

Direction des missions institutionnelles et des
relations internationales
Division Relations extérieures

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N° 009 Shom/DMI/REX/NP

**FRENCH NATIONAL REPORT
TO THE TO THE 20TH CONFERENCE OF THE MEDITERRANEAN AND BLACK SEAS
HYDROGRAPHIC COMMISSION**

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 the National Maritime Strategy and the Defence Policy according to a new 4 years target and performance contract covering the 2017-2020 period, which has recently been approved by Shom's Executive Board. In addition to that, survey works are being conducted 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, Shom has conducted the following survey works :

- In Corsica, around the following harbours: Bastia, Ajaccio, Golfe de Calvi, Ile-Rousse by BH2 *Borda* in 2015 (fig.1) and Saint-Florent, Porto-Vecchio by BH2 *Laplace* in 2016 (fig.2&3)
- on Lebanon's coast, approaches and accesses to the harbours of Beyrouth, Djounie, Naqura and Tripoli by BHO *Beautemps-Beaupré* in 2016 (fig.4)
POSA and PROTEVS MED Campaigns in Western Mediterranean sea by BHO *Beautemps-Beaupré* in 2016 (fig.5&6)
- Lebanon's coast, approaches and accesses to the harbours of Beyrouth, Djounie, Naqura and Tripoli by BHO *Beautemps-Beaupré* in 2016 (fig.4)
- POSA and PROTEVS MED Campaigns in Western Mediterranean sea by BHO *Beautemps-Beaupré* in 2016 (fig.5&6)

