

Paris, le 27 janvier 2012

N° 005 SHOM/DMI/REX/NP

SERVICE HYDROGRAPHIQUE
ET OCÉANOGRAPHIQUE
DE LA MARINE

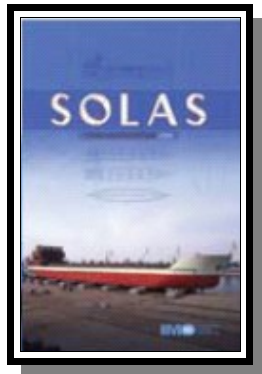
DIRECTION DES MISSIONS
INSTITUTIONNELLES ET DES
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**FRENCH NATIONAL REPORT
TO THE 11TH MEETING OF THE SOUTH-WEST PACIFIC
HYDROGRAPHIC COMMISSION MEETING**

1. Hydrographic Service: General

SHOM, the French hydrographic service, was created in 1720 and used to report to the French Navy. It became a public service in 2007 with goals and budget set by a board of directors composed of representatives from various French ministries and organisations. A contract of targets and performance between SHOM and the Minister of Defence covering 2010-2012 will be superseded to cover 2013-2016.



SHOM abides by the rules set for France by the International Maritime Organisation, and in particular by the SOLAS convention, specifying the obligation for coastal States to provide navigators with hydrographic services. SHOM is dedicated to guaranty the quality and the availability of information describing marine physical environment, along the coast and offshore, while coordinating its collection, filling and release. SHOM continuously ensures that public, civilian and military needs are satisfied at the lowest possible cost.

SHOM fulfils the missions of a national hydrographic service, supports defence and provides expertise to maritime policies. As a public service, SHOM can interact with other French geography, meteorology and oceanography specialists as well as with its European and international counterparts.



2. Surveys

2.1. Coverage of new surveys

SHOM conducts or participates in different types of surveys in the SWPHC area. The first type aims at collecting geophysical information in order to define the extent of the French continental shelves, in accordance with Art 76 of the UN Convention of the Law of the Sea (UNCLOS). Since the last meeting of the SWPHC, a geophysical survey has been conducted by a SHOM team on board N/O *Atalante* in the North of Wallis and Futuna, in order to assess a possible extension of the continental shelf.

The second type of surveys is related to SHOM's long term commitment in those areas where France has overseas territories and/or historical links. It is aimed at collecting nautical information with a view to improve SHOM's chart portfolio along the following lines:

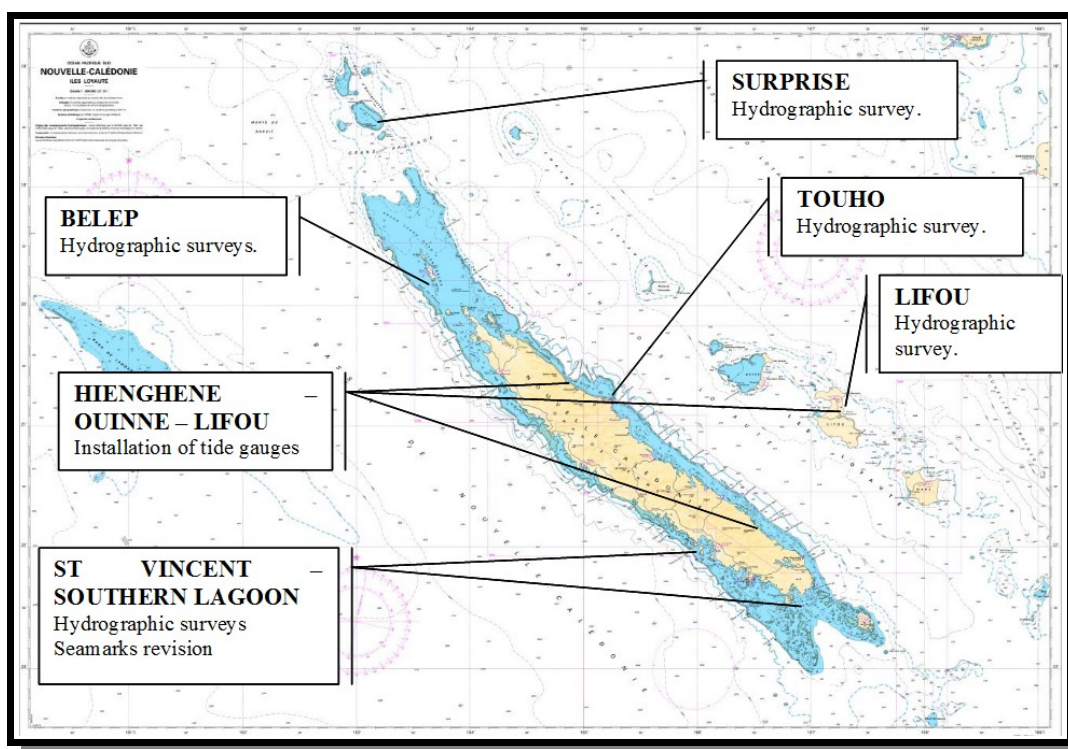
- ▲ cataloguing of all existing information;
- ▲ hydrographic surveys (bathymetry, geophysics, sediments, etc.) and production of charts and nautical documents;
- ▲ use of remote sensing (SPOT, ERS, airborne surveys, etc.) to improve the coastal cartography;
- ▲ oceanographic modelling (tides, currents, swell, etc.), eventually in liaison with IOC initiatives if any.

