



**Norwegian-German Seminar on Deep Sea Mineral Resources  
Deep Sea Mining in International Waters:  
Regulatory Framework and the Role of the International Seabed Authority**

Oslo

**30 May 2017**

*Michael W. Lodge  
Secretary-General  
International Seabed Authority*

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I wish to thank DNV-GL and the Norwegian Ministry of Foreign Affairs for organizing this event and for inviting me to speak in such distinguished company. As befits a country with a long and distinguished maritime tradition, not to mention one of the largest maritime zones in the world, Norway has been a strong supporter of the International Seabed Authority since the entry into force of the Law of the Sea Convention in 1994.

I wish to acknowledge the enormous contribution Norway has made in terms of nominating experts to serve on the Finance Committee and Legal and Technical Commission, providing expert advice to workshops and seminars, particularly in relation to studies on the implementation of Article 82 of the Convention, and, not least, your generous contributions to the various trust funds established by the Authority to assist developing countries.

I would add that, recently, we have been delighted to increase our cooperation with GRID-Arendal, including by co-hosting a workshop in Kampala, Uganda, on the opportunities for marine minerals development for Africa.

It is therefore most encouraging to see Norway partner with Germany, one of the pioneers of deep seabed mining and one of the most active in creating an industrial sector for seabed mining, to convene this event and to begin to consider Norway's future engagement with the sector.

***Promoting and encouraging the sustainable use of marine minerals resources for the benefit of mankind***

I have been asked to speak about the regulatory framework for deep seabed mining and the Authority's role in developing that framework. Before I do so, I want to say a few words about the overall context in which this discussion is taking place and deep seabed mining as an essential component of a vision for a sustainable world.

Next week, we shall be meeting in New York at the UN Ocean Conference to support the implementation of Sustainable Development Goal 14, which underlines the importance of the oceans and their resources to support human well-being and livelihoods.

The entire purpose of Part XI of the Law of the Sea Convention, and the mission of the Authority, is to promote and encourage the sustainable use of marine mineral resources for the benefit of mankind as a whole. It is not surprising therefore that the Authority will participate actively in the Ocean Conference, including by announcing several voluntary commitments aimed at supporting the implementation of SDG14.

We will also emphasize the important role of the Authority in reinforcing the rule of law in the ocean and the establishment of a just and equitable regime for access to shared marine resources.

### ***Enabling global economic and social development through sustainable deep seabed mining***

But deep seabed mining must also be considered in a broader context. Whilst the industry shares many of the characteristics of the offshore sector, fundamentally it is about mining and metals. Mining and metals are essential to global economic and social development and an integral part of any foreseeable economy and society. The prospects for deep seabed mining are thus intrinsically linked to the prospects and challenges facing the mining and metals sector in sustainably meeting global demand for minerals over the next 50 years.

All indications are that, notwithstanding reductions in demand owing to more effective recycling, substitution of materials and innovation in processing technologies, increases in demand for minerals are inevitable for the next 50 years or so. Estimates vary, but if mineral demand were to increase at a 1 per cent annual rate, as predicted by the US Geological Survey, it will be about 60 per cent higher than today by 2050. For specific commodities, the increase may be much higher. For example, the European Commission estimates that demand for copper – one of the key minerals of interest for deep seabed mining – could increase by up to 341 per cent by 2050 compared to 2010.<sup>1</sup>

The key driving factors behind this long-term trend are population growth and increases in the standard of living. Between now and 2050 it is estimated that the world's population will grow from just over 7 billion to 9.6 billion. The bulk of that growth will take place in Africa and Asia, where the demand for an improved quality of life will drive the need to access goods and services. Africa, for example, now has the fastest-growing middle class in the world. Against these long-term trends, economic cycles, recycling, materials substitution and other factors are likely to be only second-order controls on overall demand for new minerals, although they will be important locally and for shorter periods.<sup>2</sup>

How to accommodate those demands and needs within planetary boundaries is one of the great challenges facing decision-makers in all regions and industrial sectors.

There is no doubt that global mineral reserves are adequate to supply world mineral demand for the next 50 years, at least in theory. Presently estimated global mineral reserves are 20 to almost 1,000 times larger than present annual production, depending on the commodity of interest. So, there is no

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<sup>1</sup> European Commission, Science for Environment Policy, Issue 470, 16 September 2016.

<sup>2</sup> World Economic Forum, Mining and Metals in a Sustainable World 2050, September 2015.

absolute scarcity. But there are relative scarcities of certain commodities, caused by a variety of factors such as geographic concentration, import dependency and political considerations.

### ***Addressing technological challenges and fostering innovation to achieve sustainable deep-seabed mining***

The mining industry is facing tremendous challenges in meeting the demands posed by the move to sustainable consumption. These include the need to adapt to a circular economy, technological innovation, reducing waste and energy consumption, minimizing the carbon footprint, and ensuring fair and equitable participation.