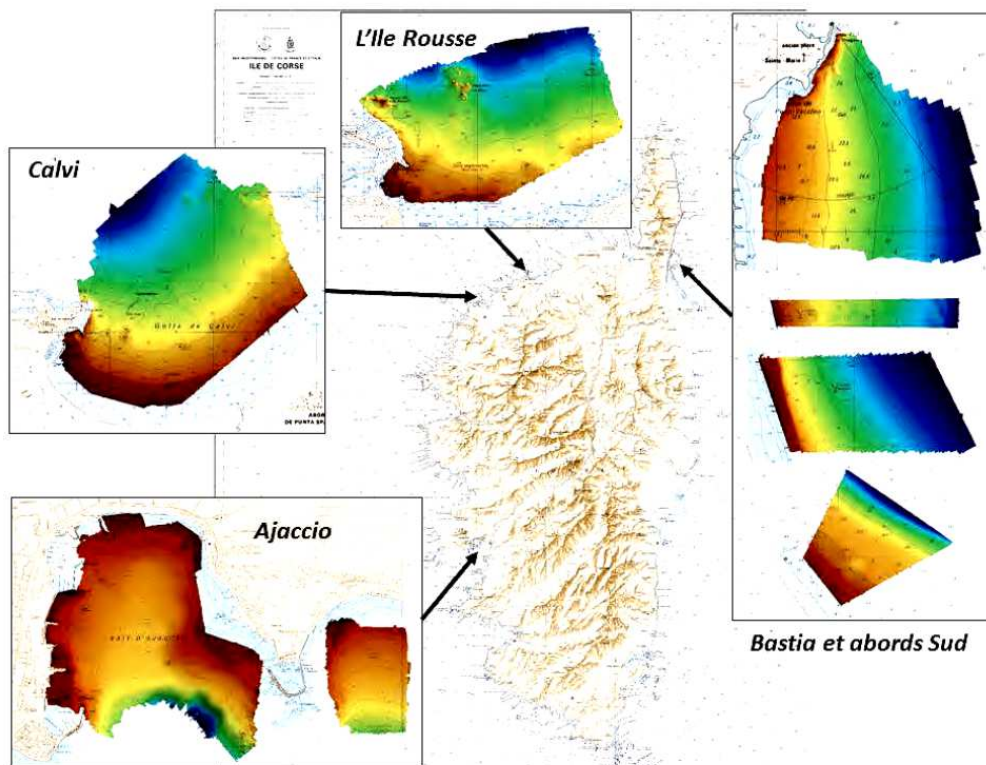


Fig 1: Surveys around Corsica in 2015 by BH2 Borda

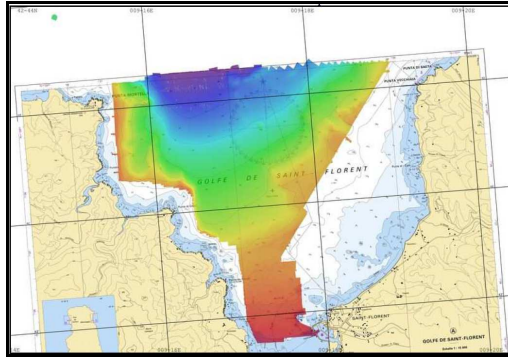


Fig 2: Golfe de Saint-Florent

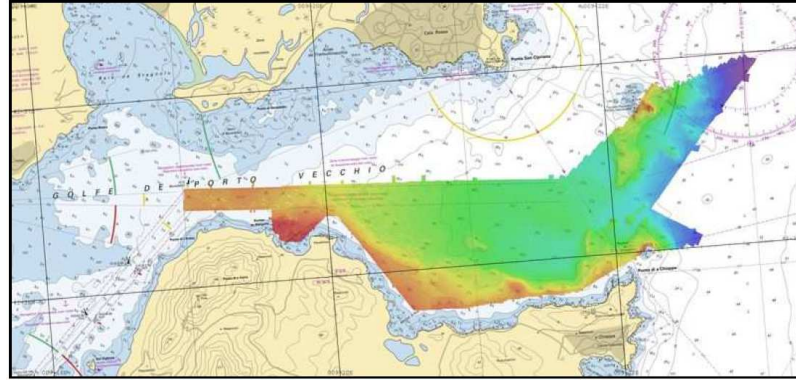


Fig 2: Survey of Porto-Vecchio) in 2016 by BH2 Laplace

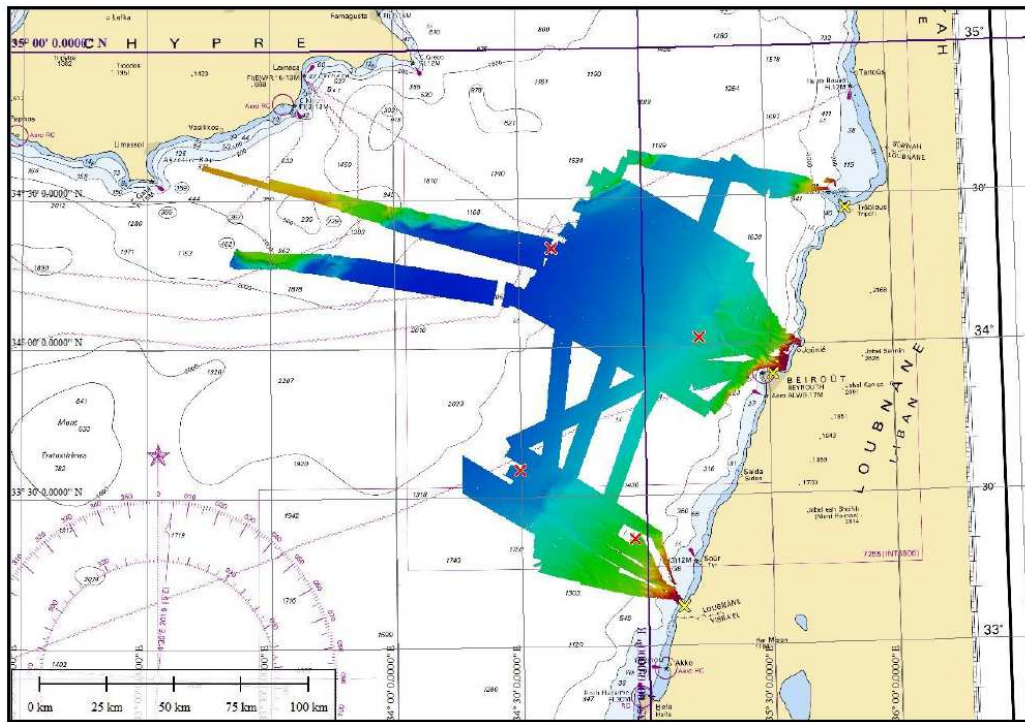


Fig 3: Surveys in Lebanon in 2016 by BHO Beutemps-Beaupré

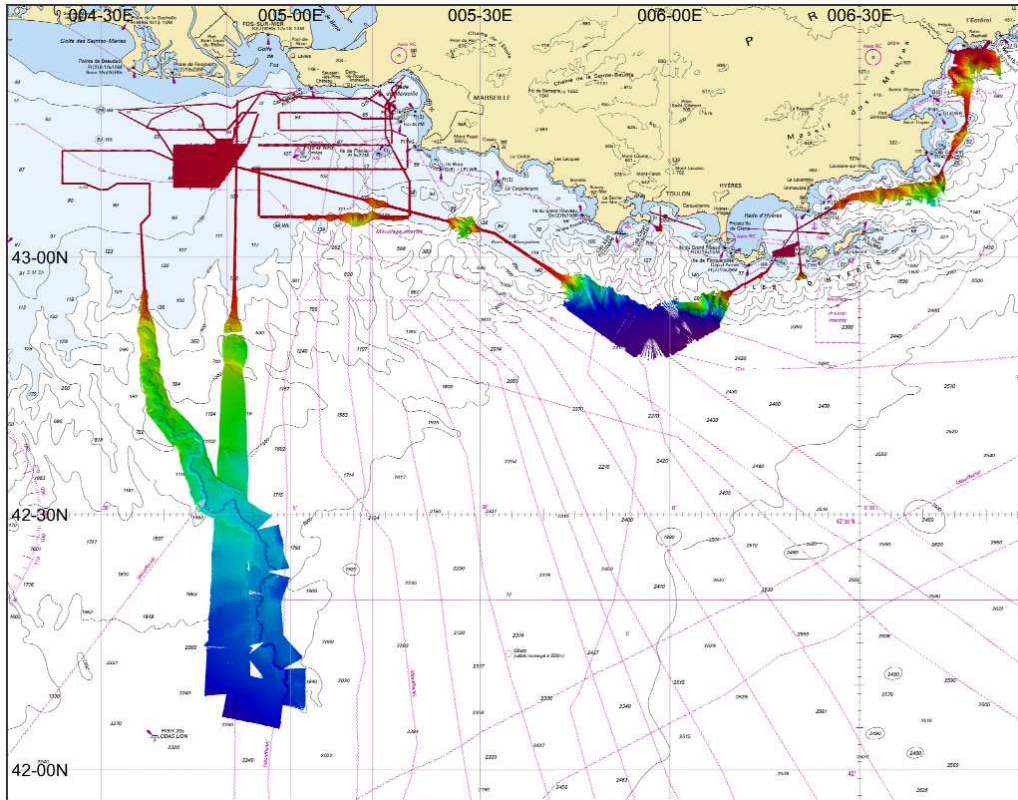


Fig. 4: POSA Campaign by BHO Beautemps-Beaupré in 2016

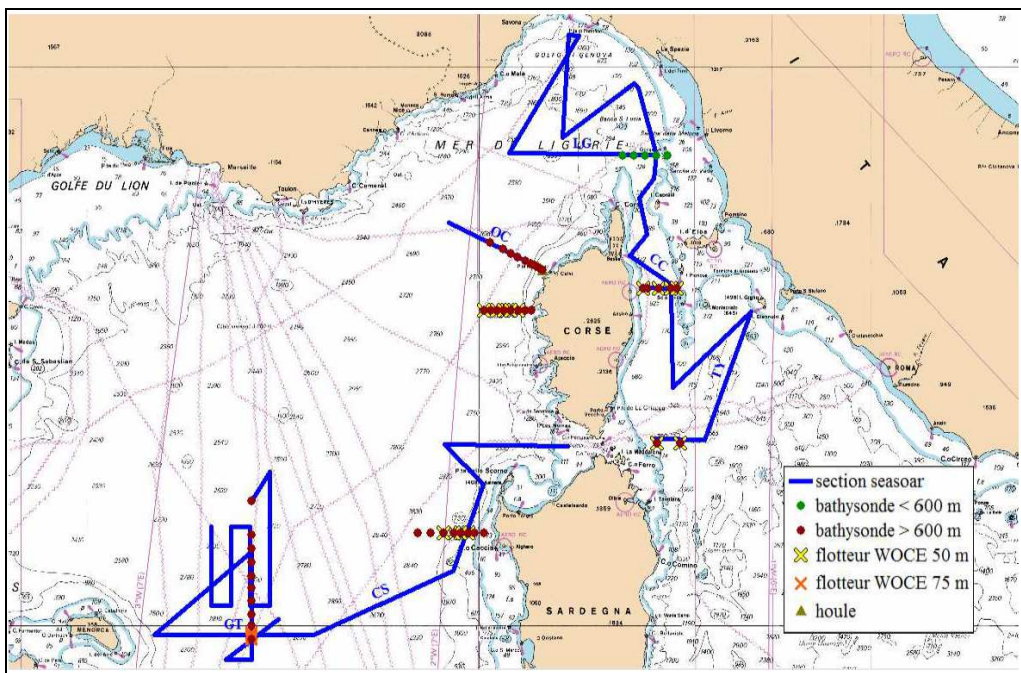


Fig 5 : PROTEVS MED Campaign by BHO Beautemps-Beaupré in 2016

2.2. LIDAR Surveys

A new lidar survey covering the coast of Golfe du Lion was done in 2015 within the framework of Litto3D® program (fig.7). This national programme, based on a partnership between Shom and the French National Geographic Institute (IGN), aims to provide a very high resolution Sea-Land digital terrain model (DTM) of metropolitan and overseas French coasts.

All Litto3D® products are downloadable under Open Licence from Shom's data portal (data.shom.fr).

