

THE TRANSFORMATION OF SHOM

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Abstract

Heir to the first national hydrographic office in the world created in 1720 as a support service within the French Navy, the French Naval Hydrographic and Oceanographic Service (SHOM) was turned in 2007 into an autonomous public establishment under the custodianship of the Defence Minister. This article reviews the preparation and the implementation of the transformation and evaluates the results at the completion of the three year mandate of the first Director General of the new SHOM. Although the regulatory framework may vary from country to country, the governance model seems well tuned to the stakes that national hydrographic offices must face.



Résumé

Héritier du premier service hydrographique national du monde, créé en 1720 en tant que service de soutien de la marine française, le Service hydrographique et océanographique de la marine (SHOM) est devenu en 2007 un établissement public autonome sous la tutelle du ministre de la défense. Cet article présente la préparation et la mise en œuvre de la transformation et évalue son bilan au terme du mandat de trois ans du premier directeur général du nouveau SHOM. Bien que le cadre réglementaire varie d'un pays à l'autre, le modèle de gouvernance retenu paraît bien adapté aux enjeux auxquels les services hydrographiques nationaux sont confrontés.



Resumen

Herederero del primer servicio hidrográfico nacional del mundo, creado en 1720 como servicio de apoyo de la Marina Francesa, el Servicio Hidrográfico y Oceanográfico de la Marina Francesa (SHOM) se convirtió en el 2007 en un establecimiento público autónomo bajo la tutela del Ministerio de Defensa. Este artículo presenta la preparación y la implementación de la transformación y evalúa los resultados al término del mandato de tres años del primer director general del nuevo SHOM. Aunque la nueva estructura regulatoria puede variar de un país al otro, el modelo de gestión parece bien adaptado a los intereses a los que deben enfrentarse los servicios hidrográficos nacionales.

¹ This paper represents the views of the author and not the official view of the French Ministry of Defence

1. Background

Officially established in 1720 as “Dépôt des cartes et plans, journaux et mémoires concernant la navigation”, the French Hydrographic Office (SHF) was the first national HO in the world. As long as the merchant and military navies were intertwined and controlled by the State with a specific ministerial department in charge of all naval and maritime issues, there was no discussion that the most appropriate location of the SHF was within the French Navy. The situation evolved with the growth of commercial and leisure maritime activities. After World War II, the development of marine research, offshore exploration and exploitation activities together with the emergence of environmental issues contributed to an even broader spectrum of stakeholders interested in HOs’ outputs. These changes led to raising periodically the question of the most appropriate governance and funding models for the SHF. However considering that the Defence requirements associated with a world-class Navy and its deterrent component were still the major drivers of the SHF activities, no major change of its position was seriously considered until the late 1980s. The “Service hydrographique de la marine” became the “Service hydrographique et océanographique de la marine (SHOM)” in 1971. The name change reflected the wider perimeter of its activities; the new decree defining SHOM duties confirmed its status as a naval service under the sole authority of the Chief of the Naval Staff. Although a number of inspection reports between 1971 and 2003 underlined the increasing inadequacy between the restrictive status of SHOM and its broad national responsibilities, the status quo prevailed. Only a small step was taken in 1983 with the establishment² of an advisory committee bringing together the representatives of the various categories of users concerned by SHOM activities to discuss survey programmes and the adequacy of SHOM products. A new impetus was given in 2003 with the decision of the Interministerial Committee of the Sea, (CIMER) chaired by the Prime Minister, to review the missions and the funding of SHOM in order to meet civil requirements for marine geographic information, especially in the coastal zone, which are not intended to be funded systematically through the Defence budget.

2. Preliminary Studies and the Decision to Transform SHOM

Following the CIMER decision, the Director of SHOM proposed the Defence Minister through the Chief of the Naval Staff to invite a prominent personality to implement the review.

