



**Workshop on the regional environmental management plan for the Area of
the northern mid-Atlantic ridge**

25-29 November, 2019; Évora, Portugal

PROVISIONAL AGENDA

1. Opening of the workshop
2. Adoption of the agenda and organization of work
3. Workshop background, scope and expected outputs
4. Review, analysis and synthesis of relevant scientific data/information/maps relating to biodiversity and ecosystem patterns along the northern mid-Atlantic ridge
5. Review of current exploration activity within contract areas and distribution of resources (polymetallic sulfides) along the northern mid-Atlantic ridge
6. Scenario planning of environmental requirements in support of the application of area-based management tools, including areas of particular environmental interests (APEIs), and addressing cumulative impacts
7. Summary and conclusion
8. Other matters
9. Closure of the workshop



WORKSHOP ON THE REGIONAL ENVIRONMENTAL MANAGEMENT PLAN FOR THE AREA OF THE NORTHERN MID-ATLANTIC RIDGE

25-29 November 2019, Évora, Portugal

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 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 mankind as a whole. The Authority is also mandated to take necessary measures with respect to activities in the Area to ensure effective protection for 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 the 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 preliminary strategy has started with the organization of two workshops, including the one organised in Szczecin, Poland, in June 2018, which

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 See ISBA/24/C/8, para.10.

addressed the design of REMPs for polymetallic sulphide deposits on mid-ocean ridges. The report of this workshop is available at <https://ran-s3.s3.amazonaws.com/isa.org.jm/s3fs-public/files/documents/ts22.pdf>.

5. At its twenty fifth session, the Council took note of and welcomed the programme of work of the secretariat to implement the preliminary strategy for the development of regional environmental management plans for the period 2019–2020.

6. Likewise, at the same session, the Assembly of the ISA adopted the Strategic Plan of the ISA for the period 2019–2023, and invited members of the Authority and observers, as well as the organs of the Authority, to support the implementation of the strategic plan and the high-level action plan. Strategic Direction 3.2 focuses on the “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”.

7. Subsequently, the secretariat prepared a guidance to facilitate the development of Regional Environmental Management Plans, which clarified the roles and responsibilities of ISA organs as well as a series of workshops to be convened by ISA secretariat as scientific and technical process to prepare draft elements for inclusion in the REMPs.

8. With the above background, the International Seabed Authority (ISA), in collaboration with the Atlantic REMP Project (funded by European Union) and the Government of Portugal, is convening the First Workshop on Regional Environmental Management Plan for the Area of the Northern Mid-Atlantic Ridge (MAR), at the University of Évora, Évora, Portugal, from 25-29 November 2019.

9. The workshop aims to: (i) review and analyze seafloor and water column ecosystem data from the northern mid-Atlantic ridge (MAR), (ii) synthesize environmental data, faunal distribution, faunal dispersal capabilities and distances, genetic connectivity, patterns of biodiversity, community structure, ecosystem function, and ecological proxy variables along and across the northern MAR, (iii) review current exploration activity within contract areas and distribution of resources (polymetallic sulfides) along the northern MAR, (iv) describe potential areas that could be impacted by exploitation of mineral resources in the Area and would require enhanced management measures, and (v) describe potential areas in the Area that could be reserved from exploitation in order to achieve effective protection of the marine environment, including through the designation of areas of particular environmental interests (APEIs).

10. The results of this workshop will provide scientific inputs to the forthcoming workshop on the regional environmental plan for Area of the northern MAR to be held in St. Petersburg, Russia, in June 2020, which will focus on identifying specific management measures for developing draft elements for inclusion in the REMP.

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

12. The secretariat has issued an information note for participants containing details of logistical arrangements, including information on travel, visa requirements, accommodation and other matters for the workshop. The workshop will be conducted in English.

13. Registration of participants will commence on Monday 8:30 am, 25 November 2019.

ITEM 1. OPENING OF THE WORKSHOP

14. The Secretary General of the International Seabed Authority, together with representatives of the Government of Portugal, the European Commission, and the University of Évora, will open the workshop at 9 a.m. on Monday, 25 November 2019.

