



# INTERNATIONAL HYDROGRAPHIC ORGANIZATION ROPME SEA AREA HYDROGRAPHIC COMMISSION



## CAPACITY BUILDING PLAN

Programme document for the period 2013-2017

### 1. INTRODUCTION

#### 1.1. Rationale

The Persian Gulf is one of the most strategic waterways in the world due to its importance in world oil transportation. It contains 715 billion barrels of proven oil reserves, representing over half (57%) of the world's oil reserves, and 2,462 Tcf (trillion cubic feet) of natural gas reserves (45% of the world total). Persian Gulf countries maintain about one-third of the world's productive oil capacity. Approximately 15.5 million barrels of oil per day pass through the Strait of Hormuz which is the world's major maritime transit chokepoint. Its blockage, even temporarily, would lead to substantial disruption in energy markets. Depths in the Persian Gulf are comparatively shallow and deep-draught tankers may have to navigate for a considerable distance with little water beneath their keels.

For these reasons, it is crucial that SOLAS contracting Governments undertake hydrographic surveys as and when required, that they arrange for the compilation and publication of hydrographic data, the dissemination and keeping up to date of all nautical information necessary for safe navigation.

The IHO Capacity Building Strategy classifies the development of hydrographic services into three phases:

- those which are in Phase 1: Collection and circulation of nautical information, necessary to maintain existing charts and publications up to date;
- those which are in Phase 2: Creation of a surveying capability to conduct coastal and offshore projects; and
- those which are in Phase 3: Produce paper charts, ENC and publications independently.

Coastal/maritime states have certain treaty obligations (SOLAS) placed on them and the IHO/RSAHC effort aims at assisting states in meeting these obligations. To achieve this a national understanding and coordination effort is required noting that:

- resources (human, time, finance etc) are limited, consequently prioritization is a fundamental issue;
- planning must be realistic;
- longer term training such as CAT A or B are not covered because such training is out of the scope of the IHO CB budget.

Nowadays, the rapidly evolving technology has replaced old navigation paradigms and demands continuous investments in education and training so that the Hydrographic Services can continue to provide high quality products and services which satisfy new demands of the maritime community.

RSAHC is aware of its Member States' efforts to provide quality service to the international maritime community in order to contribute to the safety and security of navigation and human life at sea as well as the preservation of the environment in its region and, as part of the IHO community, to contribute to the achievement of the objectives and directions of the Organization.

#### 1.2. Aims and objectives

The aims of the Plan are:

a) to train staff, at various levels, to ensure a much needed capability on hydrography and nautical cartography, particularly after natural disaster or other incidents which could affect water depths in harbours and approaches; and

b) to comply with the IHO resolutions and guidelines regarding hydrographic and nautical cartographic activities.

The medium term objective of this Plan are:

a) to ensure a basic level of MSI is established in all coastal states to, produce Local/Coastal/NAVAREA Warnings, communicate effectively with the charting authority and implement the MSI elements of GMDSS;

The longer term objectives are:

a) to instruct staff in the region on the methods of carrying out hydrographic surveys, to improve safety of navigation through enhanced navigational products;

b) to promote the establishment of Hydrographic Services (HS) and the evolution of CB Phases of the established ones.

### 1.3. Priorities

Despite the breadth of need existing in the Region, for the period of 2013 to 2017, priorities should be set in the sequence of the following list, the first of which are the highest:

0 - activities which may promote awareness of national hydrographic obligations;

1 - activities which may improve the capacity of existing HS in Phase 1;

2 - activities which may improve the capacity of existing HS in Phase 2; and

3 - activities which may improve the capability of existing HS in Phase 3.

Note the link between the training activities listed in paragraph 2. Activities below, and phases 0 to 3 listed above

The current hydrographic capacity status of countries/territories of the region is in Annex **A**.

### 1.4. Methodology and Procedures

This Plan will be reviewed each year, and adjustments made as necessary.

