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High seas fisheries: what role for a new international instrument?

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A NEW AGREEMENT ON HIGH SEAS BIODIVERSITY

States are currently discussing the development of a new international legally binding instrument (ILBI) on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (ABNJ).

FISHERIES: IN OR OUT?

It is widely acknowledged that fishing is currently the activity with the largest impact on biodiversity in ABNJ. There is a growing consensus that a new agreement should include fisheries, though it is unclear how this can be achieved. Some States continue to argue that fisheries are adequately covered by existing frameworks.

WHAT ROLE FOR FISHERIES IN A NEW AGREEMENT?

Fisheries are closely linked to all elements of the package of issues under discussion, particularly area-based management tools (ABMTs), including marine protected areas (MPAs) and environmental impact assessments (EIAs). Fisheries management bodies will therefore likely play a role in the implementation of various aspects of a new agreement.

STRENGTHENING FISHERIES MANAGEMENT

A new agreement can also complement and enhance existing fisheries management frameworks and contribute to advancing an integrated approach to ocean governance. An ILBI could improve integration and place complementary obligations on States, as well as provide over-arching principles to improve coherence of the global system of ocean governance.

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LIST OF ACRONYMS

ABMTs	Area-based management tools
ABNJ	Areas beyond national jurisdiction
BBNJ Working Group	Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction ("biodiversity beyond national jurisdiction working group")
CBD	Convention on Biological Diversity
COP	Conference of the Parties
EIA	Environmental impact assessment
FAO	United Nations Food and Agriculture Organization
IASC	International Arctic Science Committee
ICES	International Council for the Exploration of the Sea
ILBI	International legally binding instrument
IUCN	International Union for the Conservation of Nature
MPA	Marine Protected Area
NEAFC	North East Atlantic Fisheries Commission
OEABCM	Other effective area-based conservation measures
OSPAR	The Convention for the Protection of the Marine Environment of the North-East Atlantic (Oslo-Paris Convention)
PICES	North Pacific Marine Science Organization
PrepCom	Preparatory Committee
PSMA	Port State Measures Agreement
RFB	Regional fishery body
RFMO	Regional fisheries management organisation
SAI	Significant adverse impact
SCAR	Scientific Committee on Antarctic Research
SEA	Strategic Environmental Assessment
SPC	Secretariat of the Pacific Community
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNFSA	United Nations Fish Stocks Agreement
UNGA	United Nations General Assembly
VME	Vulnerable marine ecosystem

1. INTRODUCTION

Marine areas beyond national jurisdiction (ABNJ) represent nearly half of the earth's surface and host a significant proportion of its biodiversity. The remoteness of ABNJ and a lack of scientific knowledge previously placed them beyond the reach of human activities, but technological advancements, scientific developments, and growing demand for biological and mineral resources are driving new exploration and exploitation.

The search for useful genetic resources is increasing (Broggiato *et al.*, 2014),[1] while other activities are having a range of impacts, including: overexploitation of living marine resources (Merrie *et al.*, 2014); destruction of habitats (Pusceddu *et al.*, 2014); the impacts of climate change and ocean acidification (Gattuso *et al.*, 2015; Riebesell and Gattuso, 2014; Weatherdon *et al.*, 2015) pollution of the marine environment (Ramirez-Llodra *et al.*, 2011) and impacts linked to deep-sea mining (Halfar and Fujita, 2007) and geo-engineering (Boyd, 2013; Lukacs, 2012)

The international community has been discussing options to conserve and sustainably use marine biodiversity in ABNJ since 2006. In 2015, States took the historic decision to develop a new international legally binding instrument (ILBI) on the conservation and sustainable use of marine biological diversity of ABNJ, under the framework of the United Nations Convention on the Law of the Sea (UNCLOS). Specifically, it was recommended that:

> *negotiations shall address the topics identified in the package agreed in 2011, namely the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction, in particular, together and as a whole, marine genetic resources, including questions on the sharing of benefits, measures such as area-based management tools, including marine protected areas, environmental impact assessments and capacity building and the transfer of marine technology.*[2]

Both in the course of the deliberations that led to this decision and at the first meeting of the Preparatory Committee (PrepCom) in March-April 2016, numerous States and stakeholders highlighted that fishing is currently the activity with the largest impact on biodiversity in ABNJ. Despite this widespread recognition, a number of delegations have expressed concern that it is not currently clear whether fisheries should be integrated into a new ILBI and how this could be achieved.

This paper demonstrates that there is not only room for the inclusion of fisheries within a new ILBI, but that there are many options for the ILBI to complement and enhance existing fisheries management and contribute to advancing an integrated approach to ocean governance. The following section provides an introduction to fisheries in ABNJ, while Section 3 summarises the current regulatory framework. Section 4 discusses the place of fisheries within the ongoing process toward a new ILBI, and Section 5 provides a range of potential options for the inclusion of fisheries in a new instrument.

1. At present, the exploitation of marine genetic resources is not thought to cause significant environmental impacts, though the disparity in capacities of States to explore and exploit these resources has raised equity concerns (Arnaud-Haond *et al.*, 2011).

2. Recommendations of the Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction to the sixty-ninth session of the General Assembly, http://www.un.org/depts/los/biodiversityworkinggroup/documents/AHWG_9_recommendations.pdf, para 6.

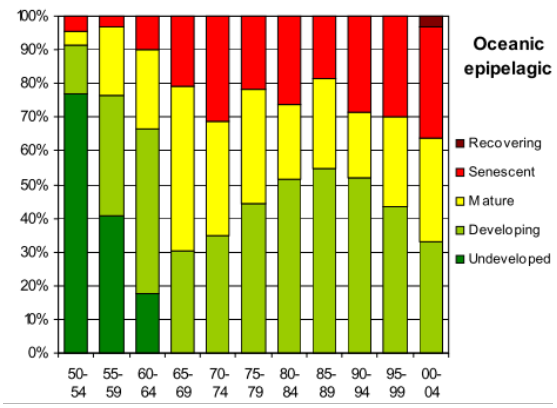
2. FISHERIES IN ABNJ

Fishing activities, traditionally limited to nearshore areas, have expanded into the high seas as demand has increased and coastal fisheries have collapsed (Merrie *et al.,* 2014; Bensch *et al.,* 2009).[3]

According to the *State of World Fisheries and Aquaculture 2016* report published by the United Nations Food and Agriculture Organisation (FAO), 58.1% of global fish stocks are fully fished, 31.4% are fished at a biologically unsustainable level and are therefore overfished, and only 10.5% of fish stocks are underfished. The report does not provide precise figures on fisheries in ABNJ, but notes that the "situation seems more critical for some highly migratory, straddling and other fishery resources that are fished solely or partially in the high seas".

