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N° 003 SHOM/DMI/REX/NP

SERVICE HYDROGRAPHIQUE  
ET OcéANOGRAPHIQUE  
DE LA MARINE

DIRECTION DES MISSIONS  
INSTITUTIONNELLES ET DES  
RELATIONS INTERNATIONALES

Dossier suivi par  
IPETA Eric Langlois  
*Head of the external relations division*  
Tel : +33 1 53 66 97 81  
Fax : +33 1 41 74 94 23  
Mél : [eric.langlois@shom.fr](mailto:eric.langlois@shom.fr)

**FRENCH NATIONAL REPORT  
TO THE 6<sup>TH</sup> MEETING OF THE ROPME HYDROGRAPHIC  
COMMISSION**

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**1. Hydrographic Service: General**

Following up its targets and performance contract for the 2013-2016 period, SHOM is pursuing the achievement of its different commitments based on France's National Maritime Strategy and Defence Policy. Survey works are now being achieved according to the prioritized 4-years survey plan for all the waters under French jurisdiction.

**2. Surveys**

**2.1. Coverage of new surveys**

Since the last conference, 2 sea-trials campaigns have been achieved in the region by hydro-oceanographic FNS *Beautemps-Beaupré*.

- GAP'14: hydrographic sea-trial.

This campaign aimed at gathering bathymetric data to improve safety of navigation. All recommended routes targeted for that campaign were surveyed at IHO S-44 order 1a standard. Intermediate results were transmitted to UAE in May 2014. Final results are to be transmitted in early February 2015. Those results include processed hydro-oceanographic data on numerical storage devices and sea-trial report. Besides, relevant maritime safety information (all obstructions and wrecks plus 9 soundings) was disseminated to UKHO for publication through Notice to mariners.

- PHYSINDIEN'14: oceanographic sea-trial.

This campaign was dedicated to ocean modelling analysis, based on a direct comparison between model outputs and field observations both in the Arabian Gulf and the Sea of Oman. In the region, the measures took place more precisely in the South-East of the Arabian Gulf, with X-CTD and L-CTD profiles plus VM-ADCP acquisition.

**2.2. New technologies and /or equipment**

NTR.

**2.3. New ships**

NTR.

**2.4. Problems encountered**

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Destinataire : BHI MONACO

Copies intérieures : DG – DMI/REX - Archives (DMIDSD/2.035)

NTR.

### **3. New charts & updates**

SHOM does not produce neither paper chart nor ENC in the ROPME area.

### **4. New publications & updates**

#### **4.1. New Publications**

NTR.

#### **4.2. Updated publications**

NTR.

#### **4.3. Means of delivery**

NTR.

#### **4.4. Problems encountered**

NTR.

### **5. MSI Existing infrastructure for transmission**

SHOM continues to increase the production of its digital nautical publications. From now, publications are still available in paper form but most of them are now available, by subscription, in digital format (weekly updated pdf files) on SHOM's online store (<https://www.shom.fr/boutique/>).

#### **5.1. New infrastructure in accordance with GMDSS Master Plan**

NTR.

#### **5.2. Problems encountered**

NTR.

### **6. C-55 Latest update**

The C-55 database for French areas of responsibilities is normally updated by SHOM on a yearly basis. The latest overall C-55 update has been transmitted to the IHB on June 24<sup>th</sup> 2014.

### **7. Capacity Building Offer of and/or demand for Capacity Building**

#### **7.1. Training received, needed, offered**

Initial training capabilities provided by SHOM, described hereunder, are also presented in its annual report available on [www.shom.fr](http://www.shom.fr).

