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21/24  
OCTOBER 2019

Reception and Conferences Center  
Rabat

## CAPACITY BUILDING WORKSHOP ON HYDROGRAPHY AND MARINE AIDS TO NAVIGATION IN AFRICA

# Participants' Guide

## SUMMARY

- Introduction
- Background information
- The objectives are
- Expected results
- Explanation of the problems
- The organization
- The Round Table
- The IHO subgroups on "Risk Analysis" and on "Technical Specifications for Survey Campaigns"
- The IALA subgroups on "Aids to Navigation Management"

## INTRODUCTION

The Ministry of Equipment, Transport, Logistics and Water (METLW) with the Royal Moroccan Navy organize jointly with The International Association for Marine Aids to Navigation and Lighthouse Authorities (IALA), International Hydrographic Organization (IHO), International Maritime Organization (IMO) and (SHOM), a capacity-building workshop on hydrography and marine aids to navigation in Africa, under the theme: "Risk analysis on hydrography and marine aids to navigation", held from **21 to 24 October 2019** at the Reception and Conferences Center in Rabat .

This event is part of Morocco, IALA and IHO capacity building strategies for marine aids to navigation and hydrography in Africa, in line with the Seminar on Safety of Navigation in Africa, organized in Morocco, on February 2018 and the Regional Seminar on Geospatial Maritime Knowledge organised in Lagos at the 15th EAHC (Nigeria, October 2018).

## BACKGROUND INFORMATION

**Hydrographic Risk Assessment** - Several hydrographic risk assessment methodologies are currently being developed, mainly in SWPHC and MACHC regions, and allow the establishment of objective analyses of hydrographic needs and the quantification of the necessary resources through long-term hydrographic plans while evaluating the associated gains. These objective assessments of needs / resources / potential gains, in EAtHC region where hydrographic services remain largely deficient in most of the African coastal states, would make it possible to improve awareness of hydrographic issues and potential gains with the maritime authorities (and beyond in a context of blue economy growth) and to establish sound and ambitious capacity development projects with donors.

**Survey Specifications** - During 2014 EAtHC conference, the lack of knowledge when it comes to specify and contracts survey works was highlighted. These shortcomings lead to non-accessibility of survey data and non-compliance with IHO standards, and lower Primary charting authorities' ability to properly update charts and publications.

**Aids to Navigation Management** - The needs assessment missions held by the IALA World-Wide Academy indicate that there is a need for the AtoN Managers to develop their skills to prepare and implement action plans, so the Coastal States should be able to meet SOLAS Chapter V compliance. More than 70 AtoN Managers in Africa are holding the internationally recognised Level 1 AtoN Manager Certificate, but there is a need for AtoN Managers from National Competent Authorities and Port Authorities to demonstrate the capacity to apply the acquired competences.

**Maritime Safety Information (MSI)** - Several recent initiatives and ongoing developments (DMA involvement in Ghana (Niord system), Nigeria experience, Morocco infoMer tool, Shom experience (SafetyNet on overseas territories) and ongoing projects (PING)) open up new opportunities for MSI and could help fill chronic gaps affecting most African coastal states in the EAtHC region.

## THE OBJECTIVES ARE

A subject of common interest to IALA and IHO is risk assessment and analysis. This subject can be addressed through a theoretical presentation supplemented by practical workshops in sub-groups. In addition to this common topic (although requiring sessions specific to hydrography and aids to navigation), the workshop will be used to address the issues of hydrographic survey specifications and AtoN's management.

Under the banner of the United Nations "Delivering as One", this four-day workshop aims to enable representatives of African States to work on the implementation of the strategies proposed by IALA and IHO to meet their obligations under the international legal framework. This applies in particular to Regulations 4, 12 and 13 of Chapter V of the International Convention for the Safety of Life at Sea (SOLAS). Some African States are in urgent need of capacity building in navigation safety and support for their economic infrastructure and environmental protection.

Through presentations of new innovative approaches and sharing of experience, this workshop should identify concrete initiatives to be implemented. The objectives of the workshop are:

- Gather managers, so they can be proactive with decision-makers  
Collect the expectations of the Coastal States (blocking points, points of commitment, organisation to be set up).
- Improve awareness of hydrographic and aids to navigation issues, as well as potential gains for maritime authorities, in a context of growth of the blue economy and climate change.
- Strengthen risk analysis, hydrographic surveys and the management of marine aids to navigation  
Support/encourage the emergence of national hydrographic schemes and national plans for development/management of aids to navigation. These supported schemes/plans can then be used as a basis for the development of projects to be submitted to national authorities and international donors; and
- Involve participants as actors and take advantage of the benefits of these tools.

