

**EU Response to notification 2009-021 - Request to submit relevant information concerning the objectives of the marine expert workshop (Ottawa, Canada, 29 September -2 October 2009) as well as on the progress the 2012 target on representative networks on marine protected areas**

The COP 9 decided to convene an expert workshop to provide scientific and technical guidance on the use and further development of biogeographic classification systems, and guidance on the identification of areas beyond the national jurisdiction which meet the scientific criteria in Annex I to Decision IX/20. In this notification the SCBD invited Parties, Governments and relevant organizations to provide relevant information concerning the objective of the above-mentioned expert workshop as well as on the progress towards the 2012 target on representative networks of marine protected areas (MPAs).

In this regard, the European Union strongly supports the consolidated set of scientific criteria for identifying ecologically or biologically significant marine areas in need of protection, in open ocean waters and deep sea habitats adopted by COP 9, as well as the guidance provided by the consolidated set of scientific criteria for representative networks of marine protected areas, including the initial steps identified.

As stipulated in the Annexes to Decision IX/20, the EU considers that the adopted Criteria and Guidance refer to open ocean waters and deep sea habitats. Such approach, which is accurate from a scientific point of view, may require of adaptation within national jurisdiction as considered appropriate by Parties. Protective measures addressing deep sea habitats in areas beyond national jurisdiction, while respecting the sovereign rights of the coastal state over its continental shelf, need to be coherent, compatible and complementary with the ones applied to deep sea habitats within national jurisdiction in order to raise their effectiveness in both realms.

Considering the current and alarming under-representation of marine and coastal protected areas, the adoption by the CBD of these criteria and guidance must be seen as a pressing and necessary step towards encouraging and informing the global community to establish and effectively manage a comprehensive, ecologically and biogeographically representative global network of national and regional marine protected areas systems, within and beyond areas of national jurisdiction, by 2012.

Development of MPA networks is a complex issue involving ecological, legal, political, social and economic issues. This includes the scientific evaluation of the ecological functions provided by different habitats and species together with the other services they provide to societies in general. However, strong scientific evidence has been recently compiled, that emphasizes particularly the need for urgent action for biodiversity conservation at all levels in selected seabed habitat types and marine areas. Such action has to be taken in accordance with the relevant international law, in particular the United Nations Convention on the Law of the Sea (UNCLOS).

The United Nations Convention on the Law of the Sea sets out the legal framework within which all activities in the oceans and seas must be carried out. The EU emphasizes that the adoption of the scientific criteria is a good example of the role that can be played by the CBD in the provision of scientific knowledge base and support to the work of the General Assembly with regard to Marine Protected Areas beyond national jurisdiction and to contribute to an integrated approach to the conservation and sustainable use of biodiversity in open ocean waters and deep sea habitats, in particular.

As contracting Parties to the UNCLOS, as an international instrument laying down the duty of States to cooperate on conserving the living resources of the high seas, the European Community and its Member States are committed to the conservation of marine ecosystems such as reefs, continental shelf slopes, canyons, seamounts, deep water corals, hydrothermal vents, sponge beds. Therefore the European Union adopted, further to the UNGA resolution 61/105, the Council Regulation No. 734/2008, on the protection of vulnerable marine ecosystems in the high seas from the adverse impacts of bottom fishing gears.

The EU also sees a need for continued action required to address the issue of marine litter and other pollution.

The EU recognizes that when new relevant scientific information as well as experiences and results from the practical application are made available, these criteria and guidance may be subject to a scientific review.

For maintaining and conserving global marine biodiversity through conservation and protection of its components in a biogeographically representative network of ecologically coherent sites, the best available scientific information, the precautionary approach and ecosystem approach shall be applied to help reduce the rate of biodiversity loss. A generally accepted nested system of marine biogeographical realms, provinces and ecoregions should provide good spatial resolutions. Besides this static classification, dynamic information as to the extent of connectivity of distant populations and ecosystems shall also be recognized as essential for the design and management of network of MPA, and such information should be integrated when available. A global classification biogeographical framework allows, *inter alia*, an assessment of which marine habitats, communities/assemblages and taxa/functional groups or guilds may be subject to disproportionate impacts due to human activities. Such a framework can also highlight possible fragmented marine habitats, as well as the relative rarity or limited extent of distribution of associated biota.

Consequently, management issues and ecosystem services aspects should also be considered in appropriate fora, such as regional seas conventions, in co-operation with competent authorities or organizations competent for regulating specific activities such as RFMOs (Regional Fisheries Management Organisations), RFMOs, regional seas conventions or the FAO, for pilot MPAs in deep seas. Furthermore, it has to be noted that MPAs are part of a broader marine biodiversity conservation strategy and that they need to be consistent with other regulatory measures regarding marine biodiversity protection.

In the Annexes to this chapeau, responses of individual Member States and the European Commission are attached.

Annex:

1. Belgium
2. Finland
3. France
4. Poland
5. Spain
6. European Commission

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**THE EUROPEAN COMMISSION SUBMISSION ON RELEVANT INFORMATION CONCERNING THE OBJECTIVES OF THE MARINE EXPERT WORKSHOP (OTTAWA, CANADA 29 SEPTEMBER – 2 OCTOBER 2009) AS WELL AS ON THE PROGRESS THE 2012 TARGET ON REPRESENTATIVE NETWORKS ON MARINE PROTECTED AREAS**

**Relevant information concerning the objectives of the expert workshop to provide scientific and technical guidance on the use and further development of biogeographic classification systems, and guidance on the identification of areas beyond the national jurisdiction which meet the scientific criteria in annex I to decision IX/20**

As regards the objectives of the marine expert workshop the European Commission believes that the workshop could inter alia contribute to clarifying whether there is a scientific need to develop a further refined classification of marine habitats. Habitat classification elements are at present poorly developed for the open ocean and deep sea habitats. Lack of an agreed deep sea habitat classification scheme hampers the establishment of habitat lists. It needs to be explored whether ongoing work to better define deep-sea habitats needs to be expanded and better coordinated. In this regard the European Commission would also draw the attention to some activities and projects whose work might be relevant for the expert workshop.

