



EGYPT NATIONAL REPORT

to the
19TH Mediterranean and Black Sea Hydrographic
Commission (MBSHC) CONFERENCE

BATUMI/GEORGIA
30 JUNE - 02 JULY 2015



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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:

- Extensive surveys has been conducted in the area of responsibilities of ENHD along the coastline of EGYPT on the Mediterranean and redsea down to latitude 22 Degree north, such as routine approaches and passages route lines Multibeam check survey to the Egyptian ports for the propose of paper charts and ENC,s updates.
-
- ENHD has a Joint Coordination with Suez Canal Authority and Egyptian River Transport Authority (RTA) to establish fresh hydrographic database executed by both authorities for the propose of ENC,s production for suez canal and inland ENC,s for river Nile by ENHD.
- ENHD is maximizing bathymetric data by coordinating with private sector conducting seismic surveys in the concession areas contained in the Egyptian Exclusive Economic Zone in order to get benefit of covering uncharted areas included in the areas of ENHD charting responsibility.
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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 production early this year.

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

New ships:

- Oceanographic ship 3D seismic capabilities (contracting).

Processing System/ Software:

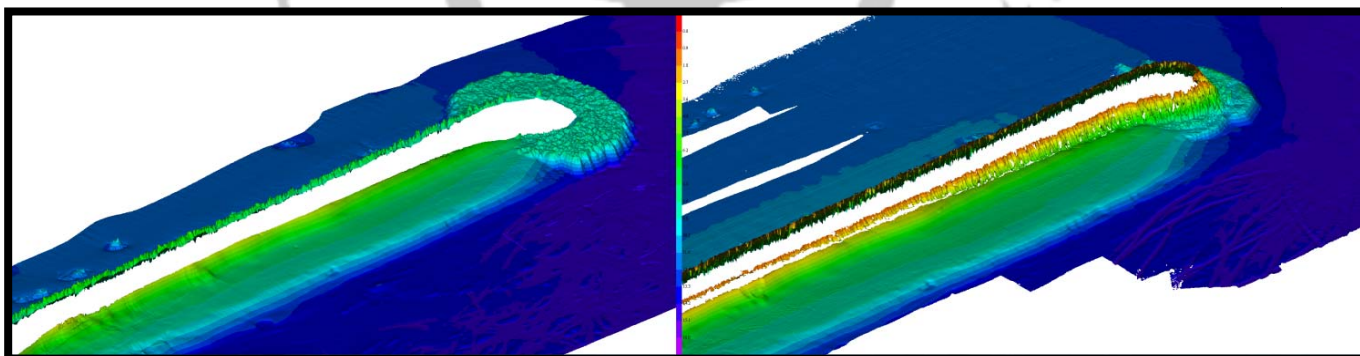
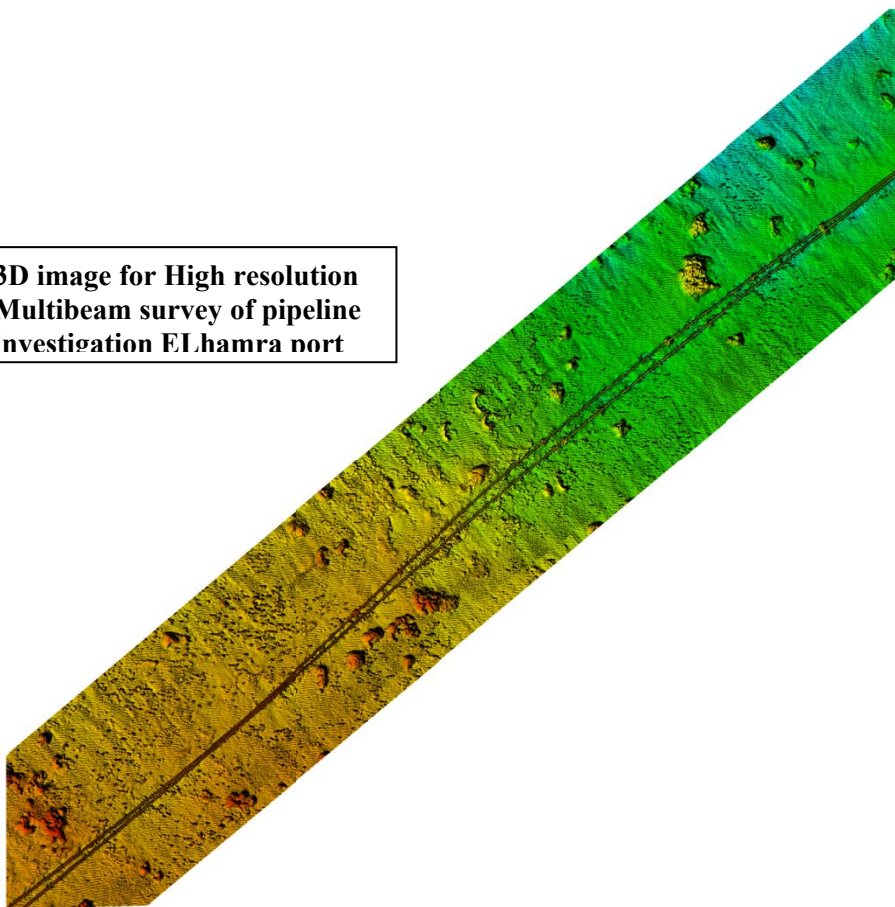
- The ENHD has acquired full digital capability