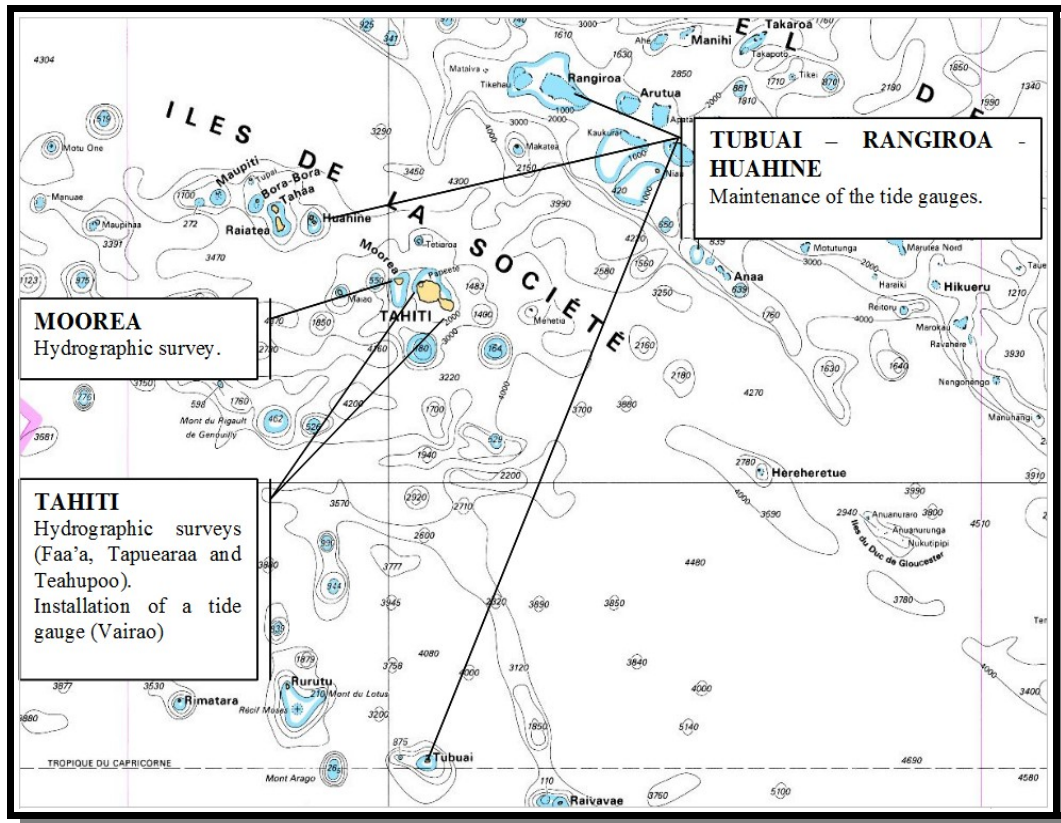
A prioritized survey plan is going to be prepared in liaison with local governmental authorities in New Caledonia and French Polynesia. Since the previous conference (November 2010), the *Groupe Océanographique du Pacifique* (GOP), located in New Caledonia and French Polynesia, has conducted the following surveys in support of the local authorities, pilots, fishermen, mining operators and defence.

In New Caledonia and the vicinity: several surveys of ports, bays, natural harbours, recommended routes and passages have been performed, mainly inside the lagoon. Tide gauges have been installed in Hienghène, Ouinné and Lifou as part of the tsunami warning network. Seamarks controls have been performed.

In French Polynesia: surveys have been conducted in Tahiti and Moorea. A tide gauge has been installed in Vairao (Tahiti) as part of the tsunami warning network. Maintenance of the existing tide gauges in the network (Tubuai, Rangiroa, Huahine) has also been performed.

In Wallis & Futuna: A tide gauge has been installed in Leava (Futuna) as part of the tsunami warning network.

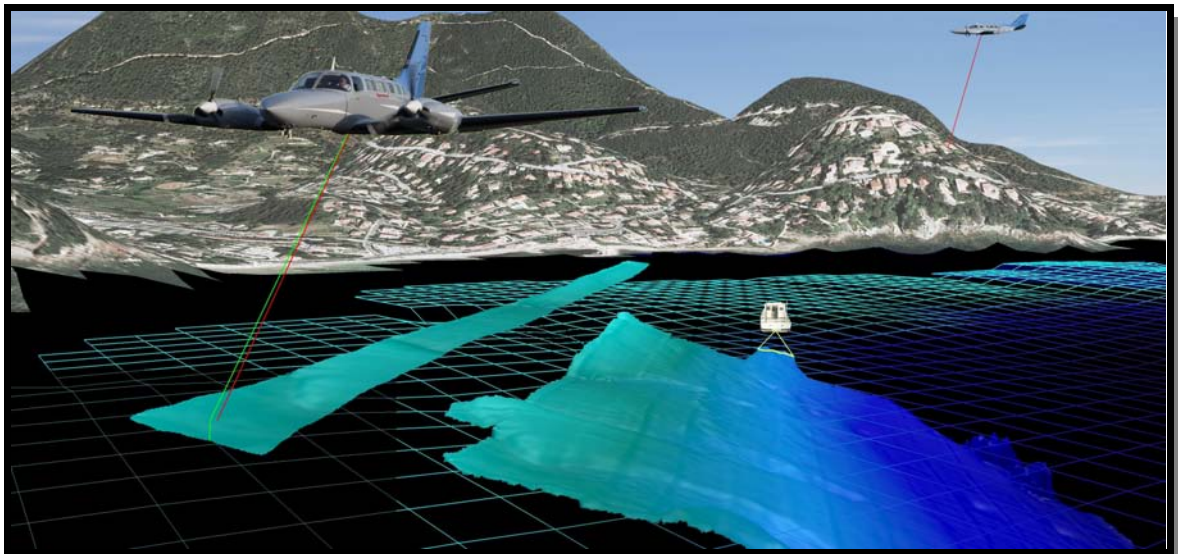




2.2. New technologies and /or equipment

The French National Geographic Institute (IGN) and SHOM were tasked by the Prime Minister to join efforts to produce a seamless, precise topographic and bathymetric model, of the entire French coast. The Litto3D® project was then created to meet more than hundred requirements expressed by coastal managers concerned with the protection and exploitation of the littoral, and by users of geo-referenced data.