## EXPECTED RESULTS - OUTPUTS

Participants will gain a better understanding of how to identify potential hydrographic risk assessment projects, specify the surveys they undertake, and implement methods, tools and supports for managing aids to navigation. Raising awareness and facilitate the implementation of structured projects, the workshop should enable participants to meet regional and/or national requirements, with the following expected outcomes:

- Disseminate the use of risk analysis tools in Africa (training of trainers, national workshops), improve project development for decision-makers, to support blue economy and adaptation to climate change.
- Develop action plans for hydrographic surveys and aids to navigation management.
- Encourage coastal States to join IALA and IHO.
- Establish consolidated and ambitious capacity building projects with donors; and
- Encourage bilateral discussions outside the workshop sessions.

## EXPLANATION OF THE PROBLEMS

Hydrographic services in most African countries in the EAtHC region have yet to be developed or are consolidating very slowly despite particular IHO attention to CB development.

The topics of “hydrographic risk assessment” and “survey specifications” have not yet been addressed through CB actions and could lead to an improvement of hydrographic services in the region:

- In the short term for survey specification: African coastal states in the EAtHC region, even if they have little or no surveying capacity, order surveys from various providers. Better expertise by specifiers in this area would improve the quality and accessibility of the surveys commissioned.
- In the medium term, carrying out hydrographic risk assessment would make it possible to raise awareness of the stakes on the basis of reliable and objective elements, as well as to draw up trusted and quantified national or regional projects.

On the other hand, the MSI topic is almost a permanent and key objective of the capacity building actions since the beginning of the CB program, although with mixed results so far within EAtHC region. This topic was partly addressed during an awareness seminar complementary to the EAtHC 14 hold in 2018 in Lagos (Nigeria), and will be further addressed during a specific MSI (and MSDI) seminar in September 2020 (28-29 Sept) back-to-back with the 16th conference of the EAtHC (30 Sept – 2 Oct 2020, Lisbon, Portugal).

The presentation of the principles of the hydrographic risk assessment and its application (through practical exercises) should make participants aware of the benefits of this type of analysis. The objective being to encourage participants to conduct this type of analysis on their national waters (with the possible support of the IHO CB WP).

The survey specification session should enable participants to clearly identify the key points to focus their attention on in order to have survey results that meet their expectations and allow the updating of the nautical documentation necessary for safe navigation.

In addition to the AtoN Level 1 training sessions delivered by the Accredited Training Organisations with the support of the IALA WWA, the participation to the Workshop sub-groups on AtoN Management, through the sharing of experiences, should enable possible solutions to be identified with participants and concrete action plans to be drafted.

## THE ORGANISATION

The invitation have been sent to the countries (members, associated members and observers) of the Eastern Atlantic Hydrographic Commission (19 countries, from Morocco to Angola, 11 speaking French, 8 English). The Workshop is open to the whole African continent, and will be hold in 2019, between the two EAtHC Conferences (2018 and 2020).

It should be organised to allow the highest participation, implication of the participants, to make attendees become actors, being able to take advantage of the benefits of such tools; produce elements of policy, on the basis of cases studies.

Simultaneous translation will be available for the joint French-English sessions and specific workshops will be organised with sub-groups in French and English, in order to facilitate understanding and encourage exchanges.

## THE ROUND TABLE

The round table will take place on Monday, October 21, from 12:00 to 13:00, between coffee break and lunch.

The purpose of this round table is to make the participants aware that it is possible that the problems presented are universal (financial means, staffing) and/or met by most of them (perfectible organizations, lack of knowledge and/or complexity of the objectives, lack of training/awareness of staff, lack or bad adjustment of methods and tools, etc.)

There are possible solutions, based on general principles from which common bases can be created, which can be adapted to national or local contingencies.

It is very difficult to implement isolated actions, but a strategy based on a simple series of actions, a realistic timetable and the sharing of tools, methods and feedback with partners at regional or international level gives credibility to the authorities and more effective guarantees.

It is important that actors on the African continent, having successfully developed effective and sustainable capacities in the field of hydrography and aids to navigation, demonstrate their success and position themselves as regional leaders to support the rise of their regional neighbors.

The round table is organized in three phases:

- P1 - Joint round table on hydrography/aids to navigation, focusing on two examples of difficulties encountered in these two areas and the strategies implemented to overcome them.
- P2 - Opening of exchanges with the audience, questions and comments from the listeners to the actors of the round table; and
- P3 - Synthesis of interventions and debates by IALA (Omar Frits Eriksson) and IHO (Alberto Costa Neves and Vincent Lamarre).

