PEW RESOLVE

From Paper to Practice: Implementing the Mining Code
A Side Event at the International Seabed Authority 23rd Annual Session
Moon Palace Jamaica Grande
Saturday, August 12, 2017

Introduction and Background
On Saturday, August 12, 2017, a broad group of International Seabed Authority (ISA) stakeholders, including country delegates, Council members, contractors, observers, Legal and Technical Commission (LTC) members, and Finance Committee members, gathered in Ocho Rios, Jamaica to discuss their views on the future of the ISA. During the day-long workshop, participants had the opportunity to share perspectives on what will be required of the ISA as it evolves from a regulation-writing institution to an institution effectively regulating mining in the Area. Through presentations, panel roundtables, and small and large group discussions, participants exchanged ideas regarding new institutional capacities that may be required of the ISA, what can be learned from experiences in other contexts, the hallmarks of best regulatory and governance practice, distinctive attributes and constraints of the ISA, challenges that may arise, and possible approaches to addressing those challenges.

The workshop was sponsored by The Pew Charitable Trusts and facilitated by RESOLVE. A list of workshop participants is available in Appendix A.

New ISA Functions to Oversee Exploitation
Hannah Lily, Commonwealth Secretariat, shared an overview of the ISA functions needed to oversee exploitation, specifically providing:
- an overview of what the United Nations Convention on the Law of the Sea (UNCLOS) provides about the ISA's regulatory role, powers, and functions;
- the functions and structures commonly found among extractives regulators in national jurisdictions;
- the special characteristics of the ISA that distinguish it from national jurisdictions; and
- principles of best regulatory practice.

Ms. Lily's presentation is available on the workshop website.

According to UNCLOS, the ISA shall exercise such control over activities in the Area as is necessary for the purpose of securing compliance by contractors with UNCLOS and relevant rules, regulations, and procedures issued by the ISA (Articles 153 and 157). More specifically, the ISA can approve work plans, issue contracts, inspect installations used for activities in the Area, and, in certain circumstances, the ISA can issue warnings to contractors, impose monetary penalties on contractors, issue emergency orders to adjust or suspend operations, and suspend or terminate a contract (Annex III, Article 18). Annex III, Article 17 identifies specific issues the ISA should adopt rules and procedures to address.

Describing common functions in national jurisdictions, Ms. Lily indicated that State extractive sector regulation includes environmental permitting, issue of mining / production rights, monitoring and enforcement, revenue collection and administration, dispute resolution, and serving as an on-site inspectorate. Often, regulatory functions related to production rules, environmental management, health

and safety, and financial rules are separated and carried out by different agencies, departments, or divisions across national governments.

Ms. Lily highlighted that although the ISA will be expected to fulfill many of the functions found at national-level jurisdictions, it also has unique challenges as a regulatory institution, as an organization comprised of member governments and charged with representing the common heritage of mankind. Additional complexity is borne through State sponsorship of contractors and the intersection with other activities taking place on the high seas that are not under ISA jurisdiction. These characteristics suggest the ISA Mining Code will need to navigate more complexities than most national-level mining laws.

Ms. Lily also identified five principles of best regulatory practice that may be considered in the development of the Mining Code, suggesting regulations should be transparent, targeted, proportionate, accountable, and consistent.

Ms. Lily closed by highlighting several questions for consideration, including:
- Regulatory agility: How will the (currently annually-meeting) Council make decisions quickly, when circumstance require?
- Resourcing and staffing: The ISA will need staffing and resources to fulfil the functions identified in Annex III of UNCLOS. Are additional full-time staff needed to carry out these functions? Can staff be hired on a contract basis?
- Separation of functions: At the national level, regulatory functions are often separated, particularly between the issue of mining rights, and the oversight of environmental management; will that separation happen in the ISA and, if so, how?
- Coherence with other regulators: How will the ISA align with other regulatory bodies (including Sponsoring States and Flag States)?
- Inclusiveness (of all humankind): How will the ISA fulfill its obligation to reflect, represent, and work for the benefit of all humankind?