The mandate was notified on the 14 January 2005 by the Defence Minister to Mr André Lebeau, a geophysicist by training, former Director of the French Meteorological Agency (1986-1995), former President of the French Space Agency (1995-1996) and member of the French Maritime Academy. Based on his own considerable experience in managing and transforming public services, the analysis of the relevant documentation and interviews with representatives of the major stakeholders, in April 2005 Mr Lebeau produced a guidance report which recommended to transform SHOM into a national public administrative establishment. This new organisation would have an inter-ministerial governance to consolidate its position within the national environmental framework in order to account in the most efficient manner for the diversity of requirements related with the description of the marine physical environment from the coastal zone to the deep ocean. After considering the guidance report, in June 2005 the Defence Minister requested some additional investigations related with the implementation of the proposed transformation and the comparison with the situation in other countries. The additional elements were presented to the Minister at the end of September 2005. SHOM’s new Director was nominated on the 1st October 2005 and in November was tasked with evaluating the feasibility and conditions of the implementation of the recommendations of Mr Lebeau. This evaluation was conducted by a small project team chaired by the Director and composed of its closest collaborators and addressed three main issues. The first one encompassed the internal impact on the staff, the organization and the functioning procedures and involved a thorough consultation with union representatives. The second, covered the impact on the relations with the other components of the Ministry of Defence (MoD) and was handled through a team composed of SHOM Deputy Director and a Naval Staff representative. The third issue dealt with the relations with SHOM partners outside Defence. As Mr Lebeau’s recommendations meant that SHOM remained a public organ, the transformation would not have any significant impact on international relations and thus the evaluation did not require any specific consideration about this aspect.

² In France, there are basically three types of organizations in charge of national public services:

- the State administration which is under the direct authority of the government,
- the independent administrative authorities which regulate specific activities independently from the government,
- the autonomous public establishments which have a legal personality independent from the State.

Various types of public establishments have been defined over time at the national and local levels. Nowadays there are four main categories at the national level:

- the administrative public establishments which are mainly funded by public funds ,
- the industrial and commercial public establishments which can operate in both public and competitive sectors,
- the scientific and technical public establishments which operate in research and education sectors,
- the cultural public establishments which operate in the cultural sector.

The evaluation report was submitted to the Defence Minister in January 2006 together with a set of six proposals summarized as follows:

(i) The purpose of SHOM is to guarantee on behalf of the State the quality and availability of the information which describes the marine physical environment, both coastal and oceanic, through coordinating its collection, storage and dissemination, in order to meet public requirements, both civilian and military, in a European perspective, as cost effectively as possible. This activity of national public hydrographic and oceanographic service requires inter-ministerial governance under the custodianship of the Defence Minister.

(ii) The activity of national public hydrographic and oceanographic service is funded essentially by public funds, allocated by the State or obtained from the European Union or from local authorities. The organ in charge of this activity is not meant to intervene in the competitive sector.

(iii) The organ in charge of the national public hydrographic and oceanographic service is set up as a national public administrative establishment under the custodianship of the Defence Minister.

(iv) The regulatory framework of the new establishment and the terms governing its relations with the other components of the MoD will secure the advantages and efficiency factors of the existing organization, including the dual use of the national hydrographic and oceanographic infrastructure.

(v) The adequacy between the resources and the objectives will be ensured by a pluriannual contract taking into account the general directives for the public sector, the need to consolidate the contribution to the safety of navigation and to Defence support and the need to develop the support of public maritime and coastal policies in line with the associated specific funding.

(vi) The transformation of SHOM will be handled in order to become effective on 1st January 2007.

After some fine tuning of the impact on the provision of Defence support, the transformation principles were approved and the transformation process was officially initiated by a ministerial decision dated 4 April 2006.

3. Implementation of the Transformation

3.1. Overview

The transformation was run as a project called “SHOM 2007” with the structure put in place for the preliminary studies, including an internal project team chaired by SHOM Director and a MoD working group co-chaired by SHOM Deputy Director and a Naval Staff representative.