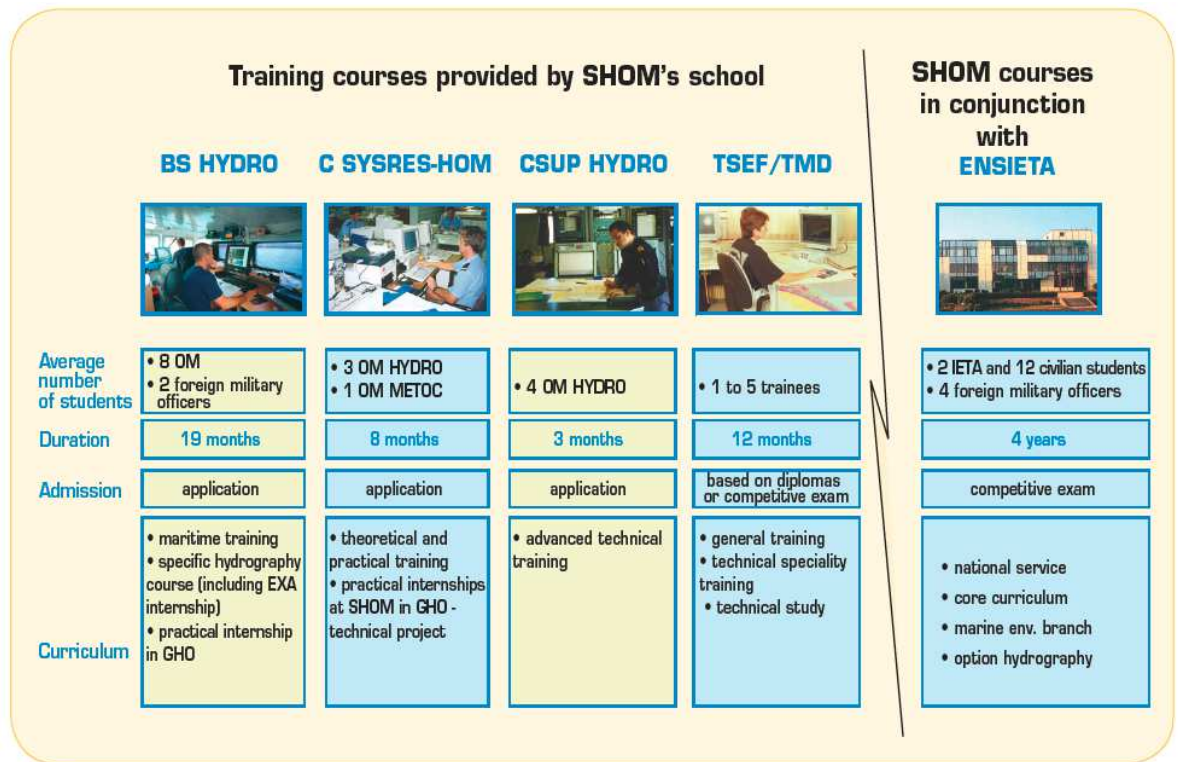


Fig.1: Courses and training provided at the SHOM hydrographic school.

## 7.2. Status of national, bilateral, multilateral or regional development projects with hydrographic component

For the several countries benefiting from French support to meet the hydrographic services requirements spelled out by the SOLAS convention, France has implemented a mechanism of formalisation of the respective responsibilities for maritime safety information, hydrographic and charting activities. It may include gradual transfer of responsibilities through State-to-State administrative arrangements. This mechanism relies on training at SHOM facilities and the.

Besides, a dedicated team is appointed to transfer the SHOM know-how to coastal States willing to get new hydrographic and oceanographic capabilities (Point of contact: Patrice Laporte, patrice.laporte@shom.fr).

## 7.3. Definition of bids to IHOCBC

NTR.

## 8. Oceanographic activities

### 8.1. GEBCO/IBC's activities

### 8.2. Tide gauge network

SHOM is the French national coordinator and reference authority in the field relating to the observation of the sea level and the management and issue of the resulting data.

These missions are carried out under the REFMAR program. Real time and processed tide gauge measurements are now accessible on web <http://refmar.shom.fr/home/> in overseas areas under French jurisdiction.



Fig.2: SHOM global tidal network, REFMAR (source shom.fr).

In February 2016, SHOM will organise, in partnership with UNESCO's Intergovernmental Oceanographic Commission (IOC) the 2016 edition of the *REFMAR Days* at UNESCO headquarter in Paris. This event is a 5 days meeting focused on the status of sea level observation and its multiple applications.

### 8.3. New equipment

NTR.

### 8.4. Problems encountered

NTR.

## 9. Other activities

### 9.1. Meteorological data collection

NTR.

### 9.2. Geospatial studies

NTR.