How Other Organizations Manage Such Responsibilities
Dr. Kenneth Oye, Massachusetts Institute of Technology (MIT), provided an overview of other organizations' efforts to manage the type of responsibilities the ISA will likely take on as it implements the Mining Code. Drawing on examples from around the world, Dr. Oye described both exemplary cases and cautionary tales of organizations that create or enforce contracts, learn and adapt, set or enforce standards, or foster the development of technical capacity. Dr. Oye's presentation is available on the workshop website.

Describing challenges and lessons learned from organizations responsible for managing scarce or limited resources, Dr. Oye identified a benefit in establishing a regulatory system early, before the value of an asset is established and when there are fewer entrenched interests. Dr. Oye noted that the deep sea mining industry is in early stages and a great number of uncertainties remain (such as the price of extracted materials, the cost of extraction, technological factors, and environmental factors). As the ISA moves into the implementation phase, it is likely some of its early assumptions regarding these factors will be incorrect, and policies will need to be adjusted. An adaptive regulatory system will be important to allow regulations to be adjusted as learning takes place.

Some structural aspects can enable learning and adaptation. For example, in the United States, investigation and regulation responsibilities related to airline safety are divided between the National Transportation Systems Board (NTSB) and Federal Aviation Association (FAA). The independence provided

by the separation of these functions has allowed for independent learning and policy responses; airline fatalities have decreased since the division of these functions.

Many security agreements and associated organizations provide models for verification and enforcement. Examples include the Nuclear Non-Proliferation Treaty and International Atomic Energy Agency, the UN Chemical Weapons Convention and UN Monitoring, Verification, and Inspection Commission, and the Australia Group Guidelines. These organizations could provide useful lessons for the ISA regarding technical capacity and the ability to incorporate learning into the design of an inspectorate.

Drawing on cases around standard setting and enforcement, Dr. Oye conveyed the following lessons: institutions with infrequent meetings (such as the Convention on Biodiversity) can accomplish some tasks through the use of working groups between meetings; and public-private partnerships can enable capacity building when resources are limited.

In response to a question about the enforcement capabilities of other organizations, Dr. Oye pointed to a common enforcement challenge: keeping resource use within agreed upon boundaries. He also described a consensus-based approach to long-term threat assessment and strategic planning used in meetings of internet exchange operators. The consensus oriented approach provided space and time for deeper reflection on unconventional cyber security threats. In response to a question regarding uncertainty and potential long term impacts of seabed mining, Dr. Oye highlighted the opportunities and risks posed by gene drive technology. He noted that while gene drive has the potential to address serious problems like malaria, zika, lyme, and other vector borne diseases, there are concerns about environmental and security risks. The experience of organizations addressing other issues points to the need for an adaptive approach to responsible innovation, with limits on initial applications, systematic monitoring, observation and analysis of field experience, and updates to policies in light of evidence generated and lessons learned.

Stakeholder Perspectives Roundtable

During the roundtable session, participants heard from individuals representing a Contractor, two Sponsoring States, a non-contracting State, and an NGO, regarding their interests and what they envision the ISA doing in 10 years. Following brief opening statements, the participants responded to questions regarding the capacities their stakeholder community needs from the ISA once extraction has started and what other stakeholders can contribute to support operationalizing the Mining Code.

Opening Comments

Jennifer Warren, Director of Regulatory Affairs, UK Seabed Resources, provided a commercial Contractor perspective. Regarding future expectations, Ms. Warren said that she is looking for commercially viable regulations and for the ISA to act as an arms-length regulator.

Xinmin Ma, Ministry of Foreign Affairs of China, provided a sponsoring State perspective. Mr. Ma noted that although the principle of the common heritage of mankind was first introduced in the 1960s, it remains a goal to be achieved. As a sponsoring State, China looks forward to a time when deep seabed mining in the Area is taking place and the ISA is performing the duties identified in UNCLOS. China is continuing to develop national laws, regulations, and administrative measures to support seabed activities. China has adopted a national law and is in the process of drafting regulations. China is working to improve the capacity of its national institutions to regulate and manage seabed activities, including enhanced supervisory and monitoring capacities. China is also working with contractors to ensure they are adopting the best environmental practices.

