



WORKSHOP ON THE DEVELOPMENT OF A REGIONAL ENVIRONMENTAL MANAGEMENT PLAN FOR THE AREA OF THE NORTHERN MID-ATLANTIC RIDGE WITH A FOCUS ON POLYMETALLIC SULPHIDE DEPOSITS

23 November - 4 December 2020; Online

ANNOTATIONS TO THE PROVISIONAL AGENDA

INTRODUCTION

1. In accordance with the UN Convention on the Law of the Sea (“the Convention”) and 1994 Agreement relating to the implementation of Part XI of the Convention, the International Seabed Authority (ISA), on behalf of the States Parties to the Convention, is mandated to administer the mineral resources in the Area and to control and organize current exploration activities, as well as future mining activities, in the Area for the benefit of humankind as a whole. The Authority is also mandated to take necessary measures with respect to activities in the Area to ensure effective protection of the marine environment from harmful effects and to adopt appropriate rules, regulations and procedures for, *inter alia*, the prevention, reduction and control of pollution and other hazards to the marine environment, the protection and conservation of the natural resources of the Area, and the prevention of damage to the flora and fauna of the marine environment.¹

2. In pursuance of this mandate, the Council, during its seventeenth session in 2012, on the basis of the recommendation of the Legal and Technical Commission, approved an Environmental Management Plan (EMP) for the Clarion-Clipperton Zone (CCZ).² This included the designation of a network of nine “Areas of Particular Environmental Interest” (APEIs).

3. At its twenty-fourth session, in March 2018, the Council took note of a preliminary strategy proposed by the Secretary-General for the development of REMPs for key provinces where exploration activities under contracts are carried out.³ The Council agreed with the priority areas that had been identified on a preliminary basis as the Mid-Atlantic Ridge, the Indian Ocean triple junction ridge and nodule-bearing province, as well as the North-West Pacific and South Atlantic for seamounts. The Council also noted that the preliminary strategy laid out a coherent and coordinated approach to the process and identified as essential that REMPs be developed in a transparent manner under the auspices of the Authority, in light of its jurisdiction under the Convention and the Agreement relating to the implementation of Part XI of the Convention.⁴

4. As noted by the Council, the implementation of this

¹ United Nations Convention on the Law of the Sea, art.145.

² See ISBA/17/LTC/7; ISBA/17/C/19 and ISBA/18/C/22.

³ See ISBA/24/C/3.

⁴ ISBA/24/C/8, para 10.

preliminary strategy has started with the organization of two workshops, including the one organized in Szczecin, Poland, in June 2018, which addressed the developing a framework of a REMP for Polymetallic Sulphide Deposits on Mid-Ocean Ridges. The report of this workshop is available at <https://isa.org.jm/files/files/documents/ts22.pdf>.

5. Building on the experience of the environmental management plan for the CCZ and initiatives taken for other regions, the development of REMPs became an essential element of the strategic plan for the period 2019–2023⁵ adopted by the Assembly in 2018 and, subsequently, a central part of the high-level action plan⁶ adopted by the Assembly in 2019. Strategic direction 3.2 of the high-level action plan provides that the Authority is to “develop, implement and keep under review regional environmental assessments and management plans for all mineral provinces in the Area where exploration or exploitation is taking place to ensure sufficient protection of the marine environment as required by, *inter alia*, Article 145 and Part XII of the Convention”.

6. At the twenty-fifth session, the Council took note of and welcomed a report of the Secretary General⁷ on the implementation of the preliminary strategy, including a programme of work to develop REMPs through a series of workshops planned during 2019 and 2020 to undertake scientific synthesis and prepare draft elements for inclusion in the REMPs.

7. To support the organization of these workshops, the secretariat prepared a guidance to facilitate the development of regional environmental management plans, which clarified the roles and responsibilities of ISA organs, as set out in the Convention, the Agreement and the rules, regulations and procedures of the Authority. The guidance also identifies the key scientific and technical approaches for spatial planning and area-based management. As requested by the Council in its decision ISBA/26/C/10, steps are being undertaken by the Legal and Technical Commission to further develop this guidance document.