In a 2006 technical paper on the state of highly migratory, straddling and other high seas fish stocks, the FAO reported that about 30% of the highly migratory tuna and tuna-like species are overexploited or depleted, as are more than 50% of the highly migratory oceanic sharks and nearly two-thirds of straddling stocks (Maguire *et al.*, 2006).

Figure 1. Percentage of the world's top oceanic-epipelagic marine fishery resources in various phases of fisheries development, 1950-2004.

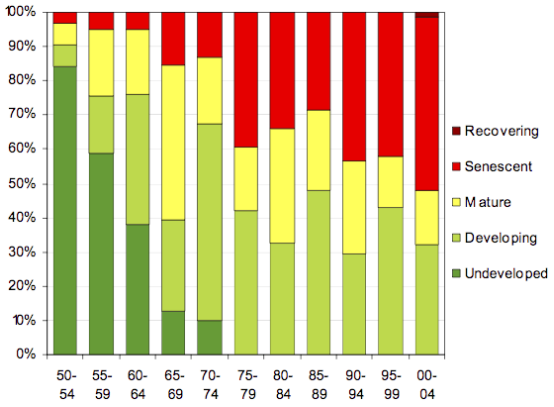


Source: Maguire *et al.*, 2006.

The FAO's 2008 *Status of Fisheries* report noted: "In the case of straddling stocks and of other high seas fishery resources, nearly two-thirds of the stocks for which the state of exploitation can be determined were classified as overexploited or depleted."[4] Reports of the Secretary-General submitted to the review conference of the UN Fish Stocks Agreement (UNFSA)[5] in 2010 and 2016[6] also note the decline in the overall status of highly migratory and straddling fish stocks, notwithstanding improvements in the status of some stocks.[7]

With regard to other high seas fish stocks, i.e. discrete stocks in ABNJ that are not straddling or highly migratory, the FAO notes: "Most fisheries for these deep water species are relatively recent and the development of a majority of them has outpaced the ability to provide scientific information and to implement effective management" (Maguire *et al.*, 2006).

Figure 2. Percentage of the world's top oceanic-deepwater marine fishery resources in various phases of fisheries development, 1950-2004.



Source: Maguire *et al.*, 2006.

3. FAO, The State of World Fisheries and Aquaculture 2016 (Rome 2016).

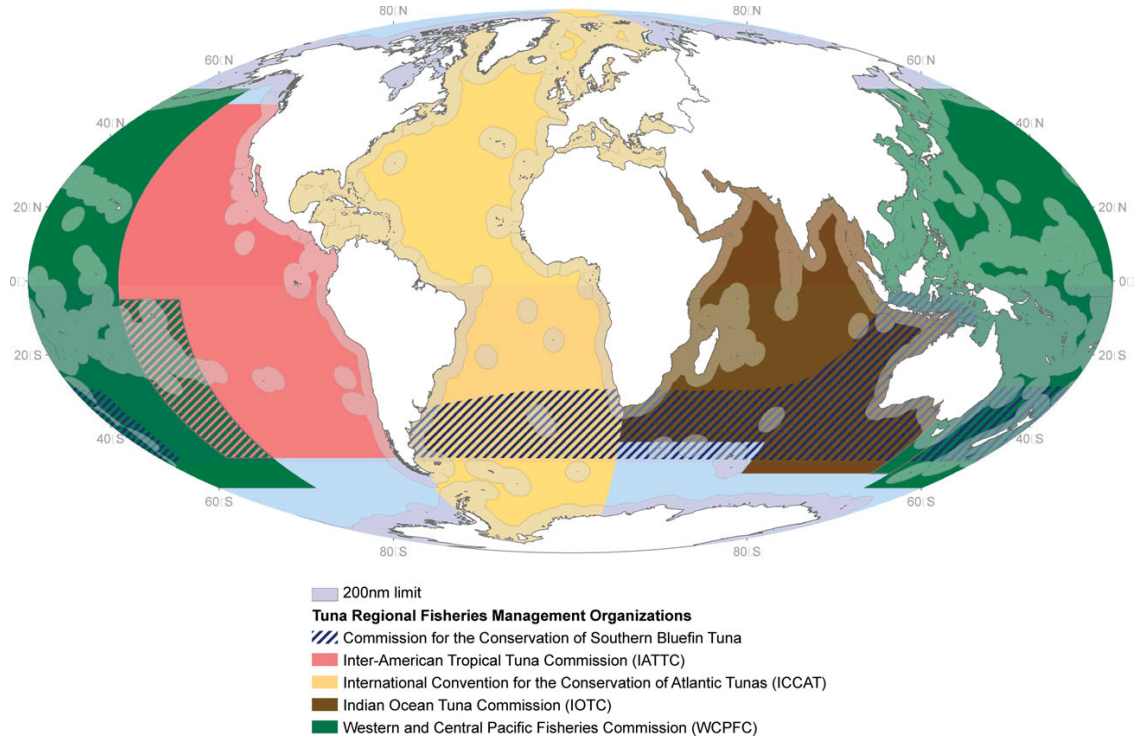
4. FAO, The State of World Fisheries and Aquaculture 2008 (Rome 2008). The report also noted that an increasing number of countries are reporting jellyfish catches, in most cases in growing quantities, and that it is not yet clear whether this is due to the development of new fisheries to supply the Asian market or a sign of environmental degradation and a threat to fisheries as jellyfishes compete with fish for food and feed on their larvae.

5. Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, entered into force 11 December 2001, 1542 A/CONF.164/37, 34 International Legal Materials 1542. Text at http://www.un.org/Depts/los/convention_agreements/convention_overview_fish_stocks.htm

6. Review Conference on the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (New York, 24-28 May 2010 and 23-27 May 2016).