The progress was monitored by the Cabinet of the Defence Minister through monthly reports and ad hoc meetings. Four main tasks were run in parallel:

- regulatory framework and organization,
- funding model,
- human resources,
- public relations.

From the outset, the Director made the commitment to minimize the impact on both staff and hydrographic production.

3.2. Regulatory Framework and Organization

The transformation of SHOM required a decree from the Prime Minister which had to be approved by the ministers concerned and reviewed by the State Council. The process proved more arduous than expected although the Defence Cabinet limited the inter-ministerial consultation strictly to the five civilian ministers represented in the Board of Directors: Budget, Industry, Transport, Environment and Overseas Territories. The draft decree was submitted to the State Council in December 2006, together with three other draft decrees adjusting the MoD organization accordingly. The review was finalized in February 2007. It took another two months to get the decree signed and finally it was published in the Official Journal in May 2007³.

The text is arranged in five chapters dealing respectively with missions, organization and functioning, administrative and funding regime, human resources and transitory and miscellaneous provisions.

The chapter on the missions states that SHOM is responsible for the knowledge and description of the marine physical environment in its relations with the atmosphere, sea bottom and coastal zones and for predicting its change overtime. It spells out three main missions:

- SHOM is the French national hydrographic service appointed to collect and check all the information necessary or merely useful to ensure the safety of maritime navigation;
- SHOM supports Defence authorities and units for the preparation and conduct of military operations as well as for the development and use of weapon systems;
- SHOM supports national and local authorities for the implementation of public maritime and coastal policies in its domain of competencies.

SHOM duties include managing the relevant national databases and making its products available to the general public. SHOM is designated as the French representative in the International Hydrographic Organization (IHO).

³ Decree n° 2007-800 of 11 May 2007 published in the Official Journal of 12 May 2007. A copy is inserted in IHO publication M-16 (Ref. 1). In 2008, the decree was incorporated in the regulatory section of the Defence Code (articles R3416-1 to 30).

The most contentious issue in the inter-ministerial consultation proved to be the provision dealing with the obligation made to all public services and establishments to communicate to SHOM all the bathymetric and geophysical data collected under their authority in French maritime areas. It was finally upheld, with the stipulation that the conditions of use be formalized in a formal agreement between the data providers and SHOM. An additional clause specifies that the authorization to conduct marine research activities in maritime areas under French jurisdiction may be subject to the obligation to communicate the collected data to SHOM.

The chapter on the organization and functioning specifies that SHOM is administered by a Board of Directors and led by a Director General. It describes their responsibilities and specifies which duties the Board may delegate to the Director General. In summary, the Board sets out strategic orientations and approves the annual budget and accounts while the Director General is responsible for day-to-day management and is the legal representative of the institution. The term of office of the Board Members as well as of the Director General is three years. Early on, the Defence Cabinet had decided to limit the number of Board Members to a maximum of twenty in order to keep it manageable. That led to the following composition:

- the Chairman and five members representing the Defence Minister,
- five members representing a selection of civilian ministers (Budget, Transport, Environment, Industry and Overseas Territories),
- the Secretary General of the Sea⁴,
- four qualified personalities,
- four representatives of the staff (one representing the military staff and three representing the civilian staff).

Two innovative provisions are included in this chapter. The first one deals with the designation of the Chairman of the Board. Instead of the standard provision which lets the Government select the Chair among the members of the Board on a case by case basis, the Chief of the Naval Staff is designated as Chair in his official capacity, in recognition of the importance of maintaining a close relationship between SHOM and the Navy. The second provision requires the Director General to be a qualified hydrographer according to the competency standards of the IHO. The existence of such standards (Ref. 2) was sufficient to convince the State Council of the legitimacy of this provision linked with SHOM responsibility in providing adequate hydrographic services for the safety of navigation.

This chapter also identifies two specific components within SHOM: the survey units and the training school. It specifies that their organization is defined by a ministerial order.

