

France REPORT

TO THE 8th CONFERENCE OF THE
EASTERN ATLANTIC HYDROGRAPHIC COMMISSION (EAtHC)

(28 - 29 October 2004 in Brest , France)

www.shom.fr

1. Nautical publications issued since last conference

Since last conference , the following charts have been produced by France in the EAtHC area.

7429 (INT 1929)	12 500	Puerto de Santa Cruz de Tenerife
7427 (INT 1846)	25 000 20 000	La Gironde – De Mortane sur Gironde au bec D’ambès – La Garonne et la Dordogne jusqu’à Bordeaux et Libourne
6989	345 000	Des Héaux de Bréhat à Belle-Ile
7030	20 000	Cours de la Garonne – Du Bec d’Ambès à Bordeaux
7066 (INT 1800)	150 000	De l’Ile Vierge à la Pointe de Penmarc’h - Abords de Brest
7069 (INT 1803)	165 000	De l’Ile d’Yeu à la Pointe de La Coubre
7149	49 000	Du Goulet de Brest à Portsall – Ile d’Ouessant
7211 (INT 1080)	1000000	Golfe de Gascogne – de Brest à Cabo Finisterre
7142	25 000	Belle-Ile
7298 (INT 1878)	200 000	De Puerto de San Cyrian à Cabo Finisterre
7649 (INT 1478)	Div	Portugal – Viara do Castello
7650 (INT 1870)	Div	Portugal – Leixoes et Barra Rio Douro

and the following nautical books:

Sailing directions :

C2.3 de Belle-Ile à la frontière espagnole

P1 France Bretagne sud : de la Pointe de Penmarc’h à la Vilaine

P3 France Pointe de Bretagne des Heaux de Bréhat à la Pointe de Penmarc’h

P5 France (côte Atlantique) : de la Vilaine à la frontière espagnole

C4 Afrique (côte ouest) de Ras Spartel à Cape Palmas

Lists of Lights :

CA France côtes Nord et Ouest

CB Atlantique : de l’Espagne à l’Afrique du Sud

Radiosignals :

91.1 Radionavigation : volume 1 (systèmes par satellites et à infrastructure terrestre)

91.2 Radionavigation : volume 1 (Radiogoniométrie, radiophares, racons et ramarks)

92.1 Radiocommunications maritimes - Europe

96.1 Stations radiométéorologiques – Europe – Afrique - Asie

92.4 Radiocommunications maritimes – le SMDSM

- 93.2 Radiocommunications pour la surveillance du trafic et le pilotage – Europe Occidentale et Méditerranée
- 940 GPS et navigation maritime
- 99 Répertoire des radiosignaux : petit cabotage, pêche, plaisance

Miscellaneous :