The Hermes project, which was financed under the 6th EU Research Framework Programme for Research and Technological Development, focused on high seas

ecosystems and its results could be relevant for the expert workshop. For key policy-relevant results from the HERMES Project see [http://www.eu-hermes.net/policy/Key\\_HERMES\\_results\\_May09.pdf](http://www.eu-hermes.net/policy/Key_HERMES_results_May09.pdf).

In that respect we would also like to highlight the work that has been done in the framework of the European Nature Information System (EUNIS) which has developed a marine habitat classification system. EUNIS data are collected and maintained by the European Topic Centre on Biological Diversity for the European Environment Agency and the European Environmental Information Observation Network. More information can be found here.

[http://eunis.eea.europa.eu/habitats-code-browser.jsp?expand=A,A6#level\\_A6](http://eunis.eea.europa.eu/habitats-code-browser.jsp?expand=A,A6#level_A6)

The European Commission proposed a new European Marine Observation and Data Network (EMODNET) in its Green Paper on maritime policy. A pilot EMODNET is being developed through preparatory actions. These projects have started in May 2009 and by the end of 2010 should produce layers for the most significant hydrographic, geological, chemical and biological parameters for complete sea-basins. One preparatory action the EUSeaMap project explicitly addresses the development and assessment of a European broad-scale seabed habitat map. Based on these parameters, a harmonised mapping of marine habitats at a broad scale over complete sea-basins using a unified classification is beginning. More information on EMODNET can be found here

[http://ec.europa.eu/maritimeaffairs/emodnet\\_en.html](http://ec.europa.eu/maritimeaffairs/emodnet_en.html)

Furthermore we believe that the FAO international guidelines on deep sea fishing contain useful information on identification of vulnerable marine ecosystems (see [http://www.fao.org/fileadmin/user\\_upload/newsroom/docs/i0816t.pdf](http://www.fao.org/fileadmin/user_upload/newsroom/docs/i0816t.pdf))

### **Relevant information concerning progress towards the 2012 target on representative networks of marine protected areas**

The EU's Marine Strategy Framework Directive adopted in June 2008 aims to provide a basis for a more effective protection of the marine environment across Europe and to achieve good environmental status of the EU's marine waters by 2020. The Directive explicitly recognised the important contribution of the establishment of marine protected areas under community legislation and under international or regional agreements to the achievement of good environmental status. The Directive also strengthens the position taken by the Community, in the context of the Convention on Biological Diversity, on halting biodiversity loss, ensuring the conservation and sustainable use of marine biodiversity, and on the creation of a global network of marine protected areas by 2012.

Article 21 requests that the European Commission shall submit a report to the European Parliament and to the Council on progress in the establishment of marine protected areas, having regard to existing obligations under applicable Community law and international commitments of the Community and the Member States by 2014.

The whole text of the Directive can be found here

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:164:0019:0040:EN:PDF>

At the core of EU biodiversity policy are the Birds and Habitats Directives, which provide the legal basis for the Natura 2000 network of protected areas. The Member States are working, with the assistance of the European Commission, on the establishment of an EU wide network of Marine Protected Areas as part of the Natura 2000 network under the Habitats Directive. The establishment of such a marine network of conservation areas will significantly contribute to the protection of biodiversity in EU waters by ensuring the long term survival of Europe's most valuable and threatened species and habitats. The need to fully apply the Habitats and Birds Directives to the offshore marine environment of the European Union, especially with regards to the establishment of the Natura 2000 network, represents a key challenge for EU biodiversity policy in the coming years. The establishment of a marine network of conservation areas under Natura 2000 will significantly contribute, not only to the target of halting the loss of biodiversity in the EU, but also to broader marine conservation and sustainable use objectives.

The situation regarding the marine establishment of Natura 2000 is less advanced than for terrestrial areas. This is especially the case for the offshore marine environment. To facilitate progress the Commission published in 2007 a guide on establishing Natura 2000 in the marine environment to assist Member States in the selection of marine Natura 2000 sites by 2008.

Coastal Member States are now working to identify further suitable marine Natura 2000 sites. There have been meetings of a marine expert group to assess the state of play with marine Natura 2000 designations and to specify the assessment process and the implementation of fisheries measures. The Commission has prepared non-binding guidance on introducing measures for marine Natura 2000 sites under the Common Fisheries Policy (CFP), complementing the earlier marine Natura 2000 guidelines.

As part of the designation process for marine Natura 2000 sites, in particular offshore, a first assessment seminar took place on 24 and 25 March 2009 in Galway, Ireland for the Atlantic marine region. The meeting was organised by the Irish authorities and co-ordinated by the European Commission with the support of the European Topic Centre on Biological Diversity, which was responsible for the technical and scientific part of the programme. The participants in this meeting included also the authorities of the Atlantic coastal Member States, conservation NGOs and Regional Advisory Councils representing the fisheries sector. The participants discussed the sufficiency of the list of sites of Community importance hosting natural habitat types and marine species in the Atlantic marine region, which had been proposed by the Member States. Assessments of other marine regions will follow in order to complete the Natura 2000 network. The Baltic Sea is the next marine region expected to be assessed. Seminars for other regions will follow later.

More information on Natura 2000 in the marine environment is available here  
<http://ec.europa.eu/environment/nature/natura2000/marine/>

## **Belgium**

### **Suggestion for site in need of protection**

#### **A General information**



Fig. 1. The carbonate structures at the Lost City Field include these spires stretching 30 meters tall. (Photo courtesy Kelley, University of Washington, IFE, URI-IAO, NOAA)

#### **1. Proposed name of MPA**

#### **Lost City hydrothermal vent field**

#### **2. Status of the location**

The Lost City vent field is located beyond the limits of national jurisdiction of coastal States.