The three other chapters are based on standard regulations applicable to public establishments. They include the possibility for SHOM to arrange capital loans and to create subsidiaries or acquire shares in private companies for instance to value research outputs or to participate in cooperative endeavours.

Most of the application orders required by the decree had been prepared in parallel and were published in the French Official Journal before the end of July 2007. They covered organizational aspects, such as the organization and functioning of the survey units and the training school, nominations (Board Members, Director General, Deputy Director, Accounting Officer), as well as SHOM human resources and infrastructure. In line with a previous decision of the Defence Minister which had moved SHOM head office from Paris to Brest in December 2005, the location of SHOM registered office was set in Brest (*Fig. 1*). The first meeting of the Board of Directors took place on 23 July 2007, formally establishing the new governance of the institution.



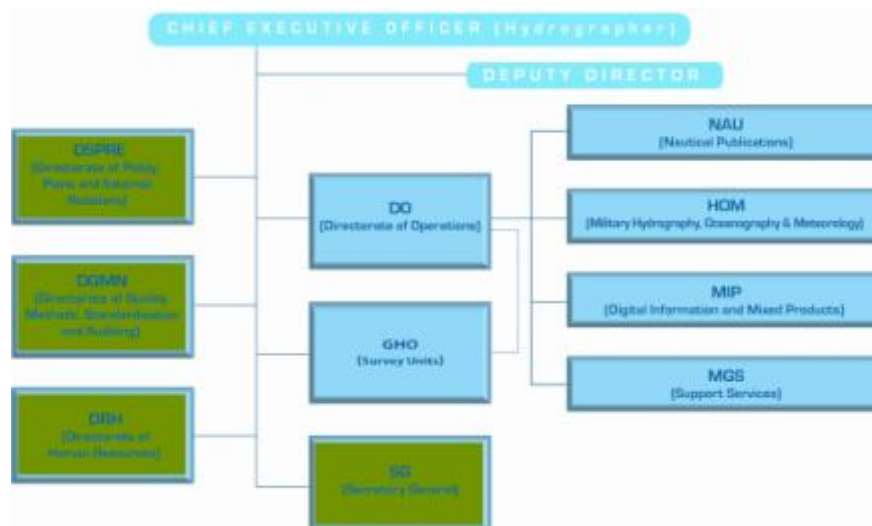
Fig. 1. SHOM facilities in Brest

⁴ The Secretary General of the Sea assists the Prime Minister with coordinating the activities of all the administrations involved in maritime issues. In that function, it was considered that he could represent the ministries which do not have their own representative in SHOM Board of Directors, such as, for example, the Ministry of Foreign Affairs, the Research Ministry and the Ministry of Agriculture and Fisheries.

The new organization of SHOM which had been prepared in 2006 was formally established in June 2007 and was confirmed by the Board of Directors at its first meeting. It distinguishes functional and production organs (Fig. 2).

administration for surveys in New Caledonia (85 days in 2006) while the overall ratio of public support versus Defence support in SHOM activities was of the order of 35/65.

Fig. 2. SHOM organizational chart



The functional organs are:

- the strategy, planning and external relations directorate,
- the quality, methods, standardization and management control directorate,
- the human resources directorate,
- the general secretariat, responsible for administrative, financial and legal matters.

The production organs include the operations directorate and three hydrographic and oceanographic groups in charge of conducting surveys. The operations directorate is organized in three product divisions aligned with the three missions (nautical products, military products, data management and mixed products). A fourth division is in charge of logistic support, including the procurement and maintenance of survey equipment. The survey units are meant to operate from ships belonging to the Navy or to civilian institutions under bilateral conventions with the ship owners.

3.3. Funding Model

When SHOM was a service of the Navy, its resources had to come from or through the Defence budget. It means that non-budgetary resources would transit through the Treasury, including the income from the sales of charts and nautical publications, and in practice it was very difficult to access financing from non-Defence partners. The overall cost of SHOM in 2006 was evaluated at 68 M€ covered by 45 M€ of aggregated resources from the Defence budget, 3 M€ of sales of products and services and 20 M€ of in-kind support (including ship time for surveys, 90% of which funded by the Navy).

