

Briefing

Fisheries; Governance

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Policy pointers

The ecosystem approach should aim to integrate both areas within and beyond national jurisdiction, as ecosystems boundaries traverse often jurisdictional lines.

Given wide consensus that the ecosystem approach should be included in any new international treaty on the conservation of marine biodiversity in areas beyond national jurisdiction, negotiators must now agree what form this inclusion will take.

A legally binding instrument should detail concrete aspects of the ecosystem approach (such as cumulative impacts) where relevant and set clear operational thresholds.

Negotiators should make sure that the new treaty addresses social, economic and equity dimensions of ecosystem-based governance.

Towards ecosystem-based governance of the high seas

Early on in the international process to adopt a new international treaty on the conservation of marine biodiversity in areas beyond national jurisdiction (ABNJ), the ‘ecosystem approach’ was identified as an invaluable tool that would help “build a global legal regime that allowed for an integrated assessment of human activities and their interactions with the marine environment”. But despite broad agreement among negotiators that this approach should be included as a general principle of any future international legally binding instrument (ILBI), its precise role is still unclear. To ensure the effective implementation of the ecosystem approach — and ultimately more effective and future-proof governance of marine biodiversity — ILBI negotiators need to agree **how** the approach will be incorporated in a new treaty and to articulate clear guidance on putting it into practice.

The United Nations General Assembly recently launched an international process to adopt a new international treaty on the conservation of marine biodiversity in areas beyond national jurisdiction (ABNJ) — areas of ocean over which no single country has authority or rights. From the process’s early stages, the ‘ecosystem approach’ was identified as an invaluable tool that would help avoid fragmentation and “build a global legal regime that allowed for an integrated assessment of human activities and their interactions with the marine environment”.¹ The preparatory phase more concretely noted it among the general principles and approaches that should be included in a future international legally binding instrument (ILBI) to guide the conservation and sustainable use of biodiversity in areas beyond national jurisdiction.² However, the approach’s potential role remains unclear.³

What is the ecosystem approach?

The ecosystem approach has been described as a “strategy for the integrated management of land, water and living resources”.⁴ The concept translates key ecological insights into law and rests broadly on four interrelated elements: integrity, integration, information and iteration. The approach has four foundational elements:

Ecological (or ecosystem) integrity is in many ways the underlying goal of the ecosystem approach. Integrity is not always easy to define^{5–7} or operationalise;⁸ however, it aims to maintain key functions and structural components of ecosystems to protect and preserve the ecosystems themselves and to conserve biological diversity.

Integration is the need for conservation activities and approaches to be holistic and consider ecological interdependencies and connections, rather than focus on discrete goals,

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areas or problems. It means incorporating into a single conceptual and operating framework all of an ecosystem's social and ecological dimensions and spatially and temporally relevant

pressures (see Box 1), using multiple types and sources of knowledge (epistemic integration) and spanning political and jurisdictional boundaries.

Information refers to the crucial role of knowledge in putting into practice the ecosystem approach. Detailed knowledge of ecosystem processes and baseline conditions are crucial to understanding the key stressors on an

ecosystem and to assessing whether a conservation plan or measure is working. As described under 'Integration', it is important that different types and sources of knowledge are used (Box 2).

The final element is **iteration**. Any ecosystem conservation measure needs to be iteratively assessed so as respond to changes in existing conditions, to the variability of natural processes and to the responses of ecosystems to various stressors and to management measures themselves.

Social and equity dimensions

Another idea central to the ecosystem approach is that humans are an integral part of ecosystems, which means that ecosystem-oriented conservation must also consider social and equity dimensions. These dimensions connect closely to other key principles, particularly those relating to the importance of indigenous and traditional knowledge. In this way, consideration of social and equity dimensions helps to operationalise epistemic

integration — enshrining two of the four foundational elements of the ecosystem approach already described.

Equity is also an important site of intersection between ecological and social connectivities. Ecological connectivities connect the oceans via biological and oceanographic interdependencies.^{10,11} However, they also connect the high seas with coastal communities by transporting deleterious effects across oceanic spaces and maritime zones, for example through the high seas towards vulnerable coastal communities.

Articulating the ecosystem approach in a new treaty

The four elements of the ecosystem approach — integrity, integration, information and iteration — are common across numerous international legal regimes and treaties. However, their articulations (and legal nature) vary.¹² For the most part, the ecosystem approach is a non-binding best practice set of principles that aims to support actors to implement their primary obligations (eg under the CBD and UN Food and Agriculture Organization); sometimes it is only implicit in other primary obligations to protect and preserve the marine environment (UN Convention on the Law of the Sea (UNCLOS), especially articles 192 and 194(5)).¹³

This variation is one factor that makes the ecosystem approach hard to delineate. Another is the fact that, in bringing together multiple disciplines and considerations, the ecosystem approach is shaped by important ambiguities.¹⁴ The meaningful inclusion of the ecosystem approach in a future ILBI — that is the extent to which it plays a significant and effective role in conserving marine biodiversity — will therefore depend on how it is included. But despite broad agreement among negotiators that the ecosystem approach should be included, there has been little discussion on what form this should take.

