



**GEOSA**  
الهيئة العامة للمساحة  
والمعلومات الجيومكانية  
General Authority for Survey  
and Geospatial Information



# 10<sup>th</sup> RSAHC Meeting

26-28 November 2024

Jeddah, Saudi Arabia

NATIONAL REPORT  
OF  
KINGDOM OF SAUDI ARABIA

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

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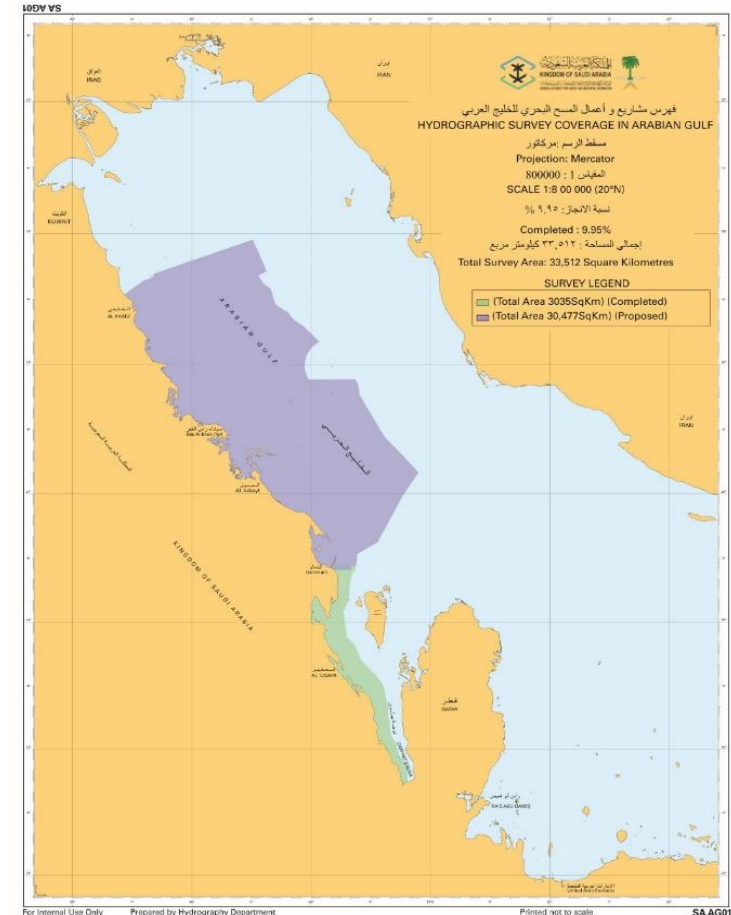
- ✓ In 2020 under the Council of Ministers Resolution No. 90, the Authority was renamed to the General Authority for Survey and Geospatial Information (GEOSA).
- ✓ The General Authority was previously known as the General Commission for Survey (GCS), which had operated since 2006.
- ✓ The mission of the Hydrography Department within GEOSA is to supervise, monitor and promote Hydrographic survey sector in the Kingdom of Saudi Arabia to achieve quality outcomes and improve hydrographic performance.
- ✓ Hydrography Department as part of its mandate is the **Water Theme Regulator** which covers Hydrography, Hydrology, Hydrogeology, and Inland Waters.
- ✓ Saudi Arabia is contained on its western shores by the Red Sea and Gulf of Aqaba and on its eastern shores by the Arabian Gulf.