Through testimonies from organisations that have succeeded in consolidating themselves and setting up effective and sustainable mechanisms in the fields of hydrographic services and aids to navigation, participants will be invited to express their expectations and proposals for actions in terms of capacity building in general and more specifically on the themes of the workshop.

The workshop in its IHO "risk analysis" component should make it possible, through a presentation of the methodology, tools and practical work on a concrete case study, to raise participants' awareness of this type of analysis.

The purpose of the workshop in its IHO component "Technical Specifications for Survey Campaigns" is, through reminders on the theory and principles of hydrography, and concrete case studies enriched by interactions with participants, who will be called upon to testify about their difficulties and successes, to raise awareness among participants of the key points to be taken into account when specifying the surveys they contract in order to obtain results that meet their expectations and enable the updating of nautical information for the benefit of the safety of navigation.

The workshop, in its Aids to Navigation Management (IALA) component, aims to create simple tools to address the problems of participants and networks that will allow them to develop these tools and share best practices in their operations.

It should be noted that "universal" problems (numbers, financial resources) are not addressed in this work.

**For all workshops, it is important that, as participants and observers, those registered in the workshop sub-groups prepare this meeting, identifying the problems they encounter in their field and listing the questions they wish to ask.**

The IHO and IALA workshops are divided into 3 stages, each of which provides the following with data and information. The first is a round table, common to IHO and IALA, where two speakers will present their fundamental problems and the strategy implemented to address them. At the end of these presentations, the participants will ask their questions. In order to ensure maximum efficiency in the responses, they may communicate one of their choice to the organizers in advance.

The contributions of this round table, together with the knowledge of the methods and tools presented by the representatives of the various bodies, will greatly facilitate the work of the sub-groups and, indeed, the feedback provided by the rapporteurs.

## THE IHO SUBGROUPS ON "RISK ANALYSIS" AND ON "TECHNICAL SPECIFICATIONS FOR SURVEY CAMPAIGNS"

The work in two sub-groups (1 in English, 1 in French) is organized in six phases:

- Phase 1: Tuesday morning - Presentation of methodological principles and risk analysis tools for hydrographic survey planning.
- Phase 2: Tuesday afternoon - Practical work on the DeSEAsion online platform to familiarize participants with the tool. During this practical work, the contribution of maritime spatial data infrastructures for the transmission of nautical information will be demonstrated (use of the data.shom.fr platform and the RasterMarine prototype set up in the EAHC region).
- Phase 3: Wednesday morning - Presentation by DHOC of the principles of hydrography.
- Phase 4: Wednesday afternoon - Shom's intervention on the survey specifications: points requiring particular attention, example studies, answers to specific questions from participants. Preparation of the synthesis of feedback and the framework for future exchanges

### IHO & IALA common phases:

- Phase 5: Thursday morning - Feedbacks  
The rapporteurs of the 5 subgroups present the results of their work (09:00 - 10:30 for the IALA subgroups, 11:00 - 11:45 for the IHO subgroups). They have 8 minutes for each presentation, followed by discussions with the audience and a perspective on future developments.
- It is therefore imperative to help them to set the place for this presentation.
- Phase 6: The conclusions will be given by IALA (Omar Frits Eriksson) in English and Shom (Vincent Lamarre) in French, with the support of DPDPM, DHOC and the NDA.

## THE IALA SUBGROUPS ON "AIDS TO NAVIGATION MANAGEMENT"

The work in three sub-groups (1 in English, 2 in French) is organized in five phases:

- Phase 1: Tuesday morning - Distribution of roles and start of work, using the "Metaplan" standard method.
- Phase 2: Continuation of the day on Tuesday and Wednesday morning:
  - collection of the 3 main problems.
  - classification by theme and definition of the 3 main themes (the most recurrent).
  - reflect on the best answers to these problems (method).
  - development of standard supports / forms that can be used by everyone (tools).
- Phase 3: Wednesday afternoon - Preparation of feedbacks and the framework for future exchanges.

### IALA & IHO common phases:

- Phase 4: Thursday morning - Feedbacks  
The rapporteurs of the 5 subgroups present the results of their work (09:00 - 10:30 for the IALA subgroups, 11:00 - 11:45 for the IHO subgroups). They have 8 minutes for each presentation, followed by discussions with the audience and a perspective on future developments.  
It is therefore imperative to help them to set the pace for this presentation.
- Phase 5: The conclusions will be given by IALA (Omar Frits Eriksson) in English and Shom (Vincent Lamarre) in French, with the support of DPDPM, DHOC and the NDA.