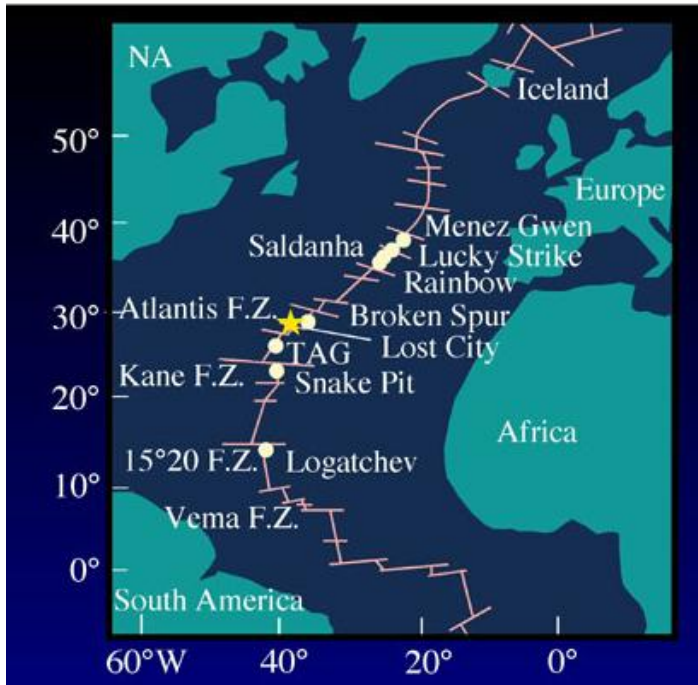


Fig. 2. The Mid-Atlantic Ridge is one of the earth's largest mountain. The dots represent active hydrothermal sites. The Lost City site is indicated with a yellow star. (Photo courtesy

University of Washington)

### 3. Biogeographic region

Atlantic Subregion; North Atlantic Province; Mid-Atlantic Ridge

### 4. Location

The Lost City hydrothermal vent field is located at 30°7' N and 42°07' W, southwest of the Azores at 750–850 m depth in international waters.

### 5. Characteristics of the area

Lost City is a field of hydrothermal vents in the Mid-Atlantic ocean that differs significantly from the black smoker vents found in the late 1970s. The vents were discovered in December 2000 during a National Science Foundation expedition to the Mid-Atlantic. A second expedition mounted in 2003 used DSV *Alvin* to explore the vents. The details of the chemistry and biology of the Lost City hydrothermal field were published in March 2005.

The vents are located on the seafloor mountain Atlantis Massif, where reactions between seawater and upper mantle peridotite produce methane- and hydrogen-rich fluids that are highly alkaline (pH 9 to 11), with temperatures ranging from <40° to 90° C. There is a field of about 30 chimneys made of calcium carbonate 30 to 60 meters tall, with a number of smaller chimneys.

Lost City vents release methane and hydrogen into the surrounding water; they do not produce significant amounts of carbon dioxide, hydrogen sulfide or metals, which are the major outputs of volcanic black smoker vents. The temperature and pH of water surrounding the two types of vent is also significantly different. Isotope data and radiocarbon ages document at least 30,000 years of hydrothermal activity driven by serpentinization reactions at Lost City, making the Lost City older than known black smoker vents by at least two orders of magnitude. Correspondingly Lost City and black smoker vents support vastly different lifeforms.

The Lost City vent site may look barren at first glance, but into the cracks and crevices of the carbonate small animals become obvious. Tiny invertebrates dwell within the cracks of these highly sculpted and actively venting porous carbonate structures. Gastropod snails, shrimp-like crustaceans (including amphipods that migrate daily from the upper surface waters to the Lost City area), and numerous polychaete worms (of which there are at least five new species) all live here. Nematode worms, flea-like ostracods, and small bivalves can also be found on these amazing structures. The biomass (net weight of animals) is small compared to a typical hydrothermal vent on the Mid-Atlantic Ridge. The biggest contributors to the biomass at Lost City are the larger more mobile megafauna, including the (grouper-like) wreckfish, cut-throat eels, and large red geryonid crabs, all readily visible around the spires.

A variety of microorganisms live in, on, and around the vents. *Methanosarcinales*-like archaea form thick biofilms inside the vents where they subsist on hydrogen and methane; bacteria related to the Firmicutes also live inside the vents. External to the vents archaea, including the newly described ANME-1 and bacteria including proteobacteria oxidise methane and sulfur as their primary source of energy.

Lost City provides geologists, chemists and biologists a working ecosystem for the study of life and other processes driven by abiotic serpentinization production of methane and hydrogen.

## Bibliography

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- <http://www.whoi.edu> (18 June, 2009)

## **B Scientific criteria for identifying marine areas in need of protection**

### **1. Uniqueness or rarity**

According to scientific reports, nothing like this submarine hydrothermal field has ever been previously observed. These events are unique, because they rest on one-million-year-old ocean crust formed tens of kilometers beneath the seafloor, and because of their incredible size. Dense macrofaunal communities such as clams, shrimps, mussels, and tube worms, which typify most other mid-ocean ridge hydrothermal environments, appear to be absent in this field. The Lost City Field was discovered unexpectedly while studying geological and hydrothermal processes that built an unusually tall, mountain at this site. In this area, deep mantle rocks called serpentinized peridotites, and rocks crystallized in subseafloor magma chambers, have been uplifted several miles from beneath the seafloor along large faults that expose them at the surface of the mountain.

It is likely that serpentinization was common during Earth's early history and has occurred or is occurring elsewhere in the solar system. Since serpentinization produces energy, hydrogen gas, methane, and organic compounds, it is a very attractive candidate for a process by which life could arise or at least be sustained early in evolution. Therefore, Lost City could provide an important window to the past.