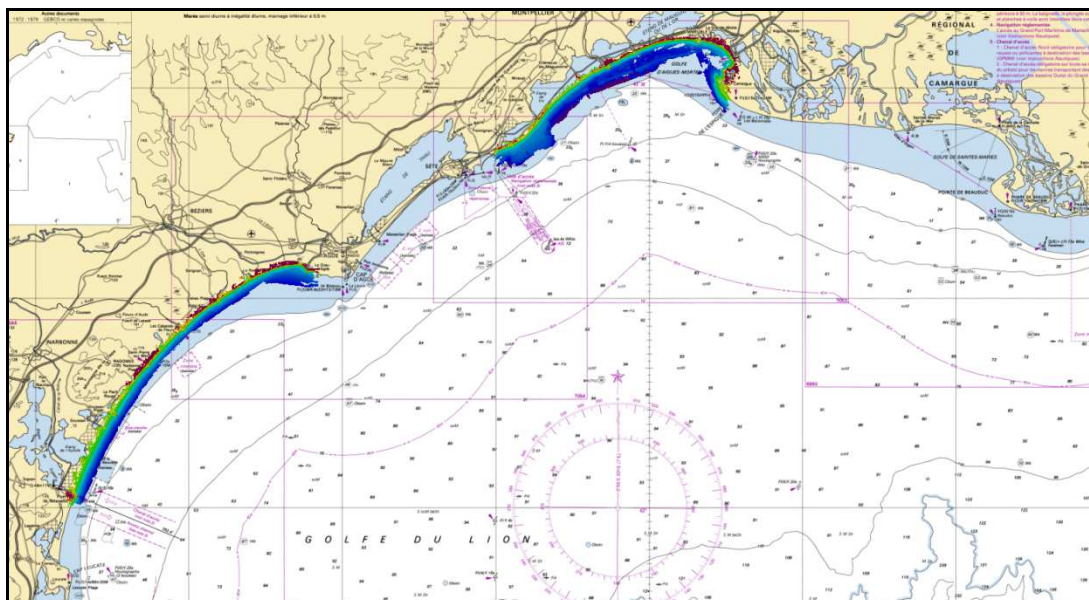


Fig.6: Lidar Survey of Golfe du Lion – 2015

2.3. French Survey programme for the region

Shom's survey planning for the area is detailed in the two figures hereafter, presenting the long-term objectives regarding the compliance with S-44 and the 2013-2016 survey plan combined with existing surveys: the survey programme for the Mediterranean area is composed of :

- coastal surveys in Corsica (main harbours approaches, anchor areas),
- survey work near Toulon (Southern side of île du Levant).

In that scope, a new national survey programme, covering the 2017-2020 period, has also received the approval of Shom's Executive Board prior to its forthcoming signature by the French Ministry of Defense.

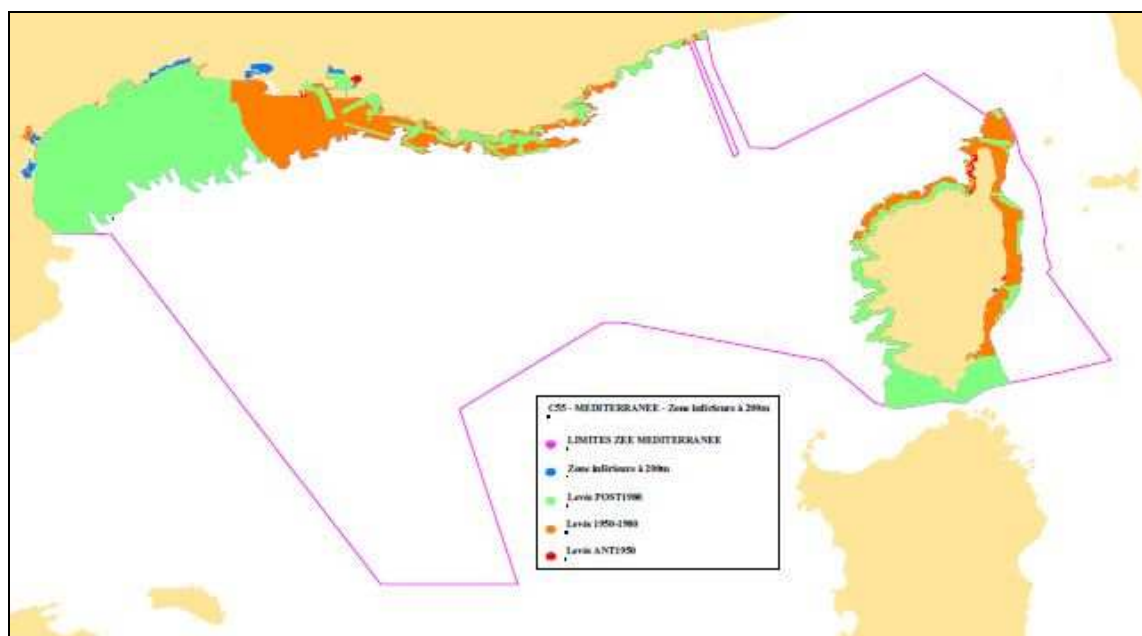


Fig.7: C-55 survey status for depth inferior to 200m.
 (Green: post 1980 survey, Orange: 1950-1980 survey, Red: anterior 1950 survey)

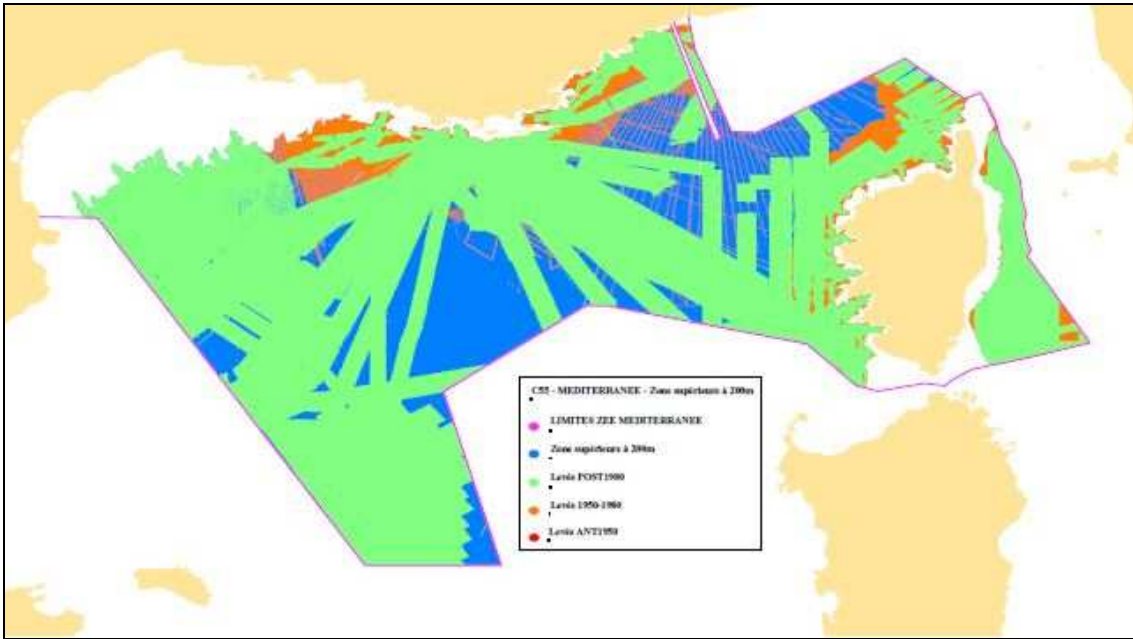


Fig.8: C-55 survey status for depth above 200m.
(Green: post 1980 survey, Orange: 1950-1980 survey, Red: anterior 1950 survey)

3. New charts & updates

3.1 ENC's

On the 15th of May 2017, Shom had produced some 561 ENC's, of which 109 cells in the Mediterranean region. In line with the WEND principles, France produces its small scale ENC cells as closely as possible to INT chart schemes. The French production plan is also compliant with IMO regulations on ECDIS mandatory carriage requirements.

The Shom ENC coverage of the MBSHC area is depicted in the chartlets hereafter (from online PRIMAR catalogue <http://www.primar.org>).