The contribution from the civilian sectors was basically limited to the provision of ship time through the maritime

Although the objective of the transformation was to adapt both the governance and the funding model of SHOM to its wide-ranging responsibilities, it was acknowledged that securing access to new sources of funds would take time and efforts, the more so in the general context of reducing public expenditures. The transition budget for the remaining part of the year 2007 and the first full-year budget of 2008 were established in continuity with the previous situation in which the main part of the resources came from the Defence budget. In parallel the establishment of a pluriannual contract setting the goals and the associated means which had been started in 2006 was continued under the supervision of the Board of Directors and became a standing item on its agenda. It was relatively easy to agree on ambitious high level goals assigned to SHOM which were consolidated with the adoption by the Board of SHOM strategic vision at the end of 2008 (Ref. 3) but it proved much more difficult to obtain appropriate funding commitments from the relevant customers. The associated funding model identified four main sources of funding:

- the public service subsidy to be supported by the Ministry of Defence as custodian of SHOM,
- the revenue from the sales of products and services,
- the contractual financing of specific Defence activities,
- the contractual financing of non-Defence activities.

The study of non-Defence financing was centred on two main projects: the Litto3D project related to the provision in partnership with the French National Geographic Institute of a high resolution land-sea digital terrain elevation model to support integrated coastal management (Ref. 4) and the national application of the European marine strategy framework directive (Ref. 5) dealing in a first stage with the assessment of French marine waters and the determination of “good environmental status”.

Reaching a consensus on the contribution of the various partners was a lengthy process and both the 2009 and 2010 budgets were elaborated and approved on a case by case basis. Finally the Board agreed in May 2010 on SHOM first contract of objectives and performance covering the period 2010-2012, which was then signed by the Defence Minister on 21 July 2010. *Table 1* summarizes the provisional results for this period. They are based on a constant annual subsidy, a reasonable growth of sales taking into account the increasing demand for digital products and a significant increase of non-Defence contractual financing which had already reached 2 M€ in 2009. These figures do not include in-kind support related to the provision of ship time which is to remain at an average level of 920 days/year with 830 days provided by the Navy and 90 days provided by the Government of New Caledonia. Additionally the contract calls for SHOM to investigate new sources of revenues through the provision of expertise and services to the private sector, as long as they are in compliance with European and national regulations on competition and the use of public data. The objective was that sales and contractual financing amount to 20-30% in 2015.

3.4. Human Resources

The transformation of SHOM did not have any significant impact on staff regulations. The new public establishment continues to employ a large majority of military personnel and civil servants and is submitted to the same limitations than the former Navy service as far as contracting its own staff from the open job market is concerned.

This is allowed only for non-permanent posts or for posts requiring specific qualifications which are not available in the military or civil services. However, the establishment can now recruit directly within the employment cap approved by the Board and does not have to process all recruitment through the MoD.

It was noted early in the procedure that the transformation would require internalizing a number of functions which previously were mutualised across the MoD. They include human resource management, accounting functions and legal advice. Also taking into account the reinforcement of the marketing function, the Navy agreed to endow SHOM with seven additional posts. Altogether the employment cap was set at 525 staff for 2008. As a token contribution to the general downsizing of public employers, it was reduced to 523 in 2009 and to 521 in 2010. In principle this number should remain stable until 2012 with the possibility to recruit up to 30 additional staff on non-permanent posts covered by contractual financing. It is worth noting that salaries and related expenditures represent about 60% of SHOM annual budget.

3.5. Public Relations

A communication plan was initiated in May 2006 and revised regularly. It was coordinated with the MoD information and communication directorate, and the Navy information and public relation service.