As presented in the following image, the survey has three components :



Should you require more information please contact litto3d@shom.fr

2.3. New ships

NTR.

2.4. Problems encountered

NTR.

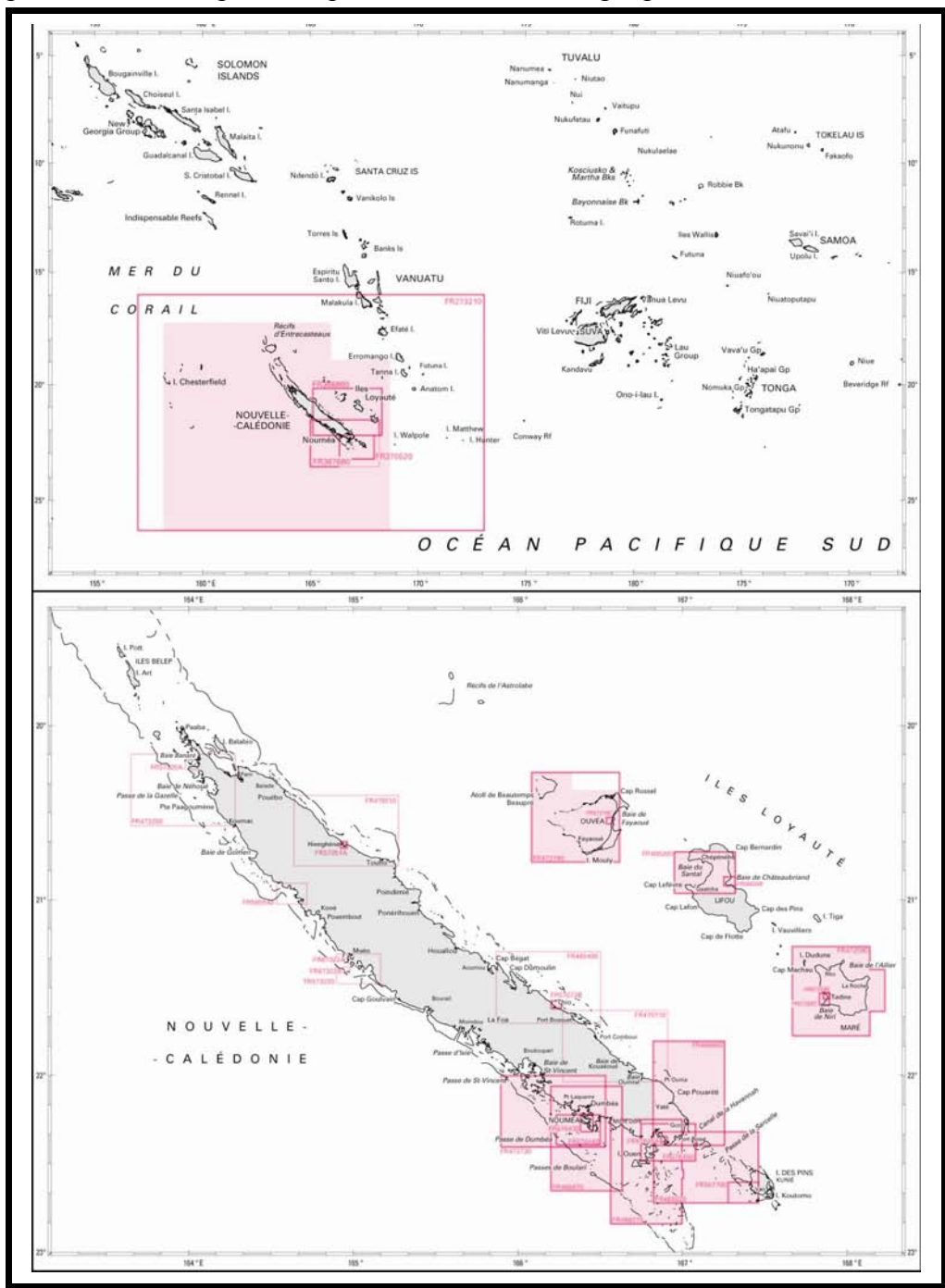
3. New charts & updates

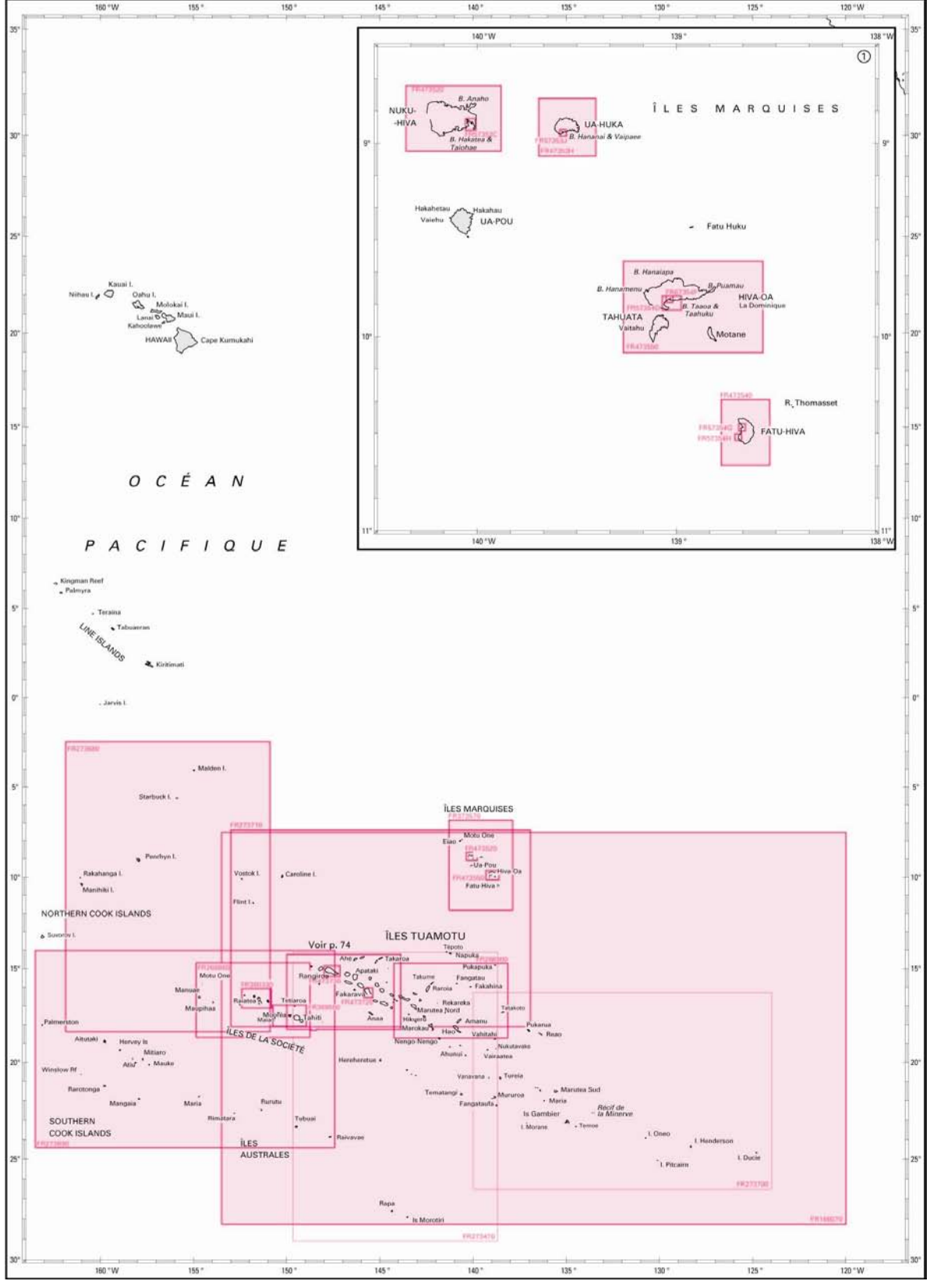
3.1. ENC's

On the 1th of January 2012, SHOM had produced some 340 ENC's at an approximate rate of 40 per year. The full collection should eventually reach a figure around 900 ENC's. The production of the last two years has been mainly devoted to fulfilling the IMO regulations on ECDIS carriage requirements. Europe approaches are well covered, taking into account commercial and passengers sailing requirements and production in non European waters (areas of international responsibilities, overseas territories) is progressing.

In line with the WEND task group recommendation, France produces its small scale ENC cells as closely as possible to INT chart schemes.

The SHOM ENC coverage of the SWPHC area is depicted in the 7 chartlets below, where existing ENC are represented in dark pink and planned ENC are in light pink:





Cells produced since the 10th conference (updated in January 2012):

ENC	Location	Area
2010		
FR266880	Polynésie	Iles de la Societe - Manuae à Tahiti
FR57073B	Nouvelle-Calédonie	Port de Thio
FR266890	Polynésie	Iles Tuamotu (Partie Ouest)
2011		
FR57051A	Nouvelle-Calédonie	Baie de Hienghène
FR273710	Polynésie	De Caroline Island aux Iles du Désappointement