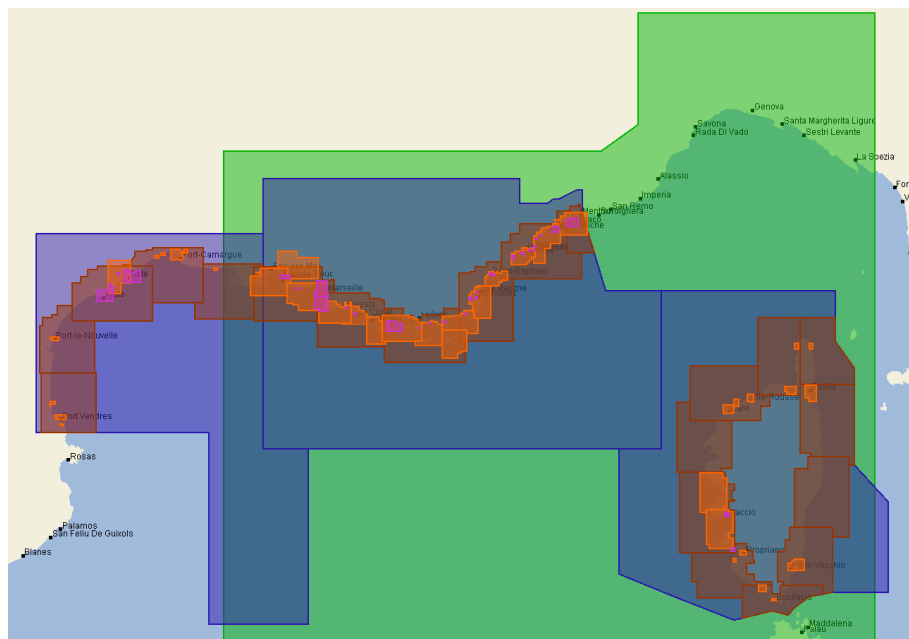


Fig.9: Shom's actual ENC Coverage over Western Mediterranean coasts.

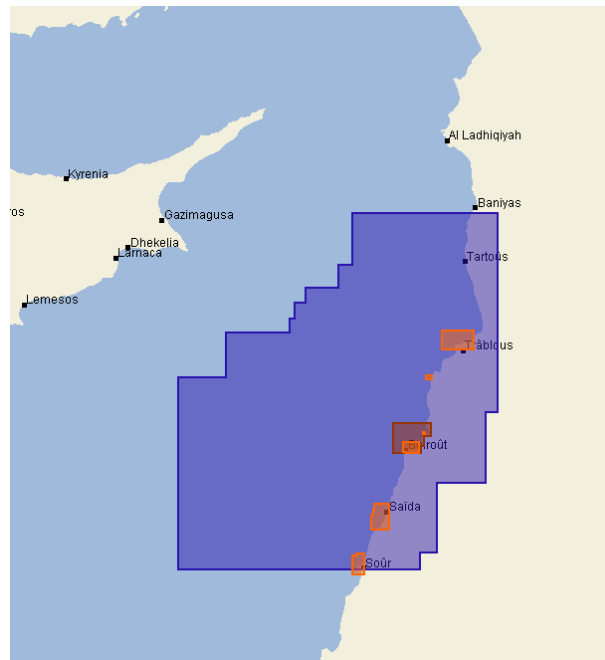


Fig.10: Shom's actual ENC Coverage over Eastern Mediterranean coasts.

The cells produced since the last Conference (June 2015) are as follows:

Number	New chart (NC) or new edition (NE)	Title
FR270140	HPD ¹	Islas Baleares to Corse and Sardegna
FR369510	HPD	Fos-sur-Mer to Menton
	HPD	Cap Cerbère to Pointe de Beauduc
FR372550	HPD	Tartous to Sour
FR473480	HPD	Outer approaches to Beyrouth
FR474060	NE	Marseille to Toulon
FR467670	NE	De Fos-sur-Mer à Marseille
FR566100	NE	De Bandol à Le Brusc
FR566120	NE	Baie de la Ciotat
FR566150	NE	Ile de Port-Cros and Ile du Levant
FR568380	NE	Abords de Saint-Raphaël
FR568390	NC	Etang de Thau
FR56850B	NC	Baie de Centuri
FR56850C	NC	Macinaggio and Tamarone Bays
FR569110	NE	Golfe de Porto-Vecchio
FR57003B	NC	Saint-Cyprien
FR570040	NC	Golfe d'Aigues-Mortes
FR57004B	NC	Carnon-Plage

¹ HPD : new edition due to the migration into CARIS HPD.

FR57004C	NC	Saintes-Maries-de-la-mer
FR570910	NE	Approaches to Toulon
FR57096A	NC	Baie de Figari
FR57162B	NC	Campomoro anchorage
FR572000	NC	Cap d'Antibes to Cap Ferrat
FR572050	NE	Golfe de la Napoule - Golfe Juan
FR572820	NE	Rade d'Hyères
FR573160	NC	Golfe of Sagone
FR57348A	HPD	Beyrouth harbor and approaches
FR57348B	HPD	Jounié Harbour
FR573920	NE	Cap Couronne to Cap Croisette - Golfe de Marseille
FR57436B	NE	Propriano harbour
FR57514A	NE	Approaches to Tarabulus (Tripoli)
FR57514B	NE	Approaches to Selaata
FR57514C	NE	Port of Lebanon - Approaches to Sayda (Saïda)
FR57514D	NE	Approaches to Sur (Tyr)
FR66612A	NE	Port de la Ciotat
FR66839A	NC	Pisse-Saumes canal
FR66839B	NC	Marseillan harbour
FR66839C	NC	Mèze harbour
FR66839D	NC	Balaruc-Les-Usines
FR66839E	NC	Bouzigues
FR67003A	NC	Cap d'Agde - Entrance to L'Hérault
FR670930	NE	Rade de Toulon
FR67162A	NC	Porto Pollo anchorage
FR67205F	NE	Port Gallice and Port du Crouton
FR673900	NE	Marseille harbour
FR673910	NE	Southern approaches to Marseille
FR67434A	NE	Sète harbour
FR674410	NE	Approaches and Monaco harbours - Cap d'Ail to Cap Martin

The following cells are planned in 2017-2018 :

Number	Compilation	Title	Comment
	Scale 1:		
FR372560	180 000	<i>De Soûr à Al Arish</i>	<i>To replace GB302634.</i>
FR47513D	22 000	<i>Abords de Tartus</i>	<i>To replace GB401579, GB41579D, GB41579E, GB41579C et GB501579.</i>
FR47513E	22 000	<i>Abords de Baniyas</i>	
FR37513A	90 000	<i>Approches de Baniyas et Tartus</i>	
FR47513C	45 000	<i>Approches de Al Ladhiqiyah</i>	

FR57513B	12 000	Port de Al Ladhiqiyah	
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The status of ENC production in the area is :

Usage Band	Produced Cells	Planned Cells	%
1	0	0	/
2	1	1	100,0
3	4	6	66,7
4	22	25	88,0
5	44	83	98,8
6	38		
Total	109	115	94,8

3.2.ENC Distribution method

All French ENCs (S-63 encrypted format) are distributed to End User Service Providers by PRIMAR RENC. FR is providing its support to the IC-ENC-PRIMAR Cooperation Committee working groups to develop a RENC-to-RENC cooperation concept.

3.3.RNCs

NTR.

3.4.INT charts

See next section for details.

