NATIONAL REPORT OF KINGDOM OF SAUDI ARABIA

15th North Indian Ocean Hydrographic Commission Meeting

16 – 18 March 2015

Muscat, Oman

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

NATIONAL REPORT OF KINGDOM OF SAUDI ARABIA

1. No Changes from IHO Yearbook:

2. Hydrographic Surveys:-

a. The Hydrographic Survey Projects (HSP) 1, 2, 3 and 4 were completed successfully and the HSP5 is in progress as shown in the diagram placed at Enclosure 1.

b. All surveys are being done by latest technology using Bathy-cum-Topo LiDARs, Multibeam Echosounder, Side Scan Sonar, Sub-bottom Profiler, Position Fixing Systems, ADCP, Tide Gauges, etc. for100% insonified surveys.

c. Hydrographic Survey Vessel and Launch:-

   i. One Hydrographic Survey Launch (HSL – 16m long catamaran) is operational for field training at Hydrographic Training Center at Jeddah, besides minor coastal survey needs.

   ii. One 43.7m long Hydrographic Survey Vessel is under construction for delivery in May 2015 for undertaking surveys in Saudi Marine Areas.

   iii. Two 20m long HSLs for field surveys in Red Sea and Arabian Gulf are under tendering process.

   iv. Problem encountered – Nil

3. New Charts & Updates:-

a. Details of coverage of charts are placed at Enclosure 2.

b. ENC distribution method is under discussions with PRIMAR IC-ENC.

c. RNCs – Nil.

d. INT Charts – under discussion at the 6th RSAHC meeting.

e. National Paper Charts – Same as ENCs. Modalities for dissemination of PNCs are under examination.

f. Problems Encounter – Nil.

4. New Publications/Updates:-

Planned for implementation in late 2015.

a. New Publications – Nil.

b. Updates of Delivery – Nil.

c. Means of Delivery – NA.

d. Problems Encountered – NA.

5. MSI:-

Existing:-

a. Under MOT/State Port Authority (SPA).
b. New infrastructure – latest GMDSS installed at GCS branch at Jeddah. Modalities for operationalization under discussion with MOT/SPA.
c. Problems encounter – Intra governmental domain issues.

6. C 55:-

Latest update is placed at Enclosure 3.

7. Capacity Building (CB):-

a. Offer of/demand for CB – Nil.
b. Training required/needed/offered – requisite training for Hydrographers and Nautical Cartographers being undertaken at GCS.
c. Status of national/regional dev. projects with hydrographic components – CB at planning stage for conducting CB programs at HTC, Jeddah under IHO CB work program from 2016.
d. Definition of bids to IHO CBC – Nil.

8. Oceanographic Activities:-

a. General – National Tide Gauge Project – 1 (NTGN1) is operational in Red Sea and Arabian Gulf with 12 tide gauges stations with online data. (Enclosure 4). First set of 2 Marine Sciences Data Buoy (MSDB1) operational in Red Sea with data flow to GCS. CTD/SV observations being obtained under outsourced hydrographic survey projects. New ship (HSV Sultan) will be deployed on some oceanographic data collection after delivery to GCS in May 2015.
b. GEBCO/IBC Activities – GCS is willing to cooperate in enriching such programs.
c. Tide Gauge Network – As in serial 8a above.
d. New Equipment – All GCS equipment are modern state of the art equipment.
e. Problems Encountered – Nil.

