

Subject : Hydrographic Offices way on EMODnet

Foreword :

This paper is aimed to present the state of the EMODnet project, the European Commission's policy for this project, the principles of the Hydrographic Offices policy and the issues which arise and should be addressed, in order to be able to implement the HO's policy.

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1 The state of EMODnet

1.1 The need for marine knowledge

The European Commission (EC) issued in 2007 a communication on an Integrated Maritime Policy (IMP) for the European Union (EU)¹. This policy was endorsed by the Council and the Parliament. In 2012, this endorsement was formally renewed by the European ministers in charge of the maritime policies in the "Limassol Declaration"² on a marine and maritime agenda for growth and jobs. They agreed to the following...Item 20: *"work towards the effective development and accessibility of marine knowledge notably by improving ocean observation, marine scientific research and seabed mapping of member States marine waters by 2020"*.

1.2 The preliminary projects

The Sea Data Net phase I project was launched in 2006. It last up to 2011. A web portal has been built. Through this web portal, the Sea Data Net's Common Data Index which gives access to one million (in 2011) oceanographic data sets within a total of 67 data center. Sea Data Net phase II began in 2011. It should last up to 2015. This service contract whose amount is 6 M€ is funded by the 7th Frame work Programme (for

¹ COM (2007) 575, 10 Octobre 2007

² Limassol Declaration, 8 Octobre 2012

European Union research). The consortium gathers 45 partners including IHPT (HO of Portugal) and BSH (HO of Germany) and some subcontractors including SHOM (HO of France).

The Geo Seas project has for geology the same goals as Sea Data Net for oceanography. It is funded by 7th Frame work Programme and its amount is 4.9 M€.

1.3 The EMODnet 1 and 1bis service contract

The European marine observation and data net (EMODnet) aims to give access through a web portal to oceanographic data sets, and regarding bathymetry to a digital terrain model. EMODnet covers six lots of oceanographic data on several themes: bathymetry, geology, physical habitats, chemistry, biology, physics. DG Mare funded a service contract³ for the bathymetry which amounts to 0.975 k€. The consortium gathers companies including Maris and public agencies including the HO of France (SHOM). It has resulted in a digital terrain model, with a 1/4' resolution covering the North Sea, the English Channel, the northern part of the Celtic Sea and the western part of Mediterranean Sea.

DG Mare made soon a second service contract⁴ in order to complete the bathymetry. It extends the area covered by the digital terrain model to the eastern part of the Mediterranean Sea, the gulf of Biscay and the Eastern Atlantic Ocean along the coasts of Spain and Portugal.

1.4 The funding of the Integrated Maritime Policy

A regulation⁵ of the European Parliament and of the Council established a programme to support the further development of an Integrated Maritime Policy. It was gifted of 40 M€. The implementing decision⁶ concerning the adoption of the Integrated Maritime Policy work programme for 2011 and 2012 gave a detailed programme of the operations to be funded by this programme either as Grants (call for proposals) or as Procurements (call for tenders). EMODnet 2 was on the list of the procurements under budget heading 11 09 05; development of cross-sectoral tools (7.59 M€ for 2011 budget and 8.76 M€ for 2012 budget).

1.5 The EMODnet 2 service contract

DG Mare launched a new call for tenders⁷ for 7 lots, the same themes as for EMODnet 1, with one more, human activities. Regarding bathymetry, the consortium led by Maris and including eight HOs won the tender. The service contract⁸ amounts 2 M€. The area covered by the digital terrain model should be extended to the coasts of Norway and Iceland, the Baltic Sea and to the Adriatic Sea and Black Sea. Its resolution should be 1/8'. It should also include on some parts of the coast, higher resolution models, where data are available.

This contract service began in July 2013. It should last for three years, until July 2016. It is in progress.

2 The European Commission's policy

2.1 The "Marine Knowledge 2020" consultation

In August 2012, the EC launched a consultation based on the Green Paper "Marine Knowledge 2020, from seabed mapping to ocean forecasting"⁹. This document is already two and a half years old. However DG Mare cannot have dramatically changed and this paper gives some clues on its policy. EMODnet is clearly its flagship project in marine knowledge. This paper has been already discussed within HOs representatives and with the representative of DG Mare. However three items could be emphasized.

-page 5,

2. This green paper

...and also new opportunities:

³ Service contract 2008/03/S12 531515

⁴ Service contract 2009/03/S12 563144

⁵ Regulation (EU) No 1255/2011, 30 November 2011

⁶ C(2012) 1447, 12 March 2012

⁷ Open call for tenders MARE/2012/10, 22 May 2012

⁸ Service contract MARE/C1/MP/Ares(2013) 533584

⁹ COM (2012) 473, 28 August 2012

(3) the 2014-2020 financial framework gives the opportunity to develop a more sustainable governance structure, moving from being a set of projects towards a continuous process...