### 9.3. Disaster prevention

- **Tsunami :**

SHOM is maintaining a large real time tide gauge network RONIM, an important tool for coastal operational oceanography, risk assessment, studies on the evolution of the mean sea level, etc. Having tide gauges in Europe and in the French overseas territories, SHOM is contributing to Tsunami warning in Pacific Ocean, Indian Ocean, Caribbean Sea and Mediterranean Sea.

France may also have Navy ships deployed in the RSAHC region, ready to provide support in case of an emergency. France also provides technical support and has a rapid response survey capacity in case of a disaster.

The point of contact at SHOM in case of a disaster is the head of the maritime safety information division. His division can be reached 24/7 by fax +33 298 221 665 or email [coord.navarea2@shom.fr](mailto:coord.navarea2@shom.fr).

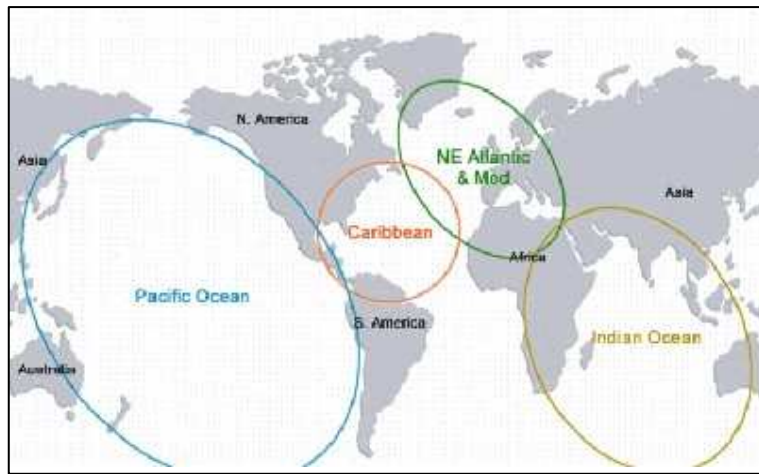


Fig.3: Cooperation areas on tsunami warning system (source COI ; UNESCO).

- **Coastal flooding :**

SHOM is associated with *Météo-France* in the provision of an alert system against coastal flooding named *Vigilance Vagues Submersion*. This allows for a better anticipation of this destructive phenomenon and protection of the populations living in the littoral area of Metropolitan France.

SHOM provides the tidal predictions, expertise and models in coastal hydrodynamics and real time tide gauge observations as well as information relative to extreme sea levels and bathymetry. *Météo-France's* marine forecasters examine and compile the data and produce a map depicting the level of coastal flooding threat together with the risk of tall waves for each French metropolitan department:

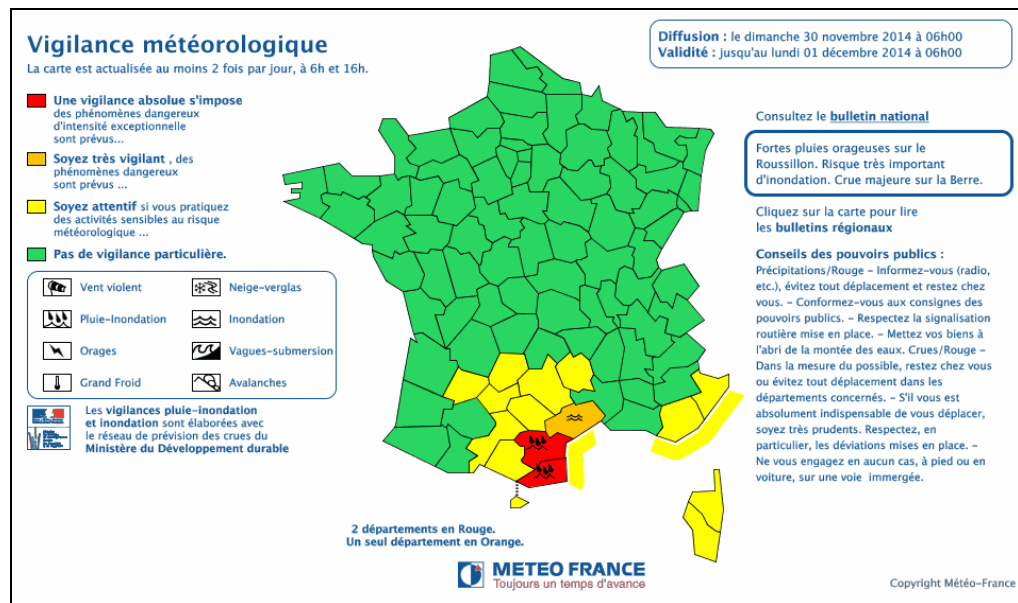


Fig.4: An example of coastal flooding alert over Mediterranean costs (yellow level). Costs subject to alert are underlined according to the alert level (source www.meteo.fr).

- **Oil spills:**

SHOM is an active member of the inter-agency drifting committee which is activated by the maritime prefecture every time there is an oil spill. The POLMAR safety plan for the sea was signed on 23<sup>rd</sup> November 2004 and aims at enabling France to face in a reactive manor a potential wide spread of marine pollution, by ensuring the efficient coordination of national operations and support from public services.

#### 9.4. Environmental protection

NTR.

#### 9.5. Astronomical observations

NTR.

## 9.6. Magnetic/Gravity surveys

NTR.

## 9.7. MSDI Progress

In January 2013, another milestone has been reached with the launch of SHOM's maritime and coastal geographic information portal which offers a large set of view and download services at <http://data.shom.fr>. All the services are compliant European directive INSPIRE.

Since then, SHOM's data portal, whose developments can be followed via Twitter (@shom-fr), has been implemented with new online services data layers on a regular basis. Hereafter are listed the some of the latest ones:

- <http://zerohydro.data.shom.fr>: online service to edit the vertical datum of your bathymetric dataset,
- An advanced tidal prediction online service to generate tidal predictions at any point, even from external harmonic constants and to perform harmonic analysis of your own observation dataset.
- New seabed, tidal and 3D-currents layers available,
- Vertical reference surface layers generated from geoid/spheroid separation model,
- Raster layer of SHOM's nautical charts completed for large scale;

Moreover, *ocean modelling forecasts* are available both in visualization and download under Open-Data Licence. Time and Space exploration (5 days timeframe), editable color patterns, profile extraction and overlaying with other data sources are some of the interactive tools that comes along with those exclusive data.