- 95 Météorologie maritime

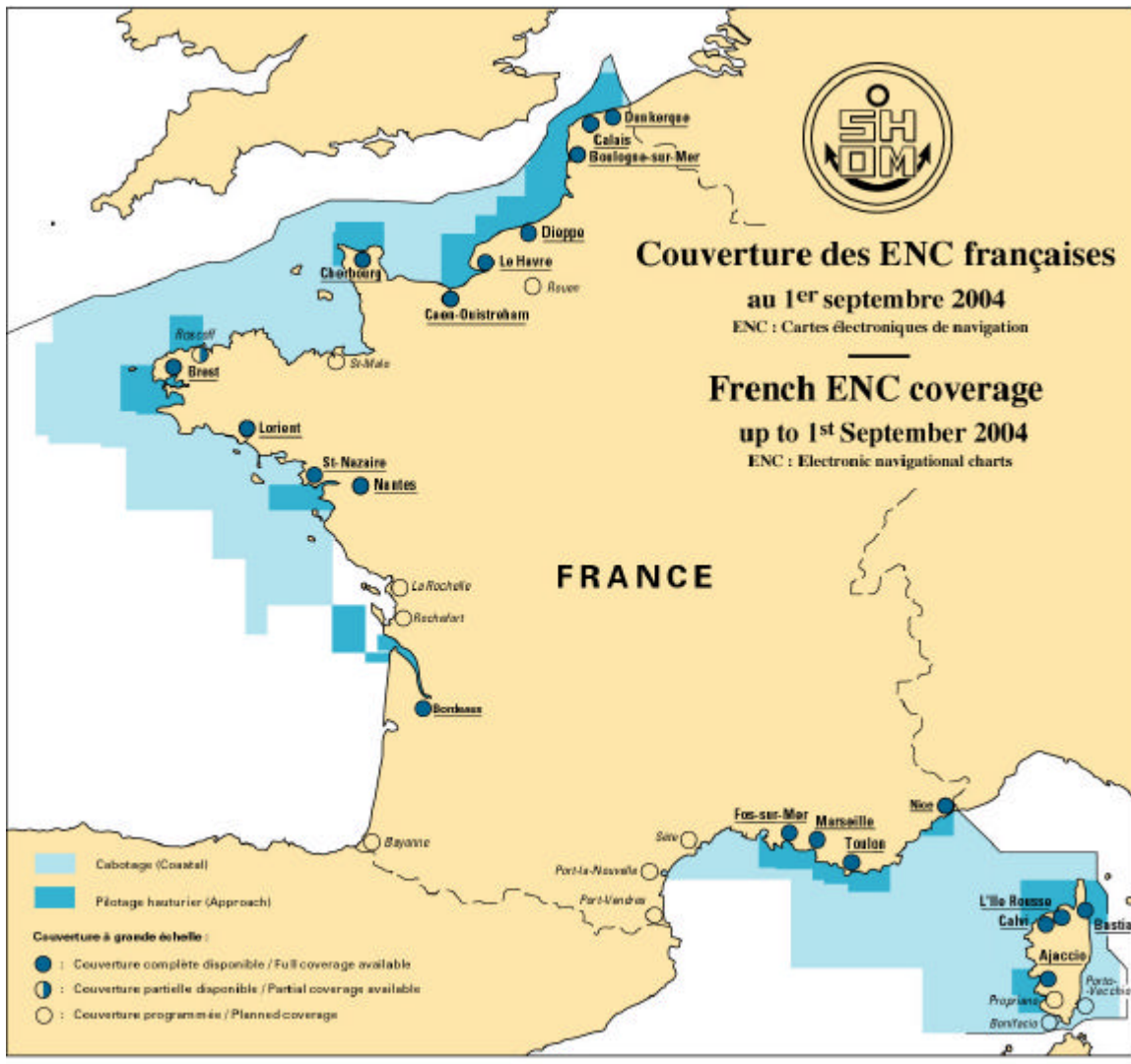
2. Electronic charts

France (in line with the WEND task group) considers that the small scale ENC schemes should be established by taking advantage of the existing INT charts schemes. The limits can easily be put in line with the producers as well as with the INT charting, which make things easier.

As an example France has proposed to EAthC chairman a scheme for small scale ENCs covering the areas of EAthC where they produce paper charts: this scheme, shown in annex, could be considered for small scale ENC production within EAthC.

Furthermore the way the limits have been defined are in accordance with the “additional” WEND principles (now included in these principles).

All French ENCs are available via PRIMAR’s distributors network.



3. ISO 9001 quality certification of SHOM activities

On March 25, 2004 the French Hydrographic Office (SHOM) was recommended for the certification ISO 9001 version 2000 by COFRAC.

