

31 March 2024

# Report

DOSI participation in the First Council meeting of the 28th session of the ISA

## Overview

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The twenty-ninth session of the Council (Part I) was held in Kingston, Jamaica from 17 March to 29 March 2024. DOSI participated in person and was supported by a team of experts who participated online.

Items on the agenda of this ISA Council session with particular relevance for DOSI included:

- Negotiations of the President's consolidated text of the Regulations, in particular those concerning the Protection and Preservation of the Marine Environment
- Negotiations regarding the Environmental Impact Assessment process
- Negotiations regarding Test mining
- Negotiations regarding Regional Environmental Management and Monitoring plans and
- The report of the chair of the Legal and Technical Commission

## DOSI Delegation participating in person

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Patricia Esquete (head of delegation)  
Beth Orcutt  
Catherine Blanchard  
Samantha Robb

## DOSI Minerals WG experts supporting other delegations

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Matt Gianni (Deep-Sea Conservation Coalition)  
Pradeep Singh (IUCN)  
Bobbi-Jo Dobush (The Ocean Foundation)  
Sabine Gollner (Netherlands)  
Danielle de Jonge (United Kingdom)

## DOSI Minerals WG experts supporting virtually

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Catherine Blanchard  
Lisa Levin  
Beth Orcutt  
Hannah Lily  
Anna Metaxas

Kirsten Kroeger  
Verena Tunnicliffe  
Aline Jaeckel

## DOSI Actions

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### 1. Information sheets and Policy briefs

DOSI prepared, printed, and distributed copies of the documents:

- [What Do Deep-Ocean Ecosystems Do for You? Polymetallic Nodule-Rich Abyssal Plains](#)
- [What Do Deep-Ocean Ecosystems Do for You? Hydrothermal Vents](#)

### 2. Interventions and textual proposals

DOSI actively intervened in the discussions by delivering a total of 11 interventions (Annex I), that included scientific and expert opinions on how to ensure high environmental standards and the reflection of independent and robust science in the regulations.

The interventions delivered can be found on the [ISA website](#) as well as in the enclosed appendix (Annex I).

Our work was mentioned in interventions or we had our interventions supported by other delegations.

### 3. Hosting side event

DOSI hosted a side event on the evening of 20 March 2024 at the Pegasus Hotel, entitled '*What does the deep ocean do for you*' (Annex II). The event started with a welcome reception, followed by three presentations, a Q&A, and concluded with a social reception so that interested parties could further discuss the presentations.

Our three speakers and their presentations were:

- Dr Patricia Esquete, University of Aveiro, Portugal
  - Title: *Polymetallic Nodule-rich abyssal plains and the water column above*
- Dr Sabine Gollner, Royal Netherlands Institute for Sea Research (NIOZ)
  - Title: *Hydrothermal vent ecosystems*
- Dr Beth Orcutt, Bigelow Laboratory for Ocean Sciences
  - Title: *Ecosystem services provided by deep-sea microscopic life, and what we know about indicators and thresholds of harm*

The event was well attended, with about 70 people attending, ranging from various Nations and observer delegations.

### Attendance at side events

DOSI attended four side events held during the session hosted by Germany, Nauru Ocean Resources Inc (NORI), Greenpeace and The Ocean Foundation, Blue Climate Initiative, and Sustainable Oceans Alliance.

1. The right to Protests, protest at sea and deep-sea mining - Greenpeace

2. Update of activities in NORI Area - Nauru Ocean Resources Inc (NORI)
3. Environmental Externalities - Germany
4. An update on EV battery trends, recycling, and the economics of DSM, and their implications for DSM policy - The Ocean Foundation, Blue Climate Initiative and Sustainable Oceans Alliance.

DOSI asked pertinent questions during the Q&A of these events, and Members of the Council often followed up on these questions at a later stage, regarding deep-sea biodiversity, ecosystem functions and services, and potential ecological impacts of deep-sea mining.