ITEM 2. ADOPTION OF THE AGENDA AND ORGANIZATION OF WORK

15. After a brief explanation by the Secretariat on procedures, the participants will be invited to consider the provisional agenda and the proposed organization of work, as contained in annex II to the present document, and adopt them following any amendments deemed necessary.

16. The workshop will be organized in plenary and breakout-group sessions. The workshop co-chairs will nominate facilitators and rapporteurs for the plenary and breakout sessions, based on the expertise and experience of the workshop participants and in consultation with the secretariat.

ITEM 3. WORKSHOP BACKGROUND, SCOPE AND EXPECTED OUTPUTS

17. Under this item, participants will have before them a background document prepared by the secretariat on “guidance to facilitate the development of Regional Environmental Management Plans”.

18. Jihyun Lee (ISA secretariat will provide a presentation on “Workshop background, including the key results of the relevant previous workshops⁵, and expected outputs : ISA’s approach for the REMP development”.

19. Phil Weaver (Secretariat for Atlantic REMP Project) will provide a presentation on “Setting the context for the workshop and proposed geographic scope of the workshop”.

20. Participants will then exchange insights, views and suggestions on the approaches for synthesizing workshop discussion, building on following presentations:

- Phil Weaver : Scenario Planning
- Pat Halpin (Technical Support Team) : Approaches for spatial planning
- Skipton Wolloey (Technical support Team) : Approaches for addressing cumulative impact assessment

ITEM 4. REVIEW, ANALYSIS AND SYNTHESIS OF RELEVANT SCIENTIFIC DATA/INFORMATION/MAPS RELATING TO BIODIVERSITY AND ECOSYSTEM PATTERNS ALONG THE NORTHERN MID-ATLANTIC RIDGE

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

(i) Regional Environmental Assessment Report that described biological and environmental patterns along and across the northern mid-Atlantic ridge, prepared by the Atlantic REMP Project; and

(ii) Data report compiling environmental and biological information, biogeographic classification, and human uses and management areas in 75 GIS layers, prepared by Duke University/MGEL in support of the workshop objectives.

22. The above two reports will be introduced to the workshop participants by Phil Weaver and Pat Halpin, respectively.

23. Following presentations will be also delivered on biodiversity and ecosystem setting, including connectivity:

⁵ <https://ran-s3.s3.amazonaws.com/isa.org.jm/s3fs-public/files/documents/ts22.pdf> (June 2018, Szczecin, Poland); https://ran-s3.s3.amazonaws.com/isa.org.jm/s3fs-public/files/documents/paris_meeting_report_for_webposting.pdf (May 2019, Paris, France)

- by Lenaick Menot : Benthic habitats – sediment and rocky
 - by Telmo Morato : Pelagic habitats
 - by Cindy Van Dover : Vents and inactive vent communities
24. Participants will exchange their views, insights, and suggestions on, *inter alia*:
- Information contained in the Regional Environmental Assessment report and Data report as a basis for developing an REMP; and
 - Critical data/information gaps: distribution, temporal variability, trophic relationships, ecosystem function, connectivity, resilience and recovery

ITEM 5. REVIEW OF CURRENT EXPLORATION ACTIVITY WITHIN CONTRACT AREAS AND DISTRIBUTION OF RESOURCES (POLYMETALLIC SULFIDES) ALONG THE NORTHERN MID-ATLANTIC RIDGE

25. Under this item, participants will have before them the Regional Environmental Assessment Report that reviewed current exploration activities within contract areas and distribution of resources (polymetallic sulphides) along the northern mid-Atlantic ridge, prepared by the Atlantic REMP Project
26. Following theme presentations will be also delivered:
- Geological setting and prospects for resource exploitation
 - by Georgy Cherkashov (LTC member)
 - Considerations for developing an REMP from geological/resources perspectives
 - by Pedro Madureira (LTC member)
 - Potential mining impacts
 - by Andreas Thurnherr
27. Participants will exchange their views, insights, and suggestions on approaches for the REMP development, drawing on the above theme presentations.