### **2. Special importance for life-history stages of species**

Hydrocarbons - molecules critical to life - are being generated by the simple interaction of seawater with the rocks under the Lost City hydrothermal vent field in the mid-Atlantic Ocean. Lost City is exceptional, because chemical reactions in the seafloor produce acetate, formate, hydrogen and alkaline fluids. All these substances may have been key to the emergence of life. In addition, acetate and formate found in Lost City fluids may have been an important energy source for the ancestors of methanogens, microorganisms that live off the methane at places like Lost City.

Hydrothermal vent sites around the world host animals that are endemic, animals that are found living only in these vent areas. A pattern exists where typical vent areas exclude almost all other general deep-sea animals for some distance from hydrothermal activity. Non-venting habitats less than a few meters away (e.g., the sides of inactive solidified carbonate structures, sedimented areas, and breccia cap rock just to the north of the field) are dominated by hard corals (*Lophelia pertusa* and *Desmophyllum*), octocorals (gorgonians), galatheid crabs, turrid gastropods, foraminifera, pteropods, urchins, asteroids, ophiuroids, and typical deep-sea barnacles. Vent and non-vent habitats are strongly segregated at the Lost City.

### **3. Vulnerability, fragility, sensitivity, or slow recovery**

The Mid-Atlantic Ridge is considered to be a slow-spreading ridge and the Lost City site was estimated to be 30,000 years old, although possibly not actively continually. However, this hydrothermal vent was considered to be too fragile to sustain long-term study or extensive biological sampling.

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#### **Finland (Notification 2009-021)**

#### **Request to submit relevant information concerning the objectives of the marine expert workshop (Ottawa, Canada 29 September – 2 October 2009) as well as on the progress the 2012 target on representative networks on marine protected areas**

Finland actively participates together with other EU member states, in the work to come to an agreement on an international level on the conservation and sustainable use of biological biodiversity in marine areas beyond the limits of national jurisdiction. Finland also takes part in the UN meetings concerning the issue.

Finland emphasises the need of an ecologically coherent network of MPAs as well as further development of biogeographic classification systems. In the Baltic Sea area we have been developing classification systems and it is continuing.

Although Finland doesn't have marine areas beyond the national jurisdiction, we consider this issue highly important for the protection of global marine biodiversity.

For further information of the Marine Environment in Finland we refer to the Finnish - Submission of information for the review of implementation of the Programme of work on marine and coastal biological diversity Notification 2008-095, January 29, 2009.

In the following Finnish work on the protection of Marine Biodiversity in the Baltic Sea and the development of MPA networks is presented:

#### **The Baltic Sea**

Finnish territorial waters and the Finnish Exclusive Economic Zone (EEZ) cover nearly 20% (81 650 km<sup>2</sup>) of the total surface area of the Baltic Sea. Although ecologically difficult to approach as a separate entity, this area is the administrative unit in which Finnish laws apply and which Finland thus has responsibility for. Just under 300 marine species (1.4% of all well-known species) have been listed from the area, although this is a severe underestimation in several respects. Perhaps some 5 000 species of poorly

known micro algae occur in the Finnish territorial waters and EEZ. Due to low salinity levels many fresh water species also thrive in the Baltic Sea.

### **Knowledge gaps**

Knowledge regarding Finnish marine underwater biodiversity has been lacking for a long time. To fill-in the largest gaps in the knowledge The Ministry of Environment launched in 2004 *The Finnish Inventory Programme for the Underwater Marine Environment* (VELMU, [www.environment.fi/velmu](http://www.environment.fi/velmu)). The programme is being conducted in cooperation with seven government ministries. The main objectives of this programme are:

- To get an overview of the most important biotopes of our marine and coastal areas and of the distribution and the range of different species by 2014.
- To store biological, geological and physical underwater information in a way that it can easily be utilized
- To increase the knowledge and awareness relating to underwater marine environment
- To build a co-operation network, this will guarantee the continuity of the inventories after the programme.

The information gathered under VELMU -programme will be of central importance both for the planning of nature conservation and for the exploitation of natural resources.

### **Assessment on habitat types in the Baltic Sea**

The first assessment of habitat types in Finland was completed in 2008. In the Finnish territorial waters of the Baltic Sea and in its coast 53 habitat types were classified according to their risk of human-induced decline and deterioration in Finland. More than half of the marine underwater habitat types have been evaluated as threatened. Only the filamentous algal zone found in shallow water has been evaluated as of least concern in all parts of the coast. The most threatened underwater habitat types are Red Algae, Bladder Wrack, Eelgrass and Blue Mussel communities. The stronghold of these communities is in the Archipelago Sea where the situation is the most alarming. Eutrophication of water bodies is the greatest reason in the underwater habitat types of the Baltic Sea and also very significant in the coastal habitat types. The expert groups have given 13 proposals on measures to be taken in the future in order to improve the state of the habitat types. The suggested measures concern the protection, management, and restoration of habitat types, as well as the land use, sustainable use of natural resources, the state of the environment, and research and monitoring (<http://www.ymparisto.fi/default.asp?node=17435&lan=en> ).

### **Ecologically coherent network of marine protected areas**

A joint OSPAR-HELCOM ministerial meeting (2003) set a target for the establishment of an ecologically coherent network of marine protected areas across the Baltic and the NE Atlantic by 2010. The network aims to conserve threatened and declining marine habitats and species, also considering the objectives defined for the EU's Natura 2000 network. According to the HELCOM Baltic Sea Action Plan, approved in 2007, Finland as

well as other HELCOM contracting parties needs to set up an ecologically coherent network of effectively managed protected areas by 2010.

Governments' decisions (-98, -99, -02, -04, -05 and -06) on the EU Natura 2000 network have added significantly to Finland's network of marine protected areas. Finland's Natura 2000 network includes many areas important for coastal and marine biotopes and species. In 1998 when most of Finland's Natura 2000 network was approved the Government resolved that 22 of the network's marine areas would also be nominated for the Baltic Sea Protected Areas (BSPA) network of HELCOM.