#### 4. Informal meetings held with other delegations

Several informal meetings and conversations were held with various State delegations, including Canada, Chile, Costa Rica, Belgium, The Netherlands, Portugal, Spain, Switzerland, The United Kingdom, and the United States of America. These included topics such as aspects on marine ecosystems including the conservation tools for the protection of the marine environment, scientific language and terms and its use in the regulations, ecosystem functions and services, biodiversity in abyssal plains, mitigation hierarchy, stakeholder participation, discussion about cumulative and more generally mining impacts in the deep sea, as well as DOSI's mission. In addition, DOSI had informal meetings with other Observers (Deep Sea Conservation Coalition, Greenpeace, Pew Charitable Trust, AIDA, Oceans North, The Ocean Foundation) to discuss the course of the negotiations, share ideas, and coordinate interventions where possible. DOSI also held informal conversations with members of the Secretariat seeking further engagement coordination in upcoming ISA workshops.

Meetings were on several occasions followed up by providing additional information, including DOSI policy briefs and information sheets, and scientific articles.

#### 5. Press

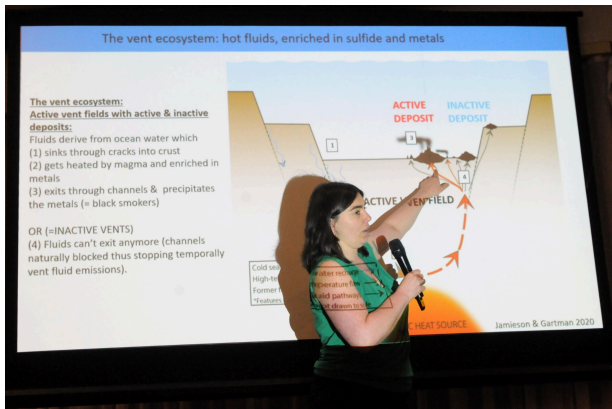
Samantha Robb was interviewed by CNNi

# Gallery

Source: Photos by IISD/ENB













## ANNEX I. Interventions

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### **OEWG Finance - Environmental externalities / DR64bis + DR64ter - delivered 20 March 2024 by Beth Orcutt**

Thank you Mr Facilitator. As this is the first time that the Deep-Ocean Stewardship Initiative – DOSI – takes the floor in the 29th Session of Council, please allow us to express our gratitude to our hosts in Jamaica, and to all delegations for your hard work since the last session. DOSI would also like to express sincere thanks to the German delegation for their concept paper and side-event on environmental externalities, and to all involved in the reports and discussion on this topic.

DOSI welcomes these very important discussions about how ecosystem services are valued and included as external costs. This is essential for evaluating the value of deep sea mining, as well as how it compares to terrestrial mining, as raised by others earlier in this discussion. While we are aware of one technical report suggesting that deep sea mining is more environmentally friendly compared to terrestrial mining, we caution that there is not a scientifically-grounded consensus view of this, considering the major knowledge gaps that remain about the value of the deep sea and the challenges of comparing such different environments for impacts.

DOSI notes that calculation of ecosystem services and their value is challenging at best, in a system where a majority of the species remain undescribed and their ecological functions are mostly unknown. At a minimum, ecosystem services estimation will require robust environmental baseline data from Environmental Impact Assessments, as well as monitoring and verification data. These calculations also require definitions of permissible harm thresholds to these services. DOSI also notes that the Brander report on ecosystem services valuation highlighted major gaps in valuation efforts due to missing baseline information. For example, to date, not a single valuation has been conducted for the CCZ. DOSI agrees about the existence of these major knowledge gaps, which underpins the consistent view of DOSI that there is currently insufficient publicly available knowledge to ensure effective protection of the marine environment. Thus, DOSI thinks that proposed DR64 additions to reference to “best available science” cannot be operationalized at this time.

