



MARITIME FORUM

Workshop: Towards the development of a strategic Environmental Management Plan for deep seabed mineral exploration and exploitation in the Atlantic basin

Event date:

01/06/2015 (All day)

A workshop was held in Horta, Azores, 1-3 June 2015 in order to identify elements for a strategic Environmental Management Plan (EMP) for deep seabed mineral exploration and exploitation along the Atlantic in the international seabed Area

(SEMPIA)

([follow-up November 2016](#) [3])

Location: Horta, Azores, Portugal Dates: 1-3 June 2015 Organizing committee

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There is a strong imperative to maintain the functions and services of the marine ecosystems of the mid-Atlantic Ridge and Atlantic Basin during exploration and exploitation of deep-sea minerals. Here we propose to convene a workshop in Horta, Azores, 1-3 June 2015 in order to identify elements for a strategic Environmental Management Plan (EMP) for deep seabed mineral exploration and exploitation along the Atlantic in the international seabed Area (for now on called the Area). The workshop will bring together the main stakeholders, including representatives of the International Seabed Authority (ISA) and region-specific exploration contractors and prospectors together with scientists from different disciplines.

The workshop

- gatered and reviewed the adequacy of available baseline information on the marine environment including the location of sensitive deep-sea habitats/ ecosystems; as also as charismatic fauna such as long range migrating species
- identified the baseline information and discuss how to fill them;

Considered the relevant laws, policies and regulations at international, regional and national levels;

- identified the nature, distribution and intensity of pressures and impacts associated with mining as they interact with other anthropogenic activities and stresses;
- agreed upon a 'road map' for the development of an EMP for the Atlantic in the Area, and the strategic aims and goals of such a plan.

There is increased interest in deep seabed mining. This interest extends to new mineral types (e.g., seafloor massive sulfides and cobalt crusts), new habitats (e.g., hydrothermal vents, seamounts, mid-ocean ridges), in all ocean basins (beyond the Clarion-Clipperton Zone into the North and South Pacific, Atlantic and Indian Oceans). Growing pressure on deep-sea minerals and their associated ecosystems prompted the Council of the International Seabed Authority (ISA) in 2012 to adopt an Environmental Management Plan for the Clarion-Clipperton Zone (ISBA/18/C/22). In 2013 and again in 2014, the United Nations General Assembly invited the ISA 'to consider developing and approving environmental management plans in other international seabed area zones, in particular where there are currently exploration contracts' (UNGA Resolution 68/70 §51 and A.69/L.28, §51). At the twentieth session of ISA in 2014, the Assembly took note of the invitation by the General Assembly and noted the importance of giving priority to the development of such environmental management plans within the work programme of ISA.

Along the Mid-Atlantic ridge south of the Azores, the ISA has approved two exploration contracts for massive sulfide deposits to the Russian Ministry of Natural Resources and Environment and L'Institut français de recherche pour l'exploitation de la mer, while a contract for exploration for cobalt crusts on the Rio Grande Rise is to be signed with the Brazilian entity Companhia de Pesquisa de Recursos Minerais S.A.

Other States have conducted marine scientific research to inform prospecting for minerals in the relevant area.

The Atlantic Ocean and particularly the Mid-Atlantic Ridge and on the Rio Grande Rise is thus one such area in urgent need of an holistic strategic Environmental Management Plan

The Atlantic - Ecosystems at stake

Mineral mining in the deep sea is expected to affect different ecosystems with differing ecological properties and associated impacts. Massive sulfide mining may directly or indirectly impact active hydrothermal vents. Active vents support a chemosynthetically-based ecosystem. Many species are endemic to vents and for many their distribution is thought to be restricted to the mid-Atlantic Ridge, which forms a consistent biogeographic unit. In 2010 the Dinarid Workshop initiated a discussion of the need for protective networks of chemosynthetic ecosystems. However, massive sulfide mining is likely to primarily impact inactive vents. Benthic communities at inactive vents and seamount cobalt crusts remain poorly understood. They are likely more diverse than at active vents and may well host vulnerable, structure-forming taxa such as deep-sea corals, sponges and xenophyophores.

The distribution of those species inhabiting inactive vents and cobalt crusts is expected to be more widespread but habitat fragmentation due to bottom physiography and circulation patterns cannot be excluded. The current state of knowledge of the species composition and the biogeography of these species are mostly unknown. Consequently rehabilitation and recovery rates are yet to be established. Moreover, as the industry procedures are not yet settled, the impact on the water column and surface waters, on the species that inhabit those areas, as well the potential horizontal spread of those impacts cannot be excluded and at least identified.