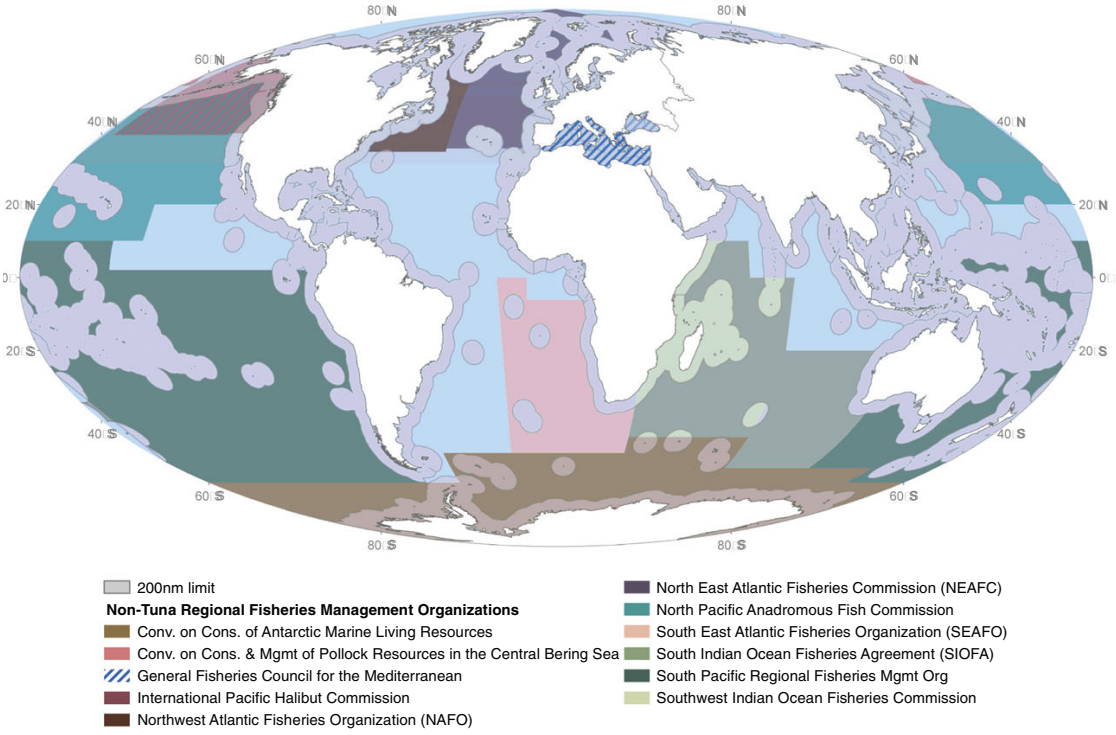
7. Report submitted to the resumed Review Conference in accordance with paragraph 32 of General Assembly resolution 63/112 to assist it in discharging its mandate under article 36, paragraph 2, of the Agreement (4 January 2010) A/CONF.210/2010/1; and Report submitted to the resumed Review Conference in accordance with paragraph 41 of General Assembly resolution 69/109 to assist it in discharging its mandate under article 36 (2) of the Agreement (1 March 2016) A/CONF.210/2016/1.

Figure 3. Tuna RFMOs*



Source: Ban *et al.*, 2014. * Areas in light blue indicate no RFMO exists; all fisheries in the Southern Ocean are managed by CCAMLR.

Figure 4. Non-Tuna RFMOs



Source: Ban *et al.*, 2014.

High seas fishing, especially given the current high level of overexploited and depleted fish stocks, can cause a wide array of impacts on open ocean ecosystems and biodiversity (Crespo *et al.*, 2016). These range from species-level to community and ecosystem-wide impacts. Species-level impacts include threats to non-targeted species through bycatch (particularly sharks, sea turtles and seabirds), contraction in species range and reduction in body size, which, together with reductions in abundance, may reduce the potential number of offspring produced by the exploited population. Loss of genetic diversity due to low population size can increase extinction risk, increase recovery time and decrease adaptability to changing climate. Changes at the species level propagate to other species in community, as reductions in abundance and average body mass may change the composition of diets and predator-prey interactions. Ecosystem level impacts can lead to reductions in biodiversity (species richness and density) and a consequent loss of ecosystem resilience, and even potential regime shifts in open-ocean communities.[8]

High seas fishing targeting deep-sea species has been documented as having severe impacts on certain fish stocks and benthic communities (Clark *et al.*, 2016; Roberts, 2002). Negative environmental impacts can result from all bottom contact fishing methods (FAO, 2008), though bottom trawling is often highlighted as being particularly deleterious as it destroys long-lived species, reduces the complexity of the seabed, and decreases species diversity and faunal biomass (Althaus *et al.*, 2009; Pusceddu *et al.*, 2014; Reed, John *et al.*, 2005; Watling and Norse, 1998).

3. REGULATION OF FISHERIES IN ABNJ

Regional fisheries management organisations (RFMOs) have a mandate to adopt binding conservation and management measures and are the preferred vehicle for fisheries regulation at the regional level.[9] The UNFSA imposes an obligation on contracting parties to cooperate with and through RFMOs, and to establish RFMOs where they do not exist in relation to straddling and highly migratory fish stocks.[10]

In 2004, the United Nations General Assembly (UNGA) called for urgent action and to consider on a case-by-case basis the interim prohibition of destructive fishing practices until appropriate conservation and management measures had been adopted.[11] In 2006, the UNGA adopted a more detailed resolution to ensure the long-term sustainability of deep-sea fish stocks that required specific measures to protect vulnerable marine ecosystems (VMEs) from the significant adverse impacts (SAIs) of bottom fisheries.[12] Resolution 61/105 (2006) specifically calls for:

- Impact assessments to assess whether individual bottom fishing activities would have SAIs on VMEs, and to ensure that activities are either managed to prevent SAIs, or not authorized to proceed;[13]
- The improvement of scientific research and data collection and sharing, and specific regulation of new and exploratory fisheries;[14]
- "Move-on" rules requiring vessels to cease bottom fishing in areas where VMEs are encountered, and to report the encounter so that appropriate measures can be adopted;[15] and;
- Closure of certain areas to bottom fishing where VMEs are known to occur or are likely to occur based on the best available scientific information, unless conservation and management measures have been established to prevent SAIs.[16]

In September 2011, the UNGA held a two-day workshop to examine implementation of the UNGA resolutions on bottom trawling.[17]

8. I.e. "a persistent change in the structure and dynamics of the whole system" (Yletyinen *et al.*, 2016).
9. RFMOs are one type of Regional fisheries bodies (RFB), i.e. a mechanism through which States or entities cooperate on the management of fisheries. See http://www.fao.org/fishery/topic/16800/en. In contrast to other RFBs, RFMOs have a mandate to establish legally binding measures. Some RFMOs focus on the management of particular highly migratory species, most notably tuna, while others manage all fish stocks in a particular fishery. RFMOs usually comprise coastal States from the region, as well as countries with interests in the fisheries concerned, such as distant-fishing nations.
10. UNFSA art. 8(3).
11. UN, Sustainable fisheries, including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and related instruments A/RES/59/25 (2004).
12. UN, Sustainable fisheries, including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and related instruments, A/RES/61/105 (2006).
13. Section 83(a).
14. Section 83(b).
15. Section 83(d).
16. Section 83(c).
17. Workshop to discuss implementation of paragraphs 80 and 83 to 87 of resolution 61/105 and paragraphs 117

Following the workshop, the moderator concluded that it was generally recognized that further efforts were needed in RFMOs to fully implement the resolutions.[18] Challenges faced by RFMOs in the implementation of the resolutions were also noted, including lack of scientific information and data, the costs of research activities, and the need for greater clarity in definitions and terminology. The need for RFMOs to make their activities more publicly available was emphasised, as was the need for assessments to be conducted more frequently. This echoed the recommendations of assessments conducted by civil society and the scientific community, which highlighted that, while RFMOs have increased their efforts to engage with biodiversity issues, implementation gaps remain (Cullis-Suzuki and Pauly, 2010; Gianni *et al.*, 2011; Rogers and Gianni, 2010; Weaver *et al.*, 2011).