If the proposal is to address environmental externalities using the policy instrument of an equalization measure or environmental tax, as opposed to other instruments such as direct regulation or tradeable permits, as Dr. Brander discussed this morning, DOSI cautions that this instrument may create a false incentive that raised revenue could be used to fund mitigation strategies. To date, there is no publicly available scientific data to suggest that restoration or offsetting are viable mitigation strategies to address impacts in the deep sea. Thus, DOSI cautions Council that this policy instrument of an environmental tax may not be the preferred method to ensure effective protection of the Marine Environment.

Regardless of the policy instrument chosen, DOSI nevertheless agrees with developing valuation for ecosystem services. DOSI supports that these values should be re-evaluated over time, and not only considered when setting the exploitation contract based on the EIA related to the Plan of Work application. DOSI however seeks clarification as to the timing of such re-evaluations, and if independent experts would be used to evaluate the monitoring data and valuation assessments. DOSI also asks if the Council would consider suspending a contract if monitoring data shows that a detrimental change in ecosystem service valuation would negate the value coming from sale of mineral resources.

DOSI reminds the Council that the three ecosystem services identified in the Brander report and proposed DR46 additions for initial focus are not exhaustive, as there are many other ecosystem services with value. For example, there are provisioning services related to fisheries, nutrient cycling as a supporting service, and habitat supporting services that have been suggested to have high value. Therefore, DOSI encourages Council to define how and when additional ecosystem services would be valued. We also caution that combining carbon emissions and carbon sequestration into one topic confuses that carbon emissions are a potential direct negative impact while carbon sequestration is a beneficial service that could be lost. We suggest rewording this provision to make the distinction clear.

Finally, DOSI would like to take this opportunity to invite all delegates to a complementary discussion, which will take place tonight, starting at 7pm, at the Pegasus' Talk of the Town Room on the topic of "What Does the Deep Ocean Do For You?". We will provide some information about valuing ecosystem services, which is relevant to the topic under discussion.

Thank you.

#### **DR2 - Principles, approaches and policies - delivered 20 March 2024 by Beth Orcutt**

Thank you, Mr. President. Regarding DR2, DOSI supports the statements of many delegations in questioning moving elements and version of paragraph 3 into the suspense document. DOSI believes that references that Exploitation of mineral resources in the Area will not begin until the legal framework is adopted – underpinned by scientific evidence demonstrating effective protection of the Marine Environment, and with robust Standards and Guidelines – is an essential principle and policy relevant to this draft regulation. Without scientific evidence supporting proof of protection of the marine environment, we believe that exploitation would not be compliant with Article 145 of UNCLOS. Thank you, Mr President.

#### **DR4 - Rights [and legitimate interests] of coastal states - Delivered by Patricia Esquete on 21/03/2024**

Thank you, Mr. President.

In paragraph 2, DOSI does not support the proposed deletion of the additional potential harmful effects. Those proposed effects, namely interference with ecological balance, including ecosystem structure, function and resilience, are in line with modern scientific understanding of



the functioning of a healthy Marine Environment. Indeed, building on the language of article 145 by including a direct reference to ecosystem structure, function and resilience shows comprehensive language that depicts the current state of scientific knowledge and enables the use of more current management tools to ensure effective protection of the marine environment. Thank you, Mr. President.

**DR11 - Publication and review of the Environmental Plans and Environmental Management Systems - Delivered by Patricia Esquete on 21/03/2024**

Thank you Mr president and congratulations on your election.

DOSI supports retaining paragraph 1(c) and also paragraph 6, with the amendment as proposed by other delegations from 'may' to shall. As deep-sea environmental scientists, we know how time-intensive proper review of environmental documents is and how many different expertises are required. Consultation with a broad range of independent experts will ensure greater quality control and consistency across reviews. We thank the delegation of Brazil for highlighting the recent example of the environmental thresholds working group, where the LTC has reached out to an additional 30 experts. DOSI is ready to support the ISA in accessing global scientific collective expertise that could assist with these tasks.

Thank you Mr President

**DR13 / DR13 Alt - Assessment of applications - Delivered on 25/03/2024 by Samantha Robb**

Thank you, Mr President.

We are grateful to DSCC for raising those important points about biodiversity protection.

