Strategic Environmental Assessment (SEA). Envisioning its Application to Marine Areas beyond National Jurisdiction (ABNJ)

1. What is a Strategic Environmental Assessment?

A Strategic Environmental Assessment (SEA) is a proactive process, usually conducted by public or governmental authorities, that aims to identify and evaluate the environmental implications of particular plans, programmes and policies. An SEA seeks to establish longer term environmental objectives for specific geographic regions or whole sectors of activity. Different plans of action are developed to achieve the objectives, and each plan is assessed against specific criteria (e.g., acceptable levels of environmental change for particular species, habitats and ecosystems). The most desirable plan of action is selected and implemented from this decision-making process. SEAs fully embody the precautionary approach, which is invoked in various international codes and agreements, such as the United Nations Fish Stocks Agreement (UNFSA) and the Code of Conduct for Responsible Fisheries.
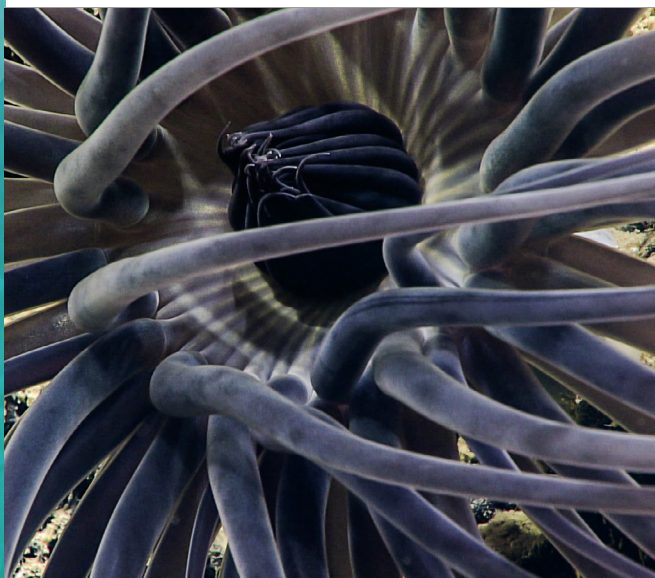
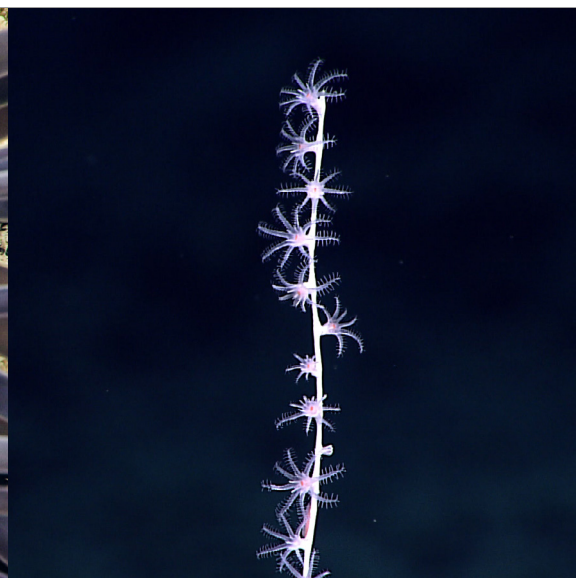

Fig 1 *A tube-dwelling anemone or cerianthid. NOAA OER*

Fig 2 *A deep-sea bamboo coral from the family Isididae. NOAA OER*

2. Why conduct a Strategic Environmental Assessment?

Conducting an SEA can ensure that the impacts of a plan, programme or policy are fully considered and addressed at the earliest stages of decision making. It provides a method of anticipating and avoiding cumulative adverse impacts on the environment that can arise from multiple activities occurring within one geographic region, including from lingering past projects, concurrent present projects, and foreseeable future projects. An SEA is particularly valuable when considering broader scale marine areas, where a range of human activities occur over long time frames; making it a valuable tool for ensuring the sustainable use of marine biodiversity in areas beyond national jurisdiction. Due to their cross-sectoral nature and scale, SEAs provide an important opportunity to harmonize elements of best practice in environmental assessments across a region.

3. What goes into a Strategic Environmental Assessment?

The 2003 Protocol on Strategic Environmental Assessment in a Transboundary Context (Kiev Protocol) describes some of the key elements in an SEA process. These include i) an report outlining likely environmental effects of a policy, plan or programme; ii) public participation and consultations, and iii) review of the policy, plan or programme considering information from the report and public consultation. Different tools can be applied to predict environmental and socio-economic effects, ensure full participation of stakeholders, and to compare plans of action. These include: (i) tools to predict environmental and socio-economic effects; (ii) tools to ensure full participation of stakeholders; and (iii) tools for analysing and comparing options.

Tools for ensuring full stakeholder engagement

- Stakeholder analysis to identify those affected and involved in the policy, plan or programme decision
- Consultation surveys
- Consensus building processes

Tools for predicting environmental and socio-economic effects

- Modelling or forecasting of direct environmental effects
- Matrices and network analysis
- Participatory or consultative techniques
- Geographical information systems as a tool to analyze, organize and present information

Tools for analyzing and comparing options

- Scenario analysis and multi-criteria analysis
- Risk analysis or assessment
- Cost benefit analysis
- Opinion surveys to identify priorities

Once a plan of action has been implemented, it is important to establish monitoring protocols to determine any unforeseen environmental effects and to apply necessary remediation measures.