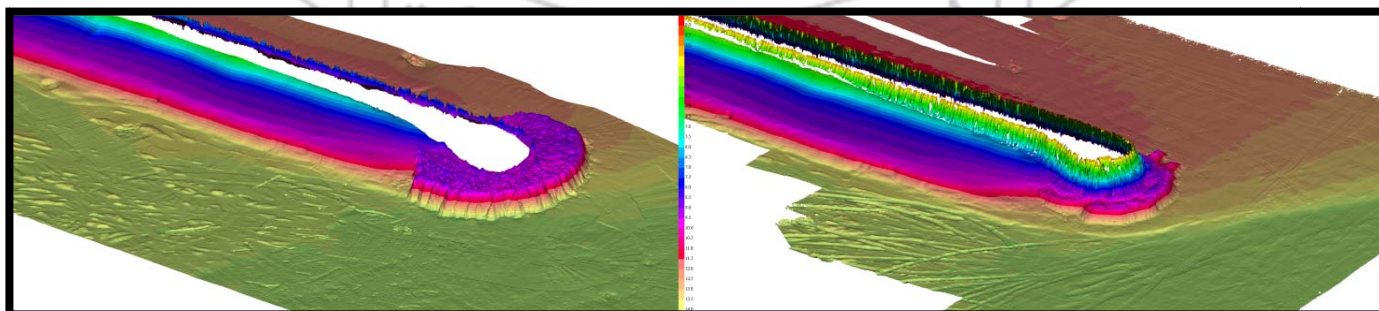
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**3D image for High resolution
Multibeam survey of pipeline
investigation Elhamra nort**



3D image for High resolution Multibeam survey of IDKU LNG port breakwater investigation





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2.3 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.

3. New charts & updates:

ENCs

ENHD produced 12 cells with different bands covers Egypt main and secondary ports on the Mediterranean Sea , Also as a contract with the Suez Canal Authority ENHD recently produced 8 cells in a harbor band for the suez canal including the new bypass channel.