ITEM 6. SCENARIO PLANNING OF ENVIRONMENTAL REQUIREMENTS IN SUPPORT OF THE APPLICATION OF AREA-BASED MANAGEMENT TOOLS, INCLUDING AREAS OF PARTICULAR ENVIRONMENTAL INTERESTS (APEIS), AND ADDRESSING CUMULATIVE IMPACTS

28. Building on the theme presentations delivered and ensuing plenary discussion, the workshop participants will focus on, through plenary and break-out sessions, scenario planning of environmental requirements in support of the application of area-based management tools, including areas of particular environmental interests (APEIs), and addressing cumulative impacts.
29. Workshop co-chairs will invite facilitators, in consultation with the secretariat, to moderate the workshop discussion under this agenda item. At the plenary, facilitators will brief the workshop participants on suggested approaches to produce outputs under this agenda item. Participants will then split into small groups to undertake focused-discussions in break-out session.
30. At the first break-out session, following key questions will be addressed, *inter alia*:
- Design conceptual model (e.g. environmental goals, objectives and thresholds) for respective habitats/communities as inputs to scenario planning for environmental requirements in support of the application of area-based management tools and addressing cumulative impacts

- Approaches for addressing critical data/information gaps in support of future adaptive management (e.g. predictive habitat modelling, joint monitoring and survey, data-sharing), which can be addressed as part of an REMP development and implementation
 - Consideration should be given to rare or fragile ecosystems/habitats of depleted, threatened or endangered species, direct mining impacts, impact of plumes, monitoring of impacts, potential for restoration, knowledge gaps, etc
31. Participants will split into small-groups. Tentative groupings include:
- Groups 1: Active hydrothermal vent communities
 - Group 2 : Inactive hydrothermal vent communities/ Hard substrate
 - Group 3 : Mid-water fauna/Sediment
32. Participants will have a chance to contribute to multiple groups, depending on their expertise and experience. Each group will report at the plenary the results of the break-out session I, which will be followed by plenary discussion on the synthesis of results of the group discussion.
33. At the Plenary, the draft synthesis of the results of break-out session I will be presented by the facilitators. The workshop participants will then articulate overall goals and objectives for the REMP.
34. At the second break-out session, the workshop participants will:
- Develop a range of scenarios for regional environmental management planning, taking into account the following factors:
 - Potential mining locations, spatial distribution of mining sites, intensities/frequencies of mining activities
 - Spatial distribution and temporal variation of ecosystems/habitats
 - Potential plume impacts
 - Potential technology development
 - Ways to address scientific data/information gaps
 - Other factors
 - Develop a framework to assess cumulative impacts;
 - Develop a framework to apply area-based management tools, including APEIs
35. At the plenary, the results of the break-out session II will be presented.
36. The workshop participants will then exchange their insights and views on future perspectives on scientific methodologies and technologies, in relation to the scenario planning.

ITEM 7. SUMMARY AND CONCLUSION

37. Participants will be invited to consider and provide comments to the report of the workshop on the basis of a draft report to be prepared and presented by the workshop co-chairs, with the support of the secretariat.

ITEM 8. OTHER MATTERS

38. Under this item, consideration may be given to any other matters of relevance raised by participants.

ITEM 9. CLOSURE OF THE WORKSHOP

39. The workshop is expected to close at 5 p.m. on Friday, 29 November 2019.

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
ISA secretariat	Guidance to facilitate the development of regional environmental management plans (REMPs)
Secretariat for Atlantic REMP Project	Report on Regional Environmental Assessment of Mid-Atlantic Ridge
Atlantic REMP Project with technical support by Duke University/MGEL	Data Report
ISA Technical Study No. 22	Developing a Framework for Regional Environmental Management Plans for Polymetallic Sulphide Deposits on Mid-Ocean Ridges
Secretariat for Atlantic REMP Project, in collaboration with ISA secretariat	Report of the expert meeting on the feasibility of applying rule-based management approaches to Regional Environmental Planning of the International Seabed Authority with a Focus on Polymetallic Sulphide Deposits in Mid-Ocean Ridges (May 2019, Paris, France)