(M€)	2010	2011	2012
Income			
<i>Public service subsidy</i>	42,2	42,2	42,2
<i>Sales of products and services</i>	4,0	4,1	4,3
<i>Contractual Defence financing</i>	5,5	4,9	4,3
<i>Non-Defence contractual financing</i>	3,9	11,7	9,7
<i>Interest and financial products</i>	0,2	0,2	0,3
Total income	55,8	63,1	60,8
Expenses			
<i>National hydrography</i>	6,9	6,9	6,9
<i>Defence support</i>	11,2	10,7	10,1
<i>Public policy support</i>	5,4	11,9	10,6
<i>Common activities and logistics</i>	33,5	33,5	33,0
Total expenses	57,0	63,0	60,6
Profit (Loss)	(1,2)	0,1	0,2

Table 1. SHOM provisional consolidated balance sheet 2010-2012

The priority was to keep the staff fully informed on the rationale of the transformation process, its consequences and its progress. The relevant documentation was posted on SHOM intranet and an information booklet was distributed to each staff in June 2006. Formal and informal internal meetings were held regularly at various hierarchical levels. An interactive forum was set up on SHOM intranet to handle questions and comments from the staff on a continuous basis.

The main MoD authorities were kept informed personally by the Director and an information flyer was distributed to all Defence partners. Three conferences were given to the Naval Staff in December 2006, to a training session for commanding officers in January 2007 and to the 2007 edition of the “Defence Hydro-Metoc Days” in June 2007. An inset on SHOM transformation was inserted in the MoD brochure on the 2007 budget.

On the occasion of the first World Hydrography Day on 21 June 2006, two press conferences were organized simultaneously in Brest and Paris to present the objectives of the transformation of SHOM in the context of the role of hydrography and the contribution of France to the objectives of the IHO. This was followed by sending an information flyer to more than 350 French stakeholders. Also in February 2007, a conference was given by SHOM Director at the French Maritime Academy (Ref. 6).

The information of international partners was addressed through the national reports presented at the meetings of Regional Hydrographic Commissions and through SHOM annual reports. A number of National Hydrographers were also present at the celebration of the second World Hydrography Day on 21 June 2007 in Paris where the new statute of SHOM was presented.

The transformation of SHOM was also an item in the 2006 and 2007 editions of the annual letter of information distributed to the general public and accessible on SHOM website (Ref. 7 & 8). A new information package including a video and a flyer in both French and English was made available in June 2007.

The final event of the plan was a communication on SHOM transformation at the weekly MoD press conference on 27 September 2007 on the occasion of the World Maritime Day dedicated to “current environmental challenges”.

In order to develop and consolidate long term support from SHOM’s many stakeholders, it was recognized that a substantive effort was required to strengthen lobbying and public relation capabilities in line with the development of new services and products along five main axes:

- the provision of an extended range of digital products and services,

- SHOM’s involvement in the integrated management of coastal areas,
- the applications of numerical modelling of the ocean,
- the role of in situ observation network of the marine environment,
- SHOM’s contribution to early warning networks.

4. Assessment

At the end of the first three years’ cycle of SHOM in its new statute which coincides with the adoption of SHOM first contract of objectives and performance and the handover to its second Director General, it is a good time to assess the benefits and drawbacks, if any, of the transformation. So far, only benefits have been identified.

The new organization and the new human resource management and accounting procedures associated with the new statute were implemented without any significant discontinuity in SHOM functioning. In order to take further advantage of the momentum of change, the overall process-based management system was streamlined in-depth. The ISO9001:2000 certification which had been finalized in 2006 was confirmed with the new system in March 2008. Some of the gains in efficiency could have been obtained in the former statute. However the obvious progress in the control of and visibility on human resources and financing is a direct consequence of the new statute.

Thanks to the constant dedication of SHOM staff, the transformation was completed without any disruption of the services provided by SHOM to its traditional customers: the production of chart and nautical publications as well as the provision of Defence support were maintained at a high level in both quality and quantity, in the demanding context of the transition to digital products.