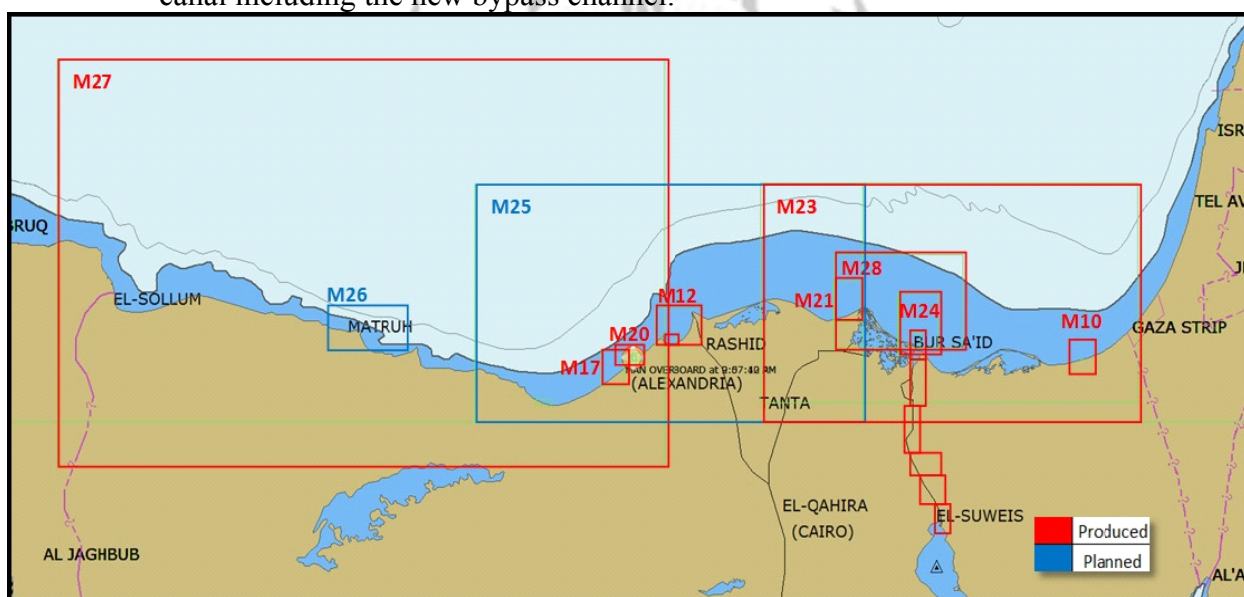


Figure: Current Egyptian ENCs coverage status on the Mediterranean Sea.

Mediterranean Sea Catalogue:

No:	Chart Name		Scale	Band	Code
1	M10	EL ARISH PORT	1:2,500	6	EG5ARISH
2	M12	IDKU	1:50,000	3	EG5EGM12
3	M17	SUMID PORT	1:30,000	4	EG4EGM17
4	M18	ALEXANDRIA PORT	1:10,000	5	EG5EGM18
5	M19	DEKHIELA PORT	1:7,500	5	EG5EGM19
6	M20	ALEXANDRIA - DEKHIELA	1:27,500	4	EG4EGM20
7	M21	DUMIAT PORT	1:40,000	4	EG4EGM21
8	M22	Port Said	1:22,000	4	EG4EGM22
9	M23	Elborolus To Rafah	1:250,000	2	EG2EGM23
10	M24	Approaches to Port Said	1:50,000	3	EG4EGM24
11	M27	Matrouh	1:500,000	2	EG2EGM27
12	M28	Dumiat to Port Said	1:100,000	3	EG3EGM28



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Usage bands:

Band	Number of cells
Overview (1)	0
General (2)	2
Coastal (3)	3
Approach (4)	4
Harbor (5)	2
Berthing (6)	1
Total	12

Suez Canal Catalogue:

No:	Chart Name	Scale	Band	Code
1	SC1	1:8,000	5	EG5EGSC1
2	SC2			EG5EGSC2
3	SC3			EG5EGSC3
4	SC4			EG5EGSC4
5	SC5			EG5EGSC5
6	SC6			EG5EGSC6
7	SC7			EG5EGSC7
8	SC8			EG5EGSC8
9	SC9	1:45,000	4	EG4EGSC9

Red Sea Catalogue:

RED SEA CATALOGUE					
1	R5	APPROACHES TO PORT GHALEB	1:12,500	5	EG5EGR05
2	R6	PORT GHALEB	1:2,000	6	EG6EGR06
3	R7	SHALATIN TO HALAIB	1:180,000	2	EG3EGR07
4	R8	APPROACHES TO ABURAMAD	1:15,000	5	EG4EGR08
5	R10	Abu Ramad	1:2,000	6	EG6EGR10
6	R11	Southern approach to Suez Canal	1:22,000	4	EG4EGR11
7	R12	Ain Elsokhna Port	1:25,000	4	EG4EGR12
8	R13	Adabia to Ras Abueldarag	1:50,000	3	EG3EGR13
9	R14	Gulf of Suez	1:150,000	3	EG3EGR14
10	R15	Red Sea	1:1000,000	2	EG2EGR15



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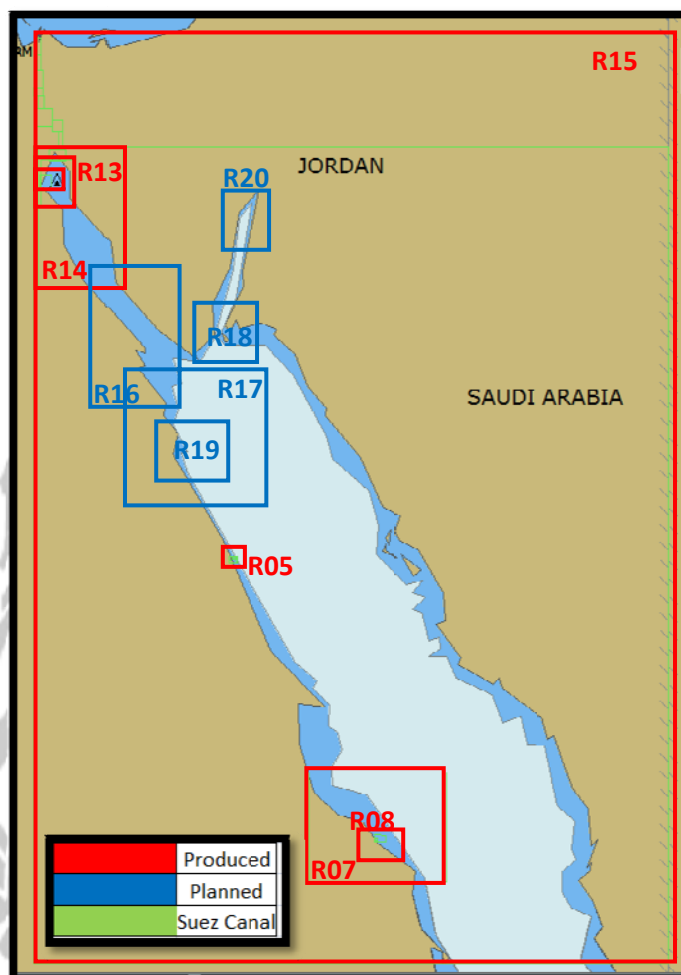


Figure: Current Egyptian ENCs coverage status on the Red Sea.

ENC Distribution method

In order to ensure consistency, reliability ,availability and seamless Egyptian ENC,s in high quality under the umbrella of IHO , ENHD has contracted with Regional ENC Coordinating Centre (IC-ENC) last year.

