Overarching issues around regional governance of deep-sea mining

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Tools for environmental management

Management by Regulator

- Regulator
  - Strategic Environmental Assessment
  - Regional Environmental Assessment

Management by Contractor

- Deep Sea Mining Company
  - Environmental Management System
  - Operational Management System (may include environmental processes)

- Mining project
  - Environmental Impact Assessments
  - Environmental Management and Monitoring Plans

External assessment

- State sponsors and other states
- Stakeholders
- Institutional finance (Environmental due diligence)
Strategic environmental assessment

SEA is a systematic decision support process, aiming to ensure that environmental aspects are considered effectively in policy, plan and programme making.
### Strategic Assessment

#### Benefits

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<tr>
<th>Area</th>
<th>Description</th>
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<tr>
<td>Assist ISA in managing environment regionally</td>
<td>Improve strategic decision-making</td>
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<tr>
<td>Framework for periodic assessment</td>
<td>Anticipate and understand cumulative or combined impacts</td>
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<td>Improve data consistency + exchange</td>
<td>Provide context info for project scoping EIA, identifies areas to focus on</td>
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Assessment

SEA Report
Documents Process
Collates Information

Plan

SEMP
Output of process
Details Approach
Overarching Strategic Environmental Assessment and Plan

- Regional Environmental Assessment leading to Regional Environmental Plan
  - Environmental Impact Assessment
  - Environmental Impact Assessment
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  - Environmental Impact Assessment

Sets the overall strategy requirements for stakeholders and mode of operation for the whole of the Area.

Regional Environmental Assessment leading to Regional Environmental Plan

Strategic assessment and plan developed for each region using overarching SEA template.

Regional Environmental Assessment leading to Regional Environmental Plan

Contractors develop EIAs in line with the regional plan for specific mining projects.
SEA in Environmental Management Process

Projects

SEA and SEMP

Develop Regional Assessment

Address Important Knowledge Gaps

Review

Publish REA and REMP

Regularly update Assessment

Projects
SEEMP
Overarching SEA

• Develop an overarching strategic approach for environmental management of deep-sea mining
  • Develop overarching objectives e.g. conservation objectives
  • Helps operationalise mining policy
  • Provide a approach for designating project-specific spatial management measures for any exploitation activity
  • Address any generic mitigation strategies
  • Address cumulative impacts
  • Identify relationships with other key stakeholders
• Technological evaluation
• SEA can be usefully applied only for the activities within the remit of the ISA (in discussion with other stakeholders)
## What is in a SEA vs SEMP

**Assessment**
- Identify links to other plans / programmes (other authorities e.g. IMO)
- Gather relevant baseline data
- Identification of key issues
- Develop objectives e.g. conservation objectives / management objectives
- Assessment of alternatives (identification, prediction, mitigation)
- Assessing cumulative impacts
- Assessing uncertainty
- Stakeholder engagement
- Decision-making process
- Decision on preferred alternatives

**Plan**
- Description / Scope
- Conservation objectives
- Management objectives e.g. keep water particulate loads < X m⁻³ h⁻¹
- Environmental management roles and responsibilities
- Reporting requirements
- Outline of key environmental risks / vulnerabilities including cumulative impacts
- Environmental Management Approach / Measures
- Monitoring requirements (to fill gaps)
- What should be done in lower tier assessments
- Specific Commitments
- Approach for audit

**REMP**
Regional baseline description
Spatial Management Plan and Maps
Why do assessment when we only need a plan?

- Documented process provides a clear justification for the plan
- Demonstrates transparency in decision making approach
- Documents uncertainty
- Documents the alternatives considered and basis for rejection
- Provides a foundation for improvement through periodic review
- Captures lessons from process
- Acts as a catalyst for periodic re-assessment of available data
Regional Environmental Assessment includes:

- Strategic planning and management focused on region
- Leads to development of Regional Environmental Management Plan
- Regional-scale environmental information, periodically updated
- Regional knowledge base (e.g., mitigation strategies)
- Regional-scale risk/impact assessment
  - Cumulative impacts of mining
  - Other anthropogenic inputs (multi-sectoral)

Information from:
- Policy
- Contractors
- Independently collected data (possibly commissioned)
- Information from other stakeholders
Regional Env. Management Plan

- Still strategic plan – but regionally focussed
- Higher level than claim-scale environmental management plan
- Typically focusses on spatial management e.g. MPA networks
- Additionally
  - Identify regional priorities for environmental management
  - Identify performance standards or common mitigation approaches
  - Identify baseline / monitoring priorities for region
  - Detail approaches for managing cumulative impacts
  - Identify common vulnerabilities
  - Guide project-based EIA
Poly metallic nodules exploration areas in the Clarion-Clipperton Fracture Zone

* In the case of poly metallic nodules, the so-called parallel system provides that each application for exploration by a developed State must cover two parts of "equal estimated commercial value". One part is allocated to the applicant and the other is to become the reserved area, which is set aside for the conduct of activities by the Authority or developing States.

** In July 2012, the Authority adopted an environmental management plan for the Clarion-Clipperton Zone to be implemented on a provisional basis over an initial three-year period. The plan includes the designation of a network of areas of particular environmental interest (ISBA/16/C22).

©International Seabed Authority, 24 July 2015. Background map: ESRU
Suggestions

Begin S/REA as soon as possible

Use a formalised (and documented) process for S/REA – not just going straight to SEMP/REMP

Stimulate scientific intercomparisons and regional assessments

Consider approaches for S/REA: legal, financial, technical

Encourage collaboration with other regional stakeholders
Issues

1. How can the SEA process be integrated into the practice and policy of the ISA?
2. What should be the timeframe for strategic initiatives (SEA and multiple REAs) to be developed?
3. How will the SEA process best link with EIA and claim scale activities?
4. How can the evidence base that underpins SEA be collected and openly shared?
5. What is the minimum amount of data required to perform an REA?
6. Should the focus be solely on spatial environmental management approaches?
7. How can SEMP and REMP be made legally binding, particularly after contracts are issued?
8. Who will conduct SEA / REA and how will they interact with the ISA and other stakeholders?
9. How should the development of SEA / REAs be funded? Who should fund baseline data collection and who should fund monitoring?
10. What happens if SEA identifies management strategies that affect mining claims e.g. limits being put on the total amount of mining in a region?

11. Which are the priority areas for establishing REAs and what scale is most appropriate (e.g. do we need more than one for the CCZ)?

12. Should specifically tailored SEA / REA guidance protocols be developed for the ISA?

13. What mechanisms should be established for revision of REMPs and their relationship to adaptive management? What should be the frequency of SEA / REA review and how will the effectiveness of the SEA/REA measures be determined?

14. How can the effects of cumulative impact be taken into account?
Summary

- Process: SEA (of which REA is a part)
- Output: Strategic and Regional environmental management plans
- Tiered – SEA, REA, (EIA)
- Should be tied to claim-scale management
- Useful and widely adopted approach
- Considered best-practice
- Many issues for DSM