Paul Lynch, Cook Islands Seabed Minerals Authority, also provided a sponsoring State perspective, noted that he represents both a developing nation and a State that has its own mineral resources. He indicated developing nations can obtain economic benefits from DSM and it is important for them to stay engaged.

Joshua Tuhumwire, Gondwana Geoscience Consulting Ltd., Uganda, provided a non-contracting State perspective. He also is a member of the Legal and Technical Commission (LTC). Mr. Tuhumwire indicated Uganda has financial interests in deep seabed mining related to benefits from the royalties that are expected to accrue as mining begins. In addition, Uganda is interested in capacity building opportunities, and hopes that contracts will continue to include training. In the next 10 years, Uganda hopes that the ISA will continue to promote training and capacity building, build awareness of deep seabed mining activities in developing countries, establish the Mining Code, and begin mining.

Matt Gianni, Deep Sea Conservation Coalition (DSCC), provided an environmental NGO perspective. DSCC would like to see strong and precautionary environmental regulations, an open and transparent decision making process, a better understanding of science to inform the regulatory process, a long term view of potential environmental harm, an agreement to discuss biodiversity loss (if it occurs as a result of deep seabed mining), and a debate on the amount of loss that is permissible.

What capacities (and obligations) does my stakeholder community need from the ISA in the coming extraction era (from both a governance and regulatory perspective)?

Ms. Warren said that, as a contractor, she would like to see the ISA operationalizing the key principles of best regulatory practice outlined in Ms. Lily's presentation (see above). In addition, it will be important for the ISA to be impartial and avoid any conflicts of interest. She also indicated regulatory transparency is important for the contractor community, which means the ISA should be transparent in its rule-writing and decision-making. For example, it should be apparent why one set of comments is incorporated when others are not. Ms. Warren also suggested that, in 10 years, it would be helpful for the ISA to have separated its regulatory and political functions. Mr. Ma agreed with the importance of transparency around decision making, and suggested that international property rights and trade secrets would be important to protect. Mr. Gianni noted that for the NGO community, it will be important for the ISA to have clearly defined mechanisms that support transparency to build trust and help with enforcement. Mr. Tuhumwire agreed on the importance of transparency, particularly once mining commences. He suggested the ISA should publish results and revenues from mining. Mr. Tuhumwire added that workshops between Annual Sessions and side events also contribute to transparency.

From the perspective of a developing sponsoring State, Mr. Lynch noted that UNCLOS is unique because it preserves and maintains rights for nations that are land locked or developing; the Cook Islands would like to see those rights realized. He also stressed the importance of capacity building and the ISA's role in supporting capacity-building activities. He noted that the Cook Islands were disadvantaged when they were first approached about becoming a sponsoring State because they lacked the capacity required to fully engage in ISA matters. He said capacity-building activities that help parties understand the contracting and reporting processes are important for developing States and the ISA should continue to support these and other capacity-building activities into the future. Ms. Warren indicated it is also important to consider the ISA's internal capacity constraints. Once the Mining Code is implemented, the ISA will need to have staff available to address technical questions related to environmental, financial, and/or economic issues and respond in a timely manner.

Mr. Ma stressed the importance of having the ISA manage mineral resources in the Area on behalf of all mankind and that the common heritage of mankind will only be realized once mining begins. Strategic planning will be necessary and should include an in-depth study of market trends. The Mining Code

should support resource development, establish a legal framework for deep-sea mining, and support the improvement of ISA institutions and capacity.

What can other stakeholders contribute to support operationalizing the Exploitation Code?

Mr. Tuhumwire suggested organizations should continue to provide capacity-building trainings in developing countries. Mr. Lynch described some of the barriers developing nations face in participating in the ISA and DSM, such as the lack of technical and legal skills and funding to travel to international meetings and events. He echoed the call for capacity building to support developing States' participation in ISA meetings and deep-sea mining activities. He suggested contractors can support developing States' participation in the ISA through contributions such as human resources or skills training. Participating developing States can also help to engender political support for the work of the ISA.

