

Direction des missions institutionnelles et des
relations internationales
Division Relations extérieures

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FRANCE NATIONAL REPORT TO THE 8TH MEETING OF THE ROPME SEA AREA HYDROGRAPHIC COMMISSION (RSAHC)

1. Hydrographic Service: General

Shom is pursuing the achievement of its different commitments based on the National Maritime & Littoral Strategy and the Strategic Review of Defence and National Security, according to a 4 years targets and performance contract covering the 2017-2020 period, approved by Shom's Board and the minister of Defence.

In addition to that, survey works are being conducted according to the prioritized 4-years survey plan for waterways under French jurisdiction.

Detailed information to update IHO Publication P-5 is regularly transmitted to IHO secretariat.

2. Surveys

2.1. Coverage of new surveys

NTR.

2.2. LIDAR Surveys

NTR, the Shom does not carry out any lidar surveys in the region.

2.3. Shom's survey programme for the region

No survey campaign is planned in the region for 2019.

2.4. New technologies and / or equipment

Mid-life upgrade of BHO *Beautemps-Beaupré* has been conducted (between end 2017 and beginning 2018). During dry dock the following hydro-oceanographic systems have been installed: EM712 0,5x1° multibeam echo sounder, SBP27 sub bottom profiler and EA640 single beam echo sounder from Kongsberg Maritime, POSIDONIA-2 deep water & long range USBL system and HYDRINS inertial navigation system from iXblue, Ocean Surveyors 150kHz and 38 kHz vessel mounted ADCP and RapidCast profiling system from Teledyne RDI, SBE21 thermosalinograph and SBE38 temperature sensor from Seabird, MK21 Ethernet data acquisition system from LM Sippican KSS32M marine gravity meter from BGGs, CG5 portable gravity meter from MicroG Lacoste, ACXC80 video monitoring system from Black Box, a complete network system from Hewlett Packard and Quantum, a deployment system for the Kullenberg piston corer from CNNMCO, Bretagne Hydraulique and ENAG.

After sea-trials in February 2018, BHO *Beautemps-Beaupré* is operational to conduct surveys.

2.5. New ships

NTR.

2.6. Problems encountered

NTR.

3. New charts & updates

Shom does not produce neither paper charts nor ENC's in the ROPME area.

4. New publications & updates

4.1. New Publications

NTR.

4.2. Updated publications

Publications are updated weekly in accordance with the Shom Notices to Mariners.

4.3. Means of delivery

All nautical publications are available in digital format only (pdf files) on Shom's online shop (diffusion.shom.fr).

4.4. Problems encountered

NTR.

5. MSI

5.1. Existing infrastructure for transmission

Shom's notices to mariners (GAN) are exclusively available under digital formats on Shom website: <http://diffusion.shom.fr/gan>.

5.2. New infrastructure in accordance with GMDSS Master Plan

NTR.

5.3. Problems encountered

NTR.

6. C-55 Latest update

NTR, Shom is not PCA in the region.

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

7.1. Training received, needed, offered

Initial training capabilities provided by Shom include the following FIG-OHI-ACI courses: category B for hydrographic surveyors and category B for nautical cartographers. So far, those courses¹ are provided in French and are open to francophone foreign applicants.

A category A course for hydrographic surveyors is provided at ENSTA Bretagne.

SHOM L'océan en référence

TRAINING COURSES PROVIDED BY SHOM SCHOOL

	BS/L3+ HYDRO*	C SYSRES-HOM	C SUP HYDRO***	NAUTICAL CARTOGRAPHER TRAINING COURSE*
Average number of students	2 to 8 petty officers/ 2 foreign students/10 students UBO	2 to 5 hydrographers petty officers	2 to 5 hydrographers petty officers	2 to 8 trainees
Duration	14 months	9 months	4 months	9 months
Admission	based on application file	based on application file	based on application file	based on diplomas or competitive exam
Curriculum	<ul style="list-style-type: none"> maneuver and navigation Training specific course on hydrography and oceanography on board end-study project 	<ul style="list-style-type: none"> information technology theoretical and practical training (application to hydrography IT) Practical internships in SHOM IT department and survey unit (GHOA) 	<ul style="list-style-type: none"> advanced technical training on hydrography team management training 	<ul style="list-style-type: none"> general training on hydrography and geosciences specific training on nautical cartography end-study technical project