DOSI supports DR13 Alt over DR13. Specifically, DOSI notes that paragraph 9 promotes scientific certainty and emphasizes how crucial it is for the LTC to understand any scientific uncertainties associated with a proposed Plan of Work. Based on the LTC's assessment and recommendation, the Council will have to decide if a Plan of Work has enough information to be approved. Where there is insufficient data confidence, the application should be rejected. Where there is sufficient data confidence but remaining uncertainties, the LTC should be satisfied that the Contractor's plan of work adequately indicates mitigation measures that will be taken to reduce risk of harm to as low as reasonably practicable. This informed and cautious approach is in line with precaution and the sufficient information requirement. In this regard, DOSI suggests explicitly inserting the sufficient information requirement into paragraph 9(c)(i) of DR13 Alt so that the sentence will read "it is based on sufficient information and adequate environmental data..." The sufficient information requirement in this context ensures informed decisions about the respective environment and environmental objectives for a particular site. The ISA manages activities in the Area on behalf of humankind as a whole and should prevent activities when there is not sufficient information to quantify risks and impacts.

In addition, DOSI strongly supports the reference to climate change in para 9(a) of DR13 Alt. Climate change is likely to alter conditions during the period of an exploitation contract by, for example, contributing additional stressors to the ecosystem. For example, consideration is required of how the impacts of climate change may affect oceanographic currents and sound propagation, changes distribution of planktonic and mobile species populations in and above contract areas, or how climate change may exacerbate the effects of mining as these impacts are not necessarily additive, but can be multiplicative. Thus, the consideration of the impact of climate change is vital and should apply. All plans and practices including impact monitoring should take this into account and update accordingly.

Lastly, in paragraph 9(a) of DR13Alt, DOSI notes and strongly supports the cross-reference to DR 44ter. Without having clear strategic environmental goals and objectives, the LTC cannot adequately assess if an application ensures effective environmental protection. Similarly, without defined environmental goals and objectives, scientific experts working within ISA working groups cannot fulfill their tasks effectively. It is essential for experts to know what the policy parameters are for them to contribute meaningful inputs towards them.

Thank you.

**DR15: Commission's recommendation for the approval or disapproval of a Plan of Work - Delivered by Samantha Robb on 25/03/2024**

Thank you, Mr President

DOSI supports Germany on the inclusion of the sufficient information requirement into Draft Regulation 15.

On paragraph 2(a), DOSI strongly supports the inclusion of the phrase in the second set of square brackets referring to the LTC not recommending approval of a Plan of Work where there is scientific uncertainty or inadequate information. DOSI also suggests an amendment to this wording so that it reads "...including because of scientific uncertainty, inadequate information, or insufficient information."

On paragraph 2(c), DOSI strongly supports the inclusion of the reference to Draft Regulation 44ter and REMPs. These submissions are in line with our earlier intervention on paragraph 9(c) of DR13 Alt.

Thank you.

**REMP Guiding questions:**

**(a) How should the Contractors' Environmental Management and Monitoring Plan and Environmental Management System be coordinated with the relevant REMP? - Delivered by Patricia Esquete on 27/03/2024**

Thank you, Madam Facilitator

From a scientific perspective, it is essential that contractors take into account the relevant REMP when designing their EMMP. We have already made an intervention this session, seeking to point out how hard it is to take scientific decisions aimed toward the 'effective protection of the marine environment' without policy direction from the ISA that clarifies how that legal duty should be operationalised. The same point applies here. The EMMP is the essential part of a contract for setting limits on what environmental impacts a contractor is permitted or prohibited from causing. REMPs are an essential method for the ISA to set a policy framework and strategic and regional objectives that will govern the content of the EMMP.