Ms. Warren indicated that contractors and other parties should make contributions. She noted that contractors shoulder the responsibility to share environmental data available through exploration and that obligation will continue into the future. She suggested contractors should be engaged with the ISA as exploitation takes place, and inform the ISA of any exploitation-related developments. To support learning and transparency, contractors should make written contributions to support decision making, and those contributions should be a part of the public record so others can have access to and learn from any contributions. Mr. Gianni agreed that environmental data should be available to help build a collective understanding of biodiversity and the ecosystem. He also agreed that publishing written comments from stakeholders has been helpful to better understand their interests in the process.

Following comments from the roundtable presenters, participants shared their thoughts. One participant echoed the importance of transparency, particularly associated with an environmental impact assessment. Describing a recent process in New Zealand, the participant suggested that the ISA should ensure environmental impact assessment contents are made public, the public have an opportunity to submit comments, and a public hearing takes place; decision making on the environmental impact assessment can take place behind closed doors. Several panelists agreed that environmental impact assessments should be published, and a public comment period and hearing should take place.

In response to a participant comment regarding adaptive approaches to regulating exploitation and the potential tension with precautionary approaches, Mr. Gianni suggested there were opportunities to be adaptive and move forward incrementally that can help to establish and maintain trust among different parties. Ms. Warren recalled discussions from the March 2017 Berlin workshop, which included discussions about creating an incentive structure with rewards.

Small Group Discussions and Report Out

Small Group Discussions on the Envisioned Future of the ISA

In small groups, participants had the opportunity to engage in deeper conversations around three questions. In each case, the groups were asked to think about key governance and regulatory considerations as well as outstanding issues, opportunities, concerns, and next steps. Each group then reported on their discussions at the plenary level.

Question 1: What institutional capacities will the ISA require to effectively govern and regulate DSM exploitation?

Many comments, while recognizing the good work of the ISA thus far in the exploration phase, stressed the need for the entire organization and its stakeholders to shift their focus as the transition to the exploitation phase unfolds.

Participants suggested the following structural capacities will need to be enhanced and/or increased:
- In its role as an administrative body, the ISA will need to be able to quickly and efficiently address issues and questions from a range of stakeholders including contractors, sponsoring States, non-sponsoring States, and public stakeholders.
- Day-to-day efficiency of the ISA needs to be enhanced so stakeholders do not have to wait for extended periods of time before questions can be addressed. In part this could be resolved by expanding the expertise and decision-making capacity of individuals in the organization.
- A "dispute resolution" or "recourse" option for contractors and other stakeholders will be needed to build long-term support and confidence in the Authority.
- The inspectorate responsibilities of the ISA and how they will be met need to be defined – some felt separating inspectorate functions from regulatory functions would be essential to ongoing confidence in the Authority. A number of participants suggested the inspectorate be housed separately from the Secretariat.
- The Secretariat's ability to distribute the CHM benefits according to a formula is essential.

A major challenge related to creating an ISA with all of the necessary institutional capacities is securing adequate funding, especially during the transition from exploration to exploitation. The group suggested one pathway would be to ask for significant donations from developed States, however there may also be a need for additional bridge funding from other sources. Over the longer term, the goal is for all activities to be paid for by the royalties.

A number of groups talked about existing ISA organs and whether or not new organs should be considered to address existing challenges and assist in enhancing future needed capacities. One suggestion was to establish an ongoing review body with a mandate to assess progress and structural capacity. One table noted they did not see a need for any new bodies or organs other than those created by the Convention, though there is a need for all those bodies to come into effect. Another participant suggested that changing the basic structures of the ISA system would not be a good idea as it could serve as a disincentive to investment.

In considering the LTC, some participants suggested more capacity and perspectives need to be integrated into the organ. Given the range of issues the LTC is dealing with (i.e., legal, technical, and environmental), and its relationship to the Council, whereby much of what is produced by the LTC is anticipated to be supported by the Council, some suggested the additional capacity would be valuable. A number of people stressed the need for increasing transparency with respect to LTC inputs and outputs and opening as much as possible to the stakeholders, including as appropriate, meetings. One group suggested that in the future the LTC could be envisioned as a pool of experts who could be convened or accessed for information by the ISA (and others), as needed.