Annex II

PROPOSED ORGANIZATION OF WORK

Workshop Co-Chairs : Pedro Madureira and Gordon Paterson

Day 1 Monday 25th November

Time	Workshop activities
09.00-09.30	<p><i>Agenda item 1. Opening of the workshop</i></p> <ul style="list-style-type: none"> • Secretary General of the International Seabed Authority (Video message) • Representatives of the Government of Portugal • Representatives of the European Commission • Representative of the University of Évora <p><i>Group Photo</i></p>
09.30-11.00	<p><i>Agenda item 2. Adoption of the agenda and organization of work</i></p> <p><i>Agenda item 3. Workshop background, scope and expected outputs</i></p> <ul style="list-style-type: none"> • Workshop background, including the key results of the relevant previous workshops, and expected outputs : ISA’s approach for the REMP development By Jihyun Lee (ISA Secretariat) • Setting the context for the workshop and proposed geographic scope of the workshop <ul style="list-style-type: none"> ○ Phil Weaver (Secretariat for Atlantic REMP Project) • Approaches for synthesizing workshop discussion <ul style="list-style-type: none"> ○ Phil Weaver : Scenario Planning ○ Pat Halpin (Technical Support Team) : Approaches for spatial planning ○ Skipton Wolloey (Technical support Team) : Approaches for addressing cumulative impact assessment <p><i>Plenary Discussion</i></p>
11.00-11.30	<i>Coffee/tea break</i>
11.30 – 12.30	<p><i>Agenda item 4. Review, analysis and synthesis of relevant scientific data/information/maps relating to biodiversity and ecosystem patterns along the northern mid-Atlantic ridge</i></p> <p><i>Theme presentations for setting a context</i></p> <ul style="list-style-type: none"> • Introduction to workshop background documents on scientific synthesis <ul style="list-style-type: none"> ○ Phil Weaver : Regional Environmental Assessment Report ○ Pat Halpin : Data Report

12.30 – 14.00	<i>Lunch</i>
14.00-14.45	<p>Agenda item 4.(continued)</p> <ul style="list-style-type: none"> • Biodiversity and ecosystem setting, including connectivity <ul style="list-style-type: none"> ○ by Lenaick Menot : Benthic habitats – sediment and rocky ○ by Imants G. Priede : Pelagic habitats ○ by Cindy Van Dover : Vents and inactive vent communities
14.45-15.30	<p>Participants will exchange their views, insights, and suggestions on, <i>inter alia</i>:</p> <ol style="list-style-type: none"> 1. Information contained in the Regional Environmental Assessment report and Data report as a basis for developing an REMP; 2. Critical data/information gaps: distribution, temporal variability, trophic relationships, ecosystem function, connectivity, resilience and recovery
15.30-16.00	<i>Coffee/tea break</i>
16.00-17.30	<p>Agenda item 5. Review of current exploration activity within contract areas and distribution of resources (polymetallic sulfides) along the northern mid-Atlantic ridge</p> <p>Theme presentations for setting a context</p> <ul style="list-style-type: none"> • Geological setting and prospects for resource exploitation by Georgy Cherkashov (LTC member) • Considerations for developing an REMP from geological/resources perspectives by Pedro Madureira (LTC member) • Potential mining impacts by Andreas Thurnherr <p><i>Plenary Discussion</i></p>

Day 2 Tuesday 26th November

Time	Workshop Activities
09.00 – 11.00	<p>Agenda item 6. Scenario planning of environmental requirements in support of the application of area-based management tools, including areas of particular environmental interests (APEIs), and addressing cumulative impacts</p> <p><u>Facilitators : Phil Weaver, Pat Halpin and Skipton Wolloey</u></p> <p>Plenary</p> <p>Facilitators will brief the workshop participants on suggested approaches to produce outputs under this agenda item. Participants will then split into small groups to undertake focused-discussions in break-out session.</p>