The overall planning of SHOM for INT charts production in the region is as follow:

Scale	Produced INT charts	Planned INT charts	%
Small (<1/1 000 000)	1	1	100
Medium	5	5	100
Large (>1/100 000)	13	17	76,5
Total	19	23	82,6

3.5.National paper charts

Hereafter the charts produced since the last Conference (June 2015):

National	INT	New chart (NC) or new edition (NE)	Scale 1 :	Title
				En 2015
6615		NE	25 000	Iles de Port-Cros et du Levant (Iles d'Hyères)
7282		NE	25 000	Rade d'Hyères
7434		NE	15 000	Ports de Sète, Port-la-Nouvelle, Port-Vendres et Collioure
6855		NEL	50 000	Du Phare d'Alistro à Solenzara
6911		NEL	15 000	Golfe de Porto-Vecchio
6970		NEL	50 000	De Punta di l'Acciolu à Capo Cavallo
7050		NEL	50 000	De Calvi à Cargèse
7091		NEL	25 000	Abords de Toulon
3024		NEL	100 000	Partie comprise entre le Cap Toukoush et le Cap Rose

5670		NEL	25 000	Abords d'Annaba (Bône)
5929		NEL	35 000	Abords d'Arzew
5951		NEL	100 000	Du Cap Ferrat à la Pointe de Kef el Asfer
7433	1972	NEL	22 500	Abords du port de Tanger Med
3975		NEL	493 500	Mer Adriatique - partie Nord
				En 2016
7514	3671	NE	25 000	Ports du Liban
7205		NE	15 000	Golfe de La Napoule - Golfe Juan - Iles de Lérins - Abords de Cannes
7390	3196	NE	10 000	Port de Marseille
6610		NEL	20 000	De Bandol au Cap Sicié, Rade du Brusç
6822		NEL	50 281	Abords Nord de Bastia
6823		NEL	50 625	Abords Sud de Bastia
6843	3186	NEL	50 500	Du Cabo Creus à Port-Barcarès
6907		NEL	24 955	Etang de Berre
6942		NEL	51 064	De Punta d'Orchina au Cap Muro - Abords d'Ajaccio
6969		NEL	50 281	Du Cap Corse à la Punta di l'Acciolu - Golfe de Saint-Florent
7391		NEL	12 500	Abords Sud de Marseille - Des Iles du Frioul à l'île de Jarre
7392	3195	NEL	24 999	Du Cap Couronne au Cap Croisette - Golfe de Marseille
7393		NEL	20 000	Du port de La Pointe Rouge à Cassis - Calanques de Cassis
6616		NEL	24 999	Du Cap Bénat au Cap Lardier - Rade de Bormes - Baie de Cavalaire
6684	3192	NEL	25 005	Golfe et Port de Fos
6713		NEL	151 701	Côte Nord-Est de la Corse, canal de Corse
7200	3199	NEL	25 000	Du Cap d'Antibes au Cap Ferrat
7267		NEL	20 000	Abords de Saint-Tropez
7406		NEL	50 095	De Marseille à Toulon
1701		NEL	20 000	Tanger et ses atterrages
5617		NEL	10 000	Port d'Alger
7348	3670	NEL	30 000	Approches de Beyrouth
3976		NEL	514 150	Mer Adriatique - Partie Sud
				En 2017
6804		NEL	30 000	Abords de Cagliari
7046	3185	NEL	12 501	Puerto de Barcelona
6610		NEL	20 000	De Bandol au Cap Sicié, Rade du Brusç
6612		NEL	20 001	De Cassis à Bandol - Baie de La Ciotat
6684	3192	NEL	25 005	Golfe et Port de Fos

6767		NEL	50 000	De Fos-sur-Mer à Marseille
6838		NEL	20 006	Abords de Saint-Raphaël - De la Pointe des Issambres à la Pointed'Anthéor
6980		NEL	15 000	L'île Rousse - Sant'Ambrogio - Calvi
7096		NEL	10 000	Baie de Figari - Port de Bonifacio

The following charts are planned in 2017-2018 :

National	INT	New chart (NC) or new edition (NE)	Scale 1:	Title
7436	3345	NC	15 000 10 000 7 500	Abords et Port de Bastia Port d'Ajaccio Port de Propriano
7441	3190	NE	7 500	Abords et Ports de Monaco - Du Cap d'Ail au Cap Martin
7093	3198	NE	10 000	Rade de Toulon
7255	3606	NE	250 000	De El Ladhiqiyeh à Soûr
7256	3608	NE	250 000	De Soûr à Al Arish
7003		NE	15 000 10 000 10 000 15 000	Le Cap d'Agde Saint-Cyprien Banyuls-sur-Mer Gruissan (New chartlet)
7707	1971	NC	12 500	Ports de Tanger Med et de Ksar-es-Srhir
7817		NC	15 000	Ports de la Goulette, Radès et Tunis
7392	3195	NE	25 000	Du Cap Couronne au Cap Croisette – Golfe de Marseille

French charts now include a QR Code to direct access to NTM applicable to that chart. Moreover, all up to date Shom charts are now available by 'Print On Demand' to French Defence users.

3.6. Other charts, e.g. for pleasure craft

Since 2014, Shom provides georeferenced marine charts in GeoTiff and S-57 format when produced. These digital marine charts are now available through Shom's online store (<http://diffusion.shom.fr>) under 2 types of licences according to the purpose of use (internal or commercial). These data can be used with GIS or cartographic software for commercial or private purposes.

A S-57 licence allows unlimited download of updated versions for 12 months from the date of purchase.

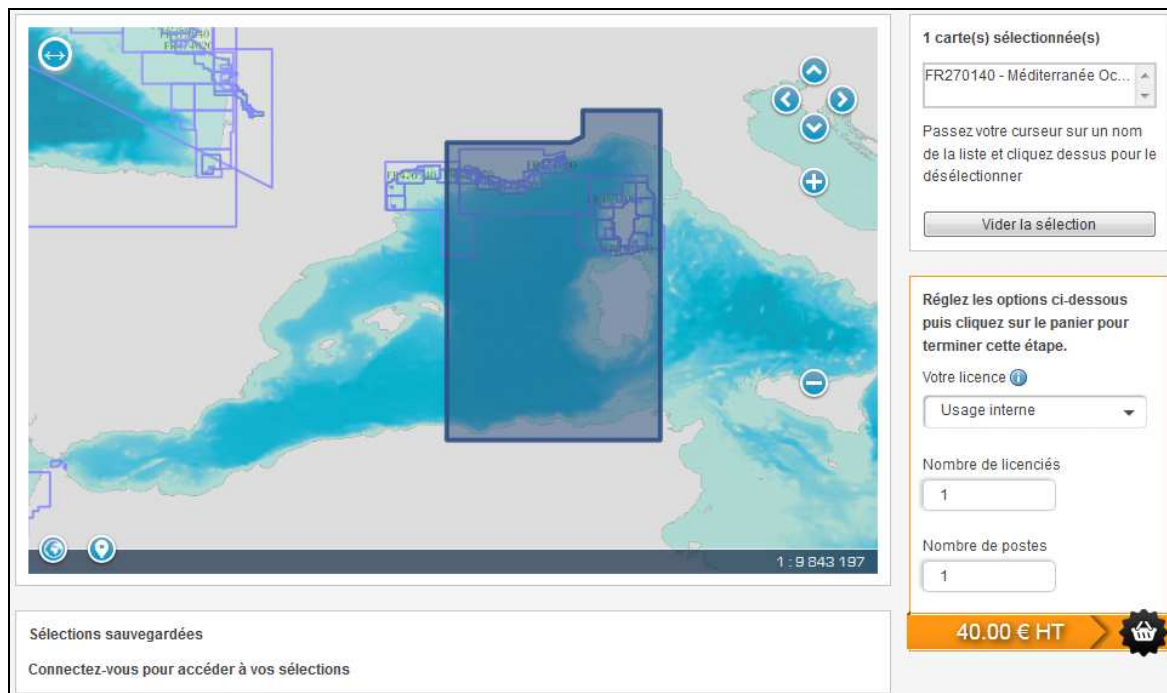


Fig.11: S-57 data purchase on Shom's online store diffusion.shom.fr.

3.7. Problems encountered

NTR.

4. New publications & updates

4.1 New Publications

NTR.

