



NATIONAL REPORT OF KINGDOM OF SAUDI ARABIA

8th ROPME SEA AREA HYDROGRAPHIC COMMISSION MEETING

18 - 20 February 2019

Islamabad, Pakistan

NATIONAL REPORT OF KINGDOM OF SAUDI ARABIA

1. Introduction

General Commission for Survey (GCS) was established in the Kingdom of Saudi Arabia on 13 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 200,000 km² in Arabian Gulf, Red Sea and the Gulf of Aqaba together and produced ENCs, PNCs and CZMCs¹ at various scales. The Hydrographic Department is well equipped with modern survey equipment and platforms to carry out tasks in both deep and coastal waters.

Saudi Arabia is surrounded on eastern and western side by Arabian Gulf, Red Sea and Gulf of Aqaba respectively with coastline stretching over 4,673 km. Presently the charts being used are based on old data thus the GCS has been undertaking hydrographic surveys to produce updated charts. The Kingdom's waters are expected to be fully surveyed and charted by 2021.

2. Hydrographic Surveys

New hydrographic surveys were undertaken from 2010 onwards and the plan is to complete surveys of entire Saudi Marine Areas as mentioned above. All the surveys are being done with the latest technology using bathymetric – topographic LiDAR, Multibeam Echosounders, Side Scan Sonars, Sub-bottom Profilers, latest Position Fixing Systems and Inertial Navigation Systems, ADCPs, Tide Gauges and allied oceanographic equipment.



Hydrographic Survey Vessel (HSV) 'Sultan' is the 43.7m long hydrographic survey vessel with two 8.4m hydrographic survey launches onboard, all platforms equipped with full suite of equipment/systems.

On the Arabian Gulf front, the marine area from south of Ad Dammam to Dawat Salwa (HSP7²) has been completed. Plans are underway to complete the charting of the remaining Eastern Waters of the Kingdom based on new surveys.

The figure on page 5 depicts the Arabian Gulf surveys-completed and planned.

¹ Coastal Zone Management Charts

² Hydrographic Survey Project

3. New Charts & Updates

General Commission for Survey (GCS) has produced the 1:50,000 scale charts given at table below at the time of filing this report from results of Hydrographic Survey Project (HSP 7) in the Arabian Gulf.

Area	No. of Charts	
	ENC	PNC
Arabian Gulf	5	5

An independent QC/QA, encryption and distribution has been arranged to be handled by an International Authority.

4. New Publications/Updates

National tide tables of 2019 published utilizing validated data from GCS' National Tide Gauge Network. It is supplied as soft and hard copy to government agencies, ports and for sale through GCS' web-portal.

5. MSI

The National Coordinator of the Kingdom of Saudi Arabia is the Ministry of Transport/Saudi Port Authority (SPA). GCS updates charts through liaison with SPA and NAVAREA IX coordinator using available GMDSS. However, plans are under consideration for the GCS to take over MSI / Chart Correction duties as and when the sale of the GCS produced ENCs and PNCs commences.

6. C-55

The status of the surveys of the Arabian Gulf is as follows:

A. Hydrographic Surveying

Status of hydrographic survey of all navigable waters, including internal waters, out to the limits of the EEZ:

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.

	A	B	C
Depths < 200m	12%	88%	30%
Depths > 200m	NA	NA	NA

(GCS 2010 – 2018 data)

B. Nautical Charting*

Status of nautical charting within the limits of the EEZ.

A = percentage covered by INT series, or a paper chart series meeting the standards in S-4.

B = percentage covered by Raster Navigational Charts (RNCs) meeting the standards in S-61.

C = percentage covered by ENC's meeting the standards in S-57.

Purpose/Scale	A	B	C
Offshore passage/Small	-	-	-
Landfall and Coastal passage/Medium	0	Nil	0
Approaches and Ports/Large	0	NA	0
Percentage of Group A showing depths in metres	0		
Percentage of Group A referenced to a satellite datum	0		

**The conversion of standalone products into the database driven system is in progress and GCS will update the status to IHO after completing the conversion.*

7. Capacity Building (CB)

CB of personnel, through in-house accredited courses, has been nil for the period since the present numbers of trained staff are sufficient for both the activities in-hand (2017/2018) and those scheduled for up to 2021. However, in-house training on new techniques, technologies and software is continuously being undertaken as part of on the job training. In addition, training courses by third parties have been identified and the personnel are expected to be trained in these courses in the coming year.

8. Oceanographic Activities

GCS collects oceanographic information like Tides, Tidal streams, Sound Velocity Profiles etc., from various sources. Most of this information is collected while undertaking hydrographic surveys, from the National Tide Gauge Network (NTGN) and the Marine Science Data Buoy projects.

GCS operates five (5) stations in the Arabian Gulf for advanced prediction of tides (for navigation) and sea level studies. GCS also supports collaboration projects for collecting oceanography data with Saudi Universities.

GCS has been publishing Tide Tables since 2016. The latest Saudi Tide Table 2019 has been published and is available for purchase.

9. Other Activities

GCS is also preparing customized products as per the requirement of its stake holders and the Hydrographers and Cartographers are actively participating in the national exhibitions and seminars. GCS is working on integrating the HDM project with the Geographical Information Centre (GIC) to make the products available online as part of self-sustainability.

10. Conclusion

GCS in Kingdom of Saudi Arabia continues to develop and gain experience adapting state of the art technologies for hydrographic surveying and nautical publication, committing to assure safety of navigation under IHO/IMO regulations. It is expected that the coastal series of nautical charts will be completed by 2020/2021 for the entire KSA coastal waters.

In step with the Nation's "Vision 2030" Program, GCS is focused on participating fully with the associated objectives and goals outlined in order to present world-class nautical charting and associated products to benefit economical maritime services, trade, tourism, Coastal Zone Management and the Blue Water Economy.

Overview of the Arabian Gulf Hydrographic Survey Coverage