8. In parallel with this development, in 2019, two expert workshops were convened, on deep sea biodiversity of the CCZ and the development of a REMP for the Area of the Northern Mid-Atlantic Ridge. The results of these two workshops were discussed by the Legal and Technical Commission at its twenty-sixth session and form the basis for the ongoing review of the environmental management plan for the CCZ, as well as further development of the REMP for the Area of the Northern Mid-Atlantic Ridge.

9. With the above background, the ISA, in collaboration with the Atlantic REMP Project (sponsored by the European Maritime and Fisheries Fund), the Ministry of Natural Resources and Environment of the Russian Federation and the All-Russia Scientific Research Institute for Geology and Mineral Resources of the Ocean (VNIIOkeangeologia), is convening the Workshop on the Development of a Regional Environmental Management Plan for the Area of the Northern Mid-Atlantic Ridge with a focus on Polymetallic Sulphide Deposits, via an online platform from 23 November to 4 December 2020.

10. The workshop aims to:

- Describe the geographical scope and environmental goals and objectives for the draft REMP;
- Identify possible elements to be included in the draft REMP for the Area of the northern MAR with a focus on PMS deposits;
- Identify potential management approaches and measures, with a focus on PMS deposits, that can be considered in the development of a REMP, including spatial and non-spatial measures

⁵ ISBA/24/A/10

⁶ ISBA/25/A/15, annex II

⁷ ISBA/25/C/13

as well as approaches for addressing cumulative impacts at the regional level; and

- Discuss the framework for implementation, including priority actions for addressing the knowledge gaps, monitoring and research, collaboration and capacity development.

11. The report of the workshop will be made available as information to the Legal and Technical Commission in its future meeting.

12. A list of documents for the workshop is contained in annex I.

13. The secretariat will issue an information note for participants containing logistics details to facilitate their participation, including information on how to join the online workshop and navigate different functions of the online meeting platform. The workshop will be conducted in English.

ITEM 1. OPENING OF THE WORKSHOP

14. The Secretary General of the International Seabed Authority, together with representatives of the Ministry of Natural Resources and Environment of the Russian Federation, the All-Russia Scientific Research Institute for Geology and Mineral Resources of the Ocean (VNII Okeangeologia), and the European Commission, will open the workshop at 6 a.m. (Jamaica; GMT-5) on Monday, 23 November 2020.

ITEM 2. WORKSHOP BACKGROUND, SCOPE AND EXPECTED OUTPUTS

15. Georgy Cherkashov and Gordon Paterson, members of the LTC, will be invited as co-chairs to moderate the workshop deliberation.

16. Under this item, participants will have before them two Council documents (ISBA/24/C/3 and ISBA/25/C/13), and the “guidance to facilitate the development of Regional Environmental Management Plans”.

17. Jihyun Lee (ISA secretariat) will provide a presentation on the workshop background, including ISA’s approach to the REMP development, and Wanfei Qiu (ISA secretariat) will provide a presentation on the workshop objectives, scope and expected outputs.

18. ISA secretariat will then introduce the list of background documents prepared for the workshop.

ITEM 3. REVIEW THE KEY OUTPUTS FROM PREVIOUS WORKSHOPS ON THE DEVELOPMENT OF A REGIONAL ENVIRONMENTAL MANAGEMENT PLAN IN THIS REGION, AND DISCUSS THEIR IMPLICATIONS FOR DESIGNING MANAGEMENT APPROACHES AND MEASURES

19. Under this item, participants will have before them:

- a. Report of the workshop on the REMP for the Area of the Northern Mid-Atlantic Ridge held in 2019 in Evora, Portugal (“Evora workshop”)
- b. Draft report on qualitative mathematical models for assessing cumulative impacts on ecosystems of the mid-Atlantic ridge from future exploitation of polymetallic sulphides (PMS)
- c. Regional Environmental Assessment for the northern Mid-Atlantic Ridge
- d. Data Report

20. To provide the context of the exploration and future exploitation of mineral resources in this region, Georgy Cherkashov and Pedro Madureira, members of the LTC, will deliver a presentation on geological settings and current exploration activities, and one on prospects for relinquishment and

exploitation of PMS deposits, respectively. This will be followed by a Q&A session for participants to ask questions and share insights.