4.2. Updated publications

NTR.

4.3. Means of delivery

Since the end of 2016, all nautical publications have been available in digital format (pdf files) on Shom's online shop (diffusion.shom.fr). Most publications are still available on paper, but from now on, new editions of nearly all publications will be only digital.

4.4. Problems encountered

NTR.

5. MSI Existing infrastructure for transmission

Since January 1st 2014, Shom's notices to mariners (GAN) are exclusively available under digital formats, either downloadable on shom.fr or by annual subscription (CD-rom).

5.1. New infrastructure in accordance with GMDSS Master Plan

NTR.

5.2. Problems encountered

NTR.

6. C-55 Latest update

The latest overall C-55 update has been transmitted to the IHO Secretariat on June 30th 2017. With the issue of Shom's survey programme for the 2017-2020 period, survey status values are now derived from survey GIS polygonal surfaces method combined with survey classification.

Survey status	Depth < 200m			Depth > 200m		
	A	B	C	A	B	C
France Méditerranée	1,7	30,1	68,5	0	26,3	73,7
F Liban	3,4	4,3	92,3	0	76,8	23,2
Monaco (Principauté de)	10,4	50,9	38,7	0	21,5	78,5

Charting status	Small (<1 M)			Medium (1M < / < 100 000)			Large (> 100 000)			Metric	WGS84
	A	B	C	A	B	C	A	B	C		
France - Méditerranée	100	0	100	100	0	100	80	0	83,6	100	100
F Liban	100	0	NA	100	0	100	100	0	100	100	75
Monaco (Principauté de) ²	100	0	100	100	0	100	100	0	100	100	100

Fig. 12: C-55 updated values for survey status (top table) and charting status (down table)

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-IHO-ACI courses: category A & B for hydrographic surveyors and category B for nautical cartographers. So far, those courses are provided in French and are open to francophone foreign applicants.

SHOM
L'océan à la carte

TRAINING COURSES PROVIDED BY SHOM SCHOOL

- BS HYDRO²**
 - Average number of students: 8 petty officers / 2 foreign military officers
 - Duration: 14 months
 - Admission: based on application file
 - Curriculum:
 - maneuver and navigation Training
 - specific course on hydrography and oceanography
 - on board end-study project
- C SYSRES-HOM**
 - Average number of students: 3 to 5 hydrographers petty officers
 - Duration: 9 months
 - Admission: based on application file
 - Curriculum:
 - information technology theoretical and practical training (application to hydrography IT)
 - Practical internships in SHOM IT department and survey unit (GHOA)
- C SUP HYDRO**
 - Average number of students: 2 to 5 hydrographers petty officers
 - Duration: 3 months
 - Admission: based on application file
 - Curriculum:
 - advanced technical training on hydrography
 - team management training
- NAUTICAL CARTOGRAPHER TRAINING COURSE¹**
 - Average number of students: 1 to 8 trainees
 - Duration: 9 months
 - Admission: based on diplomas or competitive exam
 - Curriculum:
 - general training on hydrography and geosciences
 - specific training on nautical cartography
 - end-study technical project
- SHOM school support to ENSTA Bretagne^{1*}**
 - Average number of students: 2 French military engineers and 20 civil students
 - Duration: 36 months (+12 months for French military students)
 - Admission: based on diplomas or competitive exam
 - Curriculum: see www.ensta-bretagne.fr
- HYDROGRAPHIC ENGINEER**
- MASTER ON HYDROGRAPHY**
 - Average number of students: 5 French or foreign civilian students
 - Duration: 24 months
 - Admission: based on diplomas
 - Curriculum: see www.ensta-bretagne.fr

1*Recognized training course at category B level by FIG-IHO/ACI international board
2*Recognized training course at category A level by FIG-IHO/ACI international board

Fig. 12: Courses and training provided at the Shom hydrographic school (source: shom.fr)

Hereafter are listed the training courses provided to foreign trainees from the MBSHC region since the MBSHC19 conference:

² Data provided by France according to FR-MC Technical Agreement signed on September 19th 2005.

Country	Course	Year	Student
Morocco	Cat B. Hydrographic course	2016-2017	1
Liban	Training on demand: Maritime safety information and cartographic production	2017	2
Morocco	Cat B. Hydrographic course	2017-2018	1
Morocco	Hydrographic, oceanographic, meteorological network and system administrators course	2017-2018	1
Morocco	Training on demand : cartographic data validation	2017-2018	1
Morocco	Training on demand: hydrographic data validation	2017-2018	1

For the record, Shom's initial training catalogue is available on www.shom.fr.

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

For the countries benefiting from Shom support to meet their hydrographic services obligations spelled out by the SOLAS convention, France fosters a mechanism of gradual transfer of responsibilities through State-to-State administrative arrangements. This mechanism relies on training at Shom facilities and the formalisation of the respective responsibilities for maritime safety information, hydrographic and charting activities.

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 national coordinator and reference authority for the observation of the sea level, managing and issuing the resulting data. This mission is carried out under the REFMAR programme. All real time and processed tide gauge measurements collected under that programme are now accessible on web <http://data.shom.fr/#donnees/refmar> in areas under French jurisdiction.

Like REFMAR's other partner organizations, Shom contributes by providing data from its own global tidal network, the RONIM network.

This network is recognized as an important tool for coastal operational oceanography, risk assessment, studies on the evolution of the mean sea level, etc.



Fig.13: Shom global tidal network, REFMAR (source shom.fr).

Since May 2016, Shom’s tidal predictions are available through a new web/smartphone/tablet-friendly online service named maree.shom.fr. This service provides free access of one year of tidal predictions from over 1,000 harbours worldwide.