The industry has recognized the need to transform the sector and enormous progress is being made. But there are obstacles to progress, not least the fact that an increase in mineral demand also means an increase in consumption of key enabling resources, such as water and energy. Mining is extremely energy intensive and one of the biggest contributors to global carbon emissions. For example, the European Commission study I mentioned earlier found that the energy required for copper production could be as high as 2.4 per cent of global energy demand in 2050, compared to 0.3 per cent today. The few studies that have been done so far suggest that seabed mining could consume less freshwater, energy use, mineral waste and CO<sub>2</sub> emissions than comparable terrestrial mining. These aspects need to be studied in greater depth.

In this context, the contribution of deep seabed mining towards increased long-term demand for minerals must be part of the overall vision for a sustainable world.

### **The work of the International Seabed Authority**

Let me turn now to the work of the Authority.

As you know, the chief priority for the International Seabed Authority at this time is to deliver a draft Mining Code that will enable contractors to move from exploration to exploitation.

The Mining Code is critically important to the future of the Authority and to the credibility of the deep sea mining regime established by the law of the sea. Indeed, in completing the implementation of the legal regime set out in Part XI of UNCLOS and its 1994 Implementation Agreement, the Code will constitute a key step in contributing to fulfill the object and purpose of the Convention, that is to promote the economic and social advancement of all peoples of the world.

Over the past three years, we have been making steady and deliberate progress on the different elements of the Code.

The process began in 2013 with the issue of a Technical Study on the policy issues associated with the development of a regulatory regime for mining. Subsequently, the Legal and Technical Commission conducted a wide-ranging public consultation in which it sought the views of stakeholders as to some of the key policy issues. The Secretariat also commissioned several discussion papers on various issues including financial aspects of exploitation, dispute settlement and responsibility and liability. The efforts

of the Secretariat have been supported by efforts by external stakeholders, including industry and NGOs, to convene workshops to discuss specific aspects of the proposed code. I welcome these efforts, which all contribute to the enrichment of the debate.

In July 2016, the Legal and Technical Commission issued a 'Zero Draft' of the exploitation regulations. This was made available for public consultation until November 2016. The results of that consultation were considered by the Commission at its recent meetings in Kingston in February 2017.

I was very pleased at the quantity and quality of feedback received to the Zero Draft. My own feeling is that the draft is becoming quite mature. It takes into account the preliminary conceptual studies that were done, and also takes into account many of the points raised during the first round of stakeholder consultation that took place in 2015-2016. The draft covers in a rather comprehensive manner the process for applying for exploitation rights, the content of the application, the contractual basis of the rights granted, and the rights and duties of the parties to a contract.

In parallel with these developments, there has been extensive discussion of the measures that will need to be taken to protect the marine environment from the potential negative environmental impacts of deep seabed mining. Environmental impacts must of course be properly managed, minimized and monitored, and this is a core responsibility of the Authority under Article 145 of the Convention. At the same time, however, it is important that environmental impacts are placed in perspective and considered in light of the overall impact of mining on the three-pillared architecture of sustainable development, with the social, economic and environmental dimensions at its core.

An initial reporting template for environmental impact assessment during exploitation was prepared as long ago as 2012 during a workshop convened by the Authority in Fiji.

In May 2016, a further workshop was convened with the support of the Government of Australia to examine a range of issues associated with environmental regulation during exploitation.

In January 2017, drawing on some of the outcomes of that workshop, the Secretariat prepared a discussion paper for the Legal and Technical Commission on the development and drafting of environmental regulations. This was followed by an international workshop in Berlin, which provided an opportunity for a broad range of stakeholder input into the process of developing the environmental regulations.

Good progress has also been made with respect to one of the other core issues, that is, the financial terms of contracts. As a result of three stakeholder driven workshops, the Secretariat now has a preliminary financial model to work with that will help the Legal and Technical Commission to make decisions on the level of royalties and other payments that will be made by contractors.

I am cautiously optimistic that, by the time the Authority's annual session takes place in August 2017, it will be possible to issue a substantially revised first draft of the Mining Code. Subject to the advice of the Legal and Technical Commission, this could then be circulated for another round of stakeholder consultation, along with a clear road map for the further elaboration of the Code. Naturally, this will

include many detailed elements that will benefit from the wisdom and experience of experts, including from the offshore, technology and mining sectors.

### **Concluding remarks**

In conclusion, seabed mining offers substantial potential for developing high-grade, abundant, mineral resources over the long term. Compared to terrestrial mining, deep seabed mining requires less fixed infrastructure and has the potential for securing resources with a lower carbon footprint, reduced waste and lower energy consumption. For several developing States, seabed mining has the potential to become an integral part of a transition to a sustainable blue economy. In the case of the deep seabed beyond national jurisdiction, which is managed through the Authority, there is a mechanism in place to ensure equitable distribution of benefits and social equity.

The time is right now to move in a logical and stepwise fashion to complete the elaboration of the legal regime set out in the Convention and 1994 Agreement. We do not need to be hasty, but we do need to ensure that the legal and regulatory framework is in place to allow for commercial development as soon as economic conditions allow.

I am sure that the expertise gained by Norway in the development of its offshore energy sector would be very valuable in progressing the discussions and work on these important matters. I look forward to further discussing with the government of Norway how to strengthen our relationship and I look forward to further collaboration between Norwegian and German industries.