9. Other Activities:-

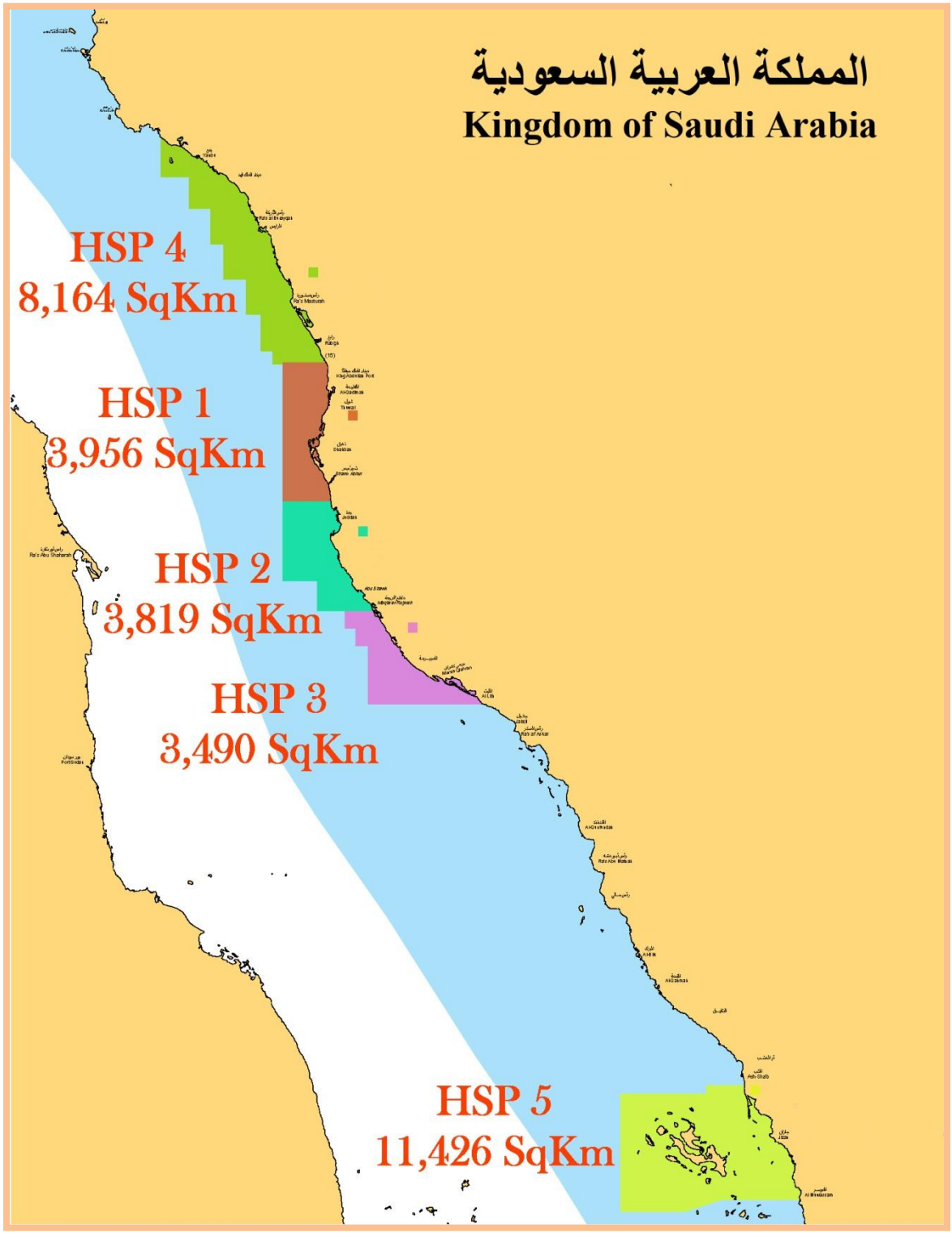
a. Participation in IHO Work Groups – being considered within the financial and administrative constraints.
b. Meteorological Data – being done under the NTGN1 & MSDB1 Projects.
c. Geospatial Studies – under development under the Geographical Information Center (GIC) at GCS.

d. Disaster Prevention – Nil.
e. Environment Protection – Hydrographic data being used to supplement the programs of the stake holders (Principality of Environment and Meteorology)
f. Astro Observations – Nil.
g. Magnetic/Gravity Surveys – Nil.
h. MSDI Progress – Hydrographic Data Management Project includes MSDI. It commenced in Feb 2015 to handle voluminous marine data under project.
i. International participation of Hydrographers & Marine Cartographers in IHO related programs has increased its regional and international cooperation in Hydrography and related Oceanography.