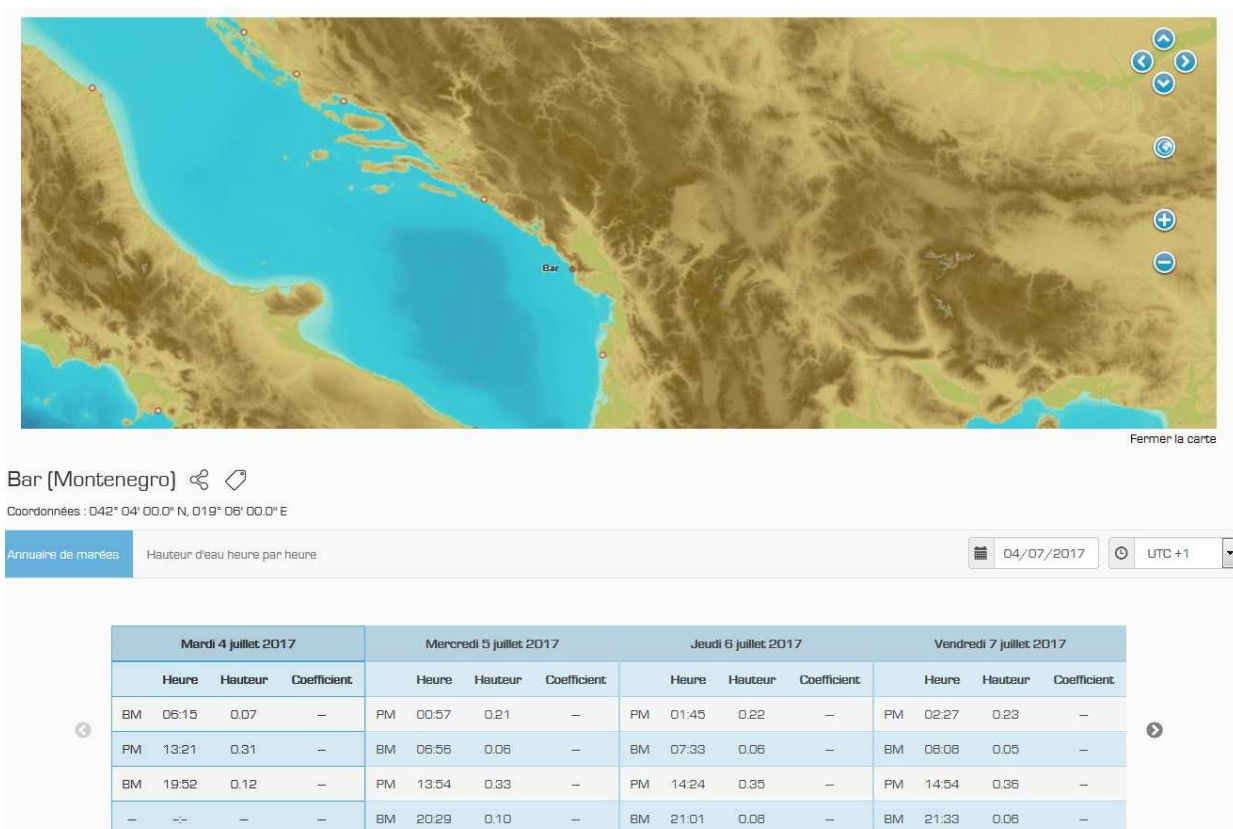


Fig.14: Tide predictions for Oman’s Port Sultan available through Shom’s web portal (source: maree.shom.fr)

In February 2016, Shom has organized, in partnership with UNESCO Intergovernmental Oceanographic Commission (IOC), the 2016 edition of the *REFMAR Days* at UNESCO headquarter in Paris. This 5 day meeting focused on the status of sea level observation and its multiple applications. About 200 people from 20 countries attended the event.

Presentation and information material presented at the event can be downloaded on: <http://refmar.shom.fr/journees-refmar-2016/programme>.

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 MBSHC 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. This division can be reached 24/7 by fax +33 298 221 665 or email coord.navarea2@shom.fr.

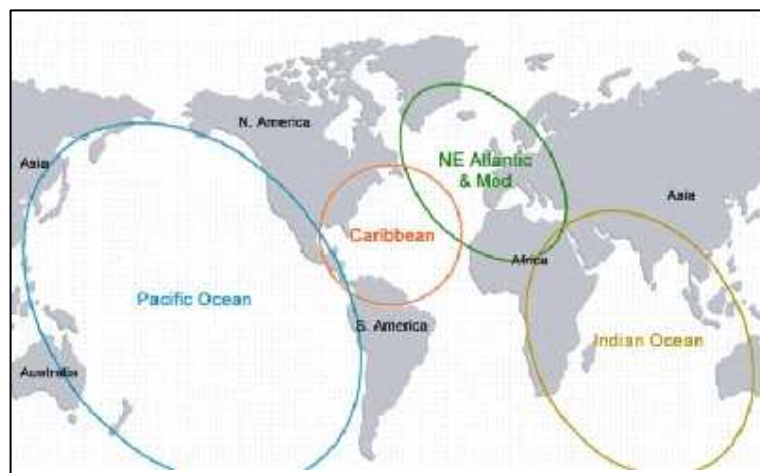


Fig.15: Cooperation areas on tsunami warning system (source COI ; UNESCO).

- **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. An extension of that alert system towards French overseas departments is currently under work.

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.

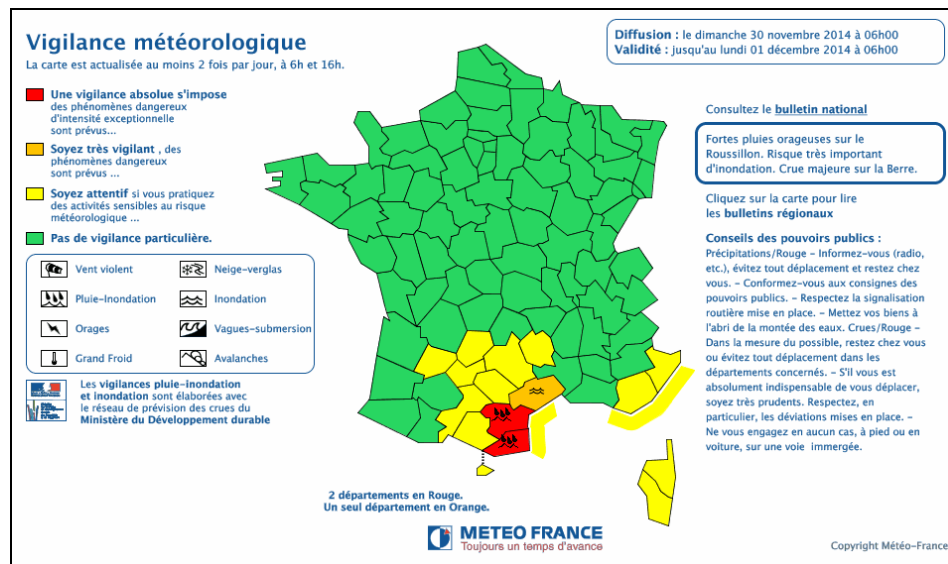


Fig.16: An example of coastal flooding alert (yellow level).

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, a second phase of that project was initiated at the end of 2015, to end in 2019. One of its main axis consists of completing and improving storm surge forecast capabilities on overseas territories, precisely French Antilles, French Guyana and French overseas Territories of the SouthWest Indian Ocean. This phase includes specific the development of surge and waves modeling configurations on those territories.

- **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 23rd 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

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 products and services:

- The portal is now displayed in Google Mercator (EPSG:3857).

- Drawing tools have been directly added to the main portal <http://data.shom.fr/#dessin>. Users can now create objects, save their map and print them, export and import them in KML format.
- A nautical info feedback service has also been integrated to the portal <http://data.shom.fr/#infonaut/>
- The metadata catalog is based on the Geonetwork solution that offers a user-friendly interface to read ISO 19115/19139 XMLs.
- Layers can be interrogated to retrieve attributes of objects.
- New high (10-20m) and medium (100m) resolution DTM Layers (open data).
- Wind forecasts (direction and speed) from *Météo France's* ARPEGE meteorological model ARPEGE are now available with Shom's ocean modeling forecasts,
- Bathymetric DTM on Corsica and Golfe du Lion;
- Litto3D® Languedoc-Roussillon and PACA;
- High resolution coastline on Aude and Var departments;
- Enhancement of WRECKS layer: information is displayed (position, description...) by clicking on an object;
- Maritime archives: 10,000 digitalized old charts and survey sheets now available on the web site;
- 4 days oceanographic forecast (focused on harbours and specific locations).