21. To provide the context of environmental management planning at the regional scale, Gordon Paterson (member of the LTC) and Patrick Halpin (Technical Support Team) will deliver a presentation on environmental goals and objectives, and one on the geographic scope of the workshop and the potential scope of the environmental planning at the regional scale, respectively. This will be followed by a Q&A session for participants to ask questions and share insights.

22. The following presentations will then be delivered on the synthesis of scientific information for management approaches, based on the outputs of the Evora workshop:

- a. Philip Weaver (Seascope Consultants Ltd./Atlantic REMP Project): Scenario planning for adaptive management;
- b. Patrick Halpin (Technical support team): Area-based management approaches; and
- c. Piers Dunstan (Technical support team): Qualitative modelling to address cumulative impact assessment.

23. Building on the presentations above, participants will exchange their views, insights, and suggestions.

ITEM 4. IDENTIFY SPATIAL AND NON-SPATIAL MANAGEMENT MEASURES FOR CONSIDERATION IN THE DEVELOPMENT OF THE REMP

24. The ISA secretariat will brief participants on suggested approaches to producing outputs under this item through break-out session discussion. Participants will then split into two groups, as arranged by the secretariat considering their expertise and experience. A separate note for participants will be circulated regarding the details of the conduct of the break-out session. These two groups will be invited to contribute to the following thematic segments to undertake focused-discussion, each with a facilitator invited by the ISA secretariat:

- a. Thematic segment A: Area-based management measures (to be facilitated by Pat Halpin, with two rapporteurs)
- b. Thematic segment B: Non-spatial management measures (to be facilitated by Phil Weaver, with two rapporteurs)

25. Break-out session discussion will be assisted by facilitators and rapporteurs invited by the ISA secretariat, in consultation with the workshop co-chairs, considering their expertise and experience.

26. Further information on the break-out groups and key questions to be addressed in each group can be found in the “Note for Participants on Break-out Session Discussion”, circulated by the ISA secretariat before the workshop.

27. After the breakout session, participants will gather in a plenary session, and each facilitator of the thematic segments will report on the progress made in their respective group discussion. Participants will then exchange their observations and insights and seek guidance from the plenary, if needed.

ITEM 5. IDENTIFY KEY ELEMENTS OF THE IMPLEMENTATION OF A REMP, INCLUDING TECHNOLOGICAL CONSIDERATIONS, MONITORING AND RESEARCH, COLLABORATION AMONG STAKEHOLDERS, AND CAPACITY DEVELOPMENT

28. Under this item, there will be a series of presentations on three topics related to the

implementation of a REMP.