# Hydrographic Surveys

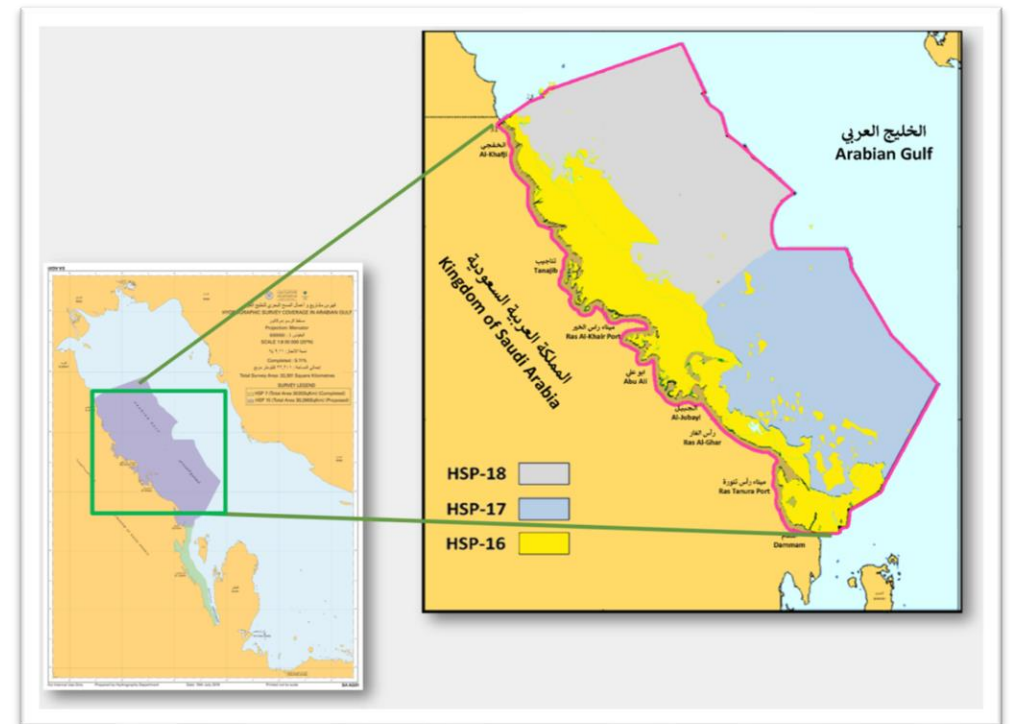
- ✓ GEOSA since its establishment, has surveyed the marine area from south of Ad Dammam to Dawhat Salwa in the Arabian Gulf.
- ✓ Hydrographic survey and charting activities are in progress in the Arabian Gulf to cover the remaining Saudi Waters
- ✓ Plan is to complete survey coverage of the entire Saudi Marine Areas by the year 2026.

Region Coverage	Percentage
Arabian Gulf	60 %



- ✓ Since 2023, the following new surveys were undertaken by GEOSA to cover the area from Ad Dammam to Al Khafji as shown below.

Arabian Gulf New Surveys					
Sr. No	Project	Description	Area (Sq. km)	Type of Survey	Status
1	HSP-16	DAMMAM TO AL KHAJFI	11000	LiDAR	75 %
2	HSP-17	DAMMAM TO RAS AL KHAIR	10806	MBES	Expected 2025
3	HSP-18	RAS AL KHAIR TO AL KHAJFI	9551	MBES	90 %



# Hydrographic Survey Platforms

- ✓ The dedicated Hydrographic Survey Vessel (HSV) ‘Sultan’ is the primary hydrographic survey platform
- ✓ Recently, Un-crewed Survey Vessels (USV) have also been deployed in the Hydrography Survey Project work in the Arabian Gulf.



( ALMASH ALBAHRI SULTAN )	
FR. Fassmer GmbH & Co. KG	
Length Overall	43.72 m
Molded Beam	9.80 m
Designed Draught	2.80 m
Maximum Speed	11 knots
Crew	24



( ALMASH ALBAHRI SULTAN 1 & 2 )	
FR. Fassmer GmbH & Co. KG	
Length Overall	8.40 m
Molded Beam	2.70 m
Designed Draught	0.60 m
Maximum Speed	14 knots
Crew	5



( ALMASH ALBAHRI 1 )	
Nautical Lines Marine LLC	
Length Overall	16.00 m
Molded Beam	5.95 m
Designed Draught	1.00 m
Maximum Speed	12 knots
Crew	10