Following this workshop, the UNGA made a number of recommendations,[19] including to: strengthen procedures for carrying out assessments and for making the assessments publicly available, recognising that doing so can support transparency and capacity-building globally; establish and improve procedures ensure that assessments are updated when new conditions or information so require, and for evaluating, reviewing and revising assessments based on best available science and management measures; and establish mechanisms to promote and enhance compliance with applicable measures related to the protection of VMEs, adopted in accordance with international law.

At the most recent meeting of the resumed review conference on the implementation of the UNFSA (May 23-27, 2016), delegates were reported to have adopted an outcome document recommending further action, including: improving the conservation and management of stocks; increasing the efficiency and coordination of regional fisheries management bodies; fighting IUU fishing through stronger monitoring, control and surveillance; and enhancing data and science and to ensure wider participation in the UNFSA.[20]

4. FISHERIES IN THE ABNJ DISCUSSIONS AND NEGOTIATIONS

4.1. Fisheries in the BBNJ Working Group

Current discussions on marine biodiversity in ABNJ have their origins in the *Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction* ("BBNJ Working Group") established by the UNGA in 2004.[21]

Fisheries issues were raised early on by States and observers. For example, at the first meeting of the BBNJ Working Group in 2006, some delegations identified IUU fishing and destructive fishing practices as "the greatest threats to marine biodiversity beyond areas of national jurisdiction".[22] In 2008, the International Union for the Conservation of Nature (IUCN) had nonetheless noted that, given the tenor of statements from some participants, "whether the agreement should cover fisheries activities will be a major point of dispute" (Gjerde *et al.,* 2008).

Many States agree that fish form an integral part of the biodiversity of the high seas and that, as fishing is currently the greatest threat to marine biodiversity in ABNJ, a new agreement should address the impacts of fisheries on marine biodiversity (e.g. through provisions for area-based management tools, including marine protected areas, and environmental impact assessments). Many States, scientific experts and civil society groups have also repeatedly highlighted the need for integrated ocean governance, noting that the inclusion of fisheries will be crucial in pursuing such integration.

and 119 to 127 of resolution 64/72 on sustainable fisheries, addressing the impacts of bottom fishing on vulnerable marine ecosystems and the long-term sustainability of deep-sea fish stocks, http://www.un.org/depts/los/reference_files/workshop_fisheries_2011.pdf.

18. Letter dated 27 October 2011 from the Moderator of the Workshop to the President of the General Assembly. UN Doc. A66/656 (18 November 2011), http://www.un.org/ga/search/view_doc.asp?symbol=a/66/566.

19. Sustainable fisheries, including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and related instruments, A/RES/66/68 (2011), http://www.un.org/depts/los/general_assembly/general_assembly_resolutions.htm.

20. See IISD, "Summary of the Resumed Review Conference on the Agreement for the Implementation of the Provisions of the UN Convention on the Law of the Sea (UNCLOS) 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks" (New York, 23-27 May 2016, http://www.iisd.ca/download/pdf/enb0771e.pdf.

21. For a detailed history and discussion of the negotiations, see Wright *et al.* (2016).

22. Report dated 9 March 2006 of the Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction, UN Doc A/61/65, §33.

Conversely, a number of fishing States have argued that there is no place for fisheries in a new ILBI as highly migratory and straddling fish stocks are already addressed by the UNFSA and managed by RFMOs and related regulations. In their view, these legal and institutional arrangements sufficiently protect marine biodiversity in ABNJ from the impacts of fishing activity.

The fisheries issue has since been a recurring discussion in the BBNJ Working Group meetings. The Package Deal adopted in 2011[23] neither explicitly included or excluded fisheries. At the June 2014 meeting, delegations recognised unsustainable fishing as "the greatest threat to marine biodiversity" but "continued to express divergent views on whether fisheries should be included in the scope of an international instrument".[24]

As a result, delegations have sought further elaboration of the sectoral dynamics of a new instrument and how it would interact with, and complement, existing legal instruments that regulate human activities in ABNJ.[25]

4.2. Fisheries and Resolution 69/292

In January 2015, States at the 9th meeting of the BBNJ Working Group took the historic step of agreeing on the need to develop a new international legally binding instrument under UNCLOS (Rochette *et al.*, 2015b). The UNGA formally approved the recommendations of the BBNJ Working Group in Resolution 69/292 in June 2015, establishing the PrepCom to prepare substantive recommendations on the elements of a draft text of an ILBI. The PrepCom will report to the UNGA by the end of 2017 and the UNGA will, before the end of its 72nd session (i.e. September 2018), decide on the convening and on the starting date of an intergovernmental conference to consider the recommendations of the PrepCom and elaborate the new IBLI.

Resolution 69/292 does not explicitly include or exclude fisheries from the purview of the negotiations. Rather, it calls for States to address "the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction", in particular the package of issues agreed in 2011. As fish are part of the marine biodiversity of ABNJ, many delegations consider that fisheries automatically come within the remit of the PrepCom with regards to conservation and sustainable use. Furthermore, although the Package Deal does not explicitly enumerate which human activities should be part of the negotiations, there nonetheless remains a link between fisheries and elements of the 2011 package.

Resolution 69/292 stipulates that a new ILBI "should not undermine existing relevant legal instruments and frameworks and relevant global, regional and sectoral bodies". The UNFSA may be instructive in interpreting this wording as the term "undermine" and particularly "undermine the effectiveness" appears 8 times in that agreement.[26] In the UNFSA context "undermine" is used in provisions requiring that measures for high seas stocks shall not undermine measures in waters such as exclusive economic zones (EEZs) and provisions requiring that fishing vessels shall not undermine stocks (in practice meaning reduce the stocks, undermine the effectiveness of measures, reduce the effectiveness of the measures, or undermine the effective implementation of the UNFSA).