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 as follows:

Two new INT charts proposed to be included in the MEDINTCHART Scheme (area F) and Two chart in (area J) as follows:



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Producer	National No:	Chart Name	Date		Scale 1:	Format
			Publication	New edition		
EG	AREA F					A0
	M22	PORTSAID PORT	July 2015	-	22,000	
	SC01	SUEZ CANAL	July 2015	-	40,000	
	AREA J					
	SC02	SUEZ CANAL	July 2015	-	40,000	
	R11	SUEZ PORT	July 2015	-	20,000	

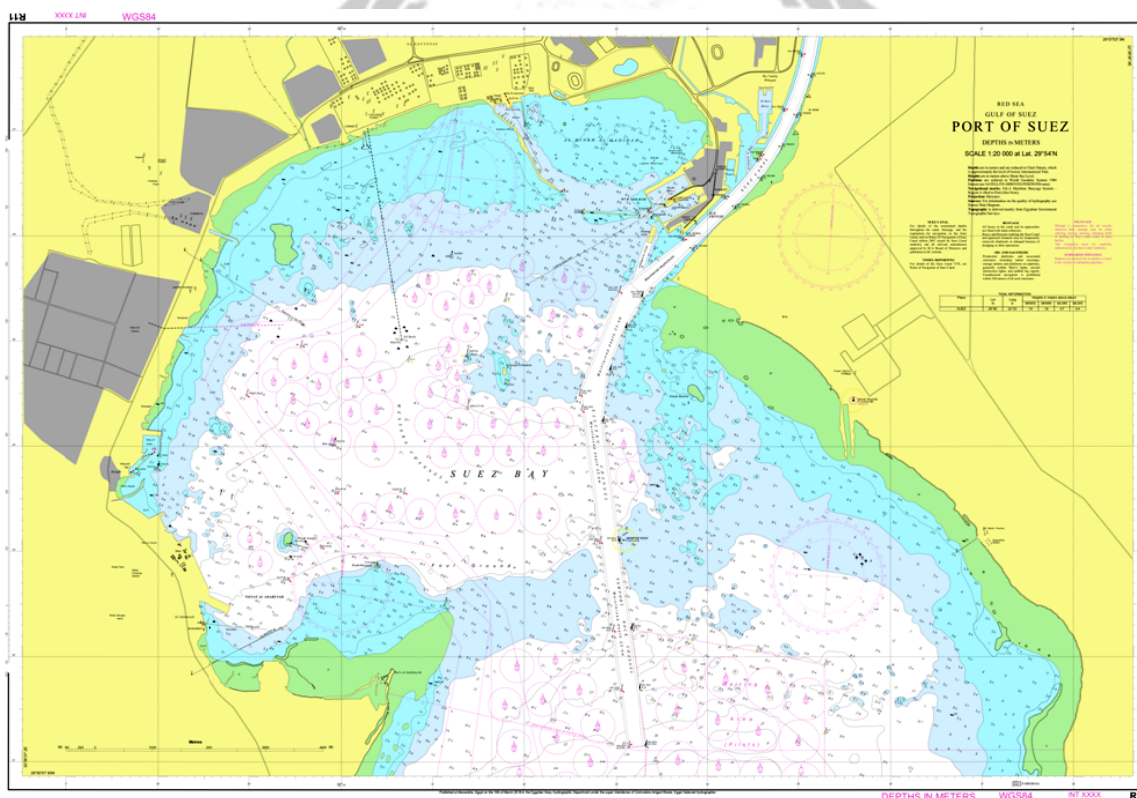


Figure: Chart R11, Port of Suez.