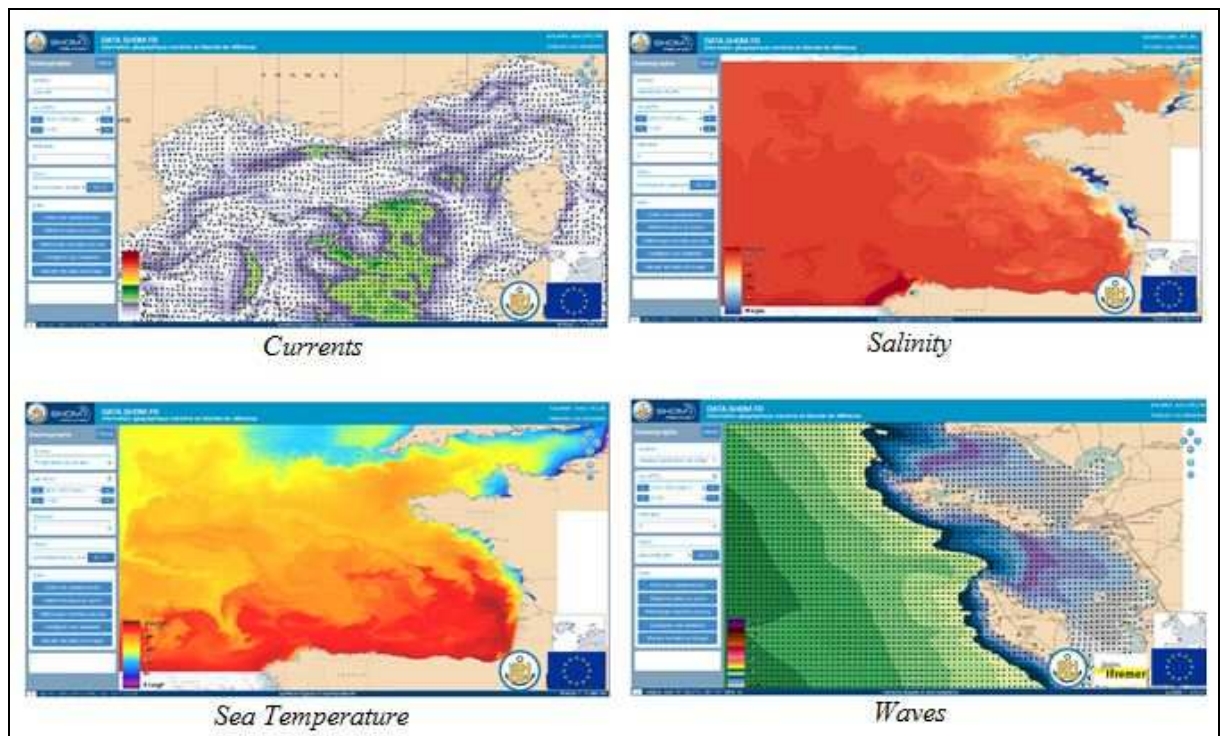


Fig.17: Oceanographic forecasts on Shom's data portal (data.shom.fr)

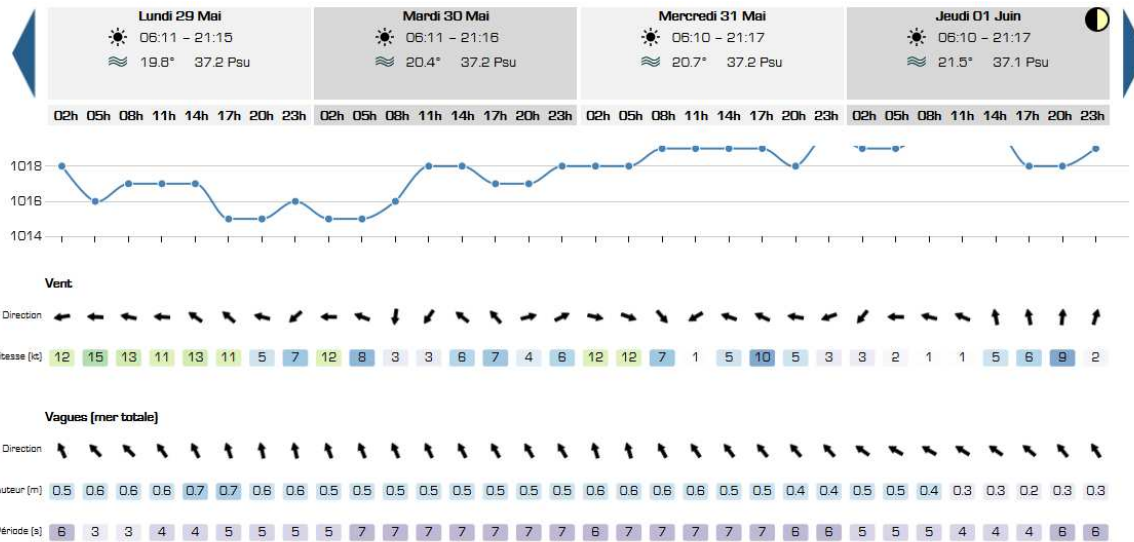


Fig.18: 4 days oceanographic forecast on a specific location (data.shom.fr)

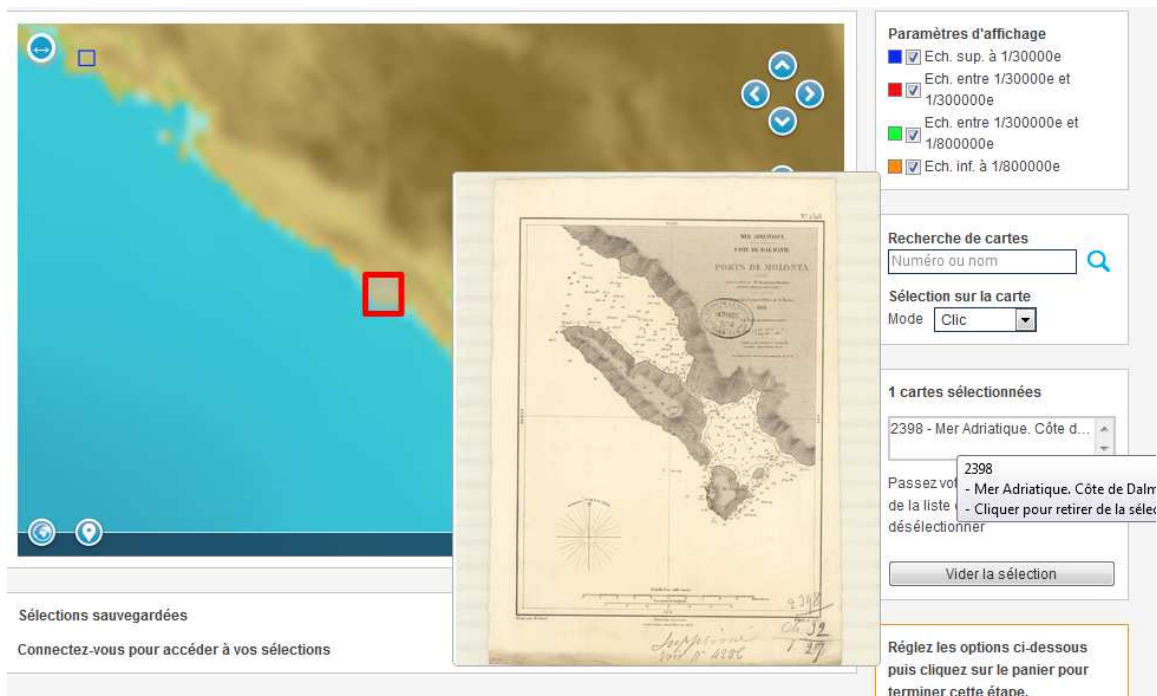


Fig.19: nautical charts and survey minutes (diffusion.shom.fr)

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 listed below: *tides, tidal currents, bathymetry, cartography, maritime and littoral databases*.

Shom is also increasing the overall quality of its general hydrographic database (wrecks, navigational aids, submarine cables, limits and restricted areas...): new specifications, encoding rules, quality checks and data management.

Those evolutions can all be followed via Shom's Twitter account (@shom_en & @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/>).

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
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
S-44 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)

10. Conclusions

In line with the work achieved by the IHO-EU Network, France is fully supportive to the build-up of larger maritime geospatial projects opportunities within this region, and wishes such discussion to continue at the forthcoming MBSHC Conference.

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