NATIONAL REPORT OF KINGDOM OF SAUDI ARABIA

7th ROPME Sea Area Hydrographic Commission Meeting

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Muscat, Oman

Prepared by Hydrography Department, General Commission for Survey, Kingdom of Saudi Arabia

National Report of Kingdom of Saudi Arabia

1. Introduction

General Commission for Survey (GCS) was established in the Kingdom of Saudi Arabia on 13th February 2006 through a resolution of the Saudi Cabinet. Hydrography under the GCS has been formulated for implementation of phased funding of capital assets, training of Saudi personnel and capacity building.

Since its establishment GCS has surveyed about 69,000 km^2 in Arabian Gulf and Red Sea together and produced ENCs, PNCs and CZMC[1]s at various scales. The Hydrographic Department is well equipped with latest survey equipment and platform to carry out task in both deep and coastal water.

2. Hydrographic Surveys:

Saudi Arabia is surrounded on eastern and western side by Arabian Gulf and Red Sea respectively with coastline stretching over 3,000 km. Presently 'Admiralty Charts' are being used based on old data thus it was essential for GCS to produce updated charts based on fresh survey data.

The work of fresh survey was begun from 2010 and plans to complete survey of entire Saudi Marine Areas by 2020. All surveys were done by latest technology using bathy-cum-topographic LiDAR, multibeam echosounder, Side Scan Sonar, Sub-bottom Profiler, Position Fixing Systems, ADCP and Tide Gauges.

Hydrographic Survey Vessel (HSV) 'Sultan' is being utilized for survey of charts areas on scale 1:150,000 (in deep water North of Jeddah and along Gulf of Aqaba).

GCS possess following equipment:-

a. One 43.7m long hydrographic survey vessel with 2 x 8.4m hydrographic survey launches onboard. All equipped with full suite of equipment/systems. All operational and being utilized for hydrographic survey, oceanographic activities and field training for third batch of hydrographers in Red Sea and Gulf of Aqaba.

b. One hydrographic survey launch (HSL) – 16m long catamaran is being deployed in Arabian Gulf for coastal surveys in Saudi Marine Areas (SMA).

Diagram of fresh Hydrographic Surveys is placed at Enclosure 1.

[1] Coastal Zone Management Chart

3. New Charts & Updates:

GCS has produced number of charts. Their details can be found in table below.

a. ENCs & PNCs distribution arrangements will be finalized in near future.
b. INT Charts – still yet to be finalized with ENCs distribution.
c. RNCs – Nil.

Area	No. of Charts		
	ENC	**PNC**	**CZM**
Arabian Gulf	5	5	13
Red Sea	37	37	73

Chart scale ranges from 1:10,000 to 1:150,000. CZM – *Coastal Zone Management*

4. New Publications/Updates:

New Publications – National tide tables of 2017 published utilizing validated data from GCS' NTGN-1[2]. It is supplied to government agencies, ports and for sale along with paper charts distribution. It is available through GCS' web-portal and as hardcopy.

5. MSI:

National Coordinator – Ministry of Transport/Saudi Port Authority (SPA). GCS updates charts through liaison with SPA and NAVAREA IX coordinator using available GMDSS.

6. C-55:

Regular planned 100% coverage of survey in progress since 2010 for Arabian Gulf and Red Sea in Saudi Marine Areas. Systematic new surveys are being progressed to survey ports, approaches, coastal and deep areas. CZMCs on 25k scale are completed.

Latest update is placed at Enclosure 2.

7. Capacity Building (CB):

GCS has focused on CB in both assets and human resource development. GCS' branch at Jeddah with Hydrographic Training Center is functional and three batches in Cat 'B' Hydrographers have graduated. They are actively participating in fresh surveys in Red Sea in GCS' own survey vessel.

[2] National Tide Gauge Network–1

8. Oceanographic Activities:

1. National Tide Gauge Network is operated in Arabian Gulf and Red Sea with 12 tide gauges stations with online data.
2. 2 x Marine Sciences Data Buoy (MSDB1) operational in Red Sea with data flow to GCS.
3. Hydrographic Survey Vessel Sultan is being used for hydrographic and oceanographic activities since its launch in May 2015.
4. GCS plans to install 10 more tide gauge stations in Arabian Gulf and Red Sea.

9. Other Activities:

a. GCS, representatives participate in important IHO/RHC meetings.

b. Meteorological Data – Real time flow into GCS' data bank.