To decide how the ecosystem approach should be articulated in a future ILBI, at least two questions need to be answered.

Firstly, from a **substantive legal perspective**, how can we ensure the coherent implementation of the ecosystem approach? How will its inclusion help determine whether cumulative impacts should be considered when designating marine protected areas, or whether conservation measures taken in areas within national jurisdiction should be compatible with those adopted in ABNJ? Whether

Box 1. Cumulative impacts

Cumulative impacts (or effects) are changes to ecosystems determined by a combination of past, present and future activities or events. From this perspective, any activity or event interacts with the broader context within which it occurs. Even if an individual activity or event, considered in isolation, may not pose significant risk of harm, its cumulative assessment may indicate otherwise; it may be the proverbial last straw — the final thing in a series of things that tips the balance.

Box 2. Integrating indigenous knowledge

The social and equity dimensions of ecosystems are recognised in the Malawi Principles on the ecosystem approach, developed under the Convention on Biological Diversity (CBD). Principle 1 recognises that the objectives for conservation and management “are a matter of societal choice”, while principle 12 recognises that all sectors of society should be involved in an ecosystem approach to conservation.

Together, these two principles speak directly to key issues under discussion within the World Intellectual Property Organization’s Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC): the need for greater participation of indigenous and traditional communities in decision-making processes to identify and designate marine protected areas; and the need for greater recognition of the relevance of their knowledge — with regards to both the conservation and sustainable use of biodiversity.⁹

environmental impact assessment rules adopted in the ILBI should only apply to activities that take place in ABNJ (the activity-oriented approach) or to every activity that has an impact on ABNJ (the impact-oriented approach)? Secondly, from an **institutional perspective**, what institutions do we need to create, with what competence, and how would they interact with those that already exist?

The challenge for both of these questions is the fact that the ocean is an interconnected entity. Ecosystem boundaries often traverse jurisdictional lines, crossing national borders and ABNJ. And an ecosystem approach that stops at the jurisdictional boundary between areas within and beyond national jurisdiction falls well short of its conceptual and ecological ambitions.

But what mechanisms are there that both respect the maritime zoning enshrined in UNCLOS and simultaneously address the need for an integrated ecosystem governance model? Some draft provisions of the ILBI speak of compatibility. Already operational in the Fish Stocks Agreement, compatibility requires parties to ensure that measures adopted in areas within and beyond national jurisdiction are compatible with one another. In ILBI negotiations, however, compatibility is discussed primarily — if not exclusively — from the perspective of adjacent coastal states that want safeguards against global measures that may have spill-over effects on maritime zones under their sovereign jurisdiction (rather than being discussed from an ecosystem point of view).

The Collective Arrangement (CA) may offer inspiration for a way forward. The CA aims to integrate the regional, sectoral and global dimensions in a coherent arrangement for decision making to foster coordination, complementarity, compatibility and consistency.¹⁵ It was adopted in 2014 by the Convention for the Protection of the Marine Environment of the North-East Atlantic and the

North-East Atlantic Fisheries Commission, who both have limited subject matter competence and realised they could achieve their goals more effectively through cooperation.

Other similar examples include the Large Marine Ecosystem arrangements,¹⁶ whose geographical scope is based on ecological criteria and which aim to implement an ecosystem approach to ocean governance. The governance structure and modality are different for each Large Marine Ecosystem, however, and for the moment their focus seems to be only on cooperation with regional seas organisations, rather than engaging with all relevant instruments and bodies, like the CA.

Let us imagine a future ILBI which integrates and (like the CA) aligns new and existing bodies and instruments within the same institutional framework and under the “constitutional” umbrella of the UNCLOS. This would ensure not only cooperation but also the compatibility of measures adopted under the individual regimes. It would also operationalise the duty to cooperate that states have under UNCLOS and strengthen individual organisations’ capacities to achieve their goals, possibly bypassing altogether the thorny issue of the extent to which the ILBI should “not undermine” relevant instruments and bodies. Perhaps most importantly, such an arrangement could effectively and seriously “help deliver” an ecosystem-based governance of the oceans, both within and beyond national jurisdiction.

Ways forward

To ensure the effective implementation of the ecosystem approach, ILBI negotiators should make sure that it is articulated in clear and concrete terms.