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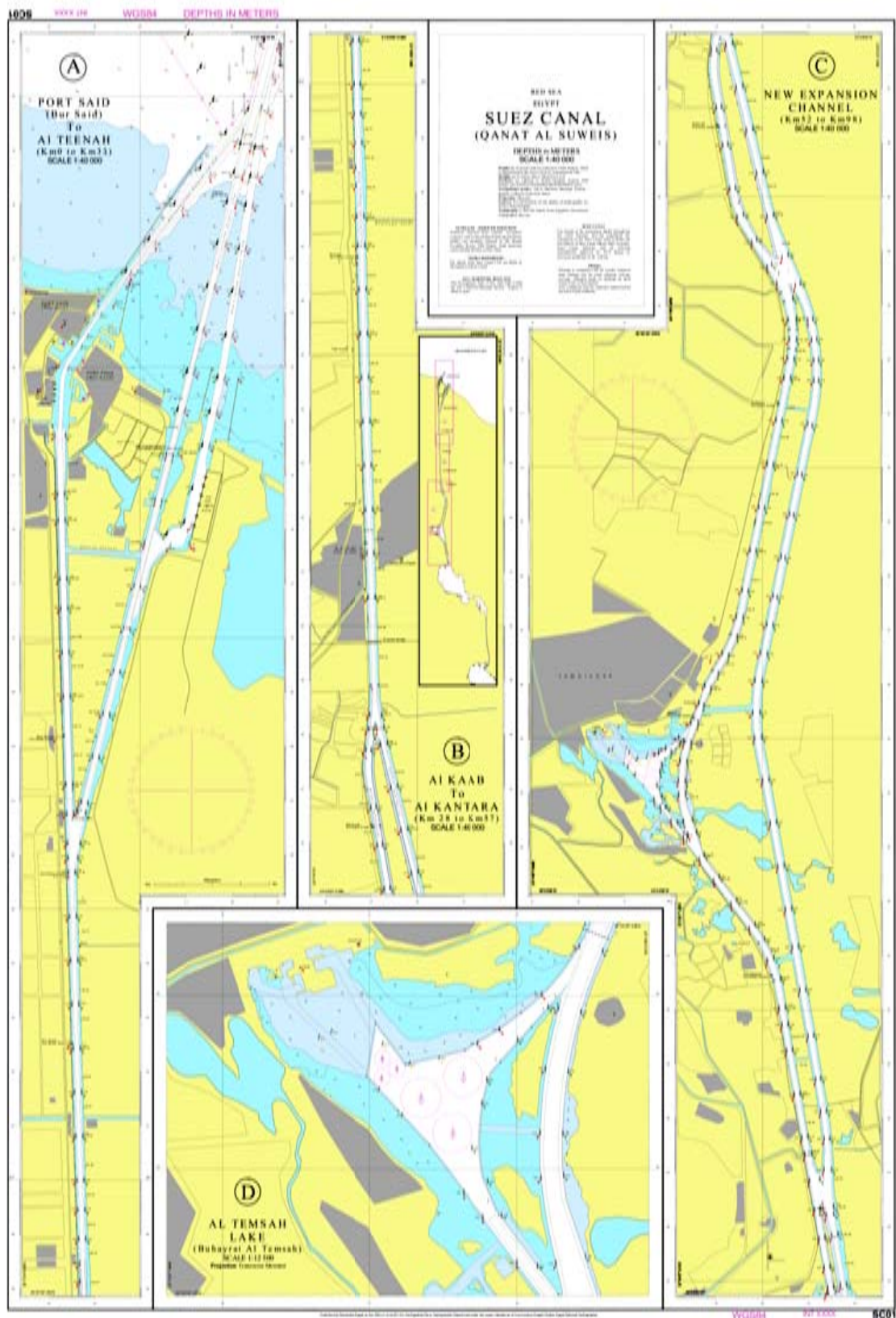


Figure: Chart SC01, Suez canal .



