



Institute for Advanced Sustainability Studies IASS in Potsdam

Environmental Standards - a first attempt to outline the need

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 relevant documents used:

- Workshop discussion paper: "Using and developing standards for activities in the Area: Procedural Considerations" by Chris Brown and Samantha Smith
- Workshop discussion paper: "Environmental Standards" - extracting MIDAS WP8 deliberations, incl. a manuscript in prep.
- all other workshop discussion papers

- ISA discussion paper on the development of "Environmental Regulations" for exploitation in the Area (ISA, 2017), in conjunction with
- ISA discussion paper: Regulations and standard contract terms on exploitation for mineral resources in the Area (ISA, 2016)

- The Area and its resources are the common heritage of mankind (Art. 136)
- All seabed mining activities in the Area are regulated, organised and controlled by the ISA on behalf of mankind as a whole. The rules, regulations and procedures adopted by the ISA are binding on all member States, regardless of individual consent. (Arts. 137(2), 153(1), 156–185)

 the Authority is obliged

- to adopt appropriate rules, regulations and procedures “to ensure an effective protection for the marine environment from harmful effects which may arise from such activities”. (UNCLOS Art. 145), including
 - prevention, reduction and control of pollution and other hazards
 - interference with the ecological balance
 - protection and conservation of natural resources and prevention of damage to the flora and fauna.
- to ensure a “uniform application of the highest standards of protection of the marine environment, the safe development of activities in the Area and protection of the common heritage of mankind” (ITLOS, 2011, para. 159)
- to ensure that any mineral development does not undermine the common heritage of humankind.

- States Parties are obliged
 - to protect and preserve the marine environment (Art. 192)
 - to prevent, reduce and control pollution (Art. 194), incl.
 - to take measures to protect and preserve rare or fragile ecosystems, ...

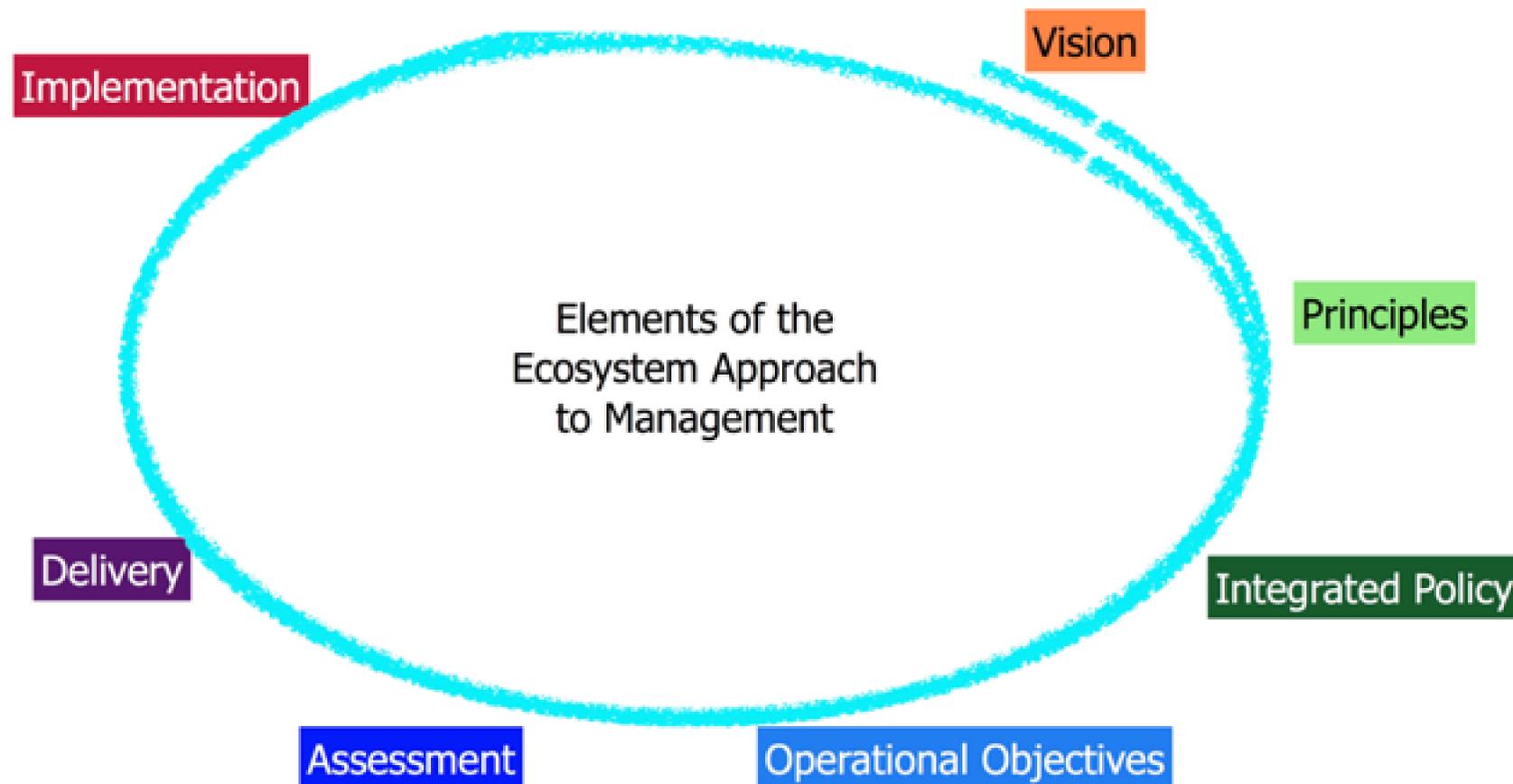
 - to ensure that activities in the Area are carried out in conformity with international regulations (Art. 139)