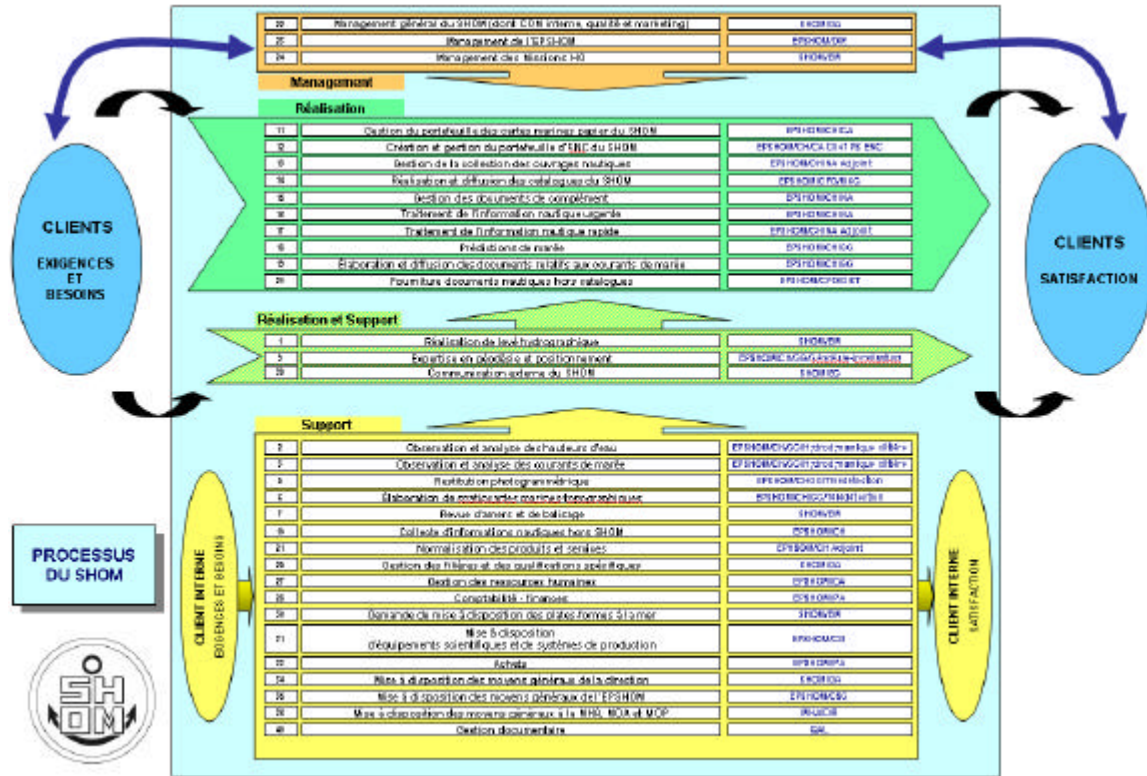
The field of certification concerns all the activities of SHOM relative to the safety of the navigation, as listed in international conventions signed by France, notably that on the protection of the life at sea (SOLAS).

It is an important milestone for SHOM which made a complete upgrade of its quality management system. The multiplicity of the activities and the range of their technical field, from the collection of the nautical information to its distribution, including design and development, led SHOM to define a particularly great number of processes (34).

The safety of navigation does not suffer the weak links, and SHOM developed since its creation a culture of rigour and traceability: this pre-existent culture helped for preparing the certification very fast considering the complexity of the domain.

With an organization now qualified by an independent body, SHOM will be more effective in face with various stakes with which it will be confronted, particularly in the field of reliable electronic navigation.

The cartography of the processes is illustrated below:



4. Litto3D project

SHOM and the French National Institute for Geography (IGN) are associated in a project called Litto 3D, and aiming at delivering a seamless, modern, precise topographic and bathymetric model (including tides) on the French coastal areas (grosso modo till a depth of 10m or a distance of 10 km seaward, till a height of 10m or a distance of 10km inland).

This project has been created in order to meet the needs of more than hundred applications of coastal management, protection and exploitation ... recorded during a preliminary study conducted among the actors of the littoral area and the users of geo-referenced data. It is a core for integrated coastal zone management projects. Laser bathymetry and topography, MBES, RTK, ortho-photos, permanent digital tide gauges, ... will allow to reach submetric accuracy.

5. Coastchart project

A powerpoint on this ESA project will be presented

6. SPWG matters

The Conference circular letter 5 of 29 June 2004 has disseminated the text of the revised convention of the IHO as it results from the work of the Strategic Planning Working Group. Three points appear to France still to be better clarified and these are:

6.1 Council composition

The proposed amendments to the Convention state that the Council is composed as follows:

“One-fourth, but not less than thirty, Member States shall take seats in the Council, the first two-thirds of whom shall take their seats on a regional basis and the remaining one-third on the basis of hydrographic interests, such as the tonnage of their fleets”¹

In this text, the tonnage of the fleets is given as an example to illustrate “the hydrographic interests”. These interests are clearly given by the mission and the objectives of the IHO as they are laid down in:

- the preamble of the convention: *the mission of the IHO is to support States in their provision of adequate and timely hydrographic data, products and services and ensure their widest possible use ;*
- the article II of the convention : *It shall be the object of the Organisation :*
 - a) *to promote the use of hydrography for the safety of navigation and all other purposes and to raise global awareness of the importance of hydrography ;*
 - b) *to improve global coverage, availability, quality and access to hydrographic data, information, products and services ;*
 - c) *to improve global hydrographic capability, capacity, science and techniques ;*
 - d) *to establish and support the development of international standards for the quality and formats of hydrographic data, information, products, services and techniques and to achieve the greatest possible uniformity in the use of these standards ;*
 - e) *to give authoritative and timely guidance on all hydrographic matters to States and international organisations ;*
 - f) *to facilitate coordination and enhance cooperation of hydrographic activities among Member States¹*

The criterion on tonnage does not reflect correctly the part of the ambitions of the IHO which are not covered by the sole regional representation. This is the more important as the proposed amendments explicit the role of the IHO beyond safety of navigation. That is the reason why considerable discussions took place during the 4th and 5th meeting of the SPWG, without reaching to a consensus. The following criteria were compared: tonnage of the fleets, surface of EEZ and combined tonnage and surface of EEZ, but some other possibilities have just been evoked like a reference to the number of original charts published by the Member States, the surfaces of the areas of original charting responsibility, or an Assembly vote for the final arbitration.