29. On the topic of technological considerations, the following presentations will be delivered:
 - a. Ulrich Schampera (ISA secretariat): Technology considerations relating to the future exploitation of PMS deposits;
 - b. Arne Myhrvold (Equinor): Technology development as an integrated part of environmental management; and
 - c. Naohisa Kanda (Japan NUS Co., Ltd.): Japan's experience in PMS testing and implications for monitoring
30. On the topic of experience of regional bodies, the following presenters will share their experiences and lessons learned in the application of area-based management tools and adaptive management at the regional scale:
 - a. Fred Kingston (Northwest Atlantic Fisheries Organization); and
 - b. Darius Campbell (North-East Atlantic Fisheries Commission)
31. On the topic of addressing knowledge gaps through research, monitoring, collaboration, and capacity development, the following presentations will be delivered:
 - a. Knowledge gaps and priorities for monitoring and research identified by the Evora workshop, including through the compilation of data and information for the Regional Environmental Assessment and Data Report:
 - Philip Weaver (Seascope Consultants Ltd.), Rachel Boschen-Rose (Seascope Consultants Ltd.), and Patrick Halpin (Duke University)
 - b. Monitoring and collaboration from contractors' and scientific perspectives:
 - Livia A. Ermakova (VNIIOkeangeologia);
 - Jozée Sarrazin (French Research Institute for Exploitation of the Sea-IFREMER) (TBC);
 - Teresa Radziejewska (University of Szczecin); and
 - Sang-Mook Lee (InterRidge) (TBC)
32. A Q&A session will follow after each topic for participants to exchange views, insights, and suggestions.
33. Then, Piers Dunstan (Commonwealth Scientific and Industrial Research Organisation) will deliver a presentation on how the framework of assessing cumulative impacts can help prioritize future monitoring and research activities and strategize future collaboration among stakeholders. This will be followed by a Q&A session for participants to exchange views, insights, and suggestions.
34. Next, the ISA secretariat will brief participants on suggested approaches to producing outputs under this item through break-out session discussion. Participants will then split into the following breakout groups to undertake focused-discussions, each with a facilitator invited by the ISA secretariat:
 - a. Thematic Segment C: Monitoring, research, and technological priorities at the regional scale to support the effective implementation of a REMP and address knowledge gaps
 - b. Thematic Segment D: Collaboration among stakeholders and capacity development of various actors to support the effective implementation of a REMP and address knowledge gaps
35. Further information on the break-out groups and key questions to be addressed in each group

can be found in the “Note for Participants on Break-out Session Discussion”, circulated by the ISA secretariat before the workshop.

36. Break-out session discussion will be assisted by facilitators and rapporteurs invited by the ISA secretariat, in consultation with the workshop co-chairs, considering their expertise and experience

37. After the breakout session, participants will gather in a plenary session, and each facilitator of the breakout groups will report on the progress made in their respective group discussion. Participants will then exchange their observations and insights and seek guidance from the plenary, if needed.

ITEM 6. SUMMARY AND CONCLUSION

38. Participants will be invited to review and provide comments to the draft report to be prepared and presented by the workshop co-chairs, with the support of the secretariat.

ITEM 7. CLOSURE OF THE WORKSHOP

39. The workshop is expected to close at 10 a.m. (Jamaica; GMT-5) on Friday, 4 December 2020.

Annex I

LIST OF DOCUMENTS FOR THE WORKSHOP

<i>Prepared by</i>	<i>Title</i>
ISA secretariat	Provisional agenda
ISA secretariat	Annotations to the provisional agenda
Council documents	Preliminary strategy for the development of regional environmental management plans for the Area (ISBA/24/C/3) Implementation of the Authority's strategy for the development of regional environmental management plans for the Area (ISBA/25/C/13)
ISA secretariat	Report of the Workshop on the REMP for the Area of the Northern Mid-Atlantic Ridge, 25-29 November 2019, Evora, Portugal
ISA secretariat	ISA Technical Study No. 22: Developing a Framework for Regional Environmental Management Plans for Polymetallic Sulphide Deposits on Mid-Ocean Ridges
Atlantic REMP Project	Report on Regional Environmental Assessment of the Northern Mid-Atlantic Ridge
Atlantic REMP Project/ Duke University/MGEL	Data report
ISA secretariat/CSIRO	Draft Report on Qualitative Mathematical Models for Assessing Cumulative Impacts on Ecosystems of the Mid-Atlantic Ridge from Future Exploitation of Polymetallic Sulphides
ISA secretariat	Background note on the legal framework for spatial and non-spatial measures identified by the Evora workshop