### **Marine/Maritime Spatial Planning**

Increased activity on Europe's seas is resulting in heightened competition between different sectoral interests, such as shipping and maritime transport, offshore energy, port development, fisheries and aquaculture, and environmental concerns. This, in turn, is putting mounting pressure on already limited marine space. A more collaborative and integrated approach to decision-making is required to secure the sustainable development of marine areas in a healthy environment. In 2007 HELCOM adopted Recommendation 28E/9 ([http://www.helcom.fi/Recommendations/en\\_GB/rec28E\\_9/](http://www.helcom.fi/Recommendations/en_GB/rec28E_9/)) on development of broad-scale marine spatial planning principles to support the implementation of this commitment and at the same time when HELCOM Baltic Sea Action Plan (BSAP) was adopted. HELCOM Contracting Parties committed themselves to develop, by 2010, as well as test, apply and evaluate by 2012, in co-operation with other relevant international bodies, broad-scale, cross-sectoral, marine spatial planning principles based on the Ecosystem Approach. Finland is actively participating also in the EU work in developing EU Maritime Spatial Planning.

### **International cooperation**

Finland has actively implemented the marine environmental protection conventions covering the Baltic Sea (HELCOM) and also partly the NE Atlantic (OSPAR). In 2007 the HELCOM Ministerial Meeting adopted the Baltic Sea Action Plan. The aim of this plan is to drastically reduce pollution to the Baltic Sea and restore its good ecological status by 2021. The plan contains concrete and meaningful actions to curb eutrophication, prevent pollution involving hazardous substances, improve maritime safety and accident response capacity, and halt habitat destruction and the decline in biodiversity ([http://www.helcom.fi/stc/files/BSAP/BSAP\\_Final.pdf](http://www.helcom.fi/stc/files/BSAP/BSAP_Final.pdf)).

Co-operation on nature conservation including marine environment has been part of bilateral environmental protection cooperation between Finland and Estonia. This bilateral co-operation between Finland and Estonia and Finland and Russia has expanded into trilateral co-operation between all three countries, particularly with respect to the marine environment of the Gulf of Finland.

The working committees, working groups and financing instruments of the Nordic Council of Ministers together form a permanent co-operation framework for promoting biodiversity in the Nordic Countries and also in the Baltic Countries and Russia. Finland is actively involved in the work of the Arctic Council Conservation of Arctic Flora and Fauna (CAFF) working group, which aims to conserve the circumpolar environment. Finland is also actively involved in the work of ASCOBANS (Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas) and IWC (International Whaling Commission) .  
Helsinki, 29 May 2009

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## France

### **National Contribution by France to the Expert Workshop on Scientific and Technical Guidance on the use of Biogeographic Classification Systems and Identification of Marine Areas beyond national jurisdiction in need of protection**

Sophie Arnaud-Haond - IFREMER

Frédéric Quemmerais - AAMP

As noted in the Global Open Ocean and Deep Seabed (GOODS) Biogeographic Classification (UNEP/CBD/COP/9/INF/44) report, both pelagic and benthic biogeographic classification systems must deal with “mixed” system that combines taxonomic, ecological and physiographic approaches and parameters.

The first aim of the biogeographic classification system is to help us to define an efficient strategy in order to manage and preserve marine biodiversity.

Due to the scarce *in situ* data reporting the spatial distribution of biodiversity at the global scale, the first approach is to define biogeographic regions mainly on the basis of abiotic factors, relying somehow on the unverified assumption that abiotic factors are the main determinant of the presence or absence of taxa. This indirect methods using physical, geophysical and ecological data have been the subject of most efforts so far, as the amount of data available in ‘ready to use’ databases is incomparably larger (Harris, Whiteway, 2008; Grant *et al*, 2006).

Thus, the work in progress undertaken by the French Marine Protected Areas Agency and French Institute for Marine Research IFREMER, presented during the recent seminar ‘2012 Marine Targets’ last December<sup>1</sup>, illustrates this approach and proposes new pathways to elaborate the benthic and pelagic biogeographic classification of the north-east Atlantic (see file attached). Thanks to the use of a geographical information system and good spatial resolution of data (in particular GEBCO topographic data and MERCATOR OCEAN oceanographic data) this work brings typological and geographical precise details in particular on the benthic classification previously created for the OSPAR area (Dinter, 2001). The use of time series for the oceanographic parameters also allows defining precisely the pelagic sectors having a strong temporal variability. It underlines moreover the difficulty of using different spatial resolution

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<sup>1</sup> A document on the High Seas (“Cross-checking High Seas issues”), drafted following the seminar is available in English on [http://www.aires-marines.fr/index.php?option=com\\_content&task=view&id=66&Itemid=67](http://www.aires-marines.fr/index.php?option=com_content&task=view&id=66&Itemid=67)

pool of data. The next stages could be devoted to a reflexion on the hierarchisation of the classification and the expression of the boundaries of the biogeographic zones. This contribution, under development, could grow rich thanks to an active collaboration with the international teams working on the subject.

Now, one shall keep in mind that biodiversity being the heart of the problem, it is not fully satisfying to be constrained to such an indirect approach, assuming a rather tight relationship between abiotic factors and the spatial distribution of taxa. The approach mentioned here above, although definitely important due to the data in hands, may therefore fell short in providing accurate guidelines at all spatial scales, because it may not be possible to explain or predict the global distribution of the marine biodiversity and biogeographics and genetics connectivity on the basis of indirect parameters.