Each year the Commission will decide responsibilities for the programmed events of the subsequent year.

The RSAHC Capacity Building Coordinator will send to the Chair, no later than January 31<sup>st</sup> of each year details of all planned projects. The projects must be written in the standards established by the IHO CBSC (see Annex **B**).

Projects supported by IHO CB Fund must follow the IHO CBSC procedures published at the IHO website.

The Chair will check the proposed projects and, if requesting IHO CB Fund support, will send them to the IHO CBSC Chair and Secretary no later than MARCH 15<sup>th</sup>, otherwise, will take the appropriate action.

## 2. Activities

Phase	Activity	Project Objective	Target Audience
0.1	<u>Technical visits Type 1</u> High level technical visit to governmental authorities	To raise government awareness of their SOLAS treaty obligations	Related Ministries and Heads of National Agencies, particularly governmental decision makers
0.2	<u>Technical visits Type 2</u> Technical assessment and advice visit	Provide advice to identify how coastal states meet their hydrographic and MSI responsibilities	Maritime Sector National Agencies. Stakeholders and

Phase	Activity	Project Objective	Target Audience
			decision makers
1.1	<u>MSI Course (3 days)</u> Training on establishment of MSI structure and basic MSI procedures	To establish a core group of trained persons to deal with MSI	MSI Practitioners
1.2	<u>Phase 1 Skills (5 days)</u> An introduction to the assessment and promulgation of navigationally significant data	To provide a core group with the skills and knowledge to assess and promulgate navigationally significant information to the wider maritime community (this course supports the MSI course)	MSI Practitioners
2.1	<u>Basic Hydrographic Survey Course (10 days)</u>	To provide awareness of national hydrography, hydrographic surveying and nautical cartography	Maritime Sector Decision Makers
2.2	<u>Port and Shallow Water Survey Course (5 days)</u>	A workshop to aid exchange of information and ideas about the challenges faced by port and shallow water surveyors in the RSAHC region	Port Surveyors
2.3	<u>MBES Processing (5 days)</u>	To train a group of hydrographic surveyors the techniques required to post-process MBES data	Hydrographic Practitioners
2.4	<u>MSDI and Database Management (5 days)</u>	To give participants an understanding of spatial data infrastructures (SDI) including the importance and role of data management and databases	Government Planners
2.5	<u>Tides and Water Level Workshop (5 days)</u>	To provide fundamental knowledge and understanding of tides and water level, and their applications for hydrographic surveying and mapping activities	Hydrographic Practitioners
2.6	<u>Seabed Classification Workshop (5 days)</u>	To provide a group of professionals with the skill and knowledge to use acoustic techniques to map extensive seabed surfaces and to determine the products of seabed mapping	Hydrographic Practitioners
3.1	<u>Basic ENC and ENC Production course (10 days)</u>	To train a group of professionals with a practical introduction to S-57 data	Cartographic Practitioners
3.2	<u>ENC Production and QA (5 days)</u>	To train a group of professionals to verify and validate S-57 data	Cartographic Practitioners
3.3	<u>Module 1 – Marine Cartography of the CAT B Cartographic Course (5 weeks)</u>	To provide participants delegates with a practical understanding of nautical cartography and the necessary skills to carry out routine nautical cartographic skills	Cartographic Practitioners
3.4	<u>Module 2 – Hydrographic Data Processing of the CAT B Cartographic Course (5 weeks)</u>	To provide participants with a practical understanding of hydrographic data processing the skills to carry out accurate assessment and an appreciation of the issues surrounding chart maintenance	Cartographic Practitioners

<b>Phase</b>	<b>Activity</b>	<b>Project Objective</b>	<b>Target Audience</b>
3.5	<u>Module 3 – Electronic Navigational Charts (ENC) of the CAT B Cartographic Course (5 weeks)</u>	To provide a group of professionals with the skill and knowledge to produce ENCs	Cartographic Practitioners
3.6	<u>Law of the Sea Workshop (5 days)</u>	To teach participants the basic technical principles applicable to maritime boundary delimitation. The delegates should be from technical hydrographic or cartographic backgrounds	Maritime Sector Decision Makers
3.7	<u>Tsunami inundation mapping workshop (5 days)</u>	To improve the modelling and presentation of regional tsunami inundation maps	Maritime Sector and emergency planning

### **3. Capacity Building Program**

The program of capacity building activities for the period 2013 – 2017 is detailed in Annex **C**.