The term "undermine" in the context of the UNFSA appears to mean "undermine the effectiveness" or reduce the effectiveness. Thus the ordinary meaning of Resolution 69/202 is that the process should not undermine, or reduce, the effectiveness of existing relevant legal instruments and frameworks and relevant global, regional and sectoral bodies.

Applied to the ABNJ context, these provisions imply that the ILBI should not undermine the effective implementation of the UNFSA, and should not undermine conservation and management measures, in the sense of reducing their effectiveness, or weakening them. Many of the proposals in this paper are based on this assumption that "not undermine" in Resolution 69/292 permits the strengthening of RFMO competences and complementary frameworks, rather than simply avoiding weakening them.

Given the foregoing, there appears to be considerable scope for a new ILBI to:

- Ensure complementarity and coherence between these legal frameworks;
- Build on and strengthen existing institutional arrangements;
- Set out guiding legal principles;

23. At the 2011 BBNJ Working Group meeting, States agreed on a "package deal" that will provide the basis for the negotiation of a future ILBI under UNCLOS. This package includes the following four elements to be negotiated: a) area-based management tools, including marine protected areas; b) environmental impact assessments; c) marine genetic resources, including access and benefit-sharing; d) capacity-building and the transfer of marine technology.

24. Letter dated 25 July 2014 from the Co-Chairs of the Ad Hoc Open-ended Informal Working Group to the President of the General Assembly, 69th session, Item 75 (a), UN Doc A/69/177 (2014) para 43.

25. Ibid para 19.

26. UNFSA articles 7.2, 16.2, 17.4, 18.1, 18.3, 20.7, 23.3, 33.2.

- Establish stringent legal obligations; and
- Establish complementary coordination and regulatory mechanisms.

The current international legal framework for fisheries addresses primarily the conservation and management of straddling and highly migratory fish stocks, such that many RFMOs do not oversee all deep-sea species, such as discrete deep-sea fish stocks (i.e. those that are not straddling or highly migratory)[27] or other target species, such as sharks.[28] Similarly, RFMOs vary greatly in their mandates and capacities with regard to biodiversity more generally, such that many components of biodiversity that are impacted by fisheries are unmanaged. The new ILBI therefore provides an opportunity to ensure that the whole of marine biodiversity in ABNJ, which includes all fish species, is legally covered.

Existing RFMOs are mandated to regulate specific activities and manage the exploitation of particular resources. Any new provisions put in place by an ILBI could strengthen, complement and standardise existing arrangements in relation to marine biodiversity more generally (including fishery resources, ecosystems, habitats and species that may be impacted by fishing activities, all of which form part of this biodiversity). A new ILBI that addresses the impacts of fisheries activities on marine biodiversity would therefore not undermine the existing mandates of fisheries management bodies.

Any new authority or arrangements that may be established under a new ILBI could also benefit from the power given to States under existing international law to adopt more stringent measures amongst themselves. This power has been frequently recognised in existing instruments, including in UNCLOS[29] and other conventions, developing or complementing international law of the sea.[30]

Finally, the FAO has provided a summary of its work relating to ABNJ, principally in the context of protected areas and assessments relating to bottom fishing under the UNGA resolutions.[31] This summary shows the complementarities between work done within RFMOs and the potential role for a future ILBI.

4.3. Fisheries at the first PrepCom

At the first PrepCom meeting (March 28 to April 8, 2016), the issue of fisheries was once again discussed. While most States continued to argue that fisheries should be covered by a new ILBI, a few States maintained that fisheries are sufficiently covered by existing legal and institutional arrangements. At the same time, a number of States that had previously been unsupportive or ambivalent regarding a new instrument shifted their positions to support both the new instrument and the view that a new ILBI should cover fisheries. As such, there is increasing consensus among States that fisheries must be addressed by a new ILBI, but there is not yet any clarity on how this might be achieved.

The International Institute for Sustainable Development reported as follows:[32]

> *To include or not to include fisheries? To nobody's surprise, the second day of the PrepCom was dominated by this Hamletic dilemma regarding the scope of a new legally binding instrument. The same question had already haunted the Working Group on BBNJ, with the lack of consensus on this issue being pointed out, time and again, by certain countries that remained half-hearted about the need for a new treaty. Seasoned delegates, however, inferred a significant defection from the "group of the non-convinced"... Many thus wondered whether the question should*

27. Deep-sea bottom fisheries were allowed to develop without the establishment of a RFMO, in part due to the failure of the UNFSA to directly cover discrete high seas bottom fisheries (Gianni 2005). The 2006 UNFSA Review Conference "encouraged States, as appropriate, to recognize that the general principles of the Agreement should also apply to discrete fish stocks in the high seas" (see Outcome of the Review Conference (2006) para 2).
28. Some more recently established RFMOs do have the mandate to manage other species or aspects of the ecosystem, e.g. the Western and Central Pacific Fisheries Commission is responsible for tuna, but also manages sharks, seabirds, and turtles affected by fishing activity.
29. Article 211 (3) with respect to port state measures as well as UNCLOS Article 311(3).
30. E.g. The Ballast Water Convention; the London Convention and 1996 London Protocol; the UNECE Espoo Convention on environmental impact assessments and the UNECE International Water Courses Convention; the Basel Convention and the Montreal Protocol and the Convention on the Protection and Use of Transboundary Watercourses and International Lakes. See IUCN Environmental Law Centre, Suggestions for elements of a draft text of an international legally binding instrument under UNCLOS for the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction: A Tool for Negotiators (2015).
31. FAO, FAO's work relating to the elements of a draft text of an international legally-binding instruments under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, COFI/2016/8/Sup.1 (2016) http://www.fao.org/3/a-mr024e.pdf.
32. IISD, Summary of the First Session of the Preparatory Committee on Marine Biodiversity of Areas Beyond National Jurisdiction: March 28 -April 8, 2016 (Earth Negotiations Bulletin 25(106) 2016) (emphasis added).

be "how," rather than "if," the new treaty will address fisheries, considering the countless appeals to complement, and not undermine, existing regional management frameworks.

5. OPTIONS FOR THE INCLUSION OF FISHERIES IN A NEW AGREEMENT ON ABNJ

Fisheries could be integrated into multiple elements of the Package Deal, as well as through overarching provisions. While there is a link between fisheries and all elements of the Package Deal, the following sections focus on the two elements of the package where this link is strongest, namely the implementation of area-based management tools (ABMTs), including marine protected areas (MPAs), and environmental impact assessments (EIAs).

