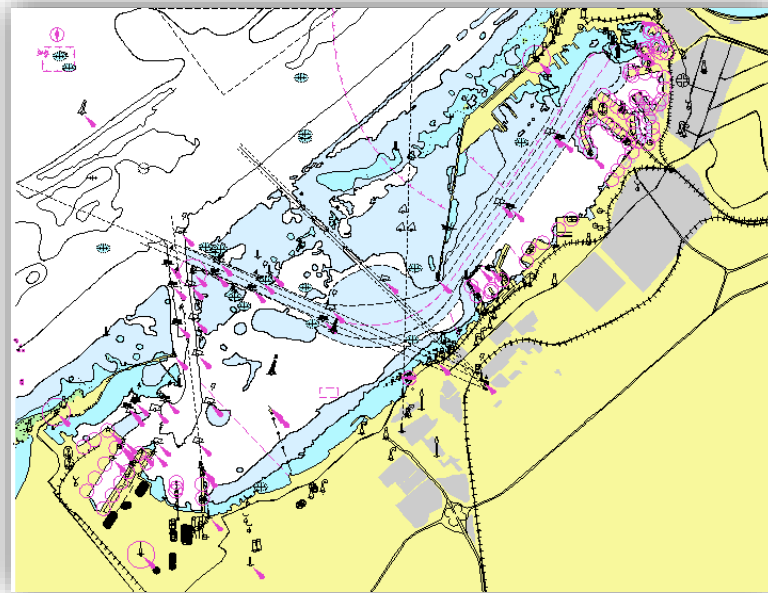




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Development of Alexandria Port



One of the major port development projects in Egypt. It is located along the Mediterranean Coast in Alexandria and is built to accommodate trade. The project included the construction of the New piers, breakwater, floating dock, dredging the navigation channel from 14.5m to 15.5m and all the associated necessary works.

2.2 New technologies and /or equipment

ENHD has a complete set of modern and high-end surveying equipment/ technologies with continuous upgrading to fulfill the survey requirements and meet IHO related standards

2.2.1 New technologies:

Recently ENHD has upgraded most of the software packages used in data gathering and processing also obtained a new package for ENC and paper chart compilation.

2.2.2 New Equipment:

- Ultra-High Frequency Multi Beam Echo sounder (0-300m shallow water).
- Digital Side Scan Sonar.
- ROV (Sea Rover) with medium/low depth capabilities.
- Sub bottom profiler combined system with Side Scan Sonar.
- Magnetometer.
- HPR
- Chirp sonar system



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New ships:

- Oceanographic ship 3D seismic capabilities (contracting).

Processing System/ Software:

- The ENHD has acquired full digital capability

2.2 Problems encountered

Egypt's got a dramatic long coastline on the Mediterranean, the Red Sea and around the Peninsula of Sinai in addition to its EEZs waters. Although Egypt started surveying and charting its territorial waters long ago, still a considerable portion of it needed to be resurveyed and charted according to the latest IHO standard.



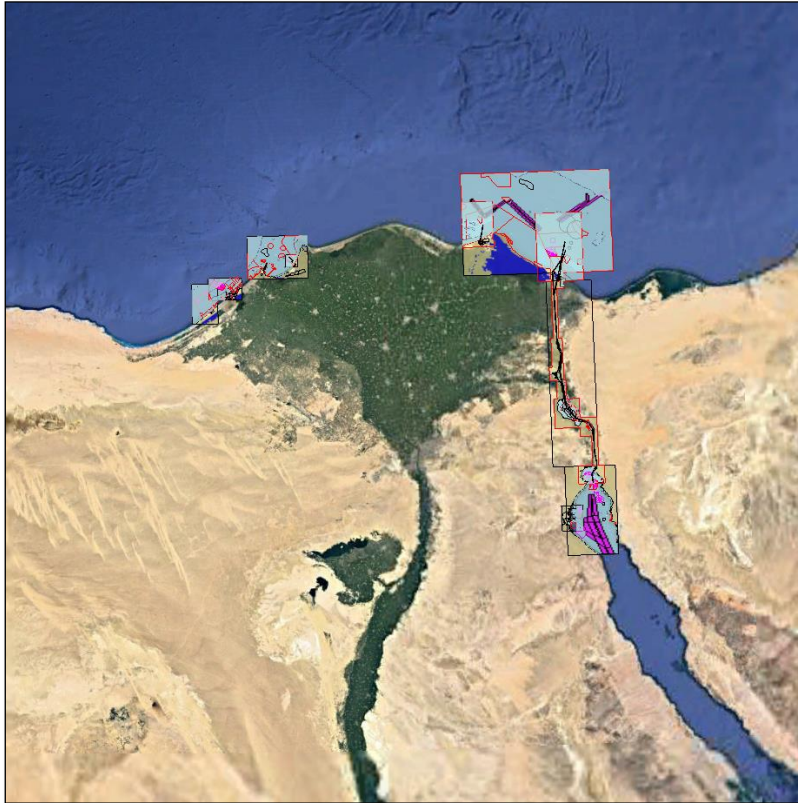
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3. New charts & updates:

ENCs

ENHD ENC catalogue has expanded, a consistent 21 reliable ENC's with different bands have been produced through the past 2 years.



Usage bands:

Band	Number of cells
Overview (1)	0
General (2)	0
Coastal (3)	1
Approach (4)	7
Harbor (5)	13
Berthing (6)	1
Total	21



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ENC Distribution method

ic-enc

In order to share in common experience and reduce expenditure, and to ensure the greatest possible standardization, consistency, reliability and availability of ENCs, and as a result of IHO encouragement for member state to distribute their ENCs through a RENC ENHD has contracted with the Regional ENC Coordinating Centre (IC-ENC) as a response to the Worldwide Electronic Navigational Chart Database (WEND) principles of the IHO.

RNCs

- ENHD doesn't produce RNCs.

INT charts

ENHD proceeded to link The Egyptian national chart scheme to the International (INT) chart scheme of the region.

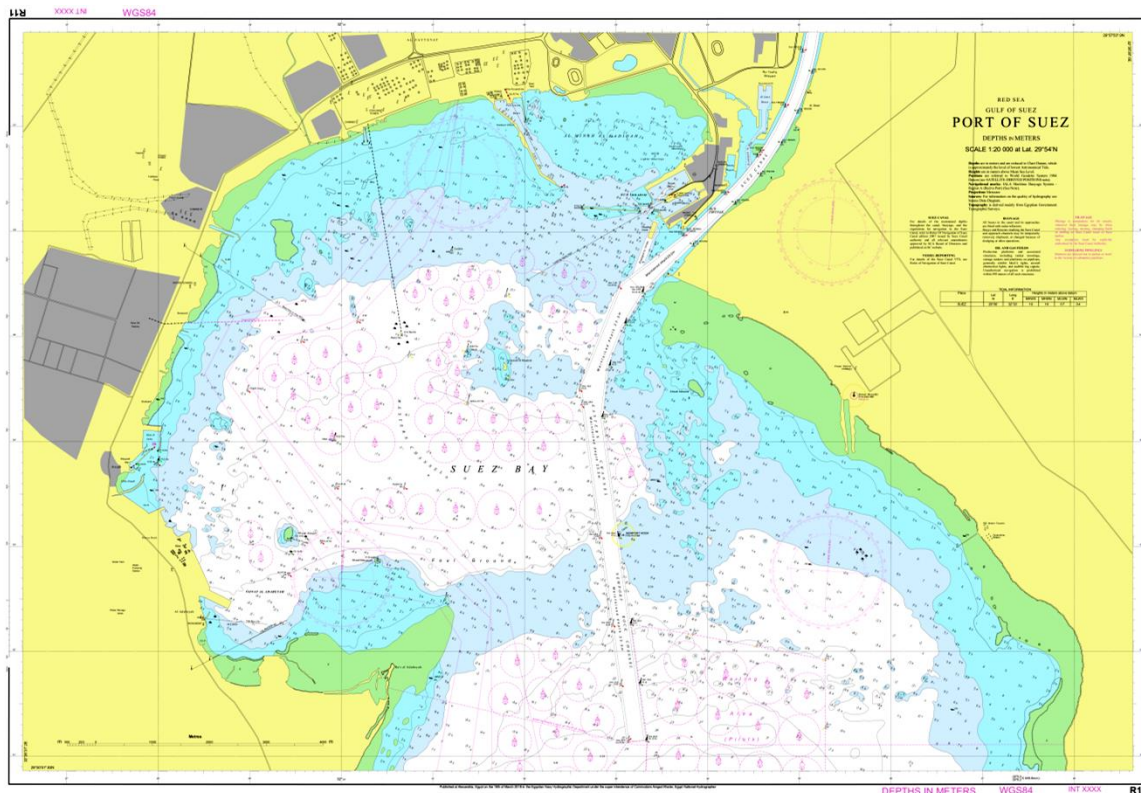


Figure: Chart R11, Port of Suez.

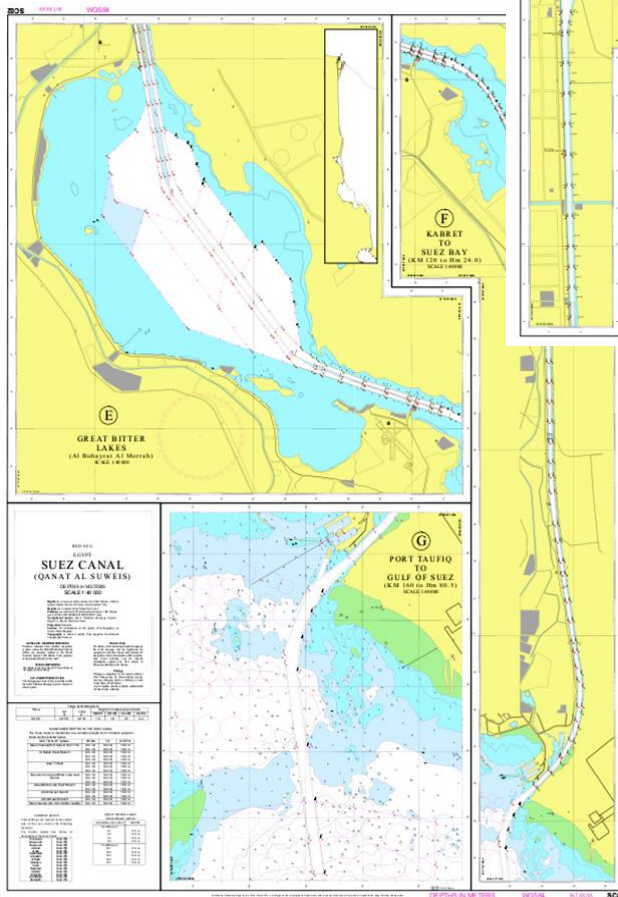
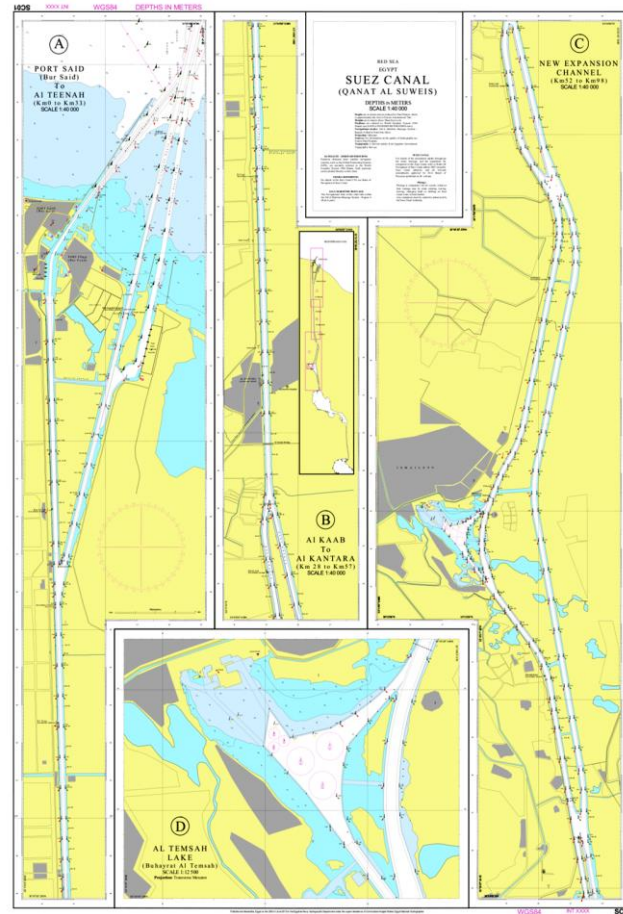


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Chart SC01, Suez canal .