The formulation given in the article 16 of the General Regulations is only considered as aiming at showing the feasibility of the Organisation to work under the revised convention when it will be adopted, but that this article 16 has still to be improved in the light of the real mission and objectives of the IHO.

The present wording of the amendments to the convention intentionally gives enough flexibility to make the adjustments to the functioning modes of the Organisation in order to avoid the present situation where several amendments adopted by the Conference have not been implemented. It is therefore probably not necessary to try to reach a consensus during the 3^d EIHC, but it is deemed essential to

¹ In italic, extract of the revised Convention

analyse thoroughly the best way to reflect the hydrographic interests of the Member States which are mentioned in the amended convention for the composition of the council.

It seems therefore necessary to establish a working group under SPWG, tasked to study the best way to reflect in the composition of the Council the hydrographic interests mentioned in the revised Convention, and to present its conclusions to the 17th IHC.

6.2 Majority required for adoption of standards

The two-thirds majority is a rule in many standardization organizations, e.g. ISO and IEC. As the draft amendments to the IHO convention state that «except as otherwise provided in this convention, decisions shall be taken by a simple majority...», it is highly desirable to keep the possibility of applying normal rules without having to modify the Convention, and article 9 g) could easily read as follows:

- « (g) The assembly may decide that the technical decisions of a subsidiary organ concerning standards and/or technical resolutions shall be taken by a two-thirds majority of members present and voting. »

The spirit of this proposal is to keep the two-thirds majority possibility at the technical level, where it is important to avoid too «exotic » proposals, but to use the simple majority once the technicalities have been sorted out, so that the overall management of the Organization is optimized. The use of the two-thirds majority will have to be decided on a case by case basis anyway, so that this proposal is adding flexibility to the convention and requires no commitment from the Member States.

6.3 Qualifications of the secretary general and the directors

It is desirable that the criteria on qualifications required from the secretary general and the directors do not eliminate good candidates without practical experience in hydrography, and that is what the present criteria are doing. But we should not go from an extreme to the other. The IHO has a definitely technical nature as stated in article 2 of the amended convention. It would thus be paradoxical, to say the least, if the direction of the Secretariat had no member with hydrographic experience. As PRO 6 from SPWG requests the approval of the « principles laid down for the eligibility criteria », those principles have to be finalized by the 3d EIHC.

These principles could be completed with «At least the secretary-general or one of the directors shall have practical experience in hydrography»

The procedures for implementing this rule will not be more complex than the existing ones : the candidates will have to be separated on two lists according to their having hydrographic experience or not. As soon as two candidates of the list « without » will have been elected, the remaining candidates of that list will be excluded.

7. Surveying capacities

The French Navy is modernizing its survey fleet. The current fleet comprises three survey ships, BH2 type (*Borda*, *Lapérouse* and *Laplace*), and SHOM uses vessels of opportunity (Navy, Lighthouses & Buoys Division, TAAF²) which take on board survey fleet teams. The renewal will go through modernization and cooperation:

- replacement of two ocean survey ships BH1 *L'Espérance* (laid up in 2000) and BO *D'Entrecasteaux* (decommissioned in 2003), as well as 8 and 9-meter hydrographic survey launches ;
- Modernization of survey ships BH2 *Borda* and BH2 *Laplace* ;
- Cooperation with Ifremer³ concerning NO⁴ *Pourquoi pas?* and BHO⁵ *Beautemps-Beaupré*.

² TAAF : Terres Australes et Antarctiques françaises : southern and antarctic French territories .

³ Ifremer : French institute for research at sea

BHO *Beautemps-Beaupré* was ordered in 2000 to be delivered in December 2002 and was commissioned in February 2003. She has been built by civilian shipyard Alsthom Leroux Naval (ALN) in partnership with Ifremer (civilian Institute) but she is a military ship. Ifremer finances up to 5% of the overall building costs.