	<p><i>Break-out session I.</i></p> <p>Following key questions will be addressed, <i>inter alia</i>:</p> <ul style="list-style-type: none"> • Design conceptual model (e.g. environmental goals, objectives and thresholds) for respective habitats/communities as inputs to scenario planning for environmental requirements in support of the application of area-based management tools and addressing cumulative impacts • Approaches for addressing critical data/information gaps in support of future adaptive management (e.g. predictive habitat modelling, joint monitoring and survey, data-sharing), which can be addressed as part of an REMP development and implementation • Consideration should be given to rare or fragile ecosystems/habitats of depleted, threatened or endangered species, direct mining impacts, impact of plumes, monitoring of impacts, potential for restoration, knowledge gaps, etc <p>Participants will split into small-groups. Tentative groupings include:</p> <ul style="list-style-type: none"> • Groups 1: Active hydrothermal vent communities • Group 2 : Inactive hydrothermal vent communities/ Hard substrate • Group 3 : Mid-water fauna/Sediment <p>Note: Participants will have a chance to contribute to multiple groups, depending on their expertise and experience.</p>
11.00-11.30	<i>Coffee/tea break</i>
11.30 – 12.30	<i>Break-out session I. (continued)</i>
12.30-14.00	<i>Lunch</i>
14.00-15.30	<i>Break-out session I. (continued)</i>
15.30-16.00	<i>Coffee/tea break</i>
16.00-17.00	<p><i>Plenary session</i></p> <p>Each group will report at the plenary the results of the break-out session I, which will be followed by plenary discussion on the synthesis of results of the group discussion.</p>

Day 3 Wednesday 27th November

Time	Workshop Activities
09.00-11.00	<p><i>Agenda item 6.(continued)</i></p> <p><u>Facilitators : Phil Weaver, Pat Halpin and Skipton Wolloey</u></p>

	<p><i>Plenary session/Break-out session II.</i></p> <ol style="list-style-type: none"> 1. Present the draft synthesis of the results of break-out session I. 2. Articulate overall goals and objectives for the REMP 2. Develop a range of scenarios for regional environmental management planning, taking into account the following factors: <ul style="list-style-type: none"> - Potential mining locations, spatial distribution of mining sites, intensities/frequencies of mining activities - Spatial distribution and temporal variation of ecosystems/habitats - Potential plume impacts - Potential technology development - Ways to address scientific data/information gaps - Other factors 3. Develop a framework to assess cumulative impacts 4. Develop a framework to apply area-based management tools, including APEIs 5. Future perspectives on scientific methodologies and technologies <p>Note: Plenary will determine specific issues to be addressed by break-out session II.</p>
11.00-11.30	<i>Coffee/tea break</i>
11.30-12.30	<i>Break-out session II. (continued)</i>
12.30-14.00	<i>Lunch</i>
14.00-15.30	<i>Break-out session II. (continued)</i>
15.30-16.00	<i>Coffee/tea break</i>
16.00-17.30	<i>Break-out session II. (continued)</i>

Day 4 Thursday 28th November

Time	Workshop Activities
09.00-11.00	<p><i>Agenda item 6 (continued)</i></p> <p><i>Plenary session</i></p> <p>Review the results of scenario planning</p>
11.00-11.30	<i>Coffee/tea break</i>

11.30 – 12.30	<i>Agenda item 6 (continued)</i>
12.30-14.00	Lunch
14.00-17.30	Preparation of Draft Report

Day 5 Friday 29th November

Time	Workshop Activities
09.00 – 11.00	<i>Agenda item 7. Summary and Conclusion</i> Review of a draft meeting report
11.00 – 11.30	<i>Coffee/tea break</i>
11.30 – 12.30	<i>Agenda item 7. (continued)</i>
12.30 – 14.00	<i>Lunch</i>
14.00 – 15.30	<i>Agenda item 7. (continued)</i> <i>Agenda item 8. Other matters</i>
15.30 – 16.00	<i>Coffee/tea break</i>
16.00 – 16.30	<i>Agenda item 9. Closure of the workshop</i>