Technology options for deep-seabed exploitation - Tackling economic, environmental and societal challenges

This briefing note is based on the STOA project on 'Technology options for deep-seabed exploitation – Tackling economic, environmental and societal challenges', which provides a state-of-play overview on exploring and exploiting deep-sea resources. To support the EU and its institutions in tackling the key barriers and challenges of deep sea exploration and exploitation identified in the study, the following policy options and follow up actions are outlined.

1. Improve communication and raise awareness on the topic (building confidence/ knowledge)

There are three main reasons why this option is important. First, there is a general lack of understanding about the topic within the civil society. Second, cooperation between industry and academia (or between companies/ academic institutes themselves) is very important and hence should be further encouraged. Third, sharing knowledge across sectors is also very important as there are important lessons to be learned from each other.

Specific actions that the EU, in particular the European Parliament could take are the following:

- Members of the European Parliament (MEPs) should liaise with industry and scientific research institutions to remain updated on the topic.
- They should also promote cooperation between industry and academia since it is a key element not only to share knowledge but also to share costs of deep sea research.
- A thematic workshop for discussing environmental, social and legal aspects could be organised.
- MEPs should keep citizens and associations informed about the latest developments and include all stakeholders in the process.
- The EU could promote learning and exchange of experience from the oil and gas sector through the organization of roundtables with other sectors.

2. Improve the knowledge base and address the environmental impacts

The reasoning behind supporting this option is because there is a big uncertainty on the extent of environmental impacts on marine ecosystems coming from deep sea mining and to some extent from bioprospecting. Moreover, a regulatory environmental framework for exploitation with environmental performance benchmarks is lacking, which is very important for the industry to take into account.

This can be remediated by supporting the following actions:

- The EU as a member of International Seabed Authority (ISA) should participate and negotiate its position in any working group established by the ISA to make sure the interests of EU stakeholders (including those from 2014 EU public consultation on deep sea mining) are brought to the negotiating table.
- The MEPs can liaise with the European Commission or industry and academics through symposia on the topic to get updated on the latest developments and such be able to advice their Member States, who are also members of ISA.
- The European Parliament can also establish an ad hoc temporary committee to bring together environment, trade and research at the European Parliament's level.
- The EU could develop management plans to protect the full range of biodiversity and ecosystem functions and identify areas off limits from mining.

3. Support the adoption of a complete legal framework

The lack of a complete legal framework in the Area for mineral resources and in particular marine biological resources has been identified as one of the main bottlenecks by a variety of stakeholders. This has an impact on companies involved in these activities, including European companies from several Member States (e.g. France, Germany, Belgium, the UK, etc.). Moreover, since the negotiations on the regulatory framework for marine biological resources are currently happening, this offers a great opportunity for the EU to make an impact and clarify its position.

Specific options for the EU/ European Parliament include the following:

- MEPs should follow the developments at the UN level and coordinate with Member States in order to facilitate the adoption of a single common EU approach for both marine genetic resources and raw materials.
- The EU should develop a common position in negotiations on how to deal with exploitation of mineral resources and exploration of marine genetic resources in the areas beyond national jurisdiction.
- The EU could further support the Deep Sea Conservation Coalition in its recommendations to the International Seabed Authority to develop a regulatory framework in line with the internationally agreed approach to the management of the impacts of bottom fisheries on seabed ecosystems and deep-sea species in the High Seas.
- MEPs can further investigate how to approach the topic at EU level considering the relevant EU existing legislation and consider establishing an ad hoc working group, with industries, research, environmental associations, specifically tasked with developing, reviewing and monitoring the effectiveness and implementation of the exploitation regulations.

4. Consider supporting a pilot mining project for mineral resources

Several EU industry stakeholders emphasised their interest in a pilot mining project supported by the EU to bridge the gap between exploration and full scale mining. EU support is crucial in order to provide an extra boost of confidence into such projects.

The following actions for the EU are proposed:

- EU (mainly through the European Commission) could potentially provide co-financing for such a project through for example Horizon 2020 funding programme. This has been the case in some of the previous projects, i.e. Blue Mining or MIDAS projects.
- The European Commission should make sure that the project takes into account the local communities affected by such a pilot project and includes a thorough environmental impact assessment.

5. Further investigate recycling as an alternative to deep-sea mining

Even though the study did not investigate recycling as an alternative to deep sea mining, it is important to address this issue as circular economy, and hence recycling are a key EU policy and the 2014 EU public consultation on deep sea mining has emphasised the reuse and recycling as a preferred option to deep sea mining.

From an EU/ European Parliament perspective the following actions can be encouraged:

- The MEPs should encourage further studies to investigate the recycling rates of minerals and metals relevant to deep sea mining, the potential alternative of deep sea mining and in particular the real job creation and the revenue generation in the near future.
- The EU should adopt a stronger position on this matter given the expectation that some of the more engaged non-EU countries will support deep sea mining and will push for exploitation legislation in the Area even if EU countries will decide to step back on deep sea mining.

6. Address the societal impacts on local communities

The main rationale for this policy option is the identified large gap in understanding the societal impacts of deep sea mining and bioprospecting on local communities. These impacts are expected to be similar to societal impacts of terrestrial mining. Even if European citizens are not likely to be affected as so far all such activities take place outside the EU, environmental protection and social responsibility are fundamental EU values that should be applied to 3rd countries as well, in particular if they relate to activities of EU companies and organisations. Social and ethical concerns should be part of the negotiations to regulate deep sea mining activities.

Specific actions in this area for the EU and the European Parliament include the following:

- Encourage and support further studies to identify the risks and potential impacts of in particular deep sea mining on 3rd countries' population, taking into account economic, social and environmental aspects.
- The EU should also explore the role of DG DEVCO for cooperation and policy development with these countries.
- The EU should support 3rd countries at the negotiation table at ISA in order to create a level playing field when facing opposing interests from some more developed and economically strong countries.

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