Other institutional capacities to be explored included:
- The need for rapid regulatory approval in a post-application process;
- Whether a pre-approval process could be envisioned and if so, whether it would require new expertise for the ISA;
- Finding ways to de-politicize decision making as much as possible;
- Adopting a clear mechanism to address transboundary concerns; and,
- Defining a clear path for new organs like the Enterprise.

One group shared their views on a possible ISA structure in 10 years, which would still include the Assembly, Secretariat, Council, and LTC. Several units to address exploitation-related responsibilities would fall under the Secretariat, including a Contract Management Unit (to manage contracts, collect revenue, inspect, and enforce), an Environmental Unit (to manage and assess data, and possibly to serve an inspection role as well), and an LTC Bureau (to support the LTC efforts). In describing the structural ideas, the following points of consideration emerged:

- Regarding the LTC, permanent support will be needed, including stipends for members – possibly akin to the International Law Commission for the UN.
- A number of the roles could be addressed through 3rd party contracts.
- The concept of an independent inspectorate is an interesting one worth exploring
- LTC members should be observers and not Delegation members, and should be funded by the ISA
- Developing countries should be supported to participate on the Council

Question 2: What challenges might the ISA face in transitioning? How would you envision those being addressed?

The group identified a number of possible challenges for the ISA and also some possible approaches to address them. A number of the comments were around the ISA structure and how, at present, it may not be best suited to the range of tasks needed given the overwhelming amount of work to be done (i.e., see latest draft of exploitation code). Specific challenges included ensuring that:

- Staffing for the Secretariat is adequate and consists of the right expertise;
- Adequate and appropriate amounts of flexibility are built into the system;
- Capacity building for members' engagement in the process is supported;
- Adequate financial support in the transition and the longer-term future is available;
- Effective decision-making processes are created and implemented as more and more actions come under the Secretariat's responsibilities;
- Sufficient time is available for the parties to meet given the number of decisions and amount of work to be completed (i.e., meeting only one time a year seems insufficient); and
- The LTC is able to adequately complete the work they are being asked to undertake.

Specific suggestions to begin to address these challenges included:

- Develop a "road map" or strategic plan with specifics for each ISA organ;
- Modify how and when the LTC works, including possibly adding funding or technical support, in relation to the other ISA organs; and
- Explore setting up additional ISA organs to support efforts (e.g., an environmental committee) and consider outsourcing tasks to bring in new information/ideas.

A number of issues related to transparency, including the perceived lack of transparency by some, were raised. While there are many views on transparency, many participants suggested sharing decision-making criteria and when/how information is shared would be useful. It was suggested that identifying ways to implement effective stakeholder involvement processes, and ensuring the ISA considers the input and responds in timely manner would be a significant benefit. Some specific thoughts included:

- Given the geographic and associated cost challenges, it is unlikely 'local' meetings would be convened, however the ISA needs to provide people a chance to offer their perspectives in order to increase the likelihood of getting good decisions that are supported and implementable;
- Enhancing stakeholder involvement while minimizing costs could be addressed by making States responsible for disseminating information to their constituents and receiving feedback; and

- Communication between the ISA and stakeholders needs to be timely; a possible way to assist would be to have a liaison at the ISA that member States could engage with directly.

Other challenges suggested included:
- Defining how the Inspectorate would function and how it would interface with other ISA organs;
- Appropriately splitting monitoring between different entities and financing those efforts;
- Ensuring the right expertise and advice is conveyed to decision makers in a timely manner;
- Addressing data issues including the lack of an official record of contractors who are putting data into the system;
- Ensuring robust environmental regulations that guarantee effective protection are drafted while also identifying adequate penalties for non-compliance; and
- Encouraging collaboration among contractors so that they can share information and invest together.

Question 3: What can be learned from other experiences in other jurisdictions?

As evidenced from earlier conversations during the workshop, taking lessons from other jurisdictions' experiences is challenging given the limited set of similar institutions with the same characteristics. Still, some examples or experiences were identified:
- In Canada, when thinking about the inspectorate function for oil and gas, there is a clear separation from regulatory body and the royalty collection body. It was suggested that the independence of an inspectorate body is essential but will be difficult for the ISA to effectuate in practice.
- One table noted that Tonga's experience, though related to a domestic regime, indicated effective coordination among all stakeholders is a key consideration. They also drew on resources such as the Secretariat of the Pacific Community.
- There may be some valuable, transferrable lessons from land mining experiences regarding different aspects of the exploitation system, however, it is also important to recognize there are inherent differences.