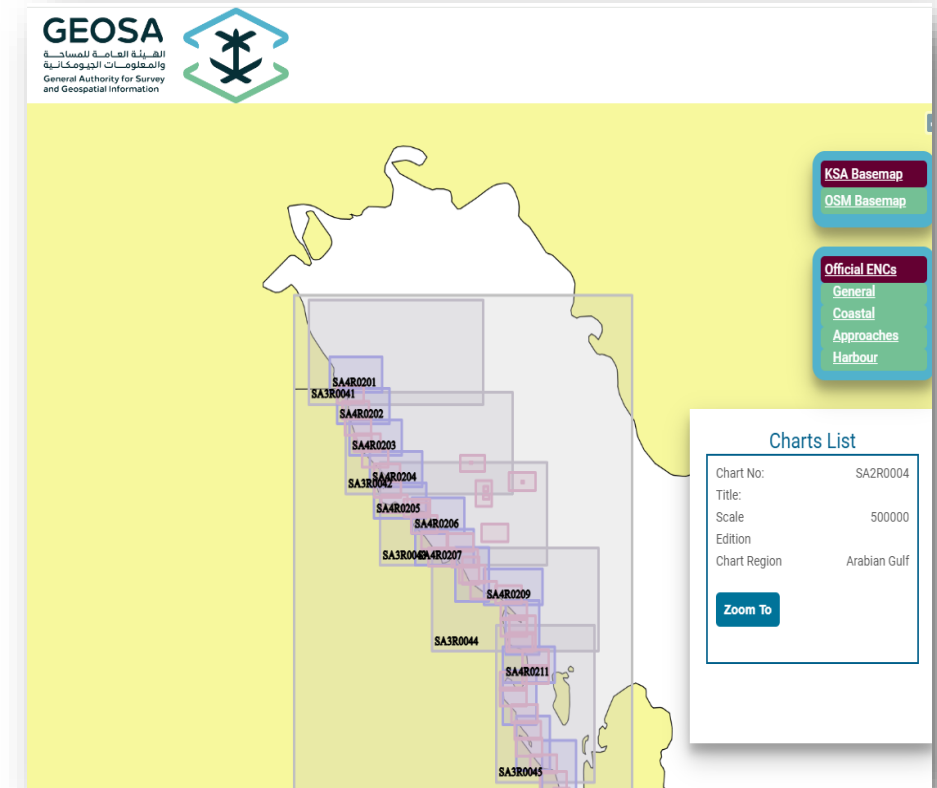
( USV – 1 & 2 )	
Guardian Geomatics	
Length Overall	7.70m
Molded Beam	0.82m
Designed Draught	2.20m
Maximum Speed	14 knots
Crew	NIL



# New Charts & Updates

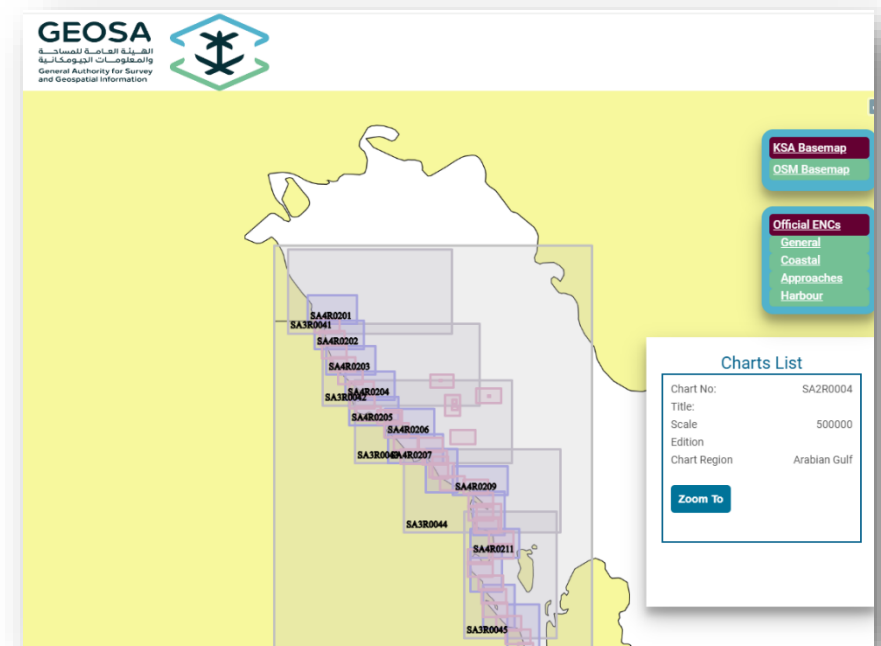
- ✓ In the Arabian Gulf, the GEOSA designed chart scheme consisting of 27 charts to fulfil different navigational purposes
- ✓ Prior to 2024, GEOSA completed production of 5 PNC & ENC charts
- ✓ To date, GEOSA, is executing two extensive-area survey projects in Arabian Gulf which are nearing completion. As a result, three (3) 150,000 scale charts, ten (10) 50,000 scale charts, six (6) larger scale (1:10,000 to 1:25,000)