Annex II

PROPOSED ORGANIZATION OF WORK

Workshop Co-Chairs: Georgy Cherkashov and Gordon Paterson

Day 1 Monday 23 November

Time (Jamaica time, GMT-5, AM)	Workshop activities
6.00 - 6.30	<p><i>Agenda item 1. Opening of the workshop</i></p> <ul style="list-style-type: none"> • Secretary General of the International Seabed Authority • Representative of the Ministry of Natural Resources and Environment of the Russian Federation • Representative of the All-Russia Scientific Research Institute for Geology and Mineral Resources of the Ocean (VNIIOkeangeologia) • Representatives of the European Commission
6.30 - 7.10	<p><i>Agenda item 2. Workshop background, scope and expected outputs</i></p> <ul style="list-style-type: none"> • Workshop background, scope and expected outputs: <ul style="list-style-type: none"> ○ Jihyun Lee and Wanfei Qiu (ISA Secretariat) • Background documents prepared to facilitate workshop deliberation (ISA Secretariat)
7.10 - 10.00	<p><i>Agenda item 3. Review the key outputs from previous workshops on the development of a regional environmental management plan (REMP) in this region, and discuss their implications for designing management approaches and measures</i></p> <p>Context of exploration and future exploitation of mineral resources (7.10 – 7.50)</p> <ul style="list-style-type: none"> • Georgy Cherkashov: Geological settings and current exploration activities • Pedro Madureira: Prospects for relinquishment and exploitation of PMS deposits <p>Q & A (10 min)</p> <p>Context of environmental management planning at regional scale (8.00 – 8.30)</p> <ul style="list-style-type: none"> • Gordon Paterson : Environmental goals and objectives • Pat Halpin : Geographic scope of the workshop and the potential scope of the environmental planning at regional scale

	<p>Q & A (10 min)</p> <p>Scientific information synthesized for management approaches (8.40 - 9.40)</p> <ul style="list-style-type: none"> • Phil Weaver : Scenario planning for adaptive management • Pat Halpin : Area-based management approaches • Piers Dunstan : Qualitative modelling to address cumulative impact assessment <p>Q & A (20 min)</p>
--	--

Day 2 Tuesday 24 November

Time (Jamaica time, GMT - 5)	Workshop Activities
6.00 – 10.00	<p><i>Agenda item 4. Identify spatial and non-spatial management measures for inclusion in the development of a REMP</i></p> <p>Plenary (6.00 – 6.30)</p> <p>ISA secretariat will brief the workshop participants on suggested approaches to produce outputs under this agenda item, through the following break-out session, <i>inter alia</i>:</p> <ul style="list-style-type: none"> • Thematic Segment A: Area-based management measures • Thematic Segment B: Non-spatial management measures <p><i>Note : Please refer to a “Note for Participants for Break-out Session Discussion” for details.</i></p> <p>Break-out session (6.45 -10.00) Participants will be split into two groups for break-out session discussion.</p>

Day 3 Wednesday 25 November

Time (Jamaica time, GMT-5)	Workshop Activities
6.00 -10.00	<p><i>Agenda item 4 (continued)</i></p> <p>Break-out session (continued)</p> <ul style="list-style-type: none"> • Thematic Segment A: Area-based management measures • Thematic Segment B: Non-spatial management measures <p><i>Note : Please refer to a “Note for Participants for Break-out Session Discussion” for details.</i></p>

Day 4 Thursday 26 November

Time (Jamaica time, GMT-5)	Workshop Activities
6.00 – 10.00	<p><i>Agenda items 4 (continued)</i></p> <p>Break-out session (continued)</p> <ul style="list-style-type: none"> • Thematic Segment A: Area-based management measures • Thematic Segment B: Non-spatial management measures <p><i>Note : Please refer to a “Note for Participants for Break-out Session Discussion” for details.</i></p>

Day 5 Monday 30 November

Time (Jamaica time, GMT-5)	Workshop Activities
06:00 – 07:00	<p><i>Plenary</i></p> <p>Facilitators of Thematic Segments will report the progress made in their respective break-out session.</p> <p>Participants will exchange their observations and insights regarding the break-out session, and seek guidance from the plenary, if any.</p>