Chart SC02, Suez canal .





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National paper charts catalogue

CHART NUMBER	CHART NAME	SCALE	PRODUCTION DATE
M10	EL ARISH PORT	1:2,500	1996
M11	ABU QIR - MAADIA	1:25,000	1999
M12	IDKU	1:50,000	2005
M13	IDKU (LNG)	1:20,000	2005
M14	ABU QIR PORT	1:15,000	2005
M15	MAADIA PORT	1:10,000	2006
M16	RASHID - EL ALAMIN	1:175,000	2007
M17	SUMID PORT	1:30,000	2007
M18	ALEXANDRIA PORT	1:10,000	2007
M19	DEKHIELA PORT	1:7,500	2007
M20	ALEXANDRIA - DEKHIELA	1:27,500	2008
M21	DUMIAT PORT	1:40,000	2008
R1	RAS MUHAMED	1:20,000	1988
R2	NUWEBAA	1:7,500	1995
R3	NUWEBAA	1:2,500	1995
R4	SHARM ELSHEIKH	1:5,000	2000
R5	APPROACHES TO PORT GHALEB	1:12,500	2010
R6	PORT GHALEB	1:2,000	2010
R7	SHALATIN TO HALAIB	1:180,000	2010
R8	APPROACHES TO ABURAMAD	1:15,000	2012
R10	Abu Ramad	1:2,000	2013
R11	Southern approach to Suez Canal	1:20,000	2013
R12	Ain Elsokhna Port	1:25,000	2013
R13	Adabia to Ras Abueldarag	1:50,000	2013
R14	Gulf of Suez	1:150,000	2013
R15	Red Sea	1:1000,000	2014

Detailed National chart catalogue will be provided to INT charts area coordinator (F&J)



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Other charts, e.g. for pleasure craft

ENHD has produced a pleasure chart for Port Ghaleb resort, Red Sea, in 2010



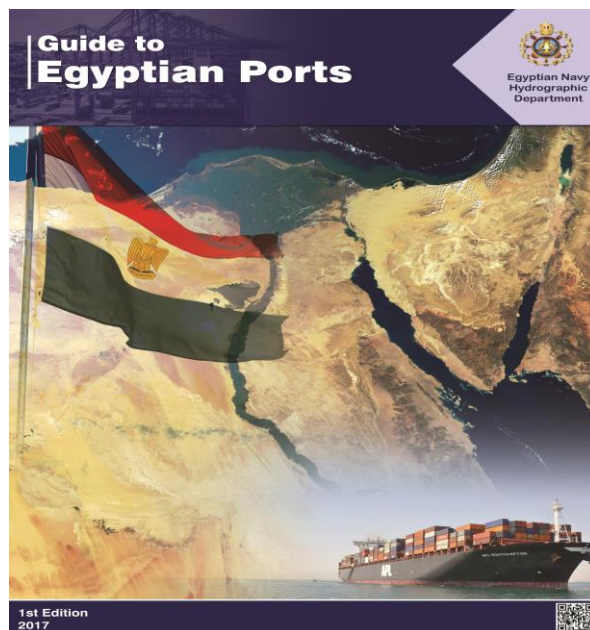
Problems encountered

Nil

4. New publications & updates:

New Publications

ENHD is working on producing a new sailing direction book for Egypt's ports





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Updated publications

- Nil

Means of delivery, e.g. paper, digital

- Nil

Problems encountered

- Nil

5. MSI

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 V), 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 KHz