Designed in accordance with civil standards, she will change the Navy traditional way of operating ships. Wide automation allows for the suppression of main engine and auxiliaries watches and the reduction of watchstaff to two persons. *Beautemps-Beaupré* will be at sea 300 days a year, and requires two crews of 28 people for her conduct.

She is fitted with single and multibeam echo sounders (SIMRAD-Kongsberg EA 600 and EM 120 for deep waters, EA 400 and EM 1002 for shallow waters), two hull fixed Acoustic Doppler Current Profiler (38 and 150 kHz RDI ADCP), two acoustic positioning systems (Posidonia for positioning equipment under hull and Géonet for towed devices), two subbottom profilers, one with narrow beam from SIMRAD-Kongsberg (SBP120) the other with wide beam developed by SHOM, a gravimeter KSS31... This equipment will be located in an additional “gondola” of 13 metres long specially designed by ALN and welded under the ship’s hull. Manoeuvre gears (transverse thrusters, electric engine, gantries, winches and cranes) are dimensioned in such a way that oceanographic devices can be operated efficiently (buoys, acoustic sources, core samplers, dredgers, magnetometers, towed vehicles ...).

The gondola has proven to be an effective solution to reduce hydrodynamic noises and to optimize the performances of MBES (comparisons with US equipment have been made by American teams). Furthermore the maintenance and replacement of the equipments will be easier than with classical hull mounted antennas.

General characteristics

Displacement	3265 tons
Dimensions	<ul style="list-style-type: none"> • Length: 80.6 metres • Width: 14.9 metres • Draught: 6.9 metres
Power	Four diesel/electric Mitsubishi engines of 1 MW each supplying a 3000 HP (2200 kW) electric propulsive engine.
Propulsion	<ul style="list-style-type: none"> • one lineshaft • one bow thrusters (440 kW) • two stern thrusters (2x220 kW)
Speed	<ul style="list-style-type: none"> • Cruise speed: 12 knots

⁴ NO : Navire Océanographique : oceanographic vessel.

⁵ BHO : Bâtiment Hydrographique et Océanographique : survey vessel.

	<ul style="list-style-type: none"> • Full speed: 14 knots
Crew	2x28 persons alternatively
Scientific Crew	22 persons
Gears	<ul style="list-style-type: none"> • multipurpose rear gantry, • lateral gantry for core sampling with winch and double capstan, • lateral gantry for hydrology and two winches • winch for coring and dredging, • detachable “Sea-Soar” winch, • two additional winches to handle small equipment, • 100-ton crane on the rear, • 12-ton crane on the bow.
Craft	<ul style="list-style-type: none"> • two 8-metre motor hydrographic survey launches, • two dinghies for ten persons each, • a 4-metre launch
Autonomy	45 days

The second ship of the co-operation, **NO *Pourquoi pas?*** was ordered with a view to have the ship delivered in 2005. Ifremer is the main contractor and the French Navy contributes up to 45% of the costs. *NO Pourquoi Pas?* will serve under a civilian status for the Navy 150 days a year, for Ifremer about 180 days a year..

Main characteristics of the *Pourquoi Pas?*:

- around the world ocean survey capacity except for high latitudes,
- Differential Global Positioning System,
- 45 days autonomy,
- Capacity to run a line at low speed and keep a station,
- Specific equipment: core sampler « Calypso » of 30 metre long, « Boxore », sediment echo sounders, high resolution and 3D seismic sounders ...
- Capacity to operate at least one towed sonar and one AUV or equivalent heavy equipment simultaneously.

Accommodation for 40 scientists.

These requirements can explain *Pourquoi Pas?*'s large dimensions for a survey ship : 100 metres long, 20 metres wide and 5000 tons of displacement.

Seven aluminum survey launches of 8m (5t) are fitted each with a shallow water multibeam echo sounder and a 33 & 210 kHz single beam echo sounder, DESO 14 or SIMRAD EA 400, Thales Aquarius GPS, integrated acquisition system, hull-mounted celerity profiler, towed side scan sonar and magnetometer. These launches can accommodate three divers to moor tide gauges or current profilers for instance.

These launches have been built by Bremen-based FASSMER shipyard. A crew member, on his own, can deploy any of these launches from a survey vessel en route (<8 Knots, sea state 4) by operating a single armed davit.