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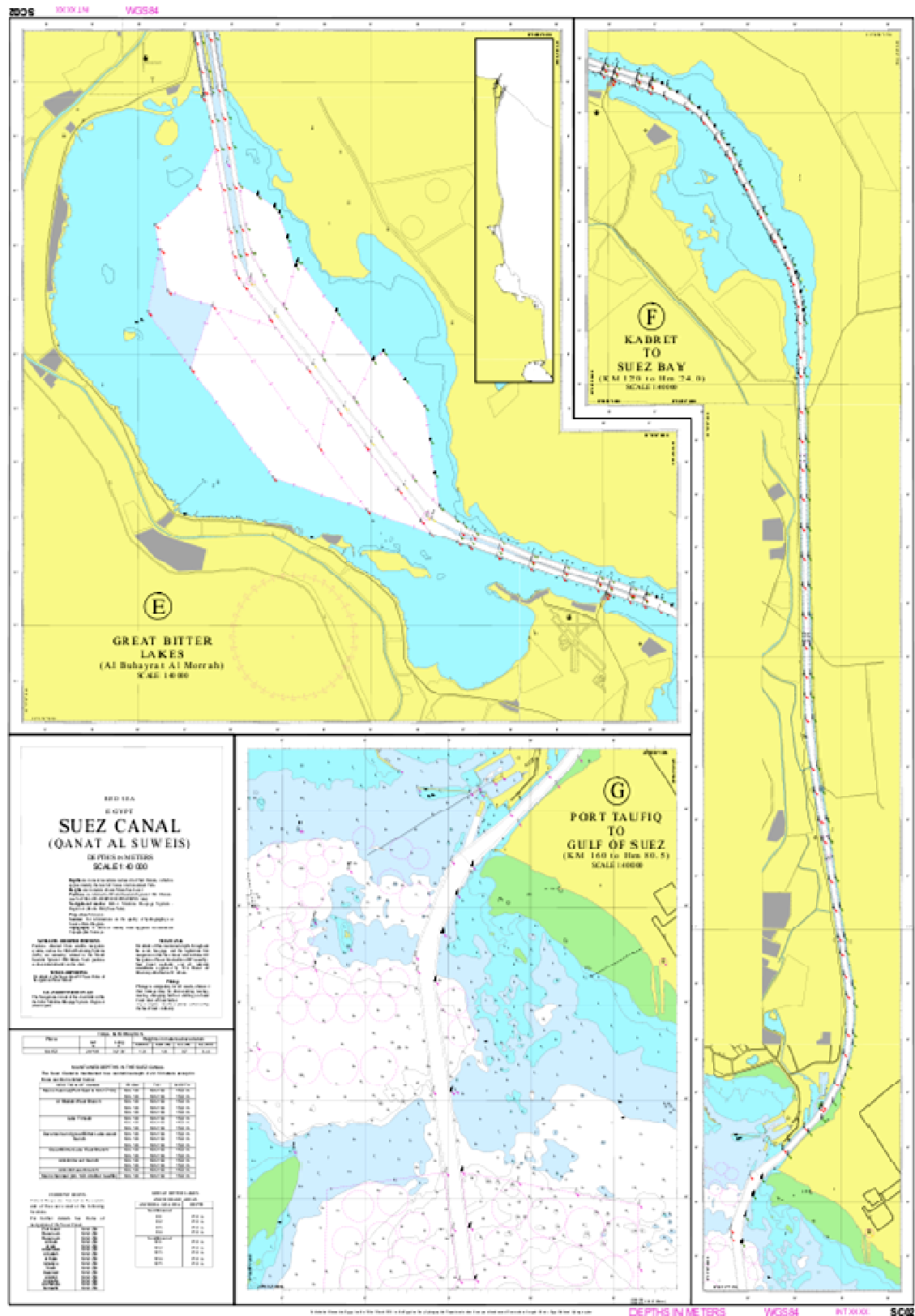


Figure: Chart SC02, Suez canal.



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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

- Nil

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



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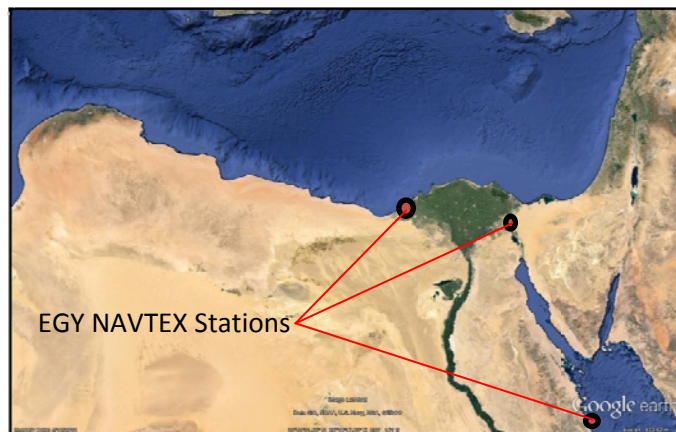


Figure: Egyptian NAVTEX stations

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

KHz:	Call	Station Name:	Range nm:	Transmission Times-All UTC:						Area
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

2.4 New infrastructure in accordance with GMDSS Master Plan

- Nil.