Some individuals discussed their concerns about transparency and the approaches other organizations take that increase transparency and stakeholder engagement, while not necessarily driving up costs significantly. In particular, the International Maritime Organization's (a UN-organization) efforts to convene parties around the London Convention (marine pollution) were cited as an example of a way to increase transparency without expending significant resources. Others spoke about the need for the ISA to increase its capacity to notify people about meetings and documents, open the meetings, take account of input received from stakeholders, and report on responses to comments. Another specific suggestion was utilization of internet-based correspondence groups where intercessional correspondence groups' efforts could be fed into the ISA process. Some noted that the ISA has been sharing a lot of information, including key documents associated with the ongoing Exploitation Code development and asking for feedback, though the mechanism for how that feedback is considered could be clearer.

Open Plenary Discussion
The workshop concluded with an open discussion reflecting on themes and issues emerging from the day's conversations and ways they could be addressed through ongoing developments.

ISA Structure: Considering the responsibilities the ISA will shoulder as mining begins and the issues that will come up, participants shared ideas regarding its structure:

- A standalone Environment Committee could be an effective approach to addressing environmental issues. While some supported this idea, others wondered whether and how it would fit into the ISA structure as defined by UNCLOS.
- The ISA Secretariat could have a unit focused on research and the environment.
- The LTC currently has a large amount of work to do, which will likely continue to increase. Subgroups focused separately on legal, technical, and environmental issues could create a structure that allows the group to specialize and work efficiently.
- Member State engagement has been an effective means for initiatives and progress in other international organizations. There may be value in exploring tools to increase engagement and encourage Member State initiated activity, such as correspondence groups.

Transparency: Throughout the workshop, transparency emerged as an important issue. Many participants suggested increased transparency will be necessary, and will continue to be so as mining in the Area gets underway. A more interactive, accessible process would help improve transparency. Several opportunities to increase accessibility were suggested, including:

- Provide opportunities for remote observation of meetings and use webinars to allow for more engagement;
- Create online spaces for consultations and dialogue focused on issues people want to learn more about;
- Set up correspondence groups, which can be accessible to more places, and encourages people to put ideas down in writing so others can comment; and
- Consider a model used in the International Maritime Organization, in which participants submit comments six weeks in advance of in-person engagements; other participants have the opportunity to review those submissions and comment on them. Thus, when parties meet in person, online engagement and exchange around issues has already taken place, and there is a presentation and discussion of the exchange.

Financing: Currently the ISA is financed by Member States and contractors, and eventually it will be fully financed by mining royalties. The ISA needs increased funding to develop the capacities that will allow it to fulfill its responsibilities as mining operations in the Area begin. However, a gap exists between the funding available through current financing options and what is required to increase its capacity. Participants discussed options for addressing that funding gap, including increased contributions from contractors or member States, philanthropy funding, or special contributions from developed nations. One participant suggested that increased communication around funding needs and positive benefits of well-funded ISA could help to identify a path forward.

Information Sharing and Learning: There may be information gathered from seabed mining in national jurisdictions (related to technologies, science, or policies and regulations) that can be transferred to the international ISA context. Small scale technology tests at the national level may also be an approach to increase learning and help to reduce uncertainties before larger scale mining operations begin in the Area. In addition to the research conducted by contractors, there are other parties conducting research relevant to deep seabed mining. The ISA should explore opportunities to bring in and build on the learnings from this external research.

The workshop concluded with a word of thanks from Secretary General Michael Lodge, who appreciated the thinking and discussion from a broad group of stakeholders on these important issues.