- The word "standard" is used here to encompass
 - standards s.s.
 - protocols
 - guidelines/guidance
 - recommendations

- aim of standardisation is to
 - ensure oversight and control by the regulator
 - establish a level playing field for operators

- the appropriate level of liability needs to be determined in view of the result to be achieved.

- Implementation of the "Ecosystem-based Approach" will be a guiding principle for the management of Activities in the Area:
 - ISA discussion paper on the development of "Environmental Regulations" for exploitation in the Area (ISA, 2017).
 - Regional Management Plan of the Clarion-Clipperton Zone
- The ecosystem approach, defined by the Convention on Biological Diversity (CBD, COP 5) is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way.
- The ecosystem approach aims at a longterm vision for a defined region, developed with stakeholders, is integrative, holistic and based on best available science and knowledge from all sources.
- needs operationalisation throughout the Mining Code



Environmental Standards



<i>EAM element</i>	<i>DP Environ. Regulations</i>	<i>issue</i>	<i>need for standards/guidance specified</i>	<i>further need identified by various sources</i>
Vision				<ul style="list-style-type: none"> • <i>a longterm strategic approach informing on ISAs direction to implement its mandates could set the framework for the regulation of environmental matters</i> • <i>could be translated into a list of procedural safeguards</i> • <i>strategy for dealing with uncertainties</i>

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<i>EAM element</i>	<i>DP Environ. Regs</i>	<i>issue</i>	<i>need for standards/guidance specified</i>	<i>further need identified by various sources</i>
Principles	Part II, Section 2	<i>Guiding principles</i>		<ul style="list-style-type: none"> • CHM Principle not mentioned but needs to be operationalised in the Regulations • Transparency not mentioned • Polluter-pays Principle missing
	DR 5	<i>Best Available Scientific Evidence</i>		<ul style="list-style-type: none"> • needs definition and operationalisation • to be "Best available science" ?
	DR 6	<i>Ecosystem-based approach</i>		<ul style="list-style-type: none"> • needs operationalisation by the structure and content of the regulations
	DR 7	<i>Precautionary approach</i>		<ul style="list-style-type: none"> • see Discussion Paper 5: Jaeckel 2017
	DR 8	<i>Best Environmental Practices, BEP</i>		<ul style="list-style-type: none"> • needs permanent expert working group for development and review
	DR 9	<i>Promotion of access to Environmental Information</i>	<ul style="list-style-type: none"> • develop procedures to ensure the practicable and timely provision of relevant Environmental Information to Interested Persons • uniform format for the reporting of data and information 	<ul style="list-style-type: none"> • Protocols for Data Sharing