In the meantime, the results obtained so far indicate that the progress in developing and promoting new services in support of marine and coastal public policies is in line with the ambition of the transformation. This is illustrated by the following examples.

After the experimentations conducted from 2005 to 2007, the new statute allowed SHOM to launch, in partnership with IGN, the production phase of the Litto3D® project already mentioned. The first two major contracts were signed in 2009, one to survey French territories in the Indian Ocean (Reunion, Mayotte and Eparses islands), with financing from the Ministry of Environment, the French marine protected areas Agency and the local authorities, and the other to survey the littoral area of Languedoc-Roussillon along the Mediterranean coast, with financing from the local authorities.

Additionally, an agreement was signed with IGN in 2008 to release the first edition of the SCANLittoral® cells for metropolitan France and overseas. SCANLittoral® is the digital seamless raster series of charts depicting seamless nautical and terrestrial information for the entire coasts (Fig. 3). This product is not only expected by national security services but is also awaited by many GIS operators, as confirmed by the increasing number of digital cartography requests for non-navigational purposes.



Fig. 3. Visualisation of SCANLittoral® on the national Geoportail GIS portal

At European level, SHOM was able, as public establishment, to take part in two projects. The Geo-Seas project that was launched in 2009 aims at building and deploying a unified marine geoscientific data infrastructure for the federation and sharing of marine geological and geophysical data from national organizations across Europe (Ref. 9). The second project, also launched in 2009, deals with the development of a pilot hydrography portal as one of the preparatory actions of the future European marine observation and data network (EMODNET); it aims at facilitating access to bathymetric data through the production and dissemination of digital terrain models (Ref. 10).

On the international scene, the real-time SHOM tide gauge network (RONIM) was recognised as a key component for the French contribution to regional tsunami warning systems developed around the world under the aegis of the Intergovernmental Oceanographic Commission (IOC) (Ref. 11). This role was materialised in 2009 with the launch of the CRATANEM project, which aims at setting up the French contribution to the IOC tsunami early warning and mitigation system in the North-eastern Atlantic, the Mediterranean and connected seas (NEAMTWS). As a public establishment, SHOM is a full-fledged partner of the project under a contract co-sponsored by the Ministry of Environment and the Ministry of Interior.

A different area where the change of statute was a key factor is the implementation of the hydrographic survey component of the Western Indian Ocean Marine Highway Development and Coastal and Marine Contamination Prevention Project sponsored by the Global Environment Facility (GEF) in partnership with the International Maritime Organization, the World Bank and the European Union (Ref. 12). As public establishment SHOM was able to reach an agreement with the World Bank on optimum conditions for the completion of the survey. The survey was carried out in the first semester of 2010 (Fig. 4).