FR266900	Polynésie	Iles Tuamotu (partie centrale)
FR273570	Polynésie	Iles Marquises
FR273680	Polynésie	De L'île Malden à l'île Flint
FR273690	Polynésie	De l'île Maria à l'île Raivavae
FR67373B	Tuamotu	Passe d'avatoru
FR57354D	Polynésie	Hiva-Oa - Baie Taaoa
FR67354F	Polynésie	Hiva-Oa - Baie Tahauku
FR67645A	Nouvelle-Calédonie	Port de Prony
FR67373C	Polynésie	Passe de tiputa
FR57373A	Polynésie	De la passe d'Avatoru à la passe de Tiputa
FR67372B	Polynésie	Mouillage Rotoava
FR473550	Polynésie	Hiva-Oa, Tahuata et Mohotani
FR473520	Polynésie	Iles Marquises - Nuku-Hiva
FR67372B	Polynésie	Tuamotu - Rotoava
FR473520	Polynésie	Iles Marquises - Nuku-Hiva
FR57372A	Polynésie	Passe Garuae à Rotoava
FR473720	Polynésie	Fakarava
FR47354O	Polynésie	Fatu-Hiva
FR57354G	Polynésie	Fatu-Hiva - Baie Hanavave
FR57354H	Polynésie	Fatu-Hiva - Baie Omoa
FR47353H	Polynésie	Ua Huka
FR57353J	Polynésie	Ua Huka - Baie de Vaipae
FR573220	Nouvelle-Calédonie	De la passe de Poya à la passe de Koné
FR67322A	Nouvelle-Calédonie	Passe de Muéo
FR67322B	Nouvelle-Calédonie	Port de Muéo
FR472340	Futuna	Iles Futuna et Alofi
FR57234A	Futuna	Iles Futuna et Alofi – Ava Leava (Anse de Sigave)
FR57234B	Futuna	Iles Futuna et Alofi - chenel Vasia

The production of the following cells has been planned in 2012:

Location	Number of cells planned	Usage Band
Nouvelle-Calédonie	6	4 / 5
Polynésie	6	2 / 4 / 5 / 6
Wallis	2	3 / 5

In compliance with IMO regulations on ECDIS carriage requirements, all HSC lines in French Polynesia and New Caledonia are covered with ENC.

The status of production in comparison with this scheme is:

Usage Band	Produced Cells	Planned Cells	%
1	1	1	100 %
2	8	12	67 %

Usage Band	Produced Cells	Planned Cells	%
3	5	23	22%
4	19	68	28 %
5	23	150	23 %
6	12		
Total	68	254	26 %

3.3. RNCs

NTR.

3.4. INT charts

See next section.

In agreement with the IHO S-11 publication, the status of INT charts production in the area is:

Scale	Produced INT charts	Planned INT charts	%
Small (<1/1 000 000)	7	7	100%
Medium	0	0	N/A
Large (>1/100 000)	10	10	100%
Total	17	17	100%

3.5. National paper charts

Charts produced since the last conference (updated in January 2012):

N° Nat.	N° INT	New chart (NC) or new edition (NE)	Scale 1:	French Polynesia (FP) New Caledonia (NC) Wallis & Futuna (WF)	Title
4232	/	NE	Div.	FP	<i>Iles Australes - Ile de Rapa, îles de Moritiri</i> (Conversion into WGS84)
6207	/	NE	30 000	FP	<i>Ile Raivavae (Vavitu)</i> (Conversion into WGS84)
6320	/	NE	30 000	FP	<i>Makatea</i> (Conversion into WGS84)
6418	/	NE	5 000	FP	<i>Ile Mangareva - Rade de Rikitea</i>
6463	/	NE	15 000	FP	<i>Ile Mangareva – Passe de l'Ouest</i> (New surveys)
6528	/	NE	20 000	NC	<i>De Houailou au Cap Koua</i> (Conversion into WGS84)
6537	/	NE	60 000	NC	<i>Du Cap Bayes au Cap Koua</i> (Conversion into WGS84)
6540	/	NE	25 000	NC	<i>Baie de Saint-Vincent</i> (Conversion into WGS84)
6717	/	NE	10 000	FP	<i>Port Phaeton (Teauaa)</i> (Conversion into WGS84)

6768	/	NE	300 000	NC	<i>Nouvelle-Calédonie (partie Sud) - Ile des Pins (Conversion into WGS84)</i>
6820	/	NE	35 000	NC	<i>Mouillages de l'île Lifou (Iles Loyauté) - Baie du Santal (Conversion into WGS84)</i>
6949	/	NE	60 000	NC	<i>Abords de Thio - Du Cap Bégat à l'île Toupéti (Conversion into WGS84)</i>
6956	/	NE	25 000	FP	<i>De la Passe de Mahaena à la Baie de Taravao (Conversion into WGS84)</i>
6985	/	NE	60 000	NC	<i>De Paagoumène à Ouaco (new surveys)</i>
7011	/	NE	60 000	NC	<i>De la presqu'île Neuméni à Port-Ounia (Conversion into WGS84)</i>
7073	/	NE	20 000	NC	<i>Ports et mouillages de la côte Sud-Est de la Nouvelle-Calédonie (Conversion into WGS84)</i>
7234	/	NE	60 000		<i>Iles Futuna et Alofi (Conversion into WGS84)</i>
7320	/	NE	60 400	NC	<i>De Koumac à Poum (new surveys)</i>
7322	/	NE	25 000	NC	<i>De la Passe de Poya à la Passe de Muéo (new surveys)</i>
7458	/	NE	50 000	FP	<i>Aratika (new buoyage)</i>
7645	6898	NE	31 000	NC	<i>Canal de la Havannah et Canal Woodin (new surveys)</i>
7644	6899	NE	25 000	NC	<i>Accès au Port de Nouméa (new surveys)</i>
7758	/	NC	39 900	NC	<i>Îles Belep - Îles Pott et Art - Îles Daos du Nord (Replaces Nat 6002)</i>

Planned in 2012:

N° Nat.	N° INT	(NC) or (NE)	Scale 1:	Location (FP) (NC) (WF)	Title
6687	6883	NE	60 000	NC	<i>Abords de Nouméa - Passes de Boulari et de Dumbéa</i>
7756	/	NC	60 000	NC	<i>De Touho à Ponérihouen (Replaces Nat 6537 and 6852)</i>

Planned in 2013:

N° Nat.	N° INT	(NC) or (NE)	Scale 1:	Location (FP) (NC) (WF)	Title
6002	/	NE	20 000	FP	<i>Bora-Bora</i>
6827	/	NE	60 000	NC	<i>Du Mont Dore à Port-Boisé - Passes de Mato et de Uatio</i>
7273		NE	60 000	NC	<i>De Nouméa à la Baie de Saint-Vincent</i>
7459	/	NC	/	FP	<i>Tikehau</i>
7755	/	NC	60 000	NC	<i>De Ponérihouen au Cap Dumoulin (Replaces Nat 3475, 6528 and 6529)</i>

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

None.

3.7. Problems encountered

As many other IHO member states, France is responsible for collecting nautical information and surveying areas that would otherwise remain uncharted. It happens from time to time that SHOM only learns by accident of surveys performed by private companies, or even other hydrographic offices, in its areas of charting responsibility, and has to insist to obtain communication of IHO-compliant data relevant to INT charts and nautical information.

In the interest of the international maritime community, it is reminded that survey results should be automatically communicated to the IHO recognised and primary charting authority (in accordance with M-3 resolution 1/2006 and S-4 resolution A-402.1 and B-635.4).

In addition, provision should be made in all contracts awarded to private survey companies to the effect that hydrographic data pertinent to the safety of navigation be communicated to the IHO recognised charting authority.

4. New publications & updates

4.1. Publications

A new edition regarding lights was released in 2011 : L.C. (Title : *Océan Atlantique (Est) - Océan Indien (Ouest) - Océan Pacifique*). The next edition is planned for 2012. The 14 volumes which SHOM has been updating since 2010, have been replaced by 4 volumes (LA, LB, LC et LD) in 2011 in order to focus on French areas of responsibilities. Also, IN K 10 and IN K 11 (2008 editions) will be updated in 2013. Their renewal is planned for 2015.

With respect to maritime radiocommunications and broadcast stations, the updates are as follows:

- 92.2 Maritime radiocommunications: Africa, Asia and Australasia (2011);
- 93 Maritime radiocommunications for traffic surveillance and pilotage (2010) : the area covered has been reduced in the same way as for the lights publications;
- 96.2 Marine weather broadcast stations: South-West Pacific, America and Antarctica (2011).

4.2. Means of delivery

SHOM aims at generating by digital means its entire paper production. This should be achieved by using international standards such as XML and following closely the recommendations of experts such as the IHO Standardization of Nautical Publications Working Group (SNPWG) in which SHOM participates.

4.3. Problems encountered

An important regulation corpus has been developed for the establishment and use of ENCs while the equivalent standardisation for nautical books is still lagging. As a result, the rules of use of these documents are not clearly established.

5. MSI Existing infrastructure for transmission

In SWPHC area, SHOM has delegated his national coordinator functions to two maritime authorities, the first in New-Caledonia (Commander of the maritime zone for Nouméa, operational organism : MRCC NOUMEA for regions in NAVAREA X and XIV areas), and the second in French Polynesia (Comar Papeete, operational organism : MRCC Papeete, for region in NAVAREA XIV area).

6. C-55 Latest update

The C-55 database for French areas of responsibilities is normally updated by SHOM on a yearly basis. Separate entries are now available for French areas in each IHO region.

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

7.1. Training received, needed, offered

As part of the capacity building programme of the IHO, SHOM contributed to a hydrographic survey and introduction to chart production training course in Papua New Guinea from 11th to 22nd October 2010. 13 trainees representing 9 countries of the SWPHC region were trained:

- 4 from Papua New Guinea (IHO member state) ;
- 2 from Fiji (IHO member state) ;
- 1 from Tonga (IHO member state) ;
- 1 from Cook Islands;
- 1 from Federated States of Micronesia;
- 1 from Nauru ;
- 1 from Palau ;
- 1 from Solomon Islands ;
- 1 from Vanuatu.

The trainees received a diploma at the end of the course and were all thrilled by their progress, while being very keen to put their newly acquired knowledge to practice in their home country.

As a sign of the region's interest towards this training, an article was published in the *PNG Post courier* edition on the 1st of November 2010 :

shipping bulletin www.postcourier.com.pg

Pacific reps graduate from hydrographics

THE International Hydrographic Organisation issued 13 certificates to course participants on 21 October 2010. The participants came from the Cook Islands (1), Kingdom of Tonga (1), and Federated State of Micronesia (1), Nauru (1), Republic of Palau (1), Vanuatu (1), Solomon Islands (1) and FIJI(2) and PNG (4). From PNG we had Captain John Nuga (PNG Ports Corporation) Ms Rhonda Amos (NMSA), Sub Leut Benjamin Walbadi (PNGDF) and Sub Leut Randall Hepota (PNGDF) graduate. The graduation was witnessed by representatives from the Fiji and Solomon Islands High Commissions, PNG Ports Corporation, National Maritime Safety Authority and the TSSP.

The Guest of Honour was Mr. Chris Rupen General Manager of the National Maritime Safety Authority. He presented the 13 certificates on behalf of the International Hydrographic Organisation to the course participants and the appreciation certificates to organisations that supported the course.

Mr Rupen encouraged the graduates to make use of what they have learnt and build their respective country's capacity in hydrographic. He highlighted that the IHO mission is to promote easier and safer navigation of sea by coordinating efforts. In supporting this, the International Hydrographic Bureau is funding this course to support the SWPHC



building capacity program in hydrographic and nautical cartographic. He thanked the IHO on behalf of participating countries and encouraged more interaction between participants through emails for advice and support from each other. Those with little to no hydrographic services should work closely with island countries with hydrographic services and our big partners, the Australian hydrographic service and New Zealand. In his farewell remarks, he thanked the participants for their patience and the course instructors, Matthew Templeton (AHS) and Ronan Pronost (Shom) and David Garforth (Brutour International P/E) for the effort and level of training they put in for the two weeks. Also the NMSA thanked, Hypack Corporation and OmniSTAR for all the software and DGPS Signal for the training course.

The NMSA, on behalf of the IHO, looks forward to this continued joint effort to improve hydrographic and nautical cartographic capabilities of developing countries and appreciate the support of National Research Institute and PNG Defence (Navy) for using their facilities for theory and practical sessions.

The students in their response appreciated the course and the hospitality the people of PNG as provided to them in their two week stay in Port Moresby. "We wish to come, if there is an opportunity for a second stage of the course here in PNG."

The course is a stepping stone for those participants who want to take hydrographics as a profession in future and even better, build the professional strength in SWP region. The South West Pacific Hydrographic Commission will support the second stage of the course, provided the IHB provided the funds and venue for the course. The course will be developed stage by stage until the level 2 Hydrographic qualification is achieved by each individual. The IHO will no doubt support with the region capacity as there are no

qualified Hydrographic surveyors compared to the vast oceans the region has. It is a development commitment and it will gradually get there at some stage. The participants were satisfied with the outcome of the course and recommended for a stage 2 course back here in PNG in 2011; the same participants will be maintained, if possible until each has acquired the H2 hydrographic competency qualification level.

On behalf of the International Hydrographic Organisation (IHO), the IHB Director, Captain Hugo Gorzizile has expressed his deep thanks to all for the team work that ended in the delivery of an excellent course for the benefit of the countries in the South West Pacific Hydrographic Commission area coordination that was just finalised in Papua New Guinea.

His sincere thanks on behalf of IHB to those involved in the coordination and the provision of human resources, as well as those that locally did their best to offer fantastic facilities to run the course and facilitated the provision of all the local support. The IHB specially applauded the Instructors from the AHS and SHOM who were able to transmit knowledge as well as experience to all the participants in a short period of time. "We thank AHS and SHOM for making Matthew and Ronan available for this important event."

For further information, initial training capabilities provided by SHOM are described in its yearly report available on www.shom.fr.

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

On 30th of December 2011, SHOM signed a new bilateral agreement regarding hydrography, oceanography and charting, with the Republic of Congo. France has now similar agreements with

seven states world-wide, including Benin (2010), Senegal (2009), Morocco and Togo (2008), Djibouti (2006) and Monaco (2005). As soon as these agreements are signed, systematic procedures are carried out for comprehensive revision of survey plans, training requirements, assessment of charting issues.

For the many countries benefiting from French support to meet the hydrographic services requirements spelled out by the SOLAS convention, France has implemented 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

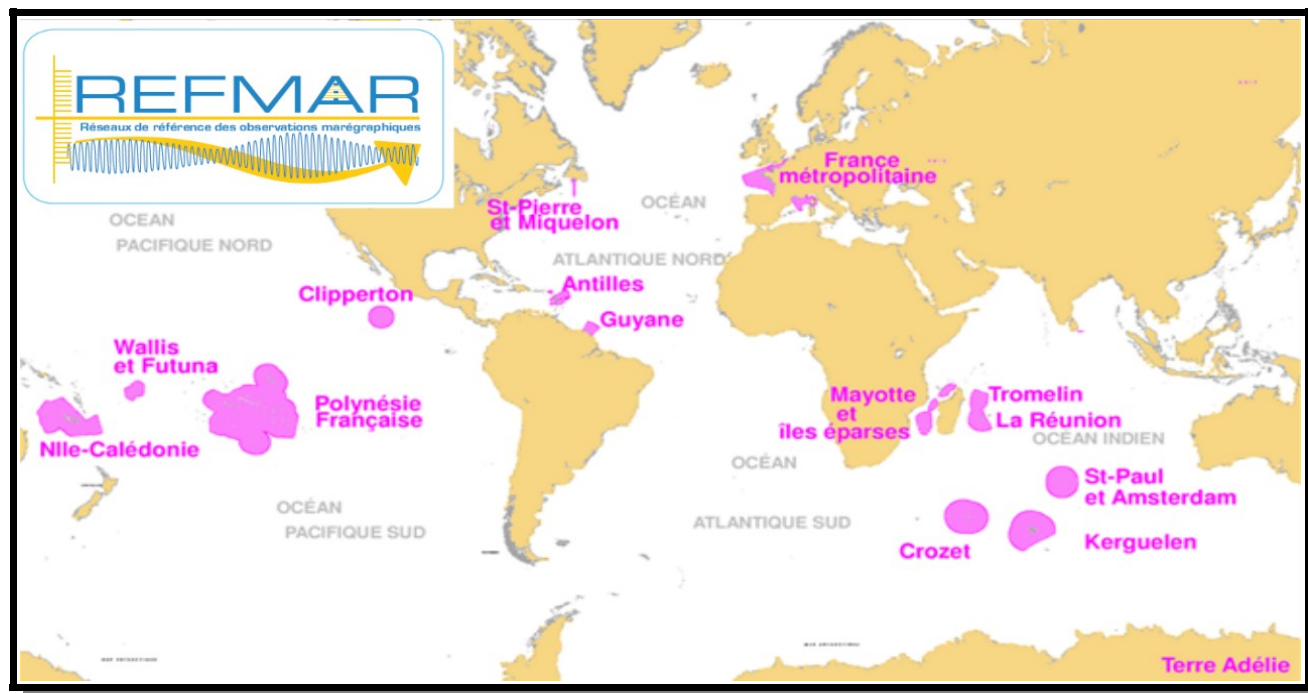
8.1. GEBCO/IBC's activities

NTR.

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.

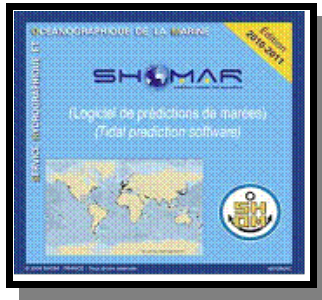
These missions are carried out under the REFMAR programme. Real time and processed tide gauge measurements are now accessible on the web <http://refmar.shom.fr> in all areas around the world under French jurisdiction as shown hereunder:



Following up on recent tsunami in the area, work is in progress in New Caledonia, Wallis and Futuna and French Polynesia to enhance SHOM's permanent tide gauges performances by enabling real-time data transmission, and to increase the network coverage in appropriate locations.

In French Polynesia, SHOM is involved in the development of the tsunami alert system, under the leadership of the CEA and the University of French Polynesia, and with the participation of other partners such as CNES, *Météo-France* and BRGM.

Five additional tide gauges have been installed in Vairao (PF), Léava (W&F), Hienghène, Ouinné and Lifou (NC) since the last conference.



SHOM released a new edition of the tidal prediction software SHOMAR (for 150 metropolitan France harbours and more than 1 000 overseas and foreign harbours). SHOM also provides real time services for sea state, sea levels, sea surface currents, associated forecasts and prediction on www.myocean.eu.org.

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

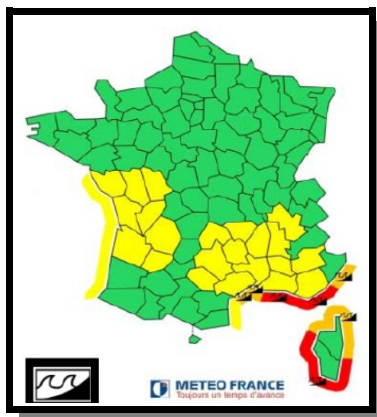
- **Tsunami :**

SHOM contributes to the development of the tsunami warning system for the Pacific ocean. The importance of the expansion of the real-time SHOM tide gauge network named RONIM is recognised as a key component. SHOM currently acts as the French national coordinator of sea level measurements, due to its national responsibility to conduct surveys, to maintain RONIM and to make and distribute the official tidal predictions. This network is recognized as an important tool for coastal operational oceanography, risk assessment, studies on the evolution of the mean sea level, etc.

France may have Navy ships in the SWPHC 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 disaster is Cdr Bertrand Menanteau. His division can be reached 24/7 by fax +33 298 221 665 or email coord.navarea2@shom.fr

- **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 tide predictions, expertise in coastal hydrodynamics and real time tide gauge observations as well as information relative to extreme sea levels and bathymetry. *Météo-France*' 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.

- **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

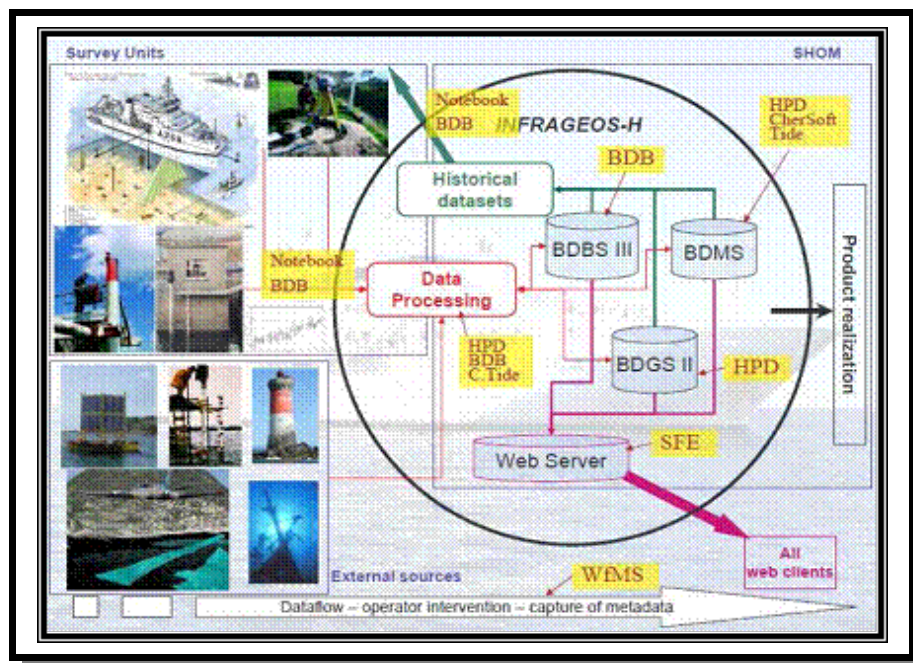
NTR.

9.7. MSDI Progress

To fulfil its responsibilities, SHOM currently operates an assortment of heterogeneous systems to stock, manage and exploit collected hydrographic data (navigational aid, soundings, tidal components...). The INFRAGEOS-H® project aims at procuring an interoperable database management system, providing better access to optimised geo-referenced databases and improving information processing.

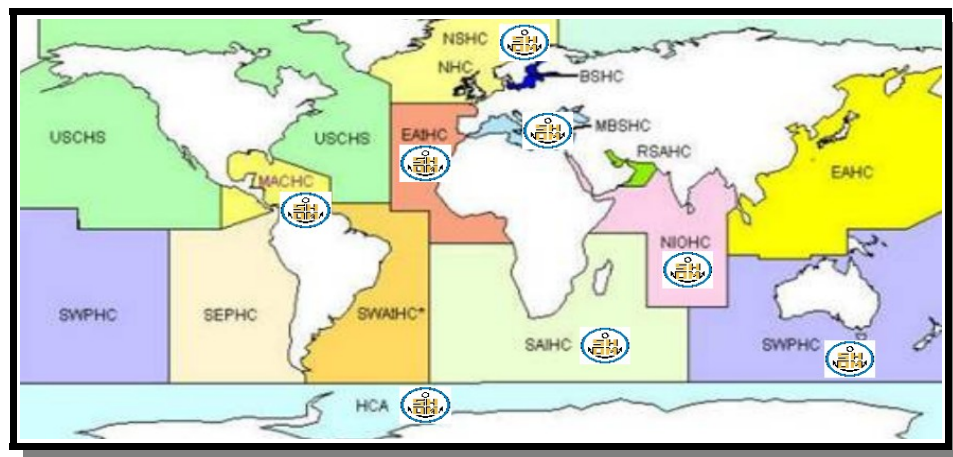
This next-generation set of tools will allow SHOM to tackle the ever-changing information and product requirements, such as new 3D developments. It also enables SHOM to comply with international normalization standards and data dissemination policies such as the INSPIRE European directive or the regulation set by the IHO. INFRAGEOS-H® paves the way to an all-inclusive system. The results achieved with the hydrographic component will be capitalized and enhanced.

The Geospatial Infrastructure covering all themes is as shown on the following diagram:



9.8. International

Because of its overseas territories and primary charting responsibilities, France, represented by SHOM, is a full member or an observer in 8 commissions amongst the 15 organized by the IHO.



The detail of SHOM's involvement in 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
EAHC		✓	Eastern Atlantic Hydrographic Commission
EUWG	✓	✓	ENC Updating Working Group
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)
IRCC		✓	Mr. Gilles Bessero, former SHOM director general, is chairman until the next IH Conference
LAWG		✓	Legal Advisory Working
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
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

Name	Chair / Vice chair	Member	Observations
WEND		✓	Wold-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

More than ever, HOs are at the core of largely diversified missions. Hydrographic data, information and products do not only provide navigation safety but also contribute to environmental projects, tsunami warning systems, disaster relief and coastal management, to name but a few. Hydrography has proven itself essential to the empowerment of coastal States. Therefore SHOM, side by side with the IHO, continuously thrives to reinforce international cooperation for the security of mariners and the capacity building of hydrographic services world wide.