-page 11,

5.2. European Marine Observation and Data network (EMODnet)

The new European Maritime and Fisheries Fund aims to provide financial support for EMODnet's move toward **operational capability**....continuous and **sustainable process**...

-page 17

6.2. EU support to assembly and processing of marine data.

...no partnership without major national marine data centres... **move to a grant or a negotiated procedure**...

It seems to open the way towards a sort of partnership.

On the other hand, the issue of *the free availability* of the data is arisen (page 8, 4.2. multiple use of marine data).

The same day as the Green Paper "Marine Knowledge 2020", the Commission published a document on interim evaluation of EMODnet¹⁰. Some paragraphs of this document are of particular relevance to HOs. Inside the executive summary the rationale (page i) explains that "it does make sense for future investors to measure all parameters themselves if somebody has already done it.

It arise the question of *confidence in data*, in their accuracy and of the accountability regarding the consequences of inaccurate data.

In paragraph 4.2 Composition of the thematic groups, item (4) is directly aimed to the HOs. It both opens the door to an *involvement of HOs in a structured manner* and arise the issue of our reluctance to provide detailed data.

It arise also the issue of the resolution of the data we are willing to publish within EMODnet

In paragraph 8.1, one seems to call for a *legal entity* which could be able to deliver products such as specified by Marine Knowledge 2020.

In paragraph 9 "lessons learned", some expectations are set in the MoU with IHO...

2.2 The "innovation in the blue economy" document

The Communication from the Commission on "innovation in the blue economy"¹¹ to the Parliament and the Council is accompanied by a Staff Working Document "Marine Knowledge 2020 roadmap"¹².

It makes a statement (page 4) on the target to developing a multi-resolution map of the entire seabed of European waters by 2020.

Once again, its paper emphasizes the need of a **sustainable process** for improving marine knowledge.

Paragraph 2.1 lists the common principles of EMODnet. Paragraph 2.3.1 describes the roadmap for EMODnet bathymetry and geology.

Paragraph 9 arise the question of the responsible for establishing the priorities when data are collected for many purposes. It also mentions the regional hydrographic commissions inside the panel which should represent the users from both private and public sector.

In paragraph 10, it mentions that the MODEG will be renewed in 2015.

2.3 The European Maritime and Fisheries Fund

The Union budget finances the Common fisheries policy and the Integrated maritime policy through a single fund, the European Maritime and Fisheries Fund (EMFF). A regulation¹³ establishes this Fund. The part of the Fund under direct management amounts to 647 M€. Measures financed under direct management (by the DG Mare) for IMP are described in articles 81 to 83. They should represent 45 % of the above amount. Paragraph 2.2 of article 83 is of special interest for IHO as it seems to allow initiatives to co-finance activities for an EMODnet with Member States and/or international institutions.

¹⁰ Interim evaluation of European Marine Observation and Data network SWD (2012) 250 29 August 2012

¹¹ COM(2014) 254, 13 May 2014

¹² SWD(2014) 149, 8 May 2014

¹³ Regulation (EU) 508/2014, 15 May 2014

83-2 c): initiatives to co-finance, purchase and maintain marine observation systems and technical tools for designing, setting up and running an operational European marine observation and data network system which aims to facilitate the collection, acquisition, assembly, processing, quality control, re-use and distribution of marine data and knowledge, through cooperation between Member States and/or international institutions concerned.

Article 23 of this regulation says that the Commission shall adopt implementing acts laying down an annual work programme. The annual programme 2014¹⁴ finances actions for a total amount of 29.3 M€. Coastal mapping call for tender is described in paragraph 1.3.14 of this programme.

2.4 The EMODnet 3 service contract

DG Mare representatives described their views on EMODnet phase 3 during the meetings with HOs representatives. According to the meeting (with Richard Bates) in Oostende 19 February 2014, the amount for building a digital terrain model should be 15 M€, a call for tender could be published in January 2015. A special meeting on EMODnet took place in Roma 6 October 2014, as a pre-event to EuroOCEAN 2014. All themes on EMODnet were on the scope. Regarding theme on bathymetry DG Mare representative (Richard Bates) draw attention on above mentioned Staff working document and on articles 82 and 83 of regulation establishing EMFF.

2.5 The MODEG

The Maritime Observation and Data Expert group has been established by DG Mare in order to get advice on relevant issues. 21st meeting took place in Oostende 19-20 February 2014. HOs representatives took part to this meeting. IHB representative issued the policy of HOs regarding EMODnet.