The studies performed in the Ifremer (Brest, Department DEEP-Studies on Deep Sea Environment) allowed gathering data on biodiversity in deep sea ecosystems, hydrothermal vents (Desbruyères *et al.*, 2006), cold seeps (Olu-Le Roy *et al.*, 2004; Sibuet, Olu, 1998), coral reefs or deep sea bed in general. Those observations have been registered in databases, particularly Biocean that was created and filled in Ifremer (Fabri *et al.*, 2006). The French Museum of natural history in Paris is determining and studying the biogeography and evolution of deep sea organisms, particularly on seamounts (Samadi, Barberousse, 2006; Samadi *et al.*, 2006), and is involved in a big project of barcoding of museum collections. Deep sea fishes distribution are studied in Ifremer Nantes (Koslow *et al.*, 2000; Lorange, Dupouy, 2001). Population genetic studies are performed in Roscoff (CNRS-University Paris VI) and more recently in Ifremer (Department DEEP, Brest), to unravel both historical biogeography and more contemporary pattern of connectivity among hydrothermal vents (Faure *et al.*, 2005; Jollivet *et al.*, 1995; Plouviez *et al.*, 2008).

Although databases recording the spatial observations of biodiversity are scarce, they exist and an international effort of standardization is currently on its way to gather them into unique interface. As an example, Ifremer, the French Museum of natural history and the French Marine Protected Areas Agency are designed to manage the marine part of the SINP project (national biodiversity information facility) setup by the French government. The SINP objectives are to inter-connect and make accessible the databases concerning the biodiversity, as for example the Ifremer Biocean database, relating to deep sea fauna. As it is already the case for Biocean, this system will be connected to the GBIF and OBIS databases.

The recent improvement of such global databases may lead to consider a complementary approach that would be focused first on the spatial distribution of biodiversity to unravel biogeographic patterns. As an example, a new method based on Network theory was recently implemented by researchers in Ifremer to analyze part of the Biocean database on hydrothermal vents. This work allowed the genuine identification, without *a priori*, of biogeographical provinces at a worldwide scale, on the basis of the fauna associated to vent fields (Moalic *et al.*, submitted). Such method can also be applied to population genetics data when available, as proposed by the same team, to add information to our understanding of spatial pattern of connectivity, and possible existence of populations acting as source or sink, therefore stressing zones of particular importance in maintaining the integrity of a system of population distributed in a wide space (Rozenfeld *et al.*, 2008).

In conclusion and in agreement with the conclusions of the GOODS reports (UNEP/CBD/COP/9/INF/44), it would be interesting to carry out these two complementary approaches in parallel. This step would undoubtedly allow us a better validation process of the biogeographic classification system. Lastly, the definition of marine areas answering the

CBD criteria (COP 9, decision IX/20) and the protection of the marine biodiversity in a context of ecosystem-based management and marine spatial planning, should not be disconnected from the works in progress about global knowledge of environmental and socio-economic stakes in the High Seas.

Databases mentioned:

Biocean: [http://www.ifremer.fr/biocean/acces\\_fr/index.htm](http://www.ifremer.fr/biocean/acces_fr/index.htm)

SINP : <http://www.naturefrance.fr/>

GBIF: <http://www.gbif.org/>

OBIS: <http://www.iobis.org/>

The 2012 Marine Targets proceedings are available on line:

<http://www.ifremer.fr/2012MarineTargets>

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**CONTRIBUTION BY FRANCE TO CDB NOTIFICATION 2009-021 /  
Progress on the 2012 target on representative network of marine protected areas**

*Avancées dans l'atteinte de l'objectif 2012 d'un réseau représentatif  
d'aires marines protégées en France*

La création de l'**Agence des aires marines protégées** (AAMP) en 2006, établissement public dédié à la protection et à la gestion durable du milieu marin, a une mission générale d'appui aux politiques publiques. Elle apporte un fort renforcement des capacités de création et de gestion des aires marines protégées françaises. Son intervention est soit directe - elle est notamment chargée de mettre à la disposition des préfets concernés les moyens nécessaires à l'étude et à la création des parcs naturels marins, dont elle assure ensuite la gestion, - soit indirecte au travers d'une mission d'appui technique, scientifique et administratif aux gestionnaires d'aires marines protégées.

La France s'est dotée en 2007 d'une stratégie de création d'aires marines protégées pour ses eaux métropolitaines (disponible sur

[http://www.aires-marines.fr/index.php?option=com\\_content&task=view&id=11&Itemid=15](http://www.aires-marines.fr/index.php?option=com_content&task=view&id=11&Itemid=15))

et poursuit l'élaboration de telles stratégies (dans les Antilles et la Guyane, et par des partenariats entre l'AAMP et les collectivités de Polynésie et de Nouvelle Calédonie) afin de couvrir l'ensemble des eaux sous juridiction française d'ici 2011.

Les créations d'aires marines protégées s'accroissent :

- mise en place du réseau Natura 2000 en mer (protection des espèces et habitats d'intérêt communautaire européen) : en plus des 206 sites Natura 2000 existants ayant un volet mer, la France a transmis à la Commission européenne les premières propositions de sites constituant le réseau « Natura 2000 en mer » français (76 sites au total, dont 29 ZPS au titre de la Directive Oiseaux, 47 pSIC au titre de la Directive Habitats, faune, flore) ;
- inscription du lagon de Nouvelle-Calédonie au patrimoine mondial, création de la réserve de biosphère de Fakarava en Polynésie ;
- extension en mer du parc national de la Guadeloupe ;
- création de parcs naturels marins : suite à la création du premier parc naturel marin en Mer d'Iroise en 2007, des procédures d'étude ont été lancées pour 4 sites de parcs naturels marins (Mayotte, Côte Vermeille, estuaires Somme-Canche- Authie, estuaire Gironde et pertuis charentais). Ces parcs répondent à une demande forte d'un outil de protection de la nature qui soit adapté à la mer et à ses acteurs et qui mette sur un pied d'égalité la protection et le développement durable, en proposant une approche intégrée et un mode de gouvernance adapté à la mer.
- Projet de création du parc national des Calanques, qui comportera une partie marine très significative (prise en compte par arrêté du Premier ministre le 30 avril 2009)
- Projet de sanctuaire des mammifères marins aux Antilles
- Réflexions en cours pour l'extension de la partie marine du parc national de Port-Cros