*Formation carried out in partnership with the UBO, its validation allows you to obtain a lecturer's degree. **Recognized training course at category B level by FIG-ISO-ACA International Board. ***Title of "Hydrographic Supervisor" registered in the RNCP and certified at level II (Bachelor's degree)

SHOM school support to L'ENSTA Bretagne

HYDROGRAPHIC ENGINEER**

Average number of students: 36 months (+12 months for French military students)

Admission: based on diplomas or competitive exam

Curriculum: see: www.ensta-bretagne.fr

Logos: Cti, European Association of Engineering Programmers (EUR-ACE), FIG, ICA, ACI, CACP

www.shom.fr
 @shom_fr | shom.fr | shom_fr

Fig.1: Courses and training provided at the Shom hydrographic school (source: shom.fr)

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

NTR.

7.3. Definition of bids to IHO CB Work Programme

NTR.

8. Oceanographic activities

8.1. GEBCO/IBC's activities

NTR.

¹ Training offer: <http://www.shom.fr/le-shom/formation-emplois-stages/formation/>
 Modalities: drh-for-eco@shom.fr

8.2. Tide gauge network

NTR.

8.3. New equipment

NTR

8.4. Problems encountered

9. Other activities

9.1. Participation in IHO Working Groups

See §9.9 International.

9.2. Meteorological data collection

NTR.

9.3. Geospatial studies

NTR.

9.4. Disaster prevention

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

The point of contact at Shom in case of a marine disaster is the head of the maritime safety information division. This division can be reached 24/7 by fax +33 298 221 665 or email coord.navarea2@shom.fr.

- **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.

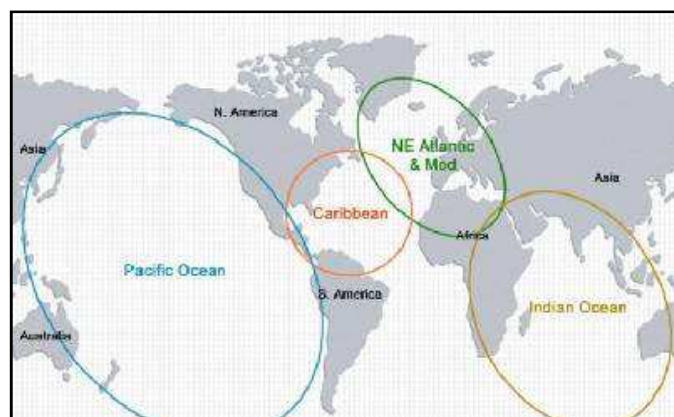


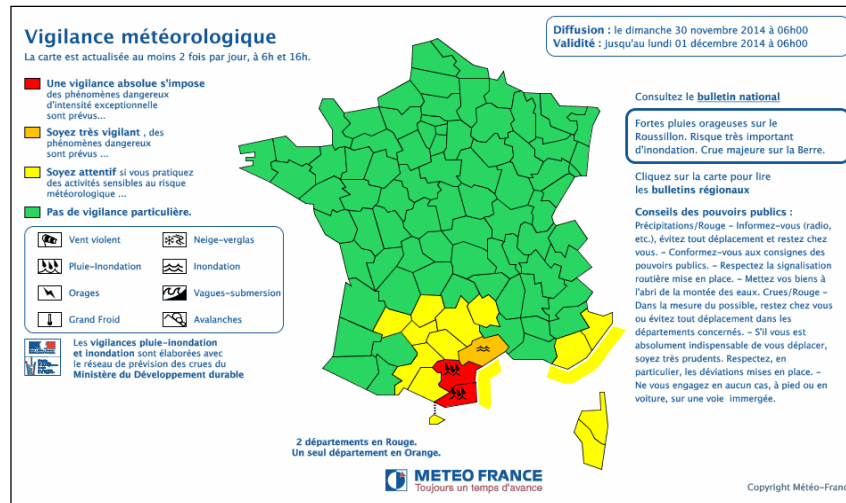
Fig.2: Cooperation areas on tsunami warning system (source COI; UNESCO).