General characteristics

Length	8 m
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Width	2.8 m
Draught	0.5 m
Engine	VOLVO 41 TD – Z double propeller
Speed	> 12 knots
Autonomy	10 hours at 8 knots
Maximum weight	5 tons
Crew	1 maneuver

The multipurpose buoy tender Louis Henin has been built in Sables d’Olonnes for Lighthouses and Buoys Division’s operations in New Caledonia and is able to carry out hydrographic surveys. She is used by SHOM’s Pacific survey unit (MOP) for surveys around New Caledonia.

She is geared with fixed and mobile equipment : transponders 33 & 210 kHz for a DESO 17 or a EA 400, hull-mounted thermosalinometer, two gantries (one for side-mounted echosounder, the second one for hydrology), inertial measurement unit and computer network.

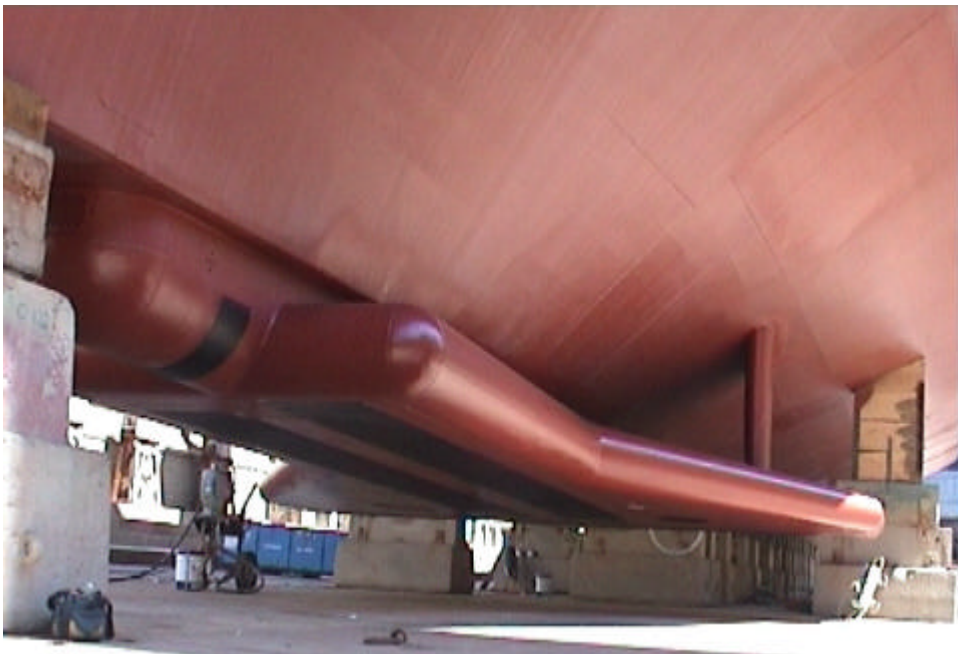
After being commissioned in Summer 2002 the ship reached her Noumea station on the 22nd November 2002.

General characteristics

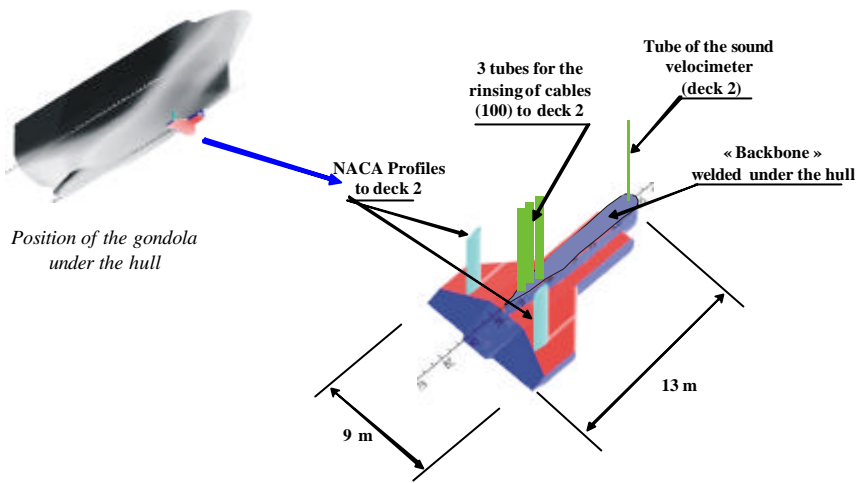
Length	28 m
Width	7.7 m
Draught	2.1 m
Engine	2 x 450 hp
Speed	12 knots
Autonomy	12 days, 12 persons on board
Light tonnage	96 t
Crew	6 persons
Scientific crew	6 persons



BHO Beautemps-Beaupré mooring in Europa Island (Indian Ocean)