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Principles	DR 10	<i>Consultation in Environmental assessment, Evaluation and management</i>		<ul style="list-style-type: none"> • Protocols for access to and dissemination of information acc. to Aarhus Convention • Protocols for public consultation and disclosure of project documentation such as REAs, EIAs and EMPs • strategy for making best use of scientific information, e.g. internal or external science advisory committee
	DR 40	<i>Facilitating involvement of Interested Persons in environmental decision-making</i>		<ul style="list-style-type: none"> • Protocols for public consultation and disclosure of project documentation such as REAs, EIAs and EMPs consider Almaty Guidelines
	DR 13	<i>Waste minimization</i>	Good Industry Practice	<ul style="list-style-type: none"> • BAT and BEP to address also other sources of pollution - see also background paper on Pilot Mining Tests

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Integrated Marine Policy	DR 12	<i>Environmental objectives</i>	<ul style="list-style-type: none"> develop Environmental objectives 	<ul style="list-style-type: none"> agree social, economic, ecosystem objectives, in light of CHM Principle operationalised by targets and indicators
Assessment tools		(global) SEA and Plan		<ul style="list-style-type: none"> see Background Paper Regional Governance (Weaver and Jones)
		Regional Environmental Assessment and Plan		<ul style="list-style-type: none"> Protocol for conducting Regional Environmental Assessments (REA) for deep-sea mining Protocol for conducting Regional Environmental Assessments (REA) for deep-sea mining Guidance tool on how to use the REA to develop EIAs at the individual licence area scale Protocols for design of regional networks of no-mining areas
	DR 17	Environmental assessment	determine sound engineering and economic principles, conducted and prepared according to Good Industry Practice	<ul style="list-style-type: none"> standard set of preconditions and steps prior to application General Protocol for developing deep-sea mining EIA process, incl. minimum information requirements, for test mining and commercial production Guidance tool on how to scope and develop EIAs for individual licence areas with and without an REA in place Protocols for guiding the evaluation of EIAs
	for Advanced Sustainability Studies e.V.		Environment	

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Assess-ment		Environmental baseline	process to handle environmental inception (scoping) report (EIR) and Prior EIAs for say test mining	
	DR 18	Environmental Impact Area	<ul style="list-style-type: none"> develop criteria to be considered when determining the Impact Area 	
	DR 19	<i>Environmental Baseline study</i>	criteria for „adequate“ or „good“ environmental baselines	<ul style="list-style-type: none"> Standards for biodiversity data collection in low-density abyssal area – survey design, effort, equipment etc. Tools for assessing how much baseline data are sufficient for a satisfactory environmental baseline survey for an EIA Criteria set out in Section 2 a-f need to be operationalised and eventually complemented by scientific experts criteria and procedures to determine location of IRZ/ PRZ
	DR 20	Environmental scoping report: preparation, review and opinion	<ul style="list-style-type: none"> suggested contents of Scoping Report template (Annex I) 	<ul style="list-style-type: none"> handling and review process needed (see DR 10)
	DR 21	<i>Environmental Risk Assessment</i> and evaluation of likely Environmental impacts (only in relation to applicants)	<ul style="list-style-type: none"> ISA guidelines for Environmental Risk Assessment, including qualification of potential significance of risks and uncertainties 	<ul style="list-style-type: none"> guidelines should be standard protocol a) for the regulator b) for the applicant Standard approaches for defining and assessing Good Environmental Status (GES) in areas proposed for mining activities Protocols for developing thresholds and other triggers for action

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	DR 22	<i>Alternatives, Mitigation and management measures</i>		<ul style="list-style-type: none"> • Protocol for conducting an alternatives assessment, including definition of scope • Develop guidance on appropriate impact minimization strategies
	Part III, Section 6	<i>Significant Environmental Impact</i>	criteria for determining the “significance”, either as part of the regulations or as guidance	<ul style="list-style-type: none"> • Tools for assessment of significant impacts/ significant adverse change and “Serious Harm caused by deep-sea mining • Protocol for conducting cumulative/syner gistic impact assessments
	DR 23	<i>Applicant to comply with relevant guidelines and Regulations</i>	<ul style="list-style-type: none"> • guidelines for Plan of Work applications • development of criteria for Environmental Plans 	<ul style="list-style-type: none"> • Protocols for standardised data collection and recording, including metadata
	Part IV, Section 2	<i>Environmental Impact Statement</i>	<ul style="list-style-type: none"> • EIS template • guidelines (or a best practice EIA manual) for quantification and qualification of expected contents 	
	DR 32			<ul style="list-style-type: none"> • standards and protocols for assessing/predicting direct, indirect, cumulative, and other effects on biota and ecosystem, as well as risk assessment • standard methods for rating the severity of effects/ impacts on biota and ecosystem