- **Coastal flooding :**

Shom is associated with *Météo-France* in the provision of an alert system against coastal flooding named *Vigilance Vagues Submersion (VVS)*. This allows for a better anticipation of this destructive phenomenon and

protection of the populations living in the littoral area of Metropolitan France and french overseas departments.

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.3: An example of coastal flooding alert (yellow level).
Costs subject to alert are underlined according to the alert level (source www.meteo.fr).*

Besides, the HOMONIM Project in partnership between Shom and Météo-France, launched in 2011 aims at improving the VVS alert system through 3 axis:

- Extension of real time sea level observation capability,
- Production of a first range of multi-scale bathymetric digital terrain models, crucial to improve coastal hydrodynamics modeling,
- Improvement of wave and surge modeling with the implementation of new modeling chain based on HYCOM and WAVEWATCH III models.

After a first phase (2011-2015) focused on France mainland coasts, the second phase of the project, currently underway (to be completed by the end of 2019), has as its main objective to extend the storm surge and littoral wave forecast capabilities on French overseas territories (French Antilles, French Guyana and French overseas Territories of the South-West Indian Ocean).

- **Oil spills:**

NTR.

9.5. Environmental protection

NTR.

9.6. Astronomical observations

NTR.

9.7. Magnetic/Gravity surveys

NTR.

9.8. MSDI Progress

Since the launch of Shom's maritime and coastal geographic information portal data.shom.fr, further developments have been implemented with new online services data layers on a regular basis. Hereafter are listed some of the latest evolutions:

- Improved content for oceanographic data
- Improved cartographic tools
- Timeline function : time synchronisation of layers to produce animated features
- New layer on administrative limits
- New bathymetric terrain models
- Maritime archives: old charts and survey sheets have been scanned and are now available on the web site

Since December 3rd 2017, in accordance with France open data policy, Shom has widely opened up access to its core data: bathymetric data, wrecks, cables, bottom types, maritime limits, and toponyms databases are distributed under Creative Commons « CC-BY-SA 4.0 » licence.

Those evolutions can all be followed via Shom's Twitter account ([@shom_en](https://twitter.com/shom_en) & [@shom_fr](https://twitter.com/shom_fr)).

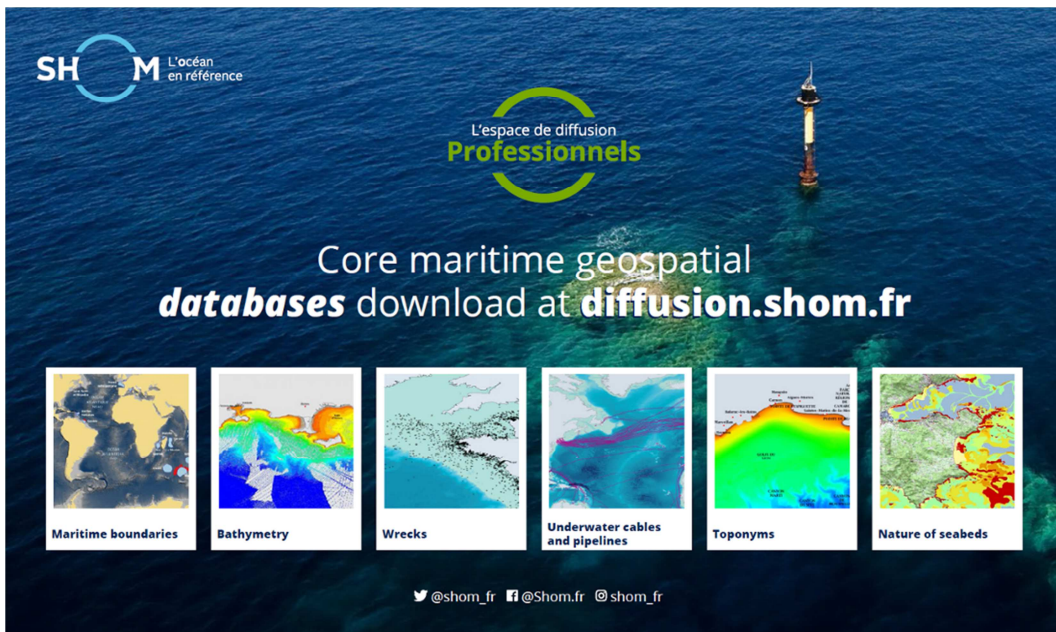


Fig.4: open data (diffusion.shom.fr)