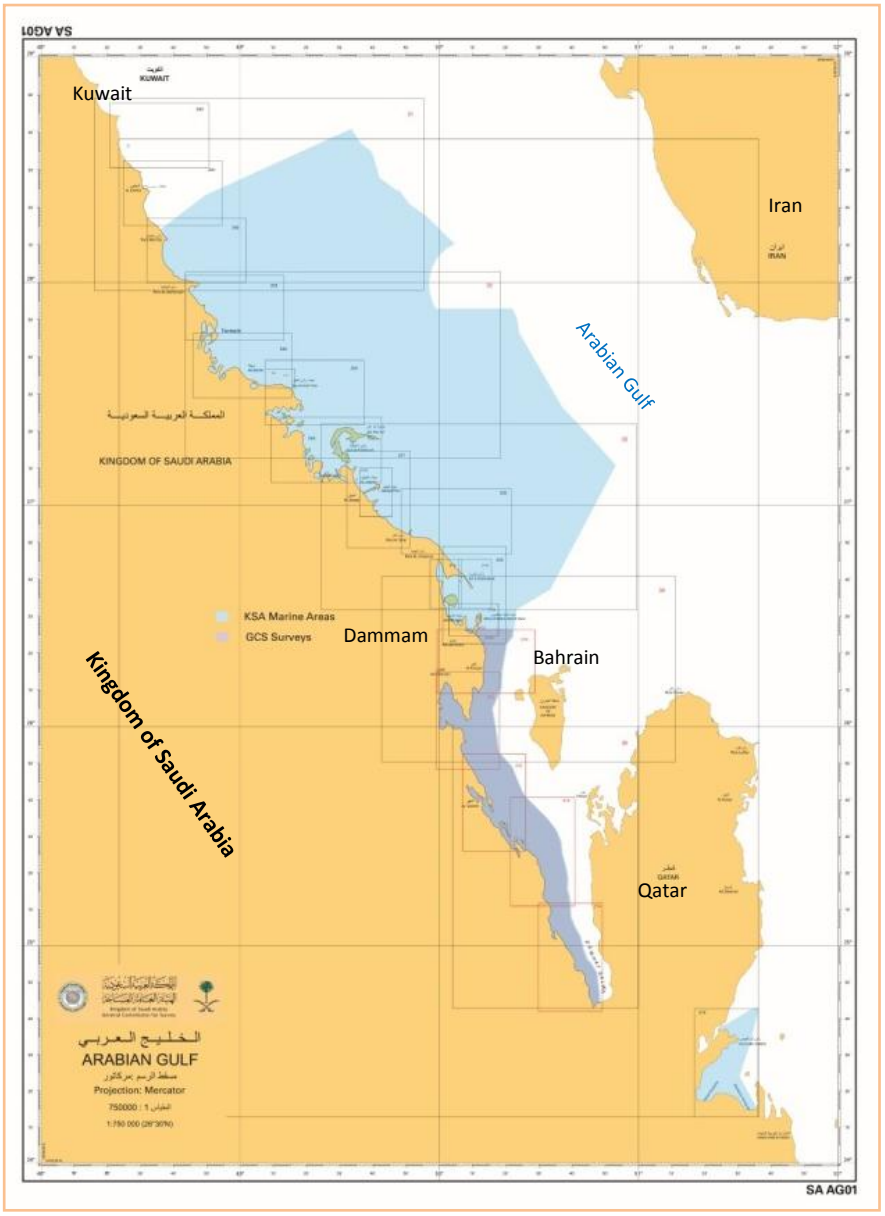
c. Environment Protection – Hydrographic data being used to supplement the preforms of the stakeholders such as Meteorology and Environment authorities.

d. MSDI Progress – 2 years Hydrographic Data Management (HDM) project completed with complete set of documentations, loading of data from surveyed ENC database/ PNC database / CZMCs database.

10. Conclusion:

GCS with consistent policies and programs is well on its way to become a strong National Hydrographic Services, with strong focus on manpower capacity building, provision of value added products and services to existing and potential stakeholders within and outside the Kingdom of Saudi Arabia.

Enclosure 1



Arabian Gulf (AG)

Total Marine Areas in AG: - 30,257 km^2.

Areas covered by GCS surveys: - 2,943 km^2 (9.7%), highlight by dark blue in 2015 under project Hydrographic Survey Project 7 (HSP7)

Enclosure 2

Country: Kingdom of Saudi Arabia

Date of validity of information: 07 February 2017

1. Hydrographic Surveying

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.

Depths	A	B	C
Depths < 200m	44	56	56
Depths > 200m	0	100	100

2. Nautical Charting

GB charts are being used by mariners with old source data. KSA charts under production area-wise along the coast (up to 1:50,000) with 100% insonified surveys for distribution through a RENC is under active consideration.

Status of nautical charting within the limits of the EEZ

Coverage of charts published by your organization, 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	-	-	-
Landfall and Coastal passage/Medium	18%	Nil	18%
Approaches and Ports/Large	51%	N/A	51%
Percentage of Group A showing depths in meters	100%		
Percentage of Group A referenced to a satellite datum	100%		

3. Maritime Safety Information (MSI)

Navigational Information (S–53)

Service	Yes	No	Partial	NOTES
Local Warnings	☑			SPA*
Coastal Warnings	☑			SPA
Navarea Warnings	☑			SPA
Information on Ports and Harbors[3]	☑			SPA

** Saudi Port Authority*

[3] Confirm that a system exists for passage of information on changes in ports and harbours to the responsible charting authority.

4. General Comments or Additional Information

1. GCS is actively implementing Hydrographic Survey Projects (HSPs) for nautical charring of Saudi Marine Areas with 100% insonification using LiDAR and MBES, etc. since 2010. The first round of fresh Hydrographic Surveys for entire Saudi Marine Areas is planned to be completed by 2020 with full charts by 2021.
2. The Hydrographic Data Management project (includes MSDI) is completed to manage the vast amount of Hydrographic and Oceanographic data for use of stakeholders.
3. Distribution of ENCs worldwide is under discussion with a reliable and efficient RENC under IHO regulations.