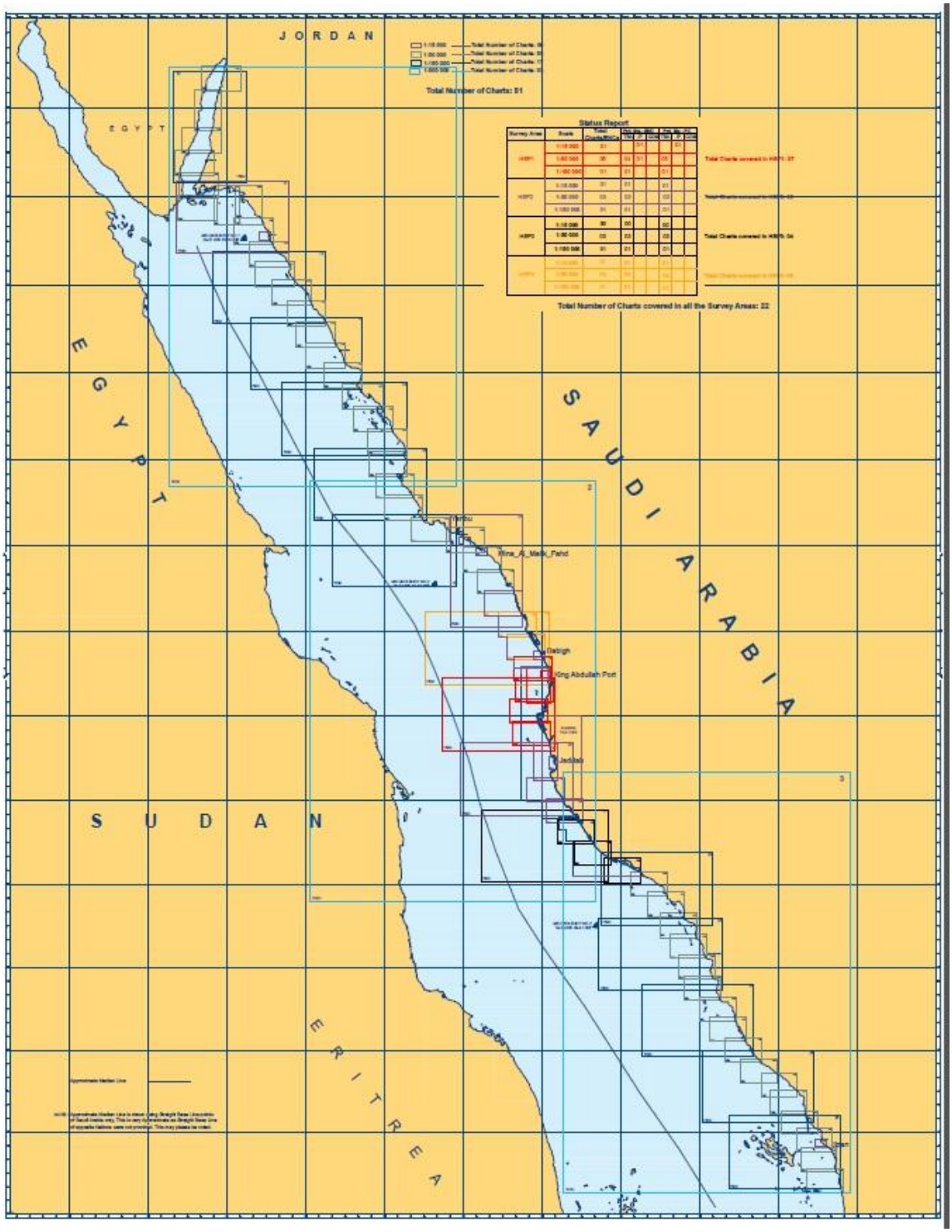
10. Conclusion:-

GCS, with its various policies and programs is well on its way to become a strong National Hydrographic Services, with provision of value added products and services to many stake holders within and outside the Kingdom of Saudi Arabia.

Enclosure 1.


المملكة العربية السعودية
Kingdom of Saudi Arabia
HSP 4
8,164 SqKm
HSP 1
3,956 SqKm
HSP 2
3,819 SqKm
HSP 3
3,490 SqKm
HSP 5
11,426 SqKm

Enclosure 2.


JORDAN
EGYPT
Total Number of Charts: 51
Status Report
Total Number of Charts covered in all the Survey Areas: 22
EGYPT
SAUDI ARABIA
SUDAN
ERITREA
Yanbu
Wajh
Rabigh
Jeddah

Enclosure 3.

IHO PUBLICATION C-55

"STATUS OF HYDROGRAPHIC SURVEYING AND NAUTICAL CHARTING WORLD-WIDE"

QUESTIONNAIRE

Country: Kingdom of Saudi Arabia

Date of validity of information: 02 February 2015

Are any amendments required to your entry in the IHO Year Book? If so, enter below.

Update is particularly important on your outsourcing strategy and on your ability to provide contract survey or charting support to other states in your RHC area.