From the minutes of the meeting:

“The IHO working group on EU matters has a mandate to provide support to specific EU projects, one of them being EMODnet. The IHO objectives are to avoid duplication and promote synergies and use of best practices through utilisation of the IHO regional components. IHO is committed to supporting EMODnet and offers their members’ expertise in Quality Assurance / Quality Control (QA/QC). IHO will explore future synergies with the EMODnet thematic lots and provide input as part of the preparation of the 3rd EMODnet call for proposal.”

22nd meeting took place in Brussels 1-2 October 2014. Next meeting should be planned in March or April 2015.

3 The Hydrographic Offices policy

3.1 The Ostende statement

During inauguration of EMODnet secretary in Ostende, IHB representatives made a speech¹⁵ on IHO policy towards EMODnet.

During MODEG meeting he made statement explaining the four axis of this policy:

- 1/ The IHO considers the development of Emodnet as the best driver for Marine Knowledge 2020.
- 2/ The IHO is committed to support this programme in the long term
- 3/ The IHO will provide sustainable operational solutions with appropriate accuracy and updating mechanisms through current IHO regional structures and approaches
- 4/ The IHO strongly recommends the use of relevant international standards such as ISO, IHO and Inspire compatible standards within Emodnet

¹⁴ Commission implementing decision 4488, 4 July 2014.

¹⁵ http://www.iho.int/mtg_docs/com_wg/IRCC/EC_IHO/EC-IHO-05/Documents/7%2020140219_Emodnet_Inauguration_rev.pdf

3.2 The Hydrographic Offices policy on the data and on the products

(to write)

Which data do we accept to deliver, at which price with which updates?

3.3 The Hydrographic Offices policy on implementing EMODnet 3

(to write)

Do we consider to establish national digital terrain models (DTM) and to link them or do we prefer to make common DTM, at a regional scale?

3.4 The true needs of European Union, new surveys?

(to write)

Do we think EMODnet specifications are the most appropriate?

Do we want to propose new surveys in order to complete coverage for the need of navigation (maritime routes of European interest)?

4 Strategy

4.1 Waiting a call for tender

In the case EMODnet 3 is just follow-on of EMODnet 2, it would have the same general characteristics. The technical specification of the call for tender would probably not allow the implementation of a sustainable process and would probably not fit with the most efficient process.

Hydrographic Offices could nevertheless organize themselves to respond to such a call for tender and prepare an offer when it is published. It should result in, in the case the HOs consortium win the tender, a Digital Terrain Model (DTM), covering the European waters in competition with those of the Member States DTM. That is not very satisfactory.

The fact is that Hydrographic Offices are mostly responsible for the bathymetric knowledge in the water of the Member States to which they belong. Most of them have to maintain DTMs.

4.2 Interact with DG Mare towards an efficient and sustainable process

Member States and European Commission aim to the best use of European funds, for responding to the needs of European Union and to support the blue growth.

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This means that:

- Duplication of effort is avoided
- DTMs available are of best quality

The mean to obtain this result should be that each Member State, or group of Member States inside a Regional Hydrographic Commission, is responsible for the DTM it elaborates and make available to the users.

One should meet following technical requirements:

- 1/ ensure seamless continuity between the area covered by two Member States
- 2/ ensure updates at a period to be defined
- 3/ establish a portal which
 - 1/ ensure liaison with other themes of EMODnet
 - 2/ ensure common access to the DTM so as it is seen as a single DTM by the users

Money from the EMFF should:

- 1/ compensate the shortfall of income from the loss of the business of Member States DTM
- 2/ finance the expenditures for ensuring continuity between Member States DTM
- 3/ finance the portal
- 4/ finance the updates
- 5/ partially finance the surveys or resurveys

HOs should have additional benefits

- 1/ in sharing know-how to elaborate DTM
- 2/ in coordinating some survey or resurvey plans

The consortium of HOs should have a contract with European Commission, which

- 1/ define which resolution in which areas DTM should have
- 2/ define the deliverables which would allow payments from DG Mare

Several schemes of organization could be imagined to meet these requirements. The most simple could be as follows:

- 1/ The Member States or in some cases, the Member State who chairs of the regional hydrographic commission, should be the members of the consortium.
- 2/ Technical center(s) in one or in several Member State(s) could ensure the technical tasks, especially the continuity between DTMs and the operation of the portal.
- 3/ One Member State could manage the contract and coordinate liaison with DG Mare.
- 4/ The regional hydrographic commissions should coordinate the needs for surveys and resurveys.