A strategic environmental plan for the Atlantic

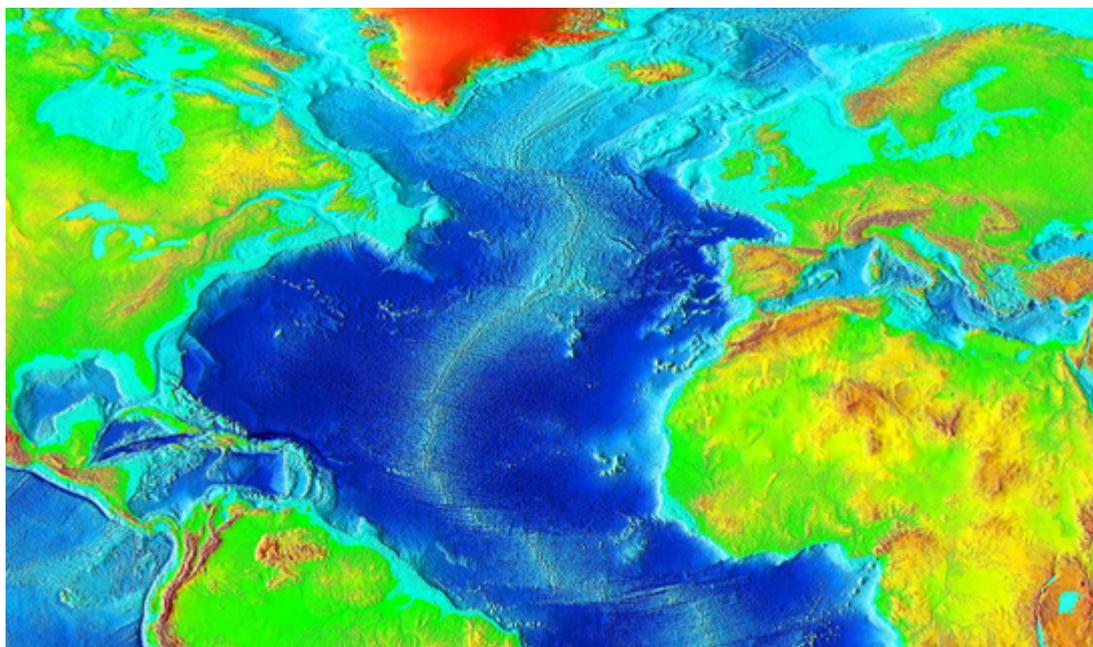
Considering the ecosystems at stake and ongoing activities in the Atlantic, a strategic Environmental Management Plan for mineral mining should consider the current legal and management regimes as well as the effects and intensity of cumulative impacts of planned and existing activities. It could assist in the planning of future seabed mining activities in the context of past, present and future impacts of human activities, including climate change, by gathering information needed to inform any future Strategic Environmental Assessment or Environmental Impact Assessments. This takes on particular relevance as new regulations for seabed mining in the Area are under development, to be guided by the overarching legal framework provided by the United Nations Convention on the Law of the Sea, and its 1994 Implementing Agreement relating to Part XI. UNCLOS declared the seabed area beyond national jurisdiction (the Area) and its mineral resources as the "common heritage of mankind", to be administered for the benefit of mankind as a whole. All rights in the resources of the Area are vested in mankind as a whole, on whose behalf the ISA is required to act. UNCLOS further requires that necessary measures shall be taken to ensure effective protection for the marine environment from harmful effects which may arise from mining-related activities. The Authority is to adopt appropriate rules, regulations and procedures for inter alia: 1) the prevention, reduction and control of pollution and other hazards to the marine environment, and 2) the protection and conservation of the natural resources of the Area and the prevention of damage to the flora and fauna of the marine environment (UNCLOS Article 145).

UNCLOS provides that "*States shall adopt laws and regulations to prevent, reduce and control pollution of the marine environment arising from, or in connection with, seabed activities subject to their jurisdiction...*" as well as with respect to vessels, installations, structures and other devices flying their flag or operating under their authority. The requirements of such laws and regulations "*shall be no less effective than the international rules, standards, and recommended practices and procedures*" (UNCLOS Articles 208 and 209).

Thus, in addition to the core outcomes identified above, the workshop provided a valuable template for environmental planning with respect to deep-ocean activities that cross sectors in the Area. We anticipate such a template will be useful in other regions in the future.

Presentations

-  [Ana Colaço: General overview of the environment and ecosystems of the Mid-Atlantic Ridge](#) [4]
-  [Angel Perez: Knowledge and data gaps on the Rio Grande Rise, South Atlantic Ocean benthic and pelagic ecosystems](#) [5]
-  [Cindy Lee van Dover: Dinard Workshop Deliberations and Outcomes](#) [6]
-  [Craig Smith: Setup of Marine Protected Areas in Deep-sea Ecosystems: The APEI Process in the CCZP](#) [7]
-  [Daniel Dunn: CBD's Ecologically or Biologically Significant Areas process: Lessons & Relevance](#) [8]
-  [David Freestone: Governance of the Atlantic](#) [9]
-  [Gwenaëlle Le Gurun: Overview of ISA and EMPs](#) [10]
-  [Phil Weaver: Progress towards deep-sea mining](#) [11]
-  [Rob Pinch: Deep-sea mining and the precautionary principle](#) [12]
-  [Telmo Morato: Assessment of knowledge and knowledge gaps in the wide Atlantic Ocean](#) [13]



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