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**RSAHC Counties/Territories Capacity Building Phase Stage**Reference: [http://www.iho-ohi.net/mtg\\_docs/CB/CBA\\_TechnicalVisits.htm](http://www.iho-ohi.net/mtg_docs/CB/CBA_TechnicalVisits.htm)

	Country / Territory	CB Phase 0	CB Phase 1	CB Phase 2	CB Phase 3	Last TV
1	Bahrain		Self	Self	Self	2008
2	Iran		Self	Self	Self	2007
3	Iraq	?	?	?	UKHO	
4	Kuwait		?	?	UKHO	2013 (High Level)
5	Oman		Self	Self	Self/UKHO	2007
6	Pakistan		Self	Self	Self	N/R
7	Qatar		?	Self	UKHO	2007
8	Saudi Arabia		Self?	Self?	UKHO	2007
9	United Arab Emirates		Self?	Self?	UKHO	2013

**KEY TO REQUIRED TRAINING ACTIVITY**

	Technical visit
	MSI Training and development
	Hydrographic survey training and development
	Cartographic training and development



**PROJECT SUBMISSION MODEL**

**IDENTIFICATION**

Project Number :

<b>Project Name:</b>	
<b>Submitting RHC/Country:</b>	
<b>Date:</b>	
<b>Institution executing the project:</b>	
<b>Name of responsible:</b>	
<b>Address:</b>	
<b>Telephone:</b>	
<b>Fax:</b>	
<b>e-mail:</b>	

**GENERAL SPECIFICATIONS**

(Please provide detailed information in Annex of no more than three pages)

<b>Background information</b>	
<i>Justification of the project</i>	

<i>Countries involved</i>	
<b>Exposition of the problem</b>	
<b>General objective</b>	
<b>Specific objectives</b>	
<b>Outputs/Products</b>	
<b>Other deliverables</b>	
<b>Achievements and awaited benefits</b>	

<b>Schedule of activities</b>	
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**RESOURCES**

<b>Contribution by countries involved</b>	
<b>Contribution by other parties</b>	
<b>Contribution</b>	

<b>expected from CBCFund</b>	
<b>Total Cost (euros)</b>	
<b>Breakdown of costs</b>	
<b>From CBC Fund (item and amount)</b>	

**PROJECT SUMMARY**

<b>Sponsor RHC</b>	<b>Year of Execution</b>	<b>Country/Countries involved</b>	<b>Priority /Status</b>	<b>Project Name</b>	<b>Project Objective</b>	<b>Benefits</b>	<b>Assistance required</b>	<b>Cost</b>	<b>Allocation and Priority (to be filled by CBC)</b>	<b>Contact Person</b>

**Name and Signature of the RHC Chairman .....**

## Capacity Building Program for the period 2013 – 2017

## 2013

Activity	Beneficiaries Countries / Territories	Responsible	Period	Obs.
Technical and Advisory Visits	Iraq	IHO and RSAHC		The CBSC did not accept this submission at its meeting in Singapore June 2012
Basic ENC and ENC Production Course (10 days)	For identified coastal states	RSAHC CB Coordinator		The CBSC did not accept this submission at its meeting in Singapore June 2012
Port & Shallow Water Survey Course (5 days)	For identified coastal states	RSAHC CB Coordinator and Pakistan		This course was not delivered in 2013 and will now be delivered in Abu Dhabi in 2014