In particular, the REMP should inform contractor decisions about location, size and habitat composition of their Preservation Reference Zones (or PRZs). As Council members will be aware, PRZs are control sites that serve an important purpose in the monitoring regime to show baseline conditions that can be compared with Impact Reference Zones (or IRZs) to help monitor and measure the impacts caused by mining. But PRZs can also serve an additional function: they can provide stepping stones, allowing faunal communities from one preservation zone to travel to another preservation zone. This serves to supplement other no-mining areas established by the ISA like the Areas of Particular Environmental Interest (APEIs) implemented in the CCZ REMP. For this to be effective, the size, location and configuration of the PRZs must take into account the REMP and the measures that the REMP puts in place. For the same reason, the EMMP should take into account not only the temporal variability of the environmental conditions and faunal communities within contract areas but also that of the areas protected by the REMP. This would contribute to guaranteeing the effectiveness of the REMP by assisting with ensuring connectivity between protected areas and throughout the region.

**(b) How can legal consequences be imposed on the basis of REMPs, in particular concerning exploitation activities ? - Delivered by Samantha Robb on 27/03/2024**

Thank you, Madam Facilitator

We apologise for taking the floor again, but following others, DOSI would also like to provide its brief comments on question (b) of the REMP guiding questions.

While DOSI does not wish to suggest the particular modalities for how to give REMPs legal effect, we want to make a comment to support the idea that some aspects of a REMP's content do need legal backing, given their importance for protecting the marine environment from the harmful effects of activities in the Area.

For example, the Clarion Clipperton Zone REMP designates a series of Areas of Particular Environmental Interest (or APEIs) which should not be mined or affected by mining impacts. As Council members are aware, there are also other REMPs currently being drafted that contain similar spatial management tools. The CCZ REMP, however, does not in itself ensure that APEIs will remain untouched and so another measure from the Council would be required to ensure this. Currently, we are aware that there is a Council decision that the APEIs should not be impacted, but we understand that this is only a temporary measure. Recognising APEIs, and other area-based management tools that may be designated under future REMPs, in the Regulations, and specifying the terms of their protected status, would give them the clear, enforceable and long-term effect that is required for the ISA to see APEIs and any future area-based management tools deliver on their environmental objectives in a meaningful way. We therefore consider it sensible that the Regulations would recognise such measures and set legally binding obligations upon both contractors and ISA organs to ensure protected areas are indeed protected.

Thank you.

**DR46 - Environmental Impact Assessment Process - delivered by Patricia Esquete on 27/03/2024**

Thank you, Madam facilitator,

We also welcome the progress made in streamlining the EIA process sections of the regulations.

DOSI notes that in para 3(a) of draft regulation 46, our suggestion to include relevant and sufficient environmental baseline data is not reflected in the Consolidated Text. We want to support Germany and Switzerland and reiterate, as we said in the previous session, that the sufficient information requirement in this context is necessary for informed decisions about the respective environment and environmental objectives for a particular site. The ISA manages activities in the Area on behalf of humankind as a whole and should prevent activities when there is not sufficient information to quantify risks and impacts.

Also, as scientists, we would like to support Micronesia in his statement on the incorporation of traditional knowledge.

We will submit further comments in written form

Thank you

**DR 48ter - Test mining - Delivered by Patricia Esquete on 27/03/2024**

Thank you Madam facilitator,

DOSI supports the requirement of test mining prior to the approval of a plan of work. Test mining is an opportunity to evaluate mining machinery and operations, but also, importantly, to better understand the potential impacts on the environment. The current gaps in our scientific knowledge regarding biodiversity loss, ecosystem recovery rates, and thresholds on ecosystem services, to take just a few examples, mean it is difficult to properly evaluate potential mining impacts. Without test-mining, the data upon which an application for mining will be based will largely come from predictive models and small-scale experiments - and this gives a higher degree of uncertainty to the predictions about likely impacts from mining.

The data collected during test mining would be valuable for a better understanding of the potential levels of environmental harm to be incurred, the potential resilience to mining impacts, including via the improvement of models.

In addition, it is important to remember that test mining is a mining activity in itself, and therefore has an impact on the marine environment. Accordingly, when test mining is conducted it should always be subject to an Environmental Impact Assessment, even though it is also used to inform the Environmental Impact Assessment for the application for a Plan of Work, as well as subsequent long-term monitoring plans.