Arabian Gulf PNC & ENC				
Navigational Purpose	Scale	Planned PNC & ENC	Produced PNC & ENC	Under Production PNC & ENC
General	1:500,000	1	0	0
Coastal	1:150,000	5	0	3
Approach	1:50,000	15	5	10
Harbor	(1:10,000 - 1:25,000)	6	0	6
<b>Total</b>		<b>27</b>	<b>5</b>	<b>19</b>





- ✓ GEOSA is also preparing customized products as per the requirement of stake holders



Arabian Gulf CZM					
Navigational Purpose	Scale	Planned CZMC	Produced CZMC	Under Production CZMC	Future Project
CZM	1:25,000	41	13	24	4
<b>Total</b>		41	13	24	4





- ✓ The National Coordinator for MSI of the Kingdom of Saudi Arabia is the Saudi Ports Authority (MAWANI).
- ✓ GEOSA updates charts through liaison with MAWANI and NAVAREA coordinator using available inputs.
- ✓ The Chart Correction actions and validation of ENC's and PNC's remains the full responsibility of GEOSA.



## 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	60 %	40 %	0 %
Depths > 200m	NA	NA	NA

*(GEOSA 2010 – 2024 data)*



## Nautical Charting

Status of nautical charting within the limits of the EEZ:

A = percentage covered by INT / 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	0	0	0
Landfall and Coastal passage / Medium	0	0	0
Approaches and Ports / Large	18.52%	18.52%	18.52%
Percentage of Group A showing depths in meters	18.52%		
<b>Percentage of Group A referenced to a satellite datum</b>	<b>18.52%</b>		

**(GEOSA 2010 – 2024 data)**



# Capacity Building (CB)

- ✓ Capacity Building of personnel, has been achieved by good use of IC-ENC sponsored courses ,in-house training and on the job training.
- ✓ In 2024, a training course on **OCEAN AFFAIRS AND THE LAW OF THE SEA** was conducted where fifty (50) members participated from nine (9) government departments.
- ✓ An **Introduction to Hydrography** was held internally for Government Stakeholders.
- ✓ Training courses by third parties have been identified and GEOSA personnel are expected to be trained in these courses over the coming years.
- ✓ **Maritime Safety Information (MSI)** training course attended in Bahrain