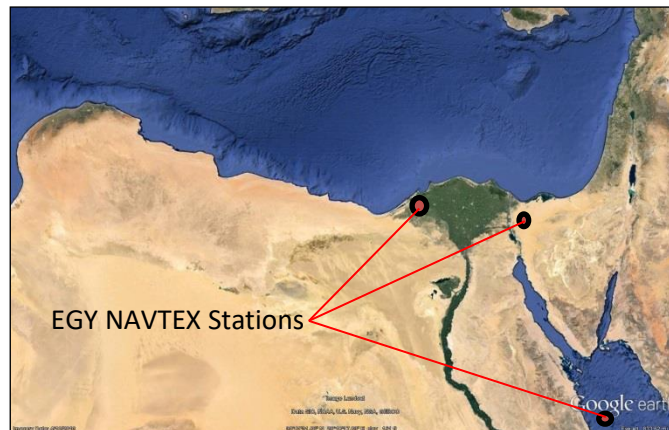


Figure: Egyptian NAVTEX stations

ENHD has coordinated with Egyptian Maritime safety Authority (MSA) to forward MSI directly to NAVAREA III coordinator via E-Mail: hydro@enhd.gov.eg to ensure effective timely promulgation of MSI.

<i>KHz:</i>	<i>Call</i>	<i>Station Name:</i>	<i>Range nm:</i>	<i>Transmission Times-All UTC:</i>						<i>Area</i>
518.0	SU H	Alexandria	350	0210	0610	1010	1410	1810	2210	3
518.0	SU K	Kosseir	350	0330	0730	1130	1530	1930	2330	9
518.0	SUZ	Ismailia	400	0350	0750	1150	1550	1950	2350	9



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2.3 New infrastructure in accordance with GMDSS Master Plan

- Nil.

2.4 Problems encountered

- Nil.

6. C-55

Has been provided to the IHO.

7. Capacity Building

Training received, needed, offered



Training received (2014):

- MSI course held in Muscat.
- Multibeam course held in India.

Offered training (2015):

- 7th Course in Marine Cartography and Data Assessment (Category B), UKHO Taunton, UK 7 September - 18 December 2015.

HYDROGRAPHIC SURVEY CATEGORY B COURSE

- Full Hydrographic Survey curriculum including all basic and essential competencies of the Hydrographic Surveyor as defined by the FIG/IHO/ICA International Advisory Board on Standards of Competence for Hydrographic Surveyors for a Category B Course. The course has been officially recognized on March 2017 and received continued recognition (in accordance with the Standards of Competence for Hydrographic Surveyors FIG/IHO/ICA S-5, Edition 11.1.0, December 2014) to 2023.
- ENHD will offer a **HYDROGRAPHIC SURVEY CATEGORY B COURSE** Under the umbrella of the Capacity Building project.

Needed training (2017-2018):

- Cat A Hydrography Programme (USM).
- MSI (training on establishment of MSI structure and basic MSI procedures).
- Advanced ENC Production.
- Multibeam Sonar Training Course.
- Technical aspects of maritime boundaries, baselines.
- Seminar on S-100.



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8. Oceanographic activities

ENHD provide Forecast elements of weather for 6 days, Storm and Weather Warning and dangers to Navigation, Wind Direction, Speed, and Gust, Calculations of Swell and current Direction, Temperature and Visibility, Atmospheric Pressure and Humidity, Changes to sea level, tide and tidal stream calculations.

Equipment:

- Automatic Weather Station:
- Messier Climate Weather Station
- Tide and Sea Level Gauge.



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9. Other activities

- IMO Audit Scheme

Egypt went through IMO Audit Scheme in 2016. ENHD participated in this Audit as the Egyptian National Hydrographic Office. The Audit Scheme members were satisfied that ENHD is fulfilling its responsibilities according to SOLAS convention Chapter 5 Regulation 9



- Satellite Derived Bathymetry

ENHD has conducted several SDB trails in the Mediterranean using free satellite images of Landsat-8 based on Arterial Neural Network. More work is undergoing now by using high definition images.

Commodore Dr./ Ashraf EL-Assal
Director
Egyptian Navy Hydrographic Department
Egypt National Hydrogrhper

15-July 2017