1. HYDROGRAPHIC SURVEYING

1.1 Status of hydrographic survey of all navigable waters, including internal waters, out to the limits of the EEZ: *(Please refer to the guidance given in the introductory text "Analysis of the Status of Surveys".)*

Survey coverage, where:

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	44	56	56
Depths > 200m	0	100	100

Amplifying information:

1. Special national circumstances which influence the statistical break-down above (e.g. geographical factors such as narrow continental shelf or fringing reefs, or constraints such as areas of unstable seabed which require a routine resurvey program): Regular planned 100% insonified surveys in progress since 2011for Red Sea and Arabian Gulf in Saudi Marine Areas.

2. Significant shortfalls in sea areas of high priority for maritime traffic:

   a. Maritime Shipping Routes:

      (1) International (i.e. between hub ports): GB charts in use.

      (2) Regional (i.e. between hub ports and feeder ports): GB charts in use.

      (3) Internal (i.e. from feeder ports to other national ports; cruise liner routes): GB charts in use.

   b. Ports and Approaches: Systematic new surveys being progressed.

   c. Other (fisheries; offshore industry): Coastal Zone Management (CZM) charts on scale 1:25,000 under progress for non-navigational purposes.

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

Territory: NA.

Survey coverage, where:

A = percentage which is adequately surveyed.

B = percentage which requires re-survey at larger scale or to modern standards.

C = percentage EEZ which has never been systematically surveyed.

	A	B	C
Depths < 200m			
Depths > 200m			

Amplifying information:

1. Special national circumstances which influence the statistical break-down above (e.g. geographical factors such as narrow continental shelf or fringing reefs, or constraints such as areas of unstable seabed which require a routine resurvey program):

2. Significant shortfalls in sea areas of high priority for maritime traffic:

   a. Maritime Shipping Routes:

      (1) International (i.e. between hub ports):

      (2) Regional (i.e. between hub ports and feeder ports):

      (3) Internal (i.e. from feeder ports to other national ports; cruise liner routes):

   b. Ports and Approaches:

   c. Other (fisheries; offshore industry):

1.3 Status of hydrographic survey of all navigable waters, including internal waters, out to the limits of the EEZ of developing countries where surveys have been, or are being carried out by your hydrographic service:

Country: NA.

Survey coverage, where:

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			
Depths > 200m			

Amplifying information:

1. Special national circumstances which influence the statistical break-down above (e.g. geographical factors such as narrow continental shelf or fringing reefs, or constraints such as areas of unstable seabed which require a routine resurvey program):

2. Significant shortfalls in sea areas of high priority for maritime traffic:

    a. Maritime Shipping Routes:

        (1) International (i.e. between hub ports):

        (2) Regional (i.e. between hub ports and feeder ports):

        (3) Internal (i.e. from feeder ports to other national ports; cruise liner routes):

    b. Ports and Approaches:

    c. Other (fisheries; offshore industry):

2. NAUTICAL CHARTING

If you do not have a nautical charting capability, but know which country/countries has/have assumed responsibility for the charting of your sea areas, please indicate details here: 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.

If you do have a nautical charting capability, complete the details below *(Please refer to the guidance given in the introductory text "Analysis of the Status of Charting".)***:**

2.1 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	Nil	Nil	Nil
Approaches and Ports/Large	10	N/A	11
Percentage of Group A showing depths in metres	100%		
Percentage of Group A referenced to a satellite datum	100%		

Amplifying notes: WGS84 Datum.

Significant gaps in coverage: Nil.

2.2 Status of nautical charting within the limits of the EEZ of dependent territories

Coverage of charts published by your organization, where: NA.

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

B = percentage covered by RNCs meeting the standards in S-61.

C = percentage covered by ENCs meeting the standards in S-57.

Territory: NA.

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

Amplifying notes:

Significant gaps in coverage:

Territory: NA.

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

Amplifying notes:

Significant gaps in coverage:

Territory: NA.

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

Amplifying notes:

Significant gaps in coverage:

2.3 Status of nautical charting produced by mutual agreement within the limits of the EEZ of other coastal states

Coverage of charts produced by your organization, where: Nil.

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

B = percentage covered by RNCs meeting the standards in S-61.

C = percentage covered by ENCs meeting the standards in S-57.

Country: NA.

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

Amplifying notes:

Significant gaps in coverage:

Country: NA.

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

Amplifying notes:

Significant gaps in coverage:

Country: NA.

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

Amplifying notes:

Significant gaps in coverage:

3. MARITIME SAFETY INFORMATION (MSI)

Fill in the tables to indicate the status of implementation of the services: Yes, No, Partial.