Appendix A: Workshop Participation

First Name	Last Name	Affiliation
Dorca	Achapa	Legal consultant, ISA LTC Member
Caitlyn	Antrim	Rule of Law Committee for the Oceans
David	Billett	Deep Seas Environmental Solutions, Ltd
Maya	Breitburg-Smith	RESOLVE
Winifred	Broadbelt	The Netherlands Ministry of Infrastructure and the Environment
Chris	Brown	International Seabed Authority Secretariat
Georgy	Cherkashov	VNIIOkeangeologia, ISA LTC Member
Yean Khow	Chow	National University of Singapore
Sabine	Christiansen	Institute for Advanced Sustainability Studies
Gemma	Couzens	New Zealand Ministry for the Environment
Duncan	Currie	Deep Sea Conservation Coalition
Laleta	Davis Mattis	University of the West Indies
Paul	De Morgan	RESOLVE
Kaiser	De Souza	African Mineral Development Center
Tom	De Wachter	DEME Group
Edwin	Egede	Cardiff University
Tebete	England	Kiribati Ministry of Fisheries and Marine Resources Development
Ana	Fekau	United Nations Tonga Mission in New York
Marwan	Francis	Permanent Mission of Lebanon to the United Nations
Andrew	Friedman	The Pew Charitable Trusts
Carlos	Garcia-Soto	Instituto Español de Oceanografía
Amy	Gartman	US Geological Survey USGC
Matthew	Gianni	Deep Sea Conservation Coalition
Kristina	Gjerde	IUCN
Dave	Gravallese	U.S. Department of State
Lowri Mai	Griffiths	U.K. Foreign and Commonwealth Office
Arlo	Hemphill	I am Wilderness, LLC
Michael	Henry	Cook Islands Investment Corporation
Chen	Jianzhong	Ministry of Foreign Affairs of China
Jing	Chen	Ministry of Foreign Affairs of China
Thembile	Joyini	DIRCO, ISA LTC Member
Megan	Jungwiwattanaporn	The Pew Charitable Trusts
Lara Zalena	Kamal	Ocean Mineral Singapore
Naohisa	Kanda	JANUS
John	Khoo	Permanent Mission of Singapore to the United Nations
Masaomi	Kurihara	JOGMEC
Duncan	Laki	Permanent Mission of Uganda to the United Nations
Graham	Leung	Nauru Government
Chivy	Li	Singapore Government

First Name	Last Name	Affiliation
Hannah	Lily	Commonwealth Secretariat
Feng	Liu	COMRA
Michael	Lodge	International Seabed Authority Secretary-General
Paul	Lynch	Cook Islands Seabed Minerals Authority
Xinmin	Ma	Ministry of Foreign Affairs of China
Corey	McLachlan	NORI
Aziz	Merchant	Ocean Mineral Singapore
Eugenio	Muianga	National Institute for Sea and Borders, Mozambique
Sandor	Mulsow	International Seabed Authority Secretariat
Kazuya	Naito	JOGMEC
Kate	Neilson	New Zealand Permanent Mission to the United Nations
Conn	Nugent	The Pew Charitable Trusts
Greg	O'Brien	U.S. Department of State
Kenneth A	Oye	Massachusetts Institute of Technology
John	Parianos	Nautilus Minerals
Dan	Pomeroy	Massachusetts Institute of Technology
Mehdi	Remaoun	Permanent Mission of Algeria to the United Nations
Winnie	Roberts	The Pew Charitable Trusts
Samantha	Smith	Blue Globe Solutions
Vika	Soakai	Permanent Mission of Tonga to the United Nations
Tomoko	Tauchi	DORD
Paul	Taumoepeau	Tonga Offshore Mining Limited
Ye Minn	Thein	Member of ISA Finance Committee, Myanmar
Torsten	Thiele	Global Ocean Trust
Joshua T	Tuhumwire	Gondwana Geoscience Consulting Ltd.
Philomene	Verlaan	Sargasso Sea Commission
Simon	Walmsley	WWF-International
Wang	Rong	Ocean Mineral Singapore
Jennifer	Warren	UK Seabed Resources
Gavin	Watson	UK Foreign & Commonwealth Office
Daniel	Wilde	Commonwealth Secretariat
Christopher	Williams	UK Seabed Resources
Kenneth	Wong	Department of Foreign Affairs, Trade and Development, Canada
Zhuo	Xiaojun	China Minmetals Corporation