Le Plan d'action Mer de la Stratégie nationale pour la biodiversité, réactualisé en avril 2009, contient différentes actions concernant la mise en place d'un réseau d'aires protégées :

- développement d'un réseau d'une dizaine de parcs naturels marins d'ici 2012 dans les eaux métropolitaines, et d'ici 2015 pour les DOM en privilégiant les éléments remarquables du patrimoine naturel et les éléments ayant des fonctions écologiques importantes; cet objectif a été réaffirmé dans les engagements du « Grenelle de l'environnement ».
- institutionnalisation d'un parc marin international dans les bouches de Bonifacio, dont la partie française sera la réserve naturelle des bouches de Bonifacio, dont la gestion est confiée depuis 2002 à la collectivité territoriale de Corse
- la finalisation du réseau Natura 2000 en mer d'ici 2011 et la mise en place de la gestion de ces sites.

Le Grenelle de la mer dont les conclusions sont attendues pour juillet 2009 conduira également à renforcer ces actions.

La France soutient le processus visant désigner une aire marine protégée au-delà des zones sous juridiction sur la fracture Charlie Gibbs, étudiée dans le cadre de la convention OSPAR, montrant ainsi son engagement actif à cet objectif du programme de travail. Elle a eu également à cœur de contribuer au débat sur la protection de la biodiversité en haute-mer en organisant en 2008 deux événements : l'un avec Monaco, à Monaco en février 2008, sur les aspects juridiques (organisateur IDDRI), et l'autre dans le cadre de la présidence française de l'UE à Brest en décembre 2008 sur les enjeux du patrimoine naturel, des écosystèmes et des activités humaines au-delà des zones sous juridiction (organisateur MEEDDAT et Agence des aires marines protégées). Elle s'emploie enfin à renforcer les actions du sanctuaire de mammifères marins Pelagos en Méditerranée, qu'elle a institué avec l'Italie et Monaco.

Elle organisera en 2011 en Martinique le 2<sup>ème</sup> congrès mondial des sanctuaires de mammifères marins, et en 2013, à Marseille, le 3<sup>ème</sup> congrès mondial des AMP.

L'AAMP est dans une phase d'organisation du dispositif de monitoring, en aidant les gestionnaires d'aires marines protégées à renforcer leurs dispositifs de suivi, et en identifiant les manques pour lesquels elle prendra en charge le développement de dispositifs nouveaux. Elle est le nouvel interlocuteur du Centre mondial de surveillance continue de la conservation de la nature relevant du Programme des Nations Unies pour l'environnement, pour lequel elle est en cours de vérification des informations sur les aires marines protégées françaises.

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## **Poland**

### **Response to notification 2009-021**

#### **Progress towards the 2012 target on representative networks on marine protected areas in POLAND**

The most valuable areas of the Baltic Sea in Poland are already under protection as national parks and Natura 2000 sites. In total they cover more than 500 km<sup>2</sup> of the sea. The table below shows total area and marine area of those sea coast and coastal waters protected areas.

There are two national parks recognized as marine protected areas: Woliński National Park and Słowiński National Park (the second one recognized also by UNESCO as the World Biosphere Reserve).

By the date of 31 May 2009, nine Natura 2000 sites have been designated in Poland: four Special Protection Areas (birds protection), four Special Areas of Conservation (habitats protection) and one site simultaneously Special Protection Area and Special Area of Conservation.

The biogeographical seminar for the Baltic Sea is planned for the autumn 2009. That seminar will assess the representation of certain species and habitats in the Natura 2000 network and will answer the question on the completion of the Natura 2000 network in Poland.

It is worth noting that a team of Polish scientists prepared and published in Polish and English – The Atlas of Marine Habitats in Polish Exclusive Economic Zone, which is a valuable source of information on nature values of the Polish part of the Baltic Sea. The atlas is available on the web page: [www.iopan.gda.pl/research.html](http://www.iopan.gda.pl/research.html).

Tab.1 The marine protected areas in Poland.

National parks	Total area	Marine area
Woliński National Park	10 937 ha	4 591 ha
Słowiński National Park	32 335 ha	11 171 ha
Natura 2000 sites	Total area	Marine area
Special Protection Areas		
PLB990003 Zatoka Pomorska	309 155 ha	309 155 ha
PLB990002 Przybrzeżne Wody Bałtyku	194 627 ha	194 627 ha
PLB220005 Zatoka Pucka	62 430 ha	61 565 ha
PLB220004 Ujście Wisły	1 748 ha	889 ha
SPAs total:	567 960 ha	566 236 ha
Special Areas of Conservation		
PLH990002 Ostoja na Zatoce Pomorskiej	242 533 ha	242 533 ha
PLH320019 Wolin i Uznam	30 455 ha	2 744 ha
PLH220023 Ostoja Słowińska	32 151 ha	10 810 ha
PLH220032 Zatoka Pucka i Półwysep Hel	26 751 ha	22 890 ha
SACs total:	331 890 ha	278 977 ha
SPA=SAC		
PLC990001 Ławica Słupska	80 050 ha	80 050 ha
SPAs + SACs total:	697 062 ha	567 568 ha

## Spain



**ACTUACIONES DE ESPAÑA PARA LA PRESERVACIÓN DE LOS ECOSISTEMAS MARINOS VULNERABLES DEL IMPACTO DE LAS ARTES DE PESCA DE FONDO, EN ZONAS MÁS ALLÀ DE LA JURISDICCION NACIONAL:**

La Resolución 61/105 de la Asamblea General de las Naciones Unidas, adoptada el 8 de diciembre 2006, abordó las actividades de pesca destructivas en el ecosistema marino, así como los compromisos a asumir por la Comunidad internacional para someter todas las pesquerías de fondo a una regulación que asegure la protección de los ecosistemas vulnerables de los fondos marinos, su biodiversidad y hábitat, *a partir del 2009 o antes de esta fecha.*

España ha movilizado recursos financieros, técnicos y humanos para potenciar la investigación del medio marino que permita identificar los ecosistemas vulnerables en las zonas donde opera la flota española con artes de fondo, tanto en zonas reguladas por Organizaciones Regionales de Pesca (ORPs), como en zonas donde estas Organizaciones aún no están constituidas, y en algunas zonas de alta mar, donde actualmente la flota española no desarrolla una actividad pesquera.