7:00 – 10:00	<p><i>Agenda items 5. Identify key elements of the implementation of a REMP, including technological considerations, monitoring and research, collaboration among stakeholders, and capacity development.</i></p> <p>Plenary</p> <p>Technological considerations (7.00 – 07.45)</p> <ul style="list-style-type: none"> • Ulrich Schampera: Technology considerations relating to the future exploitation of PMS deposits • Arne Myhrvold: Technology development as an integrated part of environmental management • Naohisa Kanda: Japan’s experience in PMS testing and implications for monitoring <p>Q & A (15 min)</p> <p>Experience of other regional bodies</p> <ul style="list-style-type: none"> • Sharing experience and lessons learned in the application of area-based management tools and adaptive management at the regional scale (8:10 – 8:40) <ul style="list-style-type: none"> ○ Fred Kingston (NAFO) ○ Darius Campbell (NEAFC) <p>Q & A (10 min)</p> <p>Addressing knowledge gaps through research, monitoring, collaboration and capacity development</p> <ul style="list-style-type: none"> • Knowledge gaps and priorities for monitoring and research as identified by the Evora workshop, including through the compilation of data and information for the Regional Environmental Assessment and Data Report (8.50 – 9.10) <ul style="list-style-type: none"> ○ Phil Weaver/Rachel Boschen-Rose/Pat Halpin • Monitoring and collaboration in contractor’s and scientific perspectives (9.10 – 9.50) <ul style="list-style-type: none"> ○ Livia A. Ermakova (Russia) ○ Jozée Sarrazin (IFREMER) ○ Teresa Radziejewska (Poland) ○ Lee Sang-Mook (Interidge) <p>Q & A (10 min)</p>
--------------	--

Day 6 Tuesday 1 December

Time (Jamaica time, GMT-5)	Workshop Activities
6.00 -10.00	<i>Agenda items 5 (continued)</i>

	<p><i>Plenary (6.00-7.00)</i></p> <ul style="list-style-type: none"> • How the framework of assessing cumulative impacts can help prioritizing future monitoring and research activities and strategizing future collaboration among stakeholders? (6.00 – 6.20) <ul style="list-style-type: none"> ○ Piers Dunstan (CSIRO/Australia) <p>Q & A (10 min)</p> <p>ISA secretariat will brief the workshop participants on suggested approaches to produce outputs under this agenda item, through the following groups of the break-out sessions:</p> <ul style="list-style-type: none"> • Thematic Segment C: Monitoring, research and technological priorities at regional scale to support effective implementation of a REMP and address knowledge gaps • Thematic Segment D: Collaboration among stakeholders and capacity development of various actors to support effective implementation of a REMP and address knowledge gaps <p><i>Note : Please refer to a “Note for Participants for Break-out Session Discussion” for details.</i></p> <p><i>Break-out session (7.00 – 10.00)</i> Participants will split into two groups for break-out session discussion.</p>
--	---

Day 7 Wednesday 2 December

Time (Jamaica time, GMT-5)	Workshop Activities
6.00 -10.00	<p><i>Agenda items 5 (continued)</i></p> <p><i>Break-out session (6.00 – 8.30)</i></p> <ul style="list-style-type: none"> • Thematic Segment C: Monitoring, research and technological priorities at regional scale to support effective implementation of a REMP and address knowledge gaps • Thematic Segment D: Collaboration among stakeholders and capacity development of various actors to support effective implementation of a REMP and address knowledge gaps

	<p><i>Note : Please refer to a “Note for Participants for Break-out Session Discussion” for details.</i></p> <p><i>Health break (30 min)</i></p> <p><i>Plenary (9.00 – 10.00)</i></p> <p>Facilitators of Thematic Segments will report the progress made in their respective break-out session.</p> <p>Participants will exchange their observations and insights regarding the break-out session, and seek guidance from the plenary, if any.</p>
--	--

Note : Draft report will be prepared on 3 December (Thursday)

Day 8 Friday 4 December

Time (Jamaica time, GMT-5)	Workshop Activities
6.00 – 9.30	<p><i>Agenda item 6. Summary and Conclusion</i></p> <p><i>Plenary session</i></p> <p>Participants will review the draft workshop report and provide comments.</p>
9.30 – 10.00	<p><i>Agenda item 7. Closure of the workshop</i></p>