## POLYMETALLIC NODULES RESOURCES CLASSIFICATION WORKSHOP

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Good morning everybody. I am glad to see you all here. I believe it bodes extremely well for what I hope to be an interesting and progressive week and a week as to which the international community will begin to get a very good idea of the resources associated with polymetallic nodules that we have in marine areas beyond national jurisdiction.

Dr. Rajan, Director, National Centre for Antarctic and Ocean Research of India, distinguished delegates from the Government of India, experts on classification and other aspects of deep seabed polymetallic nodule mining, eminent representatives of the Contractors for polymetallic nodules exploration of the Authority and members of the Legal and Technical Commission of the Authority.

I wish to thank all of you for the effort that you have made to be present for the ISA workshop on polymetallic nodule resource classification. This is a very important workshop for the Authority. It is our very first cut at trying to establish standards for the classification of polymetallic nodule resources.

It has been polymetallic nodules that resulted in the establishment of the ISA. It was indeed polymetallic nodules that was an extremely important part of the Law of the Sea Convention. An entire part of Part 11 of the Convention is dedicated to polymetallic nodules and I wish to also let you know that this gave scientists and engineers an opportunity at that time to also become part of the deliberations leading to the adoption of the Convention on the Law of the Sea.

It has been a long road since. I recall when discussions were going on at United Nations. The idea that we could be be mining 5000 m underwater sounded strange at that time. We already had mountains of ore on land. We had technology for mining these resources. People were being taught how to apply the technology to mining these resources in schools all over the world. We could mine underground. We collected the minerals, processed them and got the metals. At this Law of the Sea Conference, we were talking 5000m, and several thousand kms from land. It has been a long ride indeed.

This July, the Authority celebrated its 20th Anniversary. I am indeed very grateful to be able to report that the Authority now has a considerable number of contractors for polymetallic nodule resources. We also have contractors for polymetallic sulphides as well as contractors for cobalt-rich ferromanganese crusts. We however started with polymetallic nodules.

The International Seabed Authority has been established for 20 years and we have contractors who are almost at the end of their exploration contracts for polymetallic nodules.

We've had problems. Problems going back to polymetalic nodules and while these have been discussed over long periods of time, the international communities' knowledge of resources *in situ*, as far as these nodules are concerned, has been limited.

One of the directives the Authority has is to establish standards for esources in the Area. Our job is to administer these resources. As the exploration phase continues, more effort is being made to get a better idea of the resources that are on the deep seabed. We understand that this is a novel venture and that mining is yet to take place.

It is our hope that the technology development of our contractors will result in a better idea of what is available today to this community to mine at a profit, that are ISA reserves. We also are interested in the other resources —and to what extent any mining can take place for polymetallic nodules down the line.

I hope that at the end of this week we will have a basic framework for standards for resource classification of polymetallic nodules in the Area. We have contractors who have engaged in this exercise for over a year. Presently we have some that are close to their licenses coming to an end. It is not obvious in the reports we have that anybody is about to relinquish their areas. It is also not very clear what we actually have in place. For that reason we are doing this workshop.

Our specific objectives for this workshop are as follows:

- to ascertain the work being undertaken by contractors for polymetallic nodule exploration in the Area with a view to the standardization of the exploration and resource data required in Section 11 of the standard clauses of Exploration contracts;
- to review of current practice in land-based mineral development on national reporting standards for exploration results and resource classification;
- to identify of special aspects of polymetallic nodule deposits that should be addressed in resource reporting standards;
- to identify of any issues arising from differences in national reporting standards to which the Authority should respond;
- to assist contractors to identify and implement best practices in polymetallic nodule resource evaluation;
- to identify the work to be completed by contractors to fulfil item;
- to determine the time required to fulfil item (v), and for this workshop; and
- to provide guidance to the ISA regarding relations with mineral information standards organizations, including potential cooperation with CRIRSCO's work

I am very happy to have you all here. I have no expertise in this area and I am like many who have gathered here to listen to what the experts have to tell us about work in this area. I also am very interested to learn from what the contractors tell us of the results of their work to date and the the practices they have been following. We will hear from the experts gathered here about best practices in this regard. We also have some eminent members of the Legal and Technical Commission present.

Towards this end, we wish to take the results of our work this week and make them available to the entire body of the Legal and Technical Commission in February 2015 and have them make recommendations to the Council - a decision making body - on standards for the development of these

standard classification of these resources and hopefully to have this material as input for a decision that has to be taken by the Council in July 2015 regarding the extension of exploration contracts.

I would also like you all to consider how the Authority can continue to work on these standards. I do not expect it completed in four days for nodule resources when it has taken us a consideration period of time and considerable knowledge to get us to wherever we been to be able to do what has been done for land-based resources.

I look forward to an exciting week. I see this is a great opportunity to learn something. For the experts, I hope the knowledge they may gain for marine mineral resources will be a little bit more than they had before they attended this meeting For the contractors, hopefully we will have standards. The reports you give the Authority for consideration by the Legal and Technical Commission will be a basis for the Authority to inform the international community as to what is actually out there.

I have been following the work of the USGS resources and their distribution worldwide on land or ocean and keep reading about inferred resources. I believe the contractors spend a lot of money and have a lot of work and with their role in economic development we can move this process further than merely inferred resources.

Thank you.