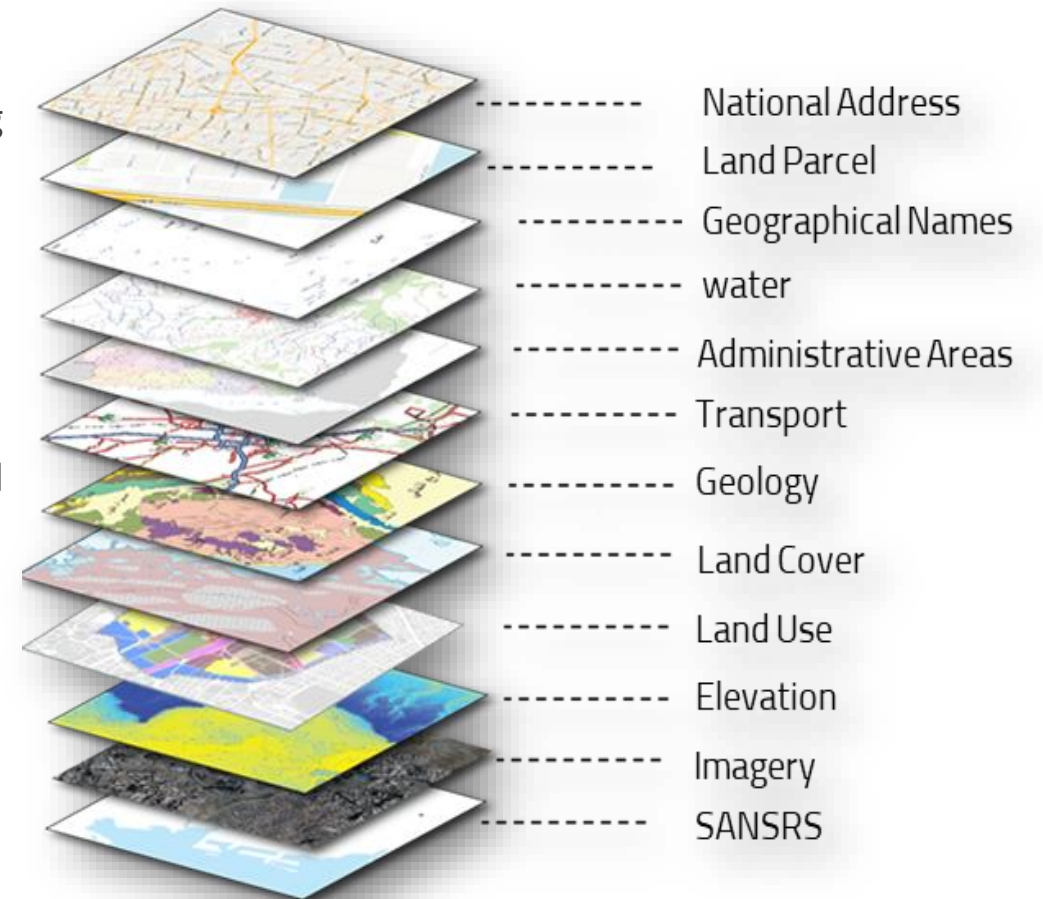


- ✓ GEOSA observes tides, meteorology and other oceanographic data from various sources.
- ✓ Complementary tide and oceanographic data are gathered during hydrographic and oceanographic survey projects.
- ✓ Tidal and meteorology observations are mainly gathered real time from the national tide gauge network (NTGN).
- ✓ NTGN was established by GEOSA in 2012
- ✓ NTGN consists of 12 stations distributed along Kingdom of Saudi Arabia coasts.
- ✓ Data is being observed every minute.
- ✓ NTGN is linked to an automated system for sending and receiving data and displaying it in real-time on GEOSA website



# National Spatial Data Infrastructure

- ✓ Establishing 12 main Themes, working groups of Themes, defining regulating aspects for each Theme.
- ✓ Building guides and technical specifications for the main Themes.
- ✓ Water theme include Hydrography, Hydrology, Hydrogeology, and Inland waters.
- ✓ GEOSA maintaining and advancing a National Geospatial Platform.





- ✓ The Hydrographers and Cartographers are actively participating in the national exhibitions, workshops and seminars.
- ✓ GEOSA is collaborating with Stakeholders and Educational Institutions for sharing knowledge and hydrographic survey awareness
- ✓ GEOSA is working to make the nautical products available online as part of self-sustainability and to support different National needs.
- ✓ GEOSA is working towards production of the S-100 products using dual-fuel methodology (where S-101 & S-57 ENC's to be produced simultaneously)



THANK YOU

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