We caution, however, that long-term impacts of mining such as the presence or abundance of nodule-dependent faunas, and the recovery of natural sediment habitats - among other currently unknown impacts - will not be apparent on test mining timescales. The effects of the test mining will also be long lasting and therefore monitoring should be maintained throughout the duration of the activity, to continuously inform on the long-term effects on the marine environment and recovery of the ecosystem. A validation monitoring system shall be established by the contractor, which should include monitoring of the long-lasting effects of test-mining

DOSI raises concerns on paragraph 4 of DR48 ter, which suggests that test mining does not have to be included in every project. The impacts of an activity on the marine environment can only be fully assessed after a test of the whole mining system including all technology on a full scale. Mining tests performed without a complete system and full scale of the collector, rising system, and other machinery do not allow us to accurately assess the possible impacts of the marine environment of mining activities. Such impacts are assessed for both the seafloor and the water column, from microbes to large animals. Without such thorough methods, the data collected is not reliable. Results from other studies or smaller-scale tests are not reliable.

Thank you

**Report of the LTC - Delivered by Patricia Esquete on 28/03/2024**

Thank you. Mr President

DOSI welcomes the LTC chair's report ISBA/29/C/7.



Regarding Part B on development of environmental thresholds, DOSI welcomes the update that the intersessional expert groups have convened, that two intersessional expert sessions have been held since the last Council meeting, and that there will be an in-person meeting of the three groups together. DOSI would like to request publication of the updated Terms of Reference for the IEGs in regards to an expected timeline of work. We encourage sufficient time to be allowed for careful and thorough work on these thresholds. More importantly, we would like to remind the council and stress that, without clear environmental goals and objectives, and in absence of sufficient data, it will not be possible for the experts to fulfill their task effectively, as setting thresholds for allowable harm requires these definitions as baselines.

Further, DOSI wants to stress the importance of holding a transparent and inclusive process, especially since each expert group only has 10 members that may not have the full diversity of expertise that is needed, as DOSI has commented on previously. This should include publication of all information on which the draft document is based, and the draft document itself, to the ISA website, holding stakeholder engagements during the development process to share progress and seek input, and holding stakeholder consultations on the draft document, before final approval is suggested. This will ensure proficiency of the final product.

Regarding Part C, DOSI welcomes the update on the development of a standardized procedure for the development, establishment and review of regional environmental management plans (or REMPs). We emphasise that the standardized procedure for the development, approval and review of REMPs and the REMP template should be agreed and applied **prior** to developing a REMP for any area, to ensure consistency between REMPs of different areas. Without an adopted document which provides guidance on REMP development, and that sets guiding principles and overarching goals, scientific experts working with the LTC to develop REMPs in various regions cannot fulfill their tasks effectively. It is essential for experts to know what the policy parameters of the REMPs should be for them to contribute meaningful inputs towards them.

Finally, DOSI welcomes the Data Management Strategic Workplan linked in the LTC chair's report, and the associated revised reporting templates for contractors to use for providing data in their annual reports. Regarding the strategic workplan, we applaud the progress made, and would like to make suggestions for further improving the way forward: We suggest integrating the data with global observing efforts, and the adoption of best practices, interoperability, and accessibility. The implementation of data standards such as Darwin Core and unique data identifiers throughout the system, (in both the template for the contractors and the DeepData database) will ensure findability and interoperability. In addition, and importantly, we suggest implementing a data quality control system to ensure reliability and accuracy of the data provided by contractors and made available through the platform.

# What Does the Deep Ocean Do for You?

Talk of the Town Room,  
The Jamaica Pegasus Hotel, 81 Knutsford Blvd

20 March 2024

7:00pm drinks and hors d'oeuvres served  
7:30 - 9:30pm presentations and Q&A



**Dr. Patricia Esquete**

University of Aveiro

*Polymetallic Nodule-rich Abyssal  
Plains and the Water Column*



**Dr. Sabine Gollner**

Royal Netherlands Institute for Sea  
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