5.1. Package Deal elements

5.1.1. Area-based management tools, including marine protected areas

Area-based management tools

Under UNCLOS, States have the duty to take measures to maintain or restore populations of both target and non-target species, and cooperate in the conservation and management of living resources in the high seas.[33] Building upon these obligations, the UNFSA requires States to adopt conservation and management measures to ensure the long-term sustainability of straddling and highly migratory fish stocks and to protect marine biodiversity.[34]

However, neither UNCLOS nor the UNFSA explicitly specify conservation and management measures to be used to achieve these goals. To this end, the Convention on Biological Diversity (CBD) specifies ABMTs, including systems of MPAs and "other effective area-based conservation measures" (OEABCM), as among the key measures to be used for the in-situ conservation of biodiversity.[35] In ABNJ, ABMTs have primarily been implemented by RFMOs in the context of protecting VMEs (*via* closures or other measures)[36] and in controlling mortality on certain fish stocks or life stages.

As there is currently no global legal mechanism for the establishment, implementation, and enforcement of ABMTs in ABNJ, the new ILBI could provide a coordination framework to ensure that current and future sectoral ABMTs in ABNJ are comprehensively and consistently applied and that systems of MPAs are effectively established, implemented, and enforced.[37] An ILBI may also outline general principles, criteria and obligations with respect to the adoption of sectoral and cross-sectoral ABMTs for achieving conservation and sustainable use.

While the provisions of the CBD do not apply to the components of biological diversity in ABNJ,[38] its provisions may be considered as a model for what could be adopted through an ILBI. In the context of in-situ conservation, for example, the CBD states that Contracting Parties shall:[39]

- "Regulate or manage biological resources important for the conservation of biological diversity, with a view to ensuring their conservation and sustainable use";
- "Promote environmentally sound and sustainable development in areas adjacent to protected areas with a view to furthering protection of these areas"; and
- "Rehabilitate and restore degraded ecosystems and promote the recovery of threatened species, inter alia, through the development and implementation of plans or other management strategies".

Early commentary on OEABCM in the context of CBD Aichi Target 11 provides further inspiration, suggesting that such measures may entail: a) an express purpose of biodiversity conservation; b) the primacy of conservation objectives where they conflict with other objectives; c) long-term management; and d) the possibility that conservation objectives can be achieved as a co-benefit of other management efforts (Jonas *et al.*, 2014).[40]

33. UNCLOS, arts. 117, 118, and 119.
34. UNFSA, arts. 5 and 10.
35. CBD, art. 8a.
36. The FAO VME Database collates information on the measures taken to reduce impacts on VMEs and maps all existing VME closures and other managed areas in ABNJ. For further discussion, see Gianni *et al.* (2011) and Wright *et al.* (2014).
37. The discussion of ABMTs has often focussed on MPAs, but the 2011 Package Deal and UNGA Resolution 69/292 refer to "measures such as area-based management tools, *including* marine protected areas" (emphasis added). States are therefore not limited to MPAs.
38. The CBD does however apply in the case of processes and activities, regardless of where their effects occur, carried out under the jurisdiction or control of a party, within the area of its national jurisdiction or beyond the limits of national jurisdiction. CBD, article 4.
39. CBD Article 8. More generally, the CBD also requires States Parties to integrate the conservation and sustainable use of biodiversity into relevant sectoral or cross-sectoral plans, programmes and policies, and to develop national strategies, plans or programmes.
40. The IUCN World Commission on Protected Areas has convened a task force to examine precisely what is

Sectoral ABMTs with respect to fisheries might include complementary measures such as:[41]

- Spatial and temporal fisheries closures or "refugia" established to limit biodiversity impacts of fisheries activities, protect vulnerable species, habitats and ecosystems, and to enhance resilience;
- Spatial and temporal fisheries closures outside the boundaries of an MPA with a view to complementing and enhancing the effectiveness or ecological coherence of MPAs and protecting migratory corridors for vulnerable species;
- Limiting deep water fishing effort or gear types in areas in or adjacent to known VMEs or in areas where VMEs are likely to be present in order to reduce the likelihood of further disturbance of VMEs or their broader ecosystems above the seabed;
- Mandated use of fisheries management measures, including catch quotas, effort or gear restrictions, and seasonal and temporal closures.

States may also wish to consider options for implementing some form of marine spatial planning (MSP) in ABNJ, especially in areas already experiencing higher levels of activity. The establishment of spatial plans for areas of the ocean would require the cooperation of all relevant sectoral bodies, including RFMOs.

In terms of the process for the implementation of ABMTs, there are a number of options. The new ILBI could, as an initial provision regarding sectoral ABMTs, place obligations upon States Parties to work directly and through relevant sectoral bodies, including RFMOs, to adopt ABMTs for the purpose of conservation and sustainable use of marine biodiversity in ABNJ, accompanied by regular reporting and review of progress. However, RFMOs and other sectoral organisations may remain constrained by their mandates, members, or lack of expertise on the biodiversity and ecosystem impacts. Calling on sectoral bodies alone to implement the decisions taken under the ILBI may therefore be complicated and slow.[42]

An alternative, or complementary, provision could be for parties to take independent action with respect to activities and processes subject to their jurisdiction or control, and then seeking the adoption of complementary measures within sectoral bodies. In this regard, a new ILBI could urge States to take action, and urge other States and sectoral bodies to take complementary measures in support of such action.

As mentioned above, RFMOs have historically been limited in their mandates and slow to integrate broader biodiversity conservation and sustainable use considerations. Therefore the ILBI could include overarching provisions to require States directly and through competent international organizations such as RFMOs to reform current management practices to be more biodiversity-inclusive, while specific provisions for ABMTs may require them to take action for conservation and sustainable use of marine biodiversity in ABNJ.

Marine Protected Areas

The widely cited IUCN definition of MPA is a "clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values".[43] This definition enjoys broad support, including in the CBD.[44]

To be effective, MPAs must be comprehensively and effectively managed and enforced across all sectors and address all human activities relevant to the goal of the MPA, or, more generally, the goal of conservation and sustainable use of marine biodiversity. Together with the other sectoral bodies,

included in OEABCM: the eventual findings of this task force may be of interest to States as a point of reference in future discussions regarding ABMTs other than MPAs.

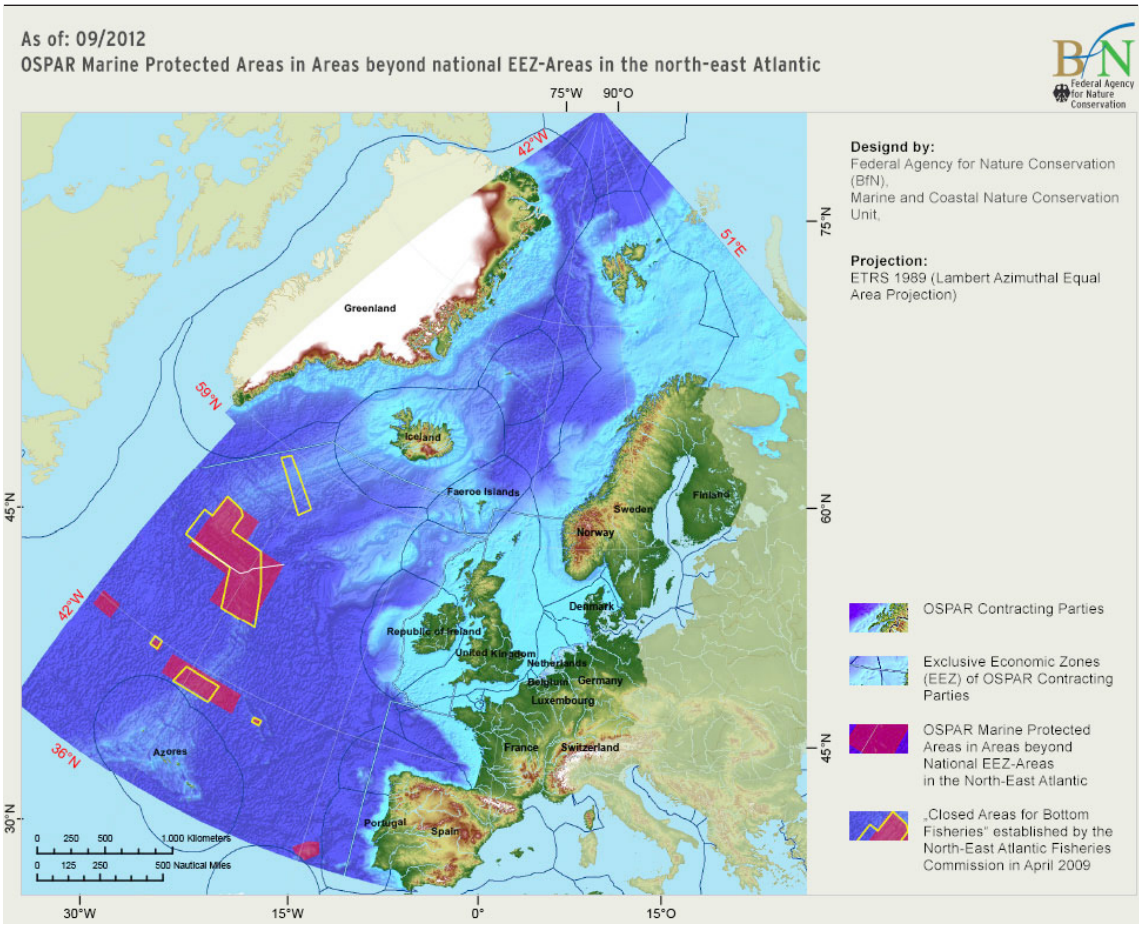
41. Note that while area-based measures may have a range of sector-specific purposes, the ABMTs of most interest in the current context are those that serve to enhance the conservation and sustainable use of marine biodiversity.

42. Expanding the mandates of such organisations, without further reforms, would be unlikely to address systemic capacity issues: these bodies were designed to rationalise resource use among competing parties, and some may resist conservation-focussed measures as incompatible with this focus or may lack the scientific expertise to do so. The result is that even where regional bodies have modern, comprehensive biodiversity mandates, they still find it difficult to take effective conservation action, especially if decision-making rules allow one RFMO member (and non-party to the new ILBI) to block conservation measures agreed by the other parties.

43. IUCN, Guidelines for applying the IUCN Protected Areas Categories to MPAs (2012) http://cmsdata.iucn.org/downloads/uicn_categoriesamp_eng.pdf. The FAO, while acknowledging the IUCN and other definitions, has said that MPAs are generally considered in the fisheries context to be: "temporally and geographically defined areas that afford natural resources greater protection than is afforded in the rest of an area as defined in relation to fisheries management" (see http://www.fao.org/fishery/topic/4400/en)

44. See https://www.cbd.int/undb/media/factsheets/undb-factsheet-pa-en.pdf. CBD COP-9 reaffirmed support for the IUCN classification system, which places protected areas into six categories. CBD Decision IX/18 Protected Areas, para 9, reaffirming paragraph 31 of decision VII/28. At https://www.cbd.int/decisions/cop/?m=cop-09.

Figure 5. NEAFC VME closures along the Mid-Atlantic Ridge (yellow) and their partial overlap with OSPAR MPAs (red)



Source: German Federal Agency for Nature Conservation. http://mare.essenberger.de/en/karte-charlie-gibbs-schutzgebiet.php

fisheries management instruments and organisations should be a crucial part of establishing, implementing, and enforcing such comprehensive and effective MPAs where fisheries are involved.

The precise role of RFMOs in the establishment of MPAs would depend on the chosen structure of the mechanism for MPAs in a new ILBI. A centralised international mechanism could involve a new international body setting out the management measures for MPAs and directing, *via* the inherent power of the UNGA, sectoral and regional bodies to take conservation measures. Alternatively, a decentralised mechanism could allow for MPAs to be agreed by a conference of the parties (COP) and the sectoral and regional bodies could be left to take appropriate measures to implement, monitor, and enforce the MPA to achieve the agreed objectives, though some have expressed concern that this might not be an improvement on the status quo. Another option might see a COP, advised by a scientific and technical advisory body, reviewing proposals, adopting conservation objectives, agreeing on specific management measures that parties can take, and, through elaboration of the duty to cooperate by States Parties, reinforcing these measures through the adoption of complementary measures by the competent international organisations.[45]

Given that discussions are in their infancy, it is too early to predict what the structure of the ILBI might ultimately be. Regardless of the precise details, RFMOs will likely be called upon to take proactive steps or measures to give effect to an MPA that they may not have otherwise taken in a "business as usual" scenario.

One potentially relevant example of ongoing efforts at integration between fisheries management and conservation of marine biodiversity is that of the North-East Atlantic

45. As noted previously, such a provision would not by definition "undermine" existing competent organisations as States retain the right to agree to stronger measures amongst themselves.

where the competent Regional Seas and RFMO have, through their respective processes, have established the first network of MPAs in ABNJ that are also mostly closed to bottom-trawling (the OSPAR Commission and the North-East Atlantic Fisheries Commission respectively) (Freestone *et al.*, 2014; Matz-Lück and Fuchs, 2014). However, it took many years to achieve the current level of cooperation and coordination, and the boundaries of the closed areas and the MPAs are still not fully aligned. This may indicate the need for providing some form of incentives and inducements to enhance effective cooperation.

5.1.2. EIAs

Under UNCLOS, States have the general legal obligation to undertake an impact assessment of activities under their control for which they have "reasonable grounds" to believe that they could trigger "significant and harmful changes to the marine environment".[46] Through the UNFSA, RFMOs have the obligation to apply the precautionary approach in the conservation and management of straddling and highly migratory fish stocks by assessing the impacts of fishing and other human activities, as well as environmental factors, on target and non-target species. Parties must also adopt cautious conservation and management measures for new or exploratory fisheries until the long-term impacts of possible future fishing activities on these stocks can be assessed.[47]

UNGA resolution 61/105 (2006) committed States and RFMOs with the competence to regulate bottom fisheries to conducting impact assessments to determine whether significant adverse impacts (SAIs) would occur to vulnerable marine ecosystems (VMEs) as a result of bottom fishing activities and to ensuring the proper management or prohibition of these activities where SAIs are likely.[48] This was strengthened by UNGA Resolution 64/72 (2009), which reaffirmed these commitments and requested all flag States, whether or not they are members of RFMOs with a competence to regulate bottom fisheries, to ensure that their vessels do not engage in bottom fishing until impact assessments have been carried out.[49] The FAO has produced guidance for impact assessments in relation to VMEs that provides information on what the impact assessment should address.[50]

A report prepared by the Deep Sea Conservation Coalition for the 2011 UNGA bottom fishing workshop found that the impact assessments required by the UNGA resolutions were not being conducted for bottom fisheries in the Atlantic and Indian Oceans, while assessments in other regions were "partial, inconclusive, or both" (Gianni *et al.*, 2011). The UNGA resolution following the workshop called on States and RMFOs to strengthen procedures for carrying out assessments, and to take into account individual, collective and cumulative impacts, and for making the assessments publicly available, recognizing that doing so can support transparency and capacity building globally.[51]

On their face, the UNFSA provisions only directly apply to straddling and highly migratory fish stocks and they are only legally binding on States who are party to the Agreement. The soft law UNGA resolutions apply to fish stocks managed by States or RFMOs with the competence to regulate bottom fisheries and seek specifically to limit their application to SAIs in the case of VMEs; they are not designed to account for cumulative impacts or the impacts of other fishing and human activities, and are not aimed at the conservation and sustainable use of marine biodiversity in ABNJ in general.

Against this background, a new ILBI could strengthen existing obligations under international law by requiring EIAs to be undertaken when a fishing activity can cause harm to marine biodiversity (including harm that may be remediable), taking into account both the need for its conservation and sustainable use. A new instrument could require that new fishing activities in ABNJ (in the water column and on the seafloor), whether permitted by RFMOs or authorised by flag States, only take place where a prior EIA of these activities has been carried out and it is established that the fishing activities can be managed in a way that: prevents and minimises future environmental impacts; ensures the long-term sustainability of the target fish stocks and non-target marine species; and will have minimal incidental impacts on the surrounding marine ecosystems and on marine biodiversity in general.

The new agreement could also impose more stringent obligations and require not only that no new fishing activities in ABNJ be authorised

46. UNCLOS, art. 206. For the customary international law status, see: International Tribunal of the Law of the Sea (ITLOS), Advisory Opinion on Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area (2011), p. 44, para. 145.
47. UNFSA, arts. 5c, 5d, 6.6, 10d.
48. UNGA Resolution 61/105 (2008), para. 83a
49. UNGA Resolution 64/72 (2009), para. 119a
50. FAO, International Guidelines for the Management of Deep-sea Fisheries in the High Seas (Rome 2009) http://www.fao.org/docrep/011/i0816t/i0816t00.HTM, paras 47-53.
51. UNGA Resolution 66/68 (2011), para. 129.

until such an EIA has been conducted, but also that current fishing activities in ABNJ be assessed within a certain timeframe. The ILBI could introduce a formal reporting and monitoring mechanism, either at the global or regional level, and provide a detailed follow-up procedure for completed assessments. The ILBI could require that all fishing activities are continuously monitored and the assessments are regularly reviewed, and updated, as well as institute a process to review the assessment where specific new scientific knowledge has become available. A review of the assessment could also be mandated upon the introduction of new technologies or gear, or an increase in fishing effort. Furthermore, to ensure that these assessments are based on the best scientific data available, an information-sharing mechanism could be developed under the ILBI.

Finally, as there is currently no mechanism to assess the cumulative impacts of all activities in ABNJ with the potential to impact marine biodiversity (Mengerink *et al.*, 2014), the new ILBI could establish a legal framework for EIAs and strategic environmental assessments (SEAs) to assess cumulative impacts, and for impact assessments across sectors.

A global level science advisory body as well as networks or shared regional scientific advisory bodies could provide added value in ensuring the application of the best available scientific information in the EIA decision-making process, in rationalising decision making, and in preventing duplication of scientific effort (Mahon *et al.*, 2015). A separate scientific and technical advisory body that provides advice to several decision-making processes could also "contribute to the intersectoral integration that is required for EBM. Science-policy interfaces that are isolated within individual arrangements may not have the broad purview required to see and consider interrelationships and trade-offs" (Mahon *et al.*, 2015).

The new ILBI could build on the successful examples of regional advisory bodies such as the International Council for the Exploration of the Sea (ICES) in the North Atlantic, which plays a central role in generating scientific information and advice for several decision-making bodies, including OSPAR, NEAFC, HELCOM and NAFO. Similar bodies exist elsewhere, including the North Pacific Marine Science Organization (PICES) in the North East Pacific, the Scientific Committee on Antarctic Research (SCAR) in the Southern Ocean, the International Arctic Science Committee (IASC) in the Arctic, and the Secretariat of the Pacific Community (SPC) in the Pacific Island Region.

5.2. Overarching provisions

There are some gaps in the existing framework for fisheries management that could be strengthened through overarching provisions separate from the specific Package Deal elements discussed above. Mahon *et al.,* (2015) note that the following should be considered in strengthening the structure and functionality of regional ocean governance bodies: "the extent to which the arrangements that comprise them are geographically coherent (spatial overlap and fit); the extent to which the individual arrangements within the cluster reflect good governance structure [and] practice; the extent to which there are functional linkages (interplay) among the arrangements comprising the cluster; and the extent to which they share a common purpose and set of principles and can deal with one another as equals".

A new ILBI could strengthen and clarify the overall fisheries management framework and implement a number of overarching provisions to further improve the integration of biodiversity considerations into fisheries management. Such provisions could include: defining a