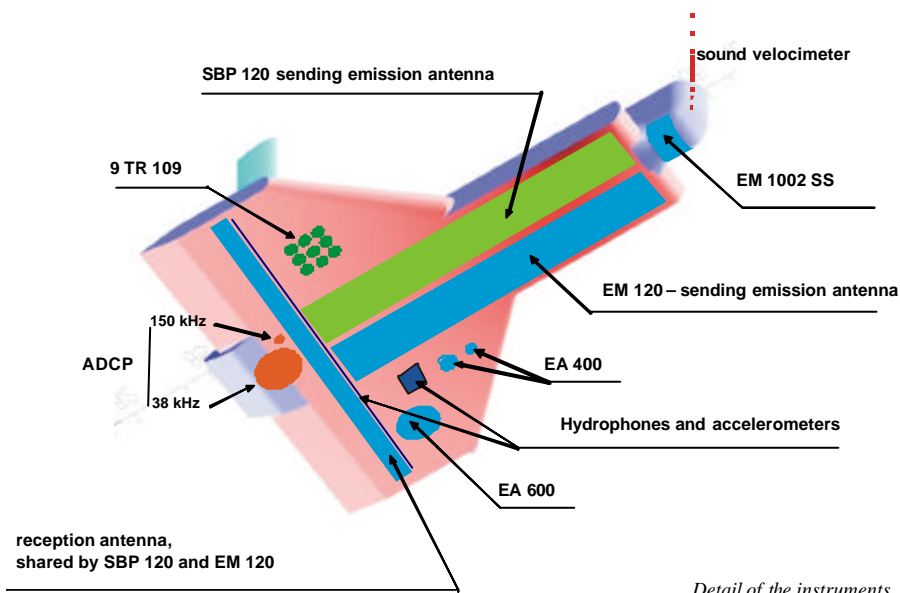


The gondola of BHO Beautemps-Beaupré



Fixing of the gondola and rising of cables in the ship

Fixing of the gondola and rising of cables in the ship.



Detail of the instruments

Detail of the instruments



Deployment of a new survey launch, Beautemps Beaupré being en route



Artist view of a project for the NO Pourquoi pas ?



Louis-Hénin in Sables d'Olonnes

ANNEXE I

Paris, le 10 décembre 2003
N° 510 SHOM/EG/NP
NMR SITRAC : 2137

Vice Amiral Carlos Antonio David da Silva Cardoso
Chairman of EAthC
Instituto Hidrografico
1249-093
LISBOA
Portugal

Objet : Wend Task Group.

Référence(s): Circular letter WEND 2/2002 of 15 September 2003.

P. jointe(s) : One annex.

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Dear Colleague,

The WEND Circular letter 2/2003 conveys the concern expressed by the WEND Task Group set up during the 7th meeting of the WEND Committee on how to foster the availability and to increase the quality of ENC's. This circular letter is sent to the Chairmen of the Regional Hydrographic Commissions in order they consult the members, associate members and observers of their RHCs on these matters.

In particular this CL asks to send comments related to 4 items. French comments are as follows:

1) A prioritized list of shipping routes within your region needing ENC coverage.

France till now has given priority to their ENC's covering their European waters. Next priorities will be shared between completion of the European waters coverage, the overseas (with a general priority to Western Indies and Guyana), the areas of French historic and international cartographic responsibility.

For EAthC, the priorities, outside France mainland, are to the accesses to Dakar and Abidjan.

The main shipping routes have already been analysed when establishing the INT charts scheme.

2) A small-scale ENC schema for your region with assignment of Producer Hydrographic Offices.

France considers that the small scale ENC schemes could be established by taking advantage of the existing INT charts schemes. The limits can easily be put in line with the producers as well as with the INT charting, which make things easier.

As an example France has established a scheme for small scale ENC's covering the areas of Easter Atlantic Ocean where they produce paper charts: this scheme, shown in annex, could be considered for small scale ENC production within EAtHC.

Furthermore the way the limits have been defined are in accordance with the additional WEND principles (cf IHB CL 2002/58), for which the quorum of positive votes has been reached.

3) Recommendations for bi-lateral or multi-lateral assistance projects that would increase ENC production, quality and consistency.

For ensuring ENC quality and consistency, we should take advantage of the considerable experience gained in the existing RENCs which have to deal with such problems.