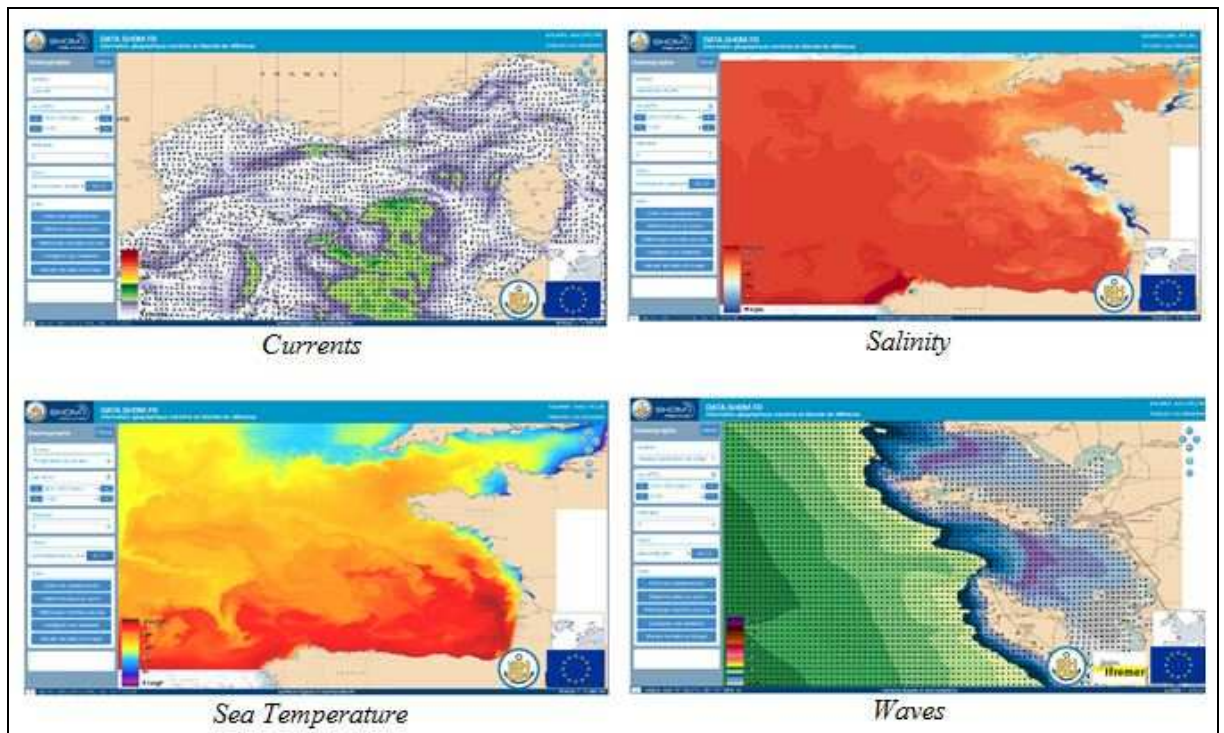


Fig.5: Oceanographic forecasts on SHOM's data portal ([data.shom.fr](http://data.shom.fr))

A detailed description of the portal functions and contents is available on SHOM website (<http://www.shom.fr/les-services-en-ligne/portail-datashomfr/>). Data available on that portal are organised according to the following topics listed below: *tides, tidal currents, bathymetry, cartography, maritime and littoral databases.*

## 9.8. International

Because of its overseas territories and primary charting responsibilities, France, represented by SHOM, is a member or associate member in 9 regional hydrographic commissions.

The detail of SHOM's involvement in other IHO activities is listed in the table hereafter:

Name	Chair / Vice chair	Member	Observations
CBSC		✓	Capacity Building Sub-Committee
CSPCWG		✓	Chart Standardisation and Paper Chart Working Group
DIPWG		✓	Digital Information Portrayal Working Group, former CSMWH
DPSWG		✓	Data Protection Scheme Working Group
DQWG		✓	Data Quality Working Group -Last meeting in 1996
EAtHC		✓	Eastern Atlantic Hydrographic Commission
FC		✓	Vice-chairman of Finance Committee
GEBSCO		✓	Joint IOC-IHO Guiding Committee for the General Bathymetric Chart of Oceans (GEBSCO)
HCA		✓	Hydrographic Commission on Antarctica
HDWG	✓	✓	Hydrographic Dictionary Working Group
HSSC		✓	Hydrographic Services and Standards Committee, formerly known as the Committee on Hydrographic Requirements for Information Systems (CHRIS)
IRCC		✓	Inter Regional Coordination Committee
MACHC		✓	MESO American & Caribbean Sea Hydrographic Commission
MBSHC		✓	Mediterranean and Black Seas Hydrographic Commission
MSDIWG		✓	Marine Spatial Data Infrastructure Working Group
NIOHC		✓	North Indian Ocean Hydrographic Commission
NSHC		✓	North Sea Hydrographic Commission
RSAHC		✓	ROPME Hydrographic Commission
SAIHC		✓	Southern Africa and Islands Hydrographic Commission
SNPWG		✓	Standardisation of Nautical Publications Working Group
SWPHC		✓	South-West Pacific Hydrographic Commission
TSMAD		✓	Transfer Standard Maintenance and Application Development
TWLWG	✓	✓	Tidal and Water Level Working Group
WEND		✓	World-Wide Electronic Navigational Chart Database
WWNWS	✓	✓	World-wide Navigational Warning Service Sub-Committee, formerly known as the Promulgation of Radio Navigational Warnings Sub-Committee (PRNW)

## 10. Conclusions

SHOM remains supportive to any crowdsourcing initiatives that may contribute to reduce the proportion of unsurveyed areas in the ROPME area or any other region. However, hydrographic offices may not lose sight of what the use of those survey data implies in terms of responsibility. So that it is essential for the hydrographic community to define global terms of use to circumscribe those initiatives so they could really make a difference for the mariners.

On the other hand, co-ordination initiatives with other multilateral organizations, like the IOC in the frame of Marine disasters prevention, could contribute to foster leveraging of resources concerning hydrographic capabilities.