La estrategia seguida por España con la realización de las campañas oceanográficas multidisciplinares, para cartografiar los fondos marinos e identificar los ecosistemas vulnerables, ha tenido por objeto contribuir al conocimiento científico de los fondos marinos, dando a conocer los resultados a las instituciones científicas en todos los ámbitos, a la CE y a la Comunidad internacional, con el fin de que se determinen las zonas marinas a proteger y se puedan adoptar las medidas de gestión de pesquerías correspondientes, tanto por las ORPs como por los Estados.

En el 2005, adelantándonos a la Resolución de NN.UU., España lanzó una campaña de investigación, abierta a la participación de los científicos de otros países, para conocer cómo y dónde se ubican los fondos sobre los que se asientan ecosistemas vulnerables, en el **Atlántico noreste**, en la zona de Hatton Bank, donde faena la flota española.

Hasta la fecha se han ejecutado en esa zona tres campañas lideradas por el IEO, en el 2005, 2006, y 2007, de un mes de duración, a bordo de dos Buques de Investigación Pesquera, de la Secretaría del Mar, el “Vizconde de Eza” y el “Miguel Oliver”, para efectuar estudios de cartografiado. Los resultados fueron presentados en el Grupo de Ecología de aguas profundas del Consejo Internacional para la Exploración del Mar (ICES).

Sobre la base de dicha información y de los datos obtenidos por los observadores científicos a bordo de buques pesqueros y de los datos sobre las posiciones satelitales de los mismos, el ICES ha podido identificar zonas susceptibles de protección, principalmente afloramientos rocosos recubiertos de arrecifes de corales de aguas frías. Este Organismo, como institución científica que asesora a la Comisión de Pesquerías del Atlántico Noreste, NEAFC, ha

hecho recomendaciones sobre los hábitats sensibles identificados y esta organización ha cerrado dichas zonas a la pesca para su protección.

Asimismo, en la reunión anual de la Organización de Pesquerías Atlántico Noroccidental (NAFO), celebrada en septiembre de 2008 en Vigo, España propuso llevar a cabo una prospección con el buque de investigación "Miguel Oliver" para cartografiar el área de regulación, a profundidades inferiores a los 2.000 m., invitando a las distintas partes contratantes de la Organización Regional a participar en este proyecto. En el pasado mes de mayo, comenzó la primera de estas campañas. En el proyecto participan, además de los Organismos científicos españoles (Instituto Español de Oceanografía –IEO- y Consejo Superior de Investigaciones Científicas –CSIC-), Organismos científicos de Canadá, Estados Unidos y Reino Unido.

De otra parte, sobre la base de la metodología experimentada, y reconocida por el Consejo Internacional para la Exploración del Mar (ICES), España ha planificado el cartografiado de los fondos marinos de la plataforma patagónica, en la zona de alta mar del Atlántico Suroeste, hasta los 1.500 metros de profundidad. En este área donde pesca la flota española, no existe una Organización Regional por el contencioso existente entre Argentina y Reino Unido, sobre las Malvinas.

Los trabajos se han venido realizando desde 2007 y el grueso de los mismos ha finalizado en el pasado mes de abril. Cada año, se han llevado a cabo cuatro campañas de cartografiado de los fondos marinos con identificación de los ecosistemas vulnerables (EMV), y una campaña para evaluar los recursos pesqueros.

En estos momentos se está elaborando un informe que recogerá los resultados preliminares, que se espera esté listo en noviembre 2009.

Posteriormente, los resultados científicos se divulgarán y se harán públicos, y España adoptará las correspondientes medidas de mitigación para proteger los posibles ecosistemas vulnerables localizados en la zona.

En el contexto comunitario, en el Consejo de Ministros de Pesca de la CE, se adoptó en junio de 2008 el Reglamento del Consejo, relativo a *la protección de los ecosistemas marinos vulnerables de alta mar, de los efectos adversos de la utilización de artes de fondo*.

Este reglamento tiene en cuenta los *estudios científicos* para la identificación de los fondos marinos vulnerables como base para las prohibiciones del ejercicio de la pesca:

- En zonas donde no se haya llevado a cabo el cartografiado o esté pendiente de publicar sus resultados, solo se permitirá la pesca sobre la

huella histórica de la pesquería. Estas zonas donde se ha concentrado históricamente nuestro esfuerzo pesquero, no es probable que contengan ecosistemas marinos vulnerables a este tipo de arte, pues si los hubiera habido en el pasado, ya se habrían deteriorado o no serían vulnerables.

- En aquellas zonas de alta mar donde se hayan identificado científicamente ecosistemas marinos vulnerables, quedarán cerradas a las actividades pesqueras de fondo.
- En aquellas zonas de alta mar donde no se haya llevado a cabo una evaluación científica del impacto de las actividades pesqueras de fondo, se aplicará el enfoque de precaución, de manera que sólo se autorizarán pescas experimentales con una actividad muy restringida y un seguimiento científico exhaustivo, hasta que se demuestre que en esa zona se puede mantener una pesquería sostenible que no afecte a ecosistemas marinos vulnerables.
- Como elemento de control añadido, la actividad pesquera de los buques estará supeditada a la obtención de un *permiso especial* regulado por reglamento comunitario.

Junio 2009