1. The ILBI should describe in detail what the ecosystem approach is and articulate in full its operational thresholds and guidelines, preferably within the ILBI itself or by

referring to other frameworks (eg CBD's Malawi Principles). This could be set out in an annex, which would ensure a degree of flexibility and would mean that parties could adapt the framework as required without having to go through formal treaty amendment procedures.¹³

2. The ILBI should fully integrate the ecosystem approach, both using it conceptually as an overarching guiding principle and delineating in relevant parts (eg with respect to environmental impact assessments) concrete components of its four foundational elements (eg cumulative impacts).

3. The ILBI should explicitly acknowledge and incorporate the social, economic and equity dimensions of the ecosystem approach. This includes addressing the equity implications of ecological connectivities that redistribute deleterious impacts across maritime zones — and in particular from the high seas to coastal areas.

4. The ecosystem approach should aim to meaningfully address both areas within and beyond national jurisdiction. A concrete first step would be for the ILBI to focus on compatibility of measures adopted by all relevant global, regional or sectoral instruments and bodies within and across maritime zones and jurisdictions that fall within the same ecosystem area (eg large marine ecosystems), with a view to articulating a more integrated governance approach over time. By integrating regional instruments and bodies within a global framework, using mechanisms such as the CA as a model, the ILBI could be a catalyst for more effective and future-proof ecosystem ocean governance.

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Notes

¹ ICP-7, para 90. / ² PREPCOM Report, Section III, para 1. / ³ De Lucia, V (2019a) The ecosystem approach and the negotiations towards a new agreement on marine biodiversity in areas beyond national jurisdiction. *Nordic Journal of Environmental Law* 2. / ⁴ Decision V/6 'Ecosystem Approach', Nairobi, 15–26 May 2000, UNEP/CBD/COP/DEC/V/6. / ⁵ De Leo, G and Levin, S (1997) The multifaceted aspects of ecosystem integrity. *Conservation Ecology* 1(1) 3. / ⁶ Steinhoff, G (2013) Ecological integrity in protected areas: two interpretations. *Seattle Journal of Environmental Law* 3 155. / ⁷ There is a significant body of literature that does try to define the approach, stemming primarily from the Global Ecological Integrity Group's work — eg, Westra, L (2005) Ecological integrity. In: C Mitcham (ed.) *Encyclopedia of Science, Technology, and Ethics*, Vol 2. Macmillan. / ⁸ For an attempt, see Kim, R and Bosselmann, K (2015) Operationalizing sustainable development: ecological integrity as a Grundnorm of international law. *Review of European, Comparative & International Environmental Law* 24(2) 194. / ⁹ With particular respect to sustainable use of marine genetic resources, this point is captured by current article 10bis of the revised draft text of 27 November 2019. / ¹⁰ Popova, E, Vousten, D, Sauer, WHH, Mohammed, EY, Allain, V, Downey-Breedt, N, Fletcher, R, Gjerde, KM, Halpin, PN, Kelly, S, Obura, D, Pecl, G, Roberts, M, Raitsos, DE, Rogers, A, Samoilys, M, Sumaila, UR, Tracey, S and Yool, A (2019) Ecological connectivity between the areas beyond national jurisdiction and coastal waters: safeguarding interests of coastal communities in developing countries. *Marine Policy* 104 90–102. <https://doi.org/10.1016/j.marpol.2019.02.050>. / ¹¹ Popova, E, Bladon, A, Mohammed, EY, Vousten, D and Sauer, W (2019) So far, yet so close: ecological connectivity between ABNJ and territorial waters. IIED, London. <https://pubs.iied.org/17500IIED> / ¹² Such as, eg, the Malawi Principles, adopted within the context of the CBD, the FAO Ecosystem Approach to Fisheries Principles (www.fao.org/3/a-y4773e.pdf) and the agreed consensual principles adopted by the UNCLOS. See: De Lucia, V (2019b) The ecosystem approach in international environmental law: genealogy and biopolitics. Routledge. / ¹³ For a detailed analysis on these aspects, see De Lucia, V (2019a). / ¹⁴ See, eg, De Lucia, V (2015) Competing narratives and complex genealogies: the ecosystem approach in international environmental law. *Journal of Environmental Law* 27(1) 91. / ¹⁵ OSPAR Commission and North-East Atlantic Fisheries Commission (2015) Collective arrangement between competent international organisations on cooperation and coordination regarding selected areas in areas beyond national jurisdiction in the North-East Atlantic, OSPAR Agreement 2014-09. www.ospar.org/documents?v=33030 / ¹⁶ Billé, R, Chabason, L, Drankier, P, Molenaar, EJ and Rochette, J (2016) Regional oceans governance: making regional seas programmes, regional fishery bodies and large marine ecosystem mechanisms work better together. UNEP Regional Seas Reports and Studies No. 197.