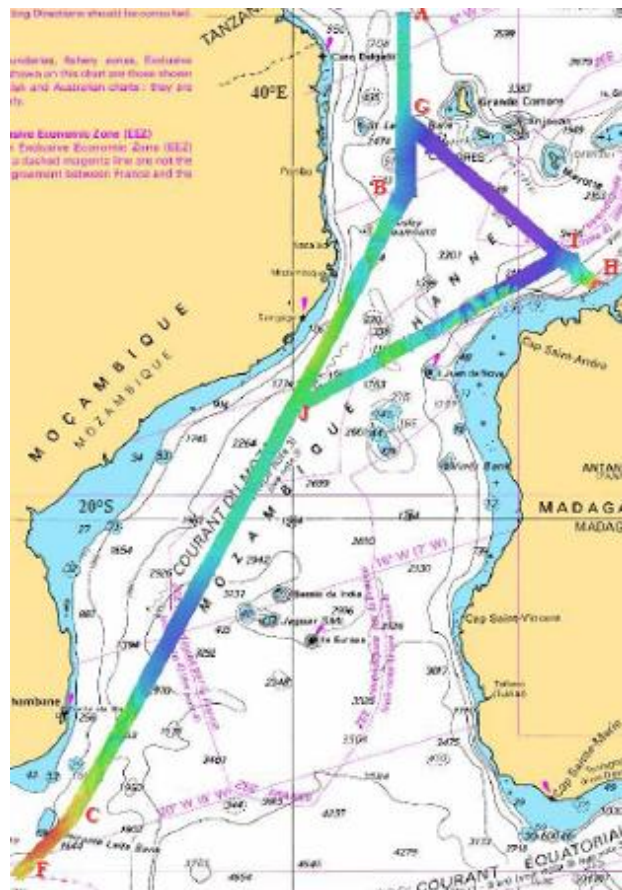


Fig. 4. SHOM Survey of the Western Indian Ocean Marine Highway

The development of operational coastal oceanography is another important element of the environmental support package to the decision aids on maritime and coastal policies where the new statute was instrumental in consolidating SHOM contribution. As a public establishment SHOM did consolidate its role of active promoter and partner of initiatives such as the real time demonstrator Previder co-sponsored by the State and the Brittany Region (Ref. 13) and the on-going national Mercator programme embedded in the maritime component of the European GMES⁷ initiative through the MyOcean project (Ref. 14).

⁷ GMES : global monitoring for environment and security.

5. Conclusion

The transformation of SHOM into a public establishment after more than ten years of efforts is clearly a success. In line with SHOM's wide-ranging role, the new statute is characterized by inter-ministerial governance and the capabilities to access to non-Defence financing sources and to partner with all stakeholders. The dual character of many activities conducted by SHOM makes its involvement necessary, and often essential, in numerous sectors which are not limited to safety of navigation and Defence support. For security, sustainable development, integrated coastal zone management, protection of the environment, decisions that are critical for the future and the protection of our maritime heritage must be supported by a recognised, qualified, reliable, cartographic foundation and by high-performance coastal oceanographic models. It was clearly a necessity to significantly improve both the support and the efficient use of SHOM's capacities and services. It ensures that SHOM continues to respond to new challenges and meets the needs of an evolving context in which knowledge-management and the efficient distribution of geospatial and environmental information are becoming the most important outcomes for the development of integrated maritime and coastal policies.

The Transformation of SHOM is a significant step, and surely not the last one, in a long and worthy history of more than 290 years of service to mariners. It is also a significant step in ensuring that SHOM continues to be a major contributor to the International Hydrographic Organization (IHO). The transformation also requires that SHOM develop its "faire savoir" in line with its uncontested "savoir-faire". SHOM's active contribution to the "Grenelle de la mer" forum and to the National Strategy for the Sea and Oceans approved by the French Government in December 2009 (Fig. 5) is a good omen.

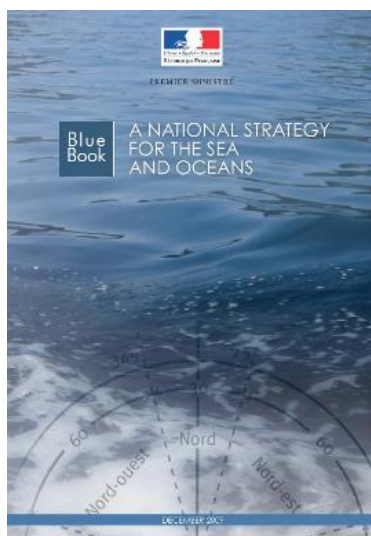


Fig. 5. French Blue Book on the national strategy for the seas and ocean

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Biography of the Author

Gilles Bessero served in SHOM as military hydrographic officer from 1976 to 1999. After a stint with the French Defence Procurement Directorate (DGA) from 1999 to 2005, he returned to SHOM as director on 1st October 2005 and implemented the transformation process through which SHOM became a public establishment. He served as the first Director General of the new establishment from June 2007 to June 2010. At the end of his mandate, he was appointed to the inspectorate of DGA as inspector in charge of the naval sector. Member of the French Maritime Academy, he is also chair of the Inter-Regional Coordination Committee of the IHO.

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