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	DR 52	<i>Environmental Monitoring</i>	<ul style="list-style-type: none"> specific monitoring and reporting guidelines (including relevant technical standards, monitoring areas and stations (incl. IRZs / PRZs) are required. 	<ul style="list-style-type: none"> Standard operational and effect monitoring and assessment protocol, incl. compulsory set of indicators
	DR 53	<i>Performance Assessment</i>	The Authority will set out the required content and format of such reporting, including the provision of a template to achieve consistency in reporting format.	<ul style="list-style-type: none"> reporting to include identification of uncertainties
	DR 54	<i>Vulnerable Marine Ecosystems</i>	The Commission shall develop and implement procedures for determining, on the basis of the Best Available Scientific Evidence and technical information, whether proposed Exploitation Activities in the Area would have serious harmful effects on Vulnerable Marine Ecosystems and ensure that, if it is determined that certain proposed Exploitation Activities would have serious harmful effects on Vulnerable Marine Ecosystems, those activities are managed to prevent such effects or not authorized to proceed.	<ul style="list-style-type: none"> Protocols for the protection of vulnerable marine ecosystems and other sensitive areas inside mining areas criteria for areas to be disapproved for mining

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	Part IX, Section 3	<i>Environmental incidents</i>		need to [re-]define „incident“ and risk level
	Part IV, Section 3	<i>Environmental Management System</i>		<ul style="list-style-type: none"> list acceptable corporate environmental management systems determine „Good Industry Practice“ Protocols for internal verification and self-governance of environmental standards
	Part IV, Section 4	<i>Environmental Management and Monitoring Plan (EMMP)</i>	<ul style="list-style-type: none"> suggested contents of EMMP template (Annex III) needs review practicalities around EMMPs need clarification [in the regulations] 	Tools for the development of mitigation, environmental management and monitoring
	Part IV, Section 5, DR 32	<i>Information requirements for the Closure Plan</i>	<ul style="list-style-type: none"> suggested contents of Closure Plan template (Annex IV) needs review 	<ul style="list-style-type: none"> practicalities around Closure Plans need clarification in the regulations decommissioning guidelines
	Part V, DR 33	<i>Review of Application for Approval of a Plan of Work</i>		<ul style="list-style-type: none"> agree on the objective criteria and legal threshold for approving or denying a PoW identify actions in the case of insufficiency or denial

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	Part VI	<i>Publicity and Consultation</i>		<ul style="list-style-type: none"> Stakeholder participation strategy in the sense of the Aarhus Convention
	DR 35	<i>Public notification</i>	Authority's guideline on a consultation process and review procedures	
	Part VII, Section 2, DR 40	<i>Evaluation of the Environmental Plans by the Commission</i>	<ul style="list-style-type: none"> rules of procedure for open meetings, the conduct of such meetings and who should attend such meetings. 	
	DR 41		<ul style="list-style-type: none"> criteria for the evaluation of EMMPs [in the regulations] 	<ul style="list-style-type: none"> criteria need more detail to be operational and meaningful
	DR 47	<i>Evaluation report to Council</i>	<ul style="list-style-type: none"> template structure in DR 	
Delivery tools				<ul style="list-style-type: none"> regional spatial planning exercise catalogue of regulatory steps and controls (spatial, activity, emissions, effect etc) Tools for Developing BAT and BPEO Assessments for Deep-Sea Mining BREF (Best Available Techniques Reference Document) note for deep-sea mining
Implementation	Part IX, Section 1	<i>Adaptive Management Approach</i>	<ul style="list-style-type: none"> needs dedicated working group to substantiate potential of AM 	<ul style="list-style-type: none"> regional monitoring and assessment plan independent research plan

Contact



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