Fig 3 *A pancake urchin is one of the most commonly seen echinoids in the deep sea. NOAA OER*

Fig 4 *Enypniastes eximia is a holothurian or sea cucumber frequently seen swimming. NOAA OER*

4 How is a Strategic Environmental Assessment related to Environmental Impact Assessments?

An environmental impact assessment (EIA) determines the environmental impacts of a specific project or development and is often location specific and limited in time. In contrast, an SEA evaluates a plan of action for a broad geographic area or a whole sector of activity with longer term environmental objectives. EIA will typically propose alternatives and specify mitigation measures to avoid the most negative environmental impacts of a project or development. SEA is a more overarching and flexible concept than EIA allowing for a more comprehensive and forward looking assessment of environmental considerations at the policy, planning and programme level. SEA is broader because it accounts for multiple activities concurrently, over larger areas and potentially longer times and it is strategic in the sense of considering development policy rather than single projects or activities This does present considerable resource and logistic challenges in the context of ABNJ in view of the vastness of the open ocean and the current mosaic of sectoral management bodies. As scales increase from EIAs to SEAs, assessment will necessarily have to depend more on models and proxies. SEAs can establish important baseline information for project based EIAs. An SEA and EIA should be vertically integrated, with the environmental objectives specified within an SEA being considered down at the project level. In practice this has not always happened and for ABNJ, EIAs have already been undertaken in some sectors without a broader environmental vision.

Fig 5 *Iridigorgia magnispiralis, one of the most iconic deep-sea corals can grow to several metres in height. NOAA OER*

5. How would an SEA fit under an ILBI?

Currently, SEAs can only be initiated by the few sectoral or regional authorities with parts of ABNJ under their jurisdiction (e.g., International Seabed Authority, bodies within the Antarctic Treaty system). A provision could be included in the International Legally Binding Instrument (ILBI) for the conservation and sustainable use of biodiversity in ABNJ under UNCLOS requiring States Parties, either individually or as a group that are proponents of a new plan, programme or policy, to undertake an SEA for a region or sector. To minimize or avoid any real or perceived bias or conflict of interest, proponents could pay into a pool of funding controlled by a neutral third party and the third party would then hire independent consultants to conduct the SEA. The Scientific/Technical Committee established under the ILBI could then review SEA reports for their quality. As no specific sequence or method to undertake an SEA has been specifically mandated in state practice to date, the ILBI also represents an opportunity to outline a process to be adapted regionally based on circumstances.

An SEA might involve the development of a problem framework that maps key environmental, economic and sustainability issues associated with the plan, policy or programme. This may identify i) the marine biodiversity and natural resources of the region, ii) ecologically and biologically significant areas, iii) the medium and long term economic potential of activities and iv) the cumulative environmental impacts of activities within the region.

A governance framework could be developed that identifies different institutional responsibilities for implementing the policy, plan or programme, relevant governance instruments, and the stakeholders that need to be engaged. Stakeholders may include, but are not limited to, relevant international organizations and treaty bodies (e.g., ISA, IMO, FAO, CBD and CMS), regional fisheries management organizations (RFMOs), regional seas organizations or arrangements (RSAs), relevant intergovernmental and nongovernmental organizations (IGOs and NGOs).

A strategic reference framework could also be developed to map the overarching law and policy documents that set the context for the SEA. This could include globally endorsed policies (e.g., UN Sustainable Development Goals, the RIO +20

commitments) as well as relevant articles of UNCLOS, the ILBI and the CBD. Engagement with Ocean Observing Systems, and the Global Ocean Observing Systems (GOOS) Regional Alliances and Deep Ocean Observing Strategy (DOOS) in particular, will be critical in supplying the baseline data needed to assess how strategic changes in direction are impacting the state of the marine environment.
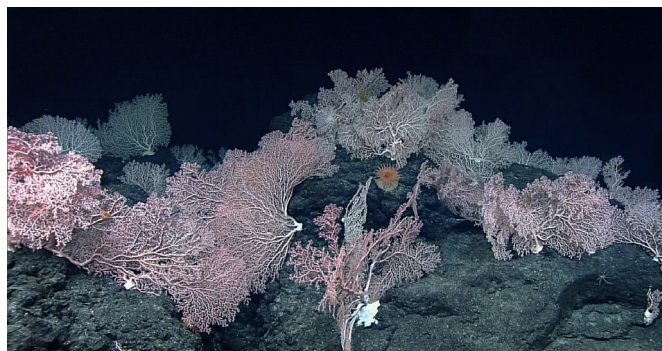

Fig 6 *A dense pink coral garden seen in the Musician Seamounts. NOAA OER*

Thinking Ahead

Implementing SEAs in ABNJ will require a high degree of collaboration between individual States Parties to the ILBI and global as well as regional organizations with ABNJ responsibilities. This may not necessarily involve displacing existing environmental assessment regimes but rather adding ABNJ considerations to existing processes, and providing best practice guidelines for SEA.

The vast geographic areas, significant knowledge gaps regarding deep-sea biodiversity, sparse and fragmentary governance frameworks, lack of resources and technical capacities for implementation, and the nascent stage of many activities in ABNJ present important challenges to implementing SEAs. For these reasons, SEAs for particular sectors and regions of ABNJ may only evolve over time but it will be important to include provisions for SEA within the ILBI so that, as knowledge of biodiversity increases and future activities develop, broad scale environmental considerations can be put in place.

Suggested Reading:

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- *Elliott, M*. 2014. Environmental Impact Assessment in Australia. Theory and Practice 6th Edition (Federation Press, Sydney)
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ABOUT DOSI

The Deep-Ocean Stewardship Initiative seeks to integrate science, technology, policy, law and economics to advise on ecosystem-based management of resource use in the deep ocean and strategies to maintain the integrity of deep-ocean ecosystems within and beyond national jurisdiction.

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