An other benefit of cooperating with an existing RENC is to use their capacities of accounting and distribution. It is then not necessary to distract personnel from production tasks in order to appoint them on the tasks of accounting and distribution: these tasks are to a large extent automated in the RENC which have develop effective business models for an integrated ENC service.

4) Proposals from your Regional Commission for speeding up ENC production and ensuring ENC quality and consistency.

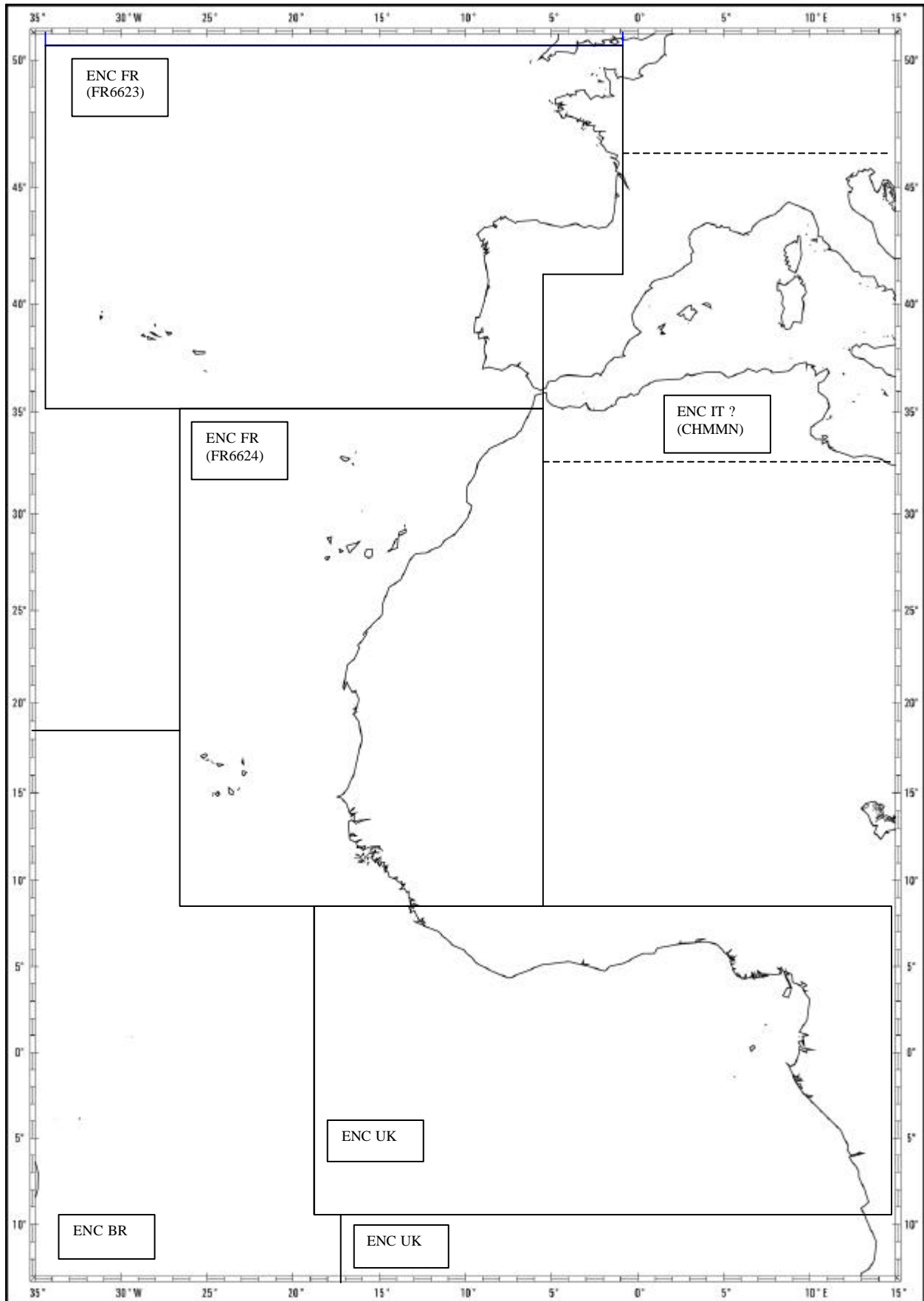
See 3.

Yours sincerely,

**On behalf the Hydrographer
Ingénieur en chef Michel Le Gouic
Head of the bureau for General Affairs**

ANNEXE II

Coupures INT proches de l'échelle 1/3000000 (overview)



Coupures INT proches de l'échelle 1/1000000 (general)