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:

- Master data: *charts, maritime boundaries, maritime and coastal databases, coastal altimetry , bathymetry, vertical datums, sedimentology, tides and currents and marine archives ;*
- Oceanographic forecast : *sea state, meteorology, sea level, hydrodynamic ;*
- Coastal observations : *HF radar and tide gauge data*

Not all these information are available on RSAHC region.

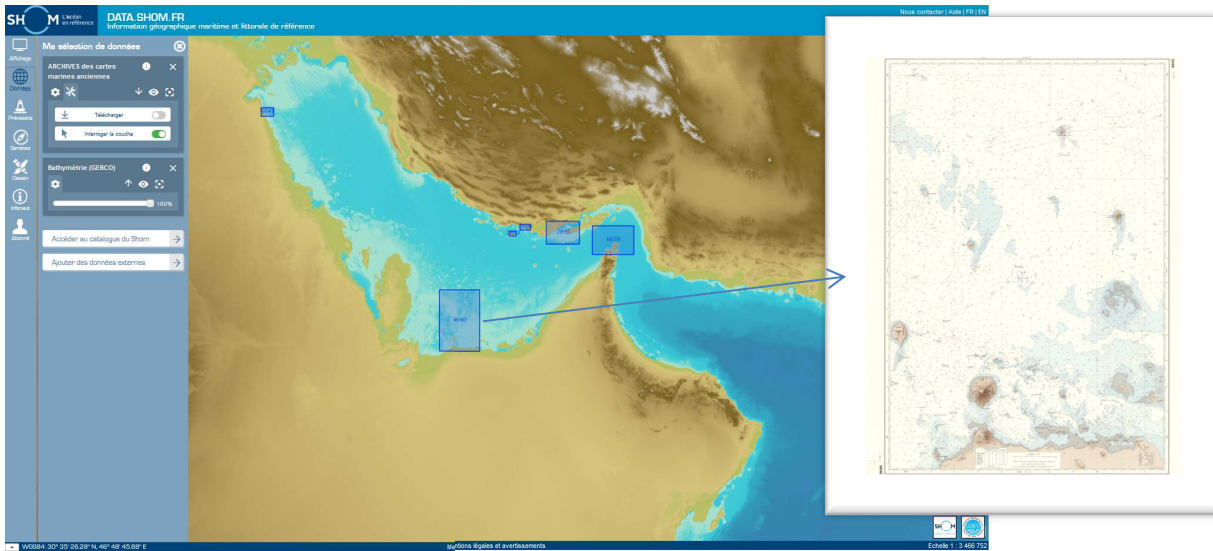


Fig.5: Archives: nautical charts (data.shom.fr)

9.9. 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
NCWG		✓	Nautical Cartography Working Group (former CPSCWG)
ENCWG		✓	ENC Working Group (former TSMADWG/DIPWG)
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
GEBCO		✓	Joint IOC-IHO Guiding Committee for the General Bathymetric Chart of Oceans (GEBCO)
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)
IENWG	✓	✓	IHO-European Union Working group
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
NIPWG		✓	Nautical Information Provision Working Group (former

			SNPWG)
NSHC		✓	North Sea Hydrographic Commission
RSAHC		✓	ROPME Hydrographic Commission
S100WG		✓	S-100 Working Group (former TSMADWG/DIPWG)
SAIHC		✓	Southern Africa and Islands Hydrographic Commission
HSPT	✓		S-44 Hydrographic surveys Project Team
SWPHC		✓	South-West Pacific Hydrographic Commission
TWCWG	✓	✓	Tidal, Water Level and Currents Working Group (former TWLWG/SCWG)
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)

5. Conclusions

Shom supports any initiatives aiming at improving the maritime knowledge and the navigation safety, as far as the data collected benefits the charting authorities and the update of nautical documentation of that region.

Destinataire : OHI

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