MODULE EIA, LESSON 4

PROCESS FOR MAKING AN APPLICATION FOR A PLAN OF WORK FOR EXPLORATION

LECTURE NOTES

Welcome to our lesson on the process for making an application for a plan for work for exploration. My name is Ulrich Schwarz-Schampera. I am the Programme Management Officer for mining geology at the International Seabed Authority. In the first part, I will talk a little bit on the fundamental geological requirements to start seabed prospecting and exploration to enable a potential actor and contractor to submit an application under the exploration regulations of ISA.

Resource Exploration in the Area

Any application for plan of work for exploration for marine mineral resources requires a sound understanding of the seabed and potential mineral enrichments therein. Seabed exploration is a classic greenfield exploration in contrast to so called brownfield exploration activities in known mineral districts and close to production sites. Classic greenfield exploration was carried out for all mining districts on all deposits on land. Exploration is finally following a period of scientific prospecting to identify the geological and environmental characteristics of an area and define the area of exploration interest in greater detail.

Magnetic patterns on the modern sea floor delineate age distributions of the underlining crust. Best possible enrichments of all three marine mineral types are strongly related to the geological and oceanographic positions, and the individual age characteristics. This means that massive sulphide occurrences form and enrich along the youngest features of the oceanic crust, the mid ocean ridges and their tectonic framework. Polymetallic manganese nodules encrust grow with time and largest and thickest occurrences are bound to all the oceanic crust and seamounts.

The deposition records of marine minerals is critical for the prospectivity. This means the enrichment process to form potentially economic deposits. Youger processes may hamper nodule and crust growth and even dissolve the area formations. Younger processes may also oxidize and/or bury metallic deposit making exploration far more difficult or even unfeasible. Marine Scientific research in the area has identified and better defined the principle occurrences of massive sulphides, polymetallic nodules and cobalt rich ferromanganese crusts.

Seabed Mineral Resources

The characterization and also the definition of prospective areas once the decision for a particular mineral type on seamounts, the abyssal plains or along mid-ocean ridges is taken.

From prospecting to exploration

The large variations and numerus details however, make it necessary to improve mapping as a required prerequisite for resource identification. Better resolutions allow for better knowledge, understanding, assessments and the identification and quantifications. Satellite altimetry and advanced eco-sounding data at higher resolutions from a variety different scientific and commercial data, provide us from the base of the general bathymetric map of the oceans called gepco. Which provides global terrain model for oceans and

continents.

Resolution for the gepco map is better than about 460 meters and already allows for first potential resource consideration and the identification of prospective areas for the three types of marine minerals based geomorphological assessments The assessment of available scientific data allows for the global identification of seabed mineral resources and the distribution in the oceans and in the area outside national jurisdictions. This global assessment and publicly available scientific data which provide potential contactors with first information for prospecting and the greenfield exploration for seabed minerals. It further allows for the selection of an area of interest for a potential contractor and eventually either the notification of prospecting or the preparation of an application for exploration

ISA has undertaken work to develop regulations for exploration and exploitation of mineral resources in the Area since its existence in November 1994, based on expert workshops, drafting and open stakeholder consultations. These efforts resulted in the issuing of regulations on prospecting and exploration for all three marine resources under consideration. These regulations will be presented in greater detail in the following.

My name is Øystein Bruncell Larsen and I am Chief of Compliance Assurance and Regulatory Management Unit at the ISA. I will discuss the institutional framework for the application process. Applicants can be from the Enterprise, representatives of States or State Institutes or commercial companies. The Compliance Assurance and Regulatory Management Unit coordinates the application process to provide a summary to the Legal and Technical Commission, the LTC, in support of their consideration of the application. The Council approves the application based on the recommendation from the LTC. The contractor gets exclusive rights to explore the contracted area for a period of fifteen (15) years. Following exploration, the contractor shall apply for a plan of work for exploitation.

Area under Exploration
Each application for approval for a plan of work for exploration shall define the boundaries of the area under application by a list of coordinates. Each application shall contain sufficient data and information to enable the Council to designate an equally valued reserved area based on the estimated commercial value of each part; this is relevant for the polymetallic nodules. A joint venture arrangement with the Enterprise can be chosen alternatively for the polymetallic sulphides or the crust.

The contractor shall have the exclusive rights to explore the contracted area. ISA shall ensure that no other entity operates in the same Area for other resources. A plan or work for exploration, shall be approved for a period of fifteen (15) years. Upon expiring of a plan of work for the exploration, the contractor shall apply for a plan of work for exploitation, unless the contractor has already done so, has obtained an extension or decided to renounces its rights in the contracted Area.

Financial and technical capabilities
Each application shall contain a description of the applicant's previous experience, knowledge, skills, technical qualifications and expertise relevant to the proposed plan of work for exploration to determine whether the applicant is financially and technically capable of carrying of the proposed plan of work for exploration and of fulfilling its financial obligations to the Authority. A general description of equipment and methods and description of the applicant's financial and technical capabilities to respond to any incidence or activity which causes serious harm to the environment shall be included. The schedule for the proposed exploration programme shall include activities for the immediate five-year period, studies to be undertaken of technical and economic factors, a description of the programme of oceanographic and environmental baseline studies.

Application fees

The fee for processing an application is five hundred thousand (500,000) US dollars. If the administration costs are less than the fixed amount, ISA shall refund the difference to the applicant. If the administrative costs are more than the fixed amount, the applicant shall pay the difference to the ISA. Any additional amount to be paid by the applicant shall not exceed ten percent (10%) of the fixed fee.

Each application by a State enterprise or one of the entities referred to in the regulations shall be accompanied by a certificate of sponsorship issued by the State of which it is a national or by which or whose national it is effectively controlled.

Monitoring obligation by the Sponsoring State includes

1. Activities in the Area by the sponsored entity
2. Ensuring that transfer of technology and science is completed to the ISA
3. And monitoring and/or protection and preservation of the marine environment

Consideration by the Legal and Technical Commission

The LTC examines applications in the order in which they are received to determine if the applicant has complied with the Regulations, including

1. Providing the required environmental and resource information
2. Demonstrating financial and technical capability to carry out the proposed plan of work for exploration and has provided details as to its ability to comply promptly with emergency orders.

If the LTC determines that the proposed plan of work for exploration meets the requirements of the regulation, they shall recommend approve of a plan for work for exploration to the Council. The Council shall consider the report and recommendations of the Council relating to relating to approval for plan of works for exploration. After a plan of work for exploration has been approved by the Council. It shall be prepared in the form of a contract between the applicant and ISA. The contract shall be signed by the Secretary General on behalf of the ISA and by the applicant. The Secretary General shall notify all members of the ISA in writing, of the conclusion of each contract.

Contractors submit yearly and five yearly report to the Secretary General. The reports cover their programme of activities in the Area during the report cycle. The report includes maps, charts and graphs illustrating the work done and results obtained. They also include details of training programmes and scientific and operational results. Secretariat and LTC experts complete a compliance review and the result is report to the Council for continuous oversight by Member States. Thank you for watching this lesson, I now invite you to take the quiz at the end.