2.5 Problems encountered

- Nil.

6. S-55

➤ will be uploaded shortly T

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.



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Needed training (2016):

- 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.

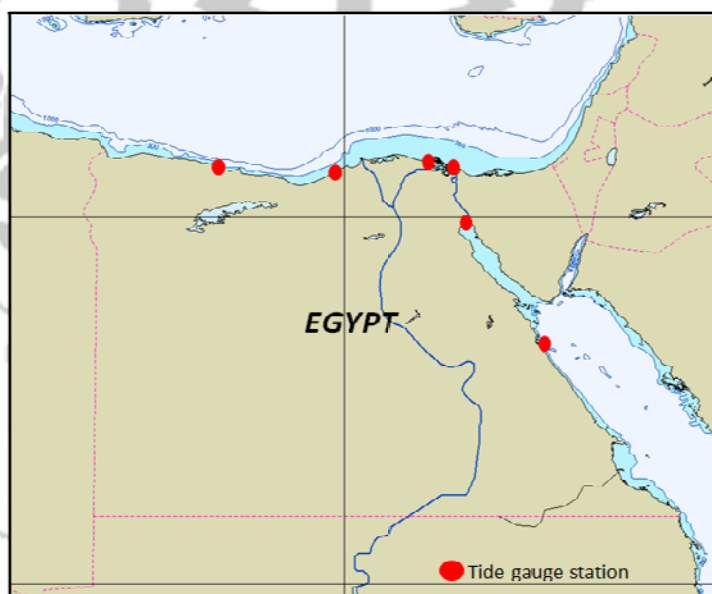
8. Oceanographic activities

Tide gauge network

A joint Co-operation between ENHD and Survey Research Institute (SRI) has installed a state-of-the-art sea level observing system at Mersa Matrouh ,Alexandria, Dumiat and Portsaid on the Mediterranean sea, which consists of three devices integrated together in a unified scheme:

- Tide gauge
- Metrological unit,
- Satellite-based GPS geodetic receiver.

To collect Heterogeneous datasets have been for the propose of precise redefinition of the Egyptian vertical datum.





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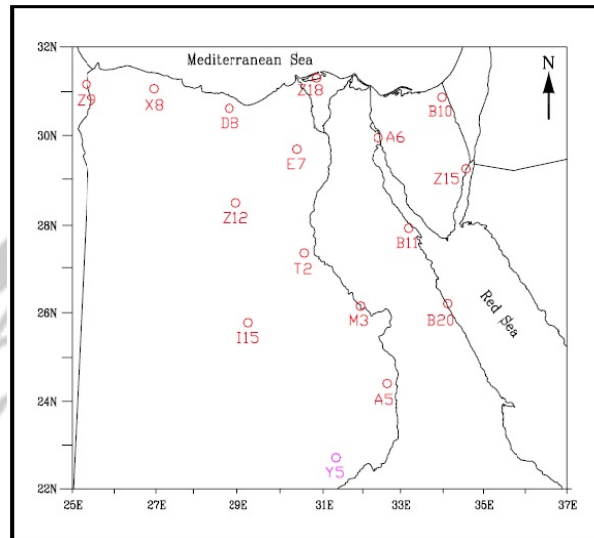
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9. Other activities

Magnetic/Gravity surveys

Several gravity observations have been collected and processed in order to enhance the vertical control networks in Egypt.



Figure; High Accuracy Reference Network HARN

Capt.Dr. Ashraf EL Assal
Head of the Hydrographic Division
Egyptian Navy Hydrographic Department