



**Ships and Marine Technology Committee of the International Organization for Standardization
(ISO/TC 8)
Seminar on “New directions of standards and marine technology”**

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PRESENTATION

by

Mr Michael W. Lodge,
Secretary-General of the International Seabed Authority

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Ladies and Gentlemen,

It is a pleasure to take part in this discussion on the importance of standards and guidelines in the context of marine technology development and I would like to begin by expressing my sincere gratitude to Director-General Dr Li(3) Jia(1)biao(1), for inviting me to participate.

ISA has been following the work of this technical committee for some time and I am convinced that your experience and expertise can contribute to the safe and sustainable development of the emerging deep-sea minerals industry.

My objective today is to provide the Committee with a brief overview of the work of ISA as it relates to the regulation of deep seabed mining, and particularly in relation to the development of standards and guidelines for future offshore mining operations.

The ISA, which is an intergovernmental organization established by the United Nations Convention on the Law of the Sea, has a unique and exclusive mandate.

Our task is to regulate and manage all activities of deep-sea mineral exploration and exploitation in the international seabed Area. At the same time, we must protect the marine environment and its biodiversity from harmful effects arising from those activities, promote marine scientific research, and share the benefits for the benefit of all humanity.

All States Parties to UNCLOS have the right to carry out deep sea mineral exploration provided they do so under a contract with ISA and in accordance with the rules, regulations, and procedures of ISA. This leads to a coherent global approach to deep sea exploration which benefits everybody.

As of today, 30 contracts for exploration have been signed which involve 21 different States including 12 developing States. Although many of these exploration projects are well advanced and mature, exploitation has not yet begun.

We are therefore in the very fortunate and unusual position of being able to regulate an industry before it begins.

Development of a regulatory framework for deep seabed mining

ISA's approach to regulation is evolutionary. The first step was to develop a solid institutional architecture. Having achieved that objective, the next step is to progressively introduce regulations as needed, supported by standards and guidelines.

When fully completed, this body of regulation will constitute a comprehensive Mining Code, governing all aspects of mineral exploration and exploitation, including protection of the marine environment.

So far, we have adopted three sets of regulations governing exploration for three different types of deep-sea mineral resources. These regulations are supported by recommendations for guidance of contractors on technical and operational matters, which are promulgated by ISA's Legal and Technical Commission – a specialized group of experts, elected by the Council. The recommendations cover matters such as data reporting formats, requirements for environmental baseline studies and best practices, and financial reporting.

We are now developing regulations for exploitation. The Council of ISA is currently considering a draft set of regulations which has been developed over several years and has already undergone several rounds of global stakeholder consultation.

The regulations will set out the process for applying for exploitation rights, the rights and duties of contractors and the terms and conditions of the contract for exploitation. To become fully operational, however, the regulations will need to be supported by more detailed standards and guidelines detailing the applicable “*mining standards and practices, including those relating to operational safety, conservation of the resources and the protection of the marine environment*” (UNCLOS, Annex III, art.17 (b)(xii)).

As presently envisaged, standards will be legally binding. Guidelines, on the other hand, will be recommendatory.

It is envisaged that two categories of standards will need to be developed. The first category, comprising the “performance standards”, would be specific to ISA and used to meet identified thresholds. They will be mandatory but flexible enough to encourage innovation and contribute to the development of best practices.

The second category will comprise the “process standards” aimed at supporting the delivery of the performance standards. A good example of this are the environmental management systems to support the delivery of environmental policy and improve environmental performance.

Both performance and process standards will form part of the terms and conditions of an exploitation contract and will therefore be key in assessing contractors’ compliance with their obligations.

Development of standards and guidelines

Whilst the regulations are being considered by the Council, which is a political body, the standards and guidelines are being developed by the Legal and Technical Commission, which is a body of experts. Nevertheless, the collective membership of ISA has decided that the work on the standards and guidelines should proceed in parallel with the development of the draft regulations and in a way that is transparent and inclusive.

The process began in May 2019 with a technical workshop on standards and guidelines organized by ISA in partnership with South Africa. This workshop brought together a wide range of stakeholders including industry and representatives of classification societies, with a view to discussing the key components of a process to expedite the development of the most important standards and guidelines.

Based on the outcomes of that workshop together with its own deliberations, the Legal and Technical Commission has adopted a three-phase approach to the development of standards and guidelines:

Phase 1 – The standards and guidelines necessary to be in place by the time of adoption of the draft exploitation regulations.

Phase 2 – The standards and guidelines necessary to be in place prior to receiving the first application for a plan of work for exploitation.

Phase 3 – The standards and guidelines necessary to be in place before commercial mining commences.

Certain key principles and approaches were highlighted by the Legal and Technical Commission and by the Council.

First and foremost, the Commission is following an outcome-based approach, that is an approach that prescribes rigorous and binding outcomes, while affording flexibility in the processes by which these outcomes are achieved. This approach incentivizes continuous improvement in technology and encourages innovation.

Second, the importance of reviewing the standards and guidelines periodically, in the light of developments in knowledge and improved technology must be taken into account.

Third, the Commission recognized the importance of developing environmental goals, objectives, and principles to support the development of the standards and guidelines.

Fourth, a key principle in the development process is transparency and inclusiveness.

On this latter point, I am pleased to report that a first set of draft standards and guidelines were issued for stakeholder consultation in July 2020. These cover the preparation and assessment of an application for the approval of a Plan of Work for exploitation, the development and application of environmental management systems and the form and calculation of environmental performance guarantees. It is expected that drafts of remaining Phase 1 standards and guidelines will be published for stakeholder consultation by the end of the year.

Because of the importance of ensuring that exploitation of deep-sea mineral resources proceeds in a sustainable manner, priority has been given to the development of standards and guidelines relating to environmental protection.

Nevertheless, we do not need to reinvent the wheel. Rather, we need to build on existing standards and develop industry-specific standards only where needed. ISO standards, and particularly the work of this Technical Committee, are therefore highly relevant to the work of ISA.

Most exploration contractors, for example, in the absence of current standards specific to seabed mining, already apply or take into account relevant ISO standards for their exploration operations, either those of a generic nature or those addressing operational safety in other offshore industries.

The Legal and Technical Commission has also taken into account relevant existing ISO standards and has even referred to some of those standards in its draft standard on environmental management systems, in particular:

- ISO 31000: Risk management;
- ISO 14001:2015 Environmental management systems – Requirements with guidance for use,
and
- ISO 19011:2018 Guidelines for auditing management systems.

The expertise and experience of ISO and this committee in particular will be of great value to ISA in future. Other committees may also have a role, including those dealing with Mining, Quality Management and Quality Assurance, Environmental Management, and Risk Management.

A good example where industry-specific standards may be required, and where ISO may be able to make a contribution, are standards related to technology, where there will be a need to build on the many existing (and emerging) international engineering and technical equipment standards, while at the

same time noting that differing extraction technologies may have different impacts and scales of impacts as well as operational safety aspects.

Concluding remarks

As you can see, a lot of efforts are currently invested by ISA, its members, the contractors and observers to develop a solid regulatory framework that will contribute to the robust, efficient and transparent regulation of deep seabed mining in the Area by ensuring the highest operating, safety and protection standards.

I would therefore welcome our discussion afterwards where your inputs could help us identify where our respective organizations could work together maybe through existing technical working groups of ISO.

I thank you.