Use the Notes Columns to indicate services which are provided by another state, and facilities co-ordinated and/or shared with other coastal states.

(Please refer to the guidance given in the introductory text "Analysis of the status of MSI".):

NAVIGATIONAL INFORMATION (S-53)

SERVICE	Yes	No	Partial	NOTES
LOCAL WARNINGS	☑			SPA*
COASTAL WARNINGS	☑			SPA
NAVAREA WARNINGS	☑			SPA
INFORMATION ON PORTS AND HARBOURS[1]	☑			SPA

GMDSS IMPLEMENTATION (IMO Publication 970 - GMDSS Handbook[2])

SERVICE	Yes	No	Partial	NOTES
Master Plan			☑	SPA/CG**
A1 Area[3]				
A2 Area[3]				
A3 Area[3]				
NAVTEX				
SafetyNET				

* *Saudi Port Authority* ** *Coast Guard*

4. NATIONAL PRIORITIES FOR INTERNATIONAL AND OR REGIONAL CO-OPERATION OR ASSISTANCE.

[1] Confirm that a system exists for passage of information on changes in ports and harbours to the responsible charting authority.
[2] See also the guidance in Navigational Publications published by Hydrographic Offices e.g. ALRS 5.
[3] For description of Sea Areas A1, A2 and A3 see S-55 "Status of MSI" on the IHO web site.

4.1 If international or regional projects are underway in your waters, please indicate here:
INT charting scheme for Arabian Gulf area for Saudi waters under discussion at RSAHC (ICCWG).

4.2 Indicate below any priorities for co-operation or assistance:

a. Projects meriting IHO liaison with international funding agencies:

(1) Regional co-operative projects: Nil.

- indicate involvement of RHC, or other Member and non-Member states. Nil.

(2) National projects:

- indicate any bilateral co-operation with Member or non-Member states. Capacity Building within RSAHC and NIOHC.

b. Requirements for training assistance:

- use M-5 and S-47 to identify level of qualification and course required.

(1) Hydrographic surveying: Yes for IBSC Cat 'A' Hydrographic Course.

(2) Nautical cartography: Nil.

(3) MSI: Nil – Hydrographic Data Management project under implementation.

c. Requirements for assistance with procurement of equipment:

(1) Technical advice on procurement options: Nil.

(2) Transfer of equipment: Nil.

5. 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 2011. The first round of fresh Hydrographic Surveys for entire Saudi Marine Areas is planned to be completed by 2018 with full charts by 2019.
2. Surveys have been completed for 44% of the coastal belt along Red Sea coast. Approx. 40% of the planned ENCs are likely to be completed by 2016.
3. The Hydrographic Data Management (HDM) project (includes MSDI) is under execution to manage the vast amount of Hydrographic and Oceanographic data for use of stakeholders.
4. Distribution of ENCs worldwide is under discussion with a reliable and efficient RENC under IHO regulations.

Signature: **Date:**

Enclosure 4.


مشروع إنشاء محطات المد والجزر في البحر الأحمر والخليج العربي
National Tide Gauge Network Project
المملكة العربية السعودية
الهيئة العامة للمساحة
Wind speed and direction sensor
حساس لقياس سرعة واتجاه الرياح
Humidity and Temperature sensor
حساس قياس الرطوبة ودرجة الحرارة
Solar Panel
خلايا شمسية
Met Station Control Box, with Datalogger, backup battery and pressure sensor
صندوق التحكم بعمل الجهاز مع بطارية إضافية وحساس للضغط
صورة توضح جهاز رصد المد والجزر
..مع صورة تفصيلية للجهاز
الأردن
العـــراق
الكويت
مقنا
ضبا
الوجه
ينبع
جـدة
القنفذة
جازان
السـودان
مصر
الخفجي
مرجومة
رأس تنورة
الجبيل
الدمام
الظهران
البحرين
قطر
الدوحة
رأس أبو قميص
الرياض
الإمارات العربية المتحدة
أبوظبي
دبي
الشارقة
خليج عمان
مسقط
سلطنة عمان
الجمهورية اليمنية
صنعاء
إريتيريا
محطات رصد المد والجزر
المقر الرئيسي للمحطة المركزية بالرياض
مواقع محطات رصد المد والجزر بعدد (١٢) محطة
عدد (٧) محطات على البحر الأحمر وخليج العقبة وعدد (٥) محطات على الخليج العربي