At the 5<sup>th</sup> RSAHC meeting held in Riyadh in March 2013 the members voted for the following courses – MSI, Tides & Water Levels and MSDI. All three submissions were endorsed by the CBSC (see below)

## 2014

Activity	Beneficiaries Countries / Territories	Responsible	Period	Obs.
MSI Course (3 days)	For identified coastal states	RSAHC CB Coordinator		Delivered in December 2014 in conjunction with the NIOHC
Basic Hydrographic Survey Course (10 days)	For identified coastal states	RSAHC CB Coordinator		Not submitted because the Port and Shallow Water Survey course covered the topic
MSDI and Database Management (5 days)	For identified coastal states	RSAHC CB Coordinator		Cancelled
Tides & Water	For identified	RSAHC CB		Abu Dhabi

Levels Workshop (5 days)	coastal states	Coordinator		offered to host at the 1 <sup>st</sup> Extraordinary RSAHC meeting
Technical and Advisory visits	Iraq	IHO and RSAHC		This activity was first submitted in 2013 but was not supported. RSAHC CB Coordinator will make an extra ordinary Submission for this visit N.B. Currently on hold

At the 1<sup>st</sup> Extraordinary RSAHC meeting held in Abu Dhabi in February 2014 the members voted for the following course – MBES Processing (5 days). This submission was endorsed by the CBSC.

#### 2015

Activity	Beneficiaries Countries / Territories	Responsible	Period	Obs.
Basic ENC and ENC Production Course (10 days)	For identified coastal states	RSAHC CB Coordinator		This course was not supported by the membership for delivery in 2015 and transferred to 2016
MBES Processing	For identified coastal states	RSAHC CB Coordinator		Abu Dhabi has offered to host
Technical and Advisory Visits	Bahrain	IHO and RSAHC		Transferred to 2016

At the 6<sup>th</sup> RSAHC meeting held in Abu Dhabi in February 2015 a vote was taken on which activities were preferred for years 2016 and 2017. The member votes showed a majority for the following activities – Port & Shallow Water Survey Course, Basic Cartography Course, Basic ENC Production Course, MBES Processing, Tides & Water Levels, ENC Production & QA, Data Management & MSDI.

There was a regional Port & Shallow Water Survey Course in 2014, a Tides & Water Levels and MBES Processing Course will be delivered in 2015 and RSAHC members will be invited to a Abu Dhabi Data Management & MSDI Course in 2015 SO the following activities will be submitted for 2016 – Basic ENC Production Course (10 days) and ENC Production & QA (5 days) together with technical visits to Bahrain and Qatar. 2017 activities will comprise a technical visit to UAE and a Basic Cartography Course (10 days).

**2016**

<b>Activity</b>	<b>Beneficiaries Countries / Territories</b>	<b>Responsible</b>	<b>Period</b>	<b>Obs.</b>
Technical and Advisory Visits	Bahrain and Qatar	IHO and RSAHC		
MSI Course (3 days)	For identified coastal states	RSAHC CB Coordinator		Delivered in December 2014
Basic Hydrographic Survey Course (10 days)	For identified coastal states	RSAHC CB Coordinator		Little support for this activity in vote
Law of the Sea Workshop (5 days)	For identified coastal states	RSAHC CB Coordinator		Little support for this activity in vote
MSDI and Database Management (5 days)	For identified coastal states	RSAHC CB Coordinator		RSAHC members will be invited to a similar course in 2015
Basic ENC and ENC Production Course (10 days)	For identified coastal states	RSAHC CB Coordinator		
ENC Production & QA	For identified coastal states	RSAHC CB Coordinator		

**2017**

<b>Activity</b>	<b>Beneficiaries Countries / Territories</b>	<b>Responsible</b>	<b>Period</b>	<b>Obs.</b>
Basic Cartography Course (10 days)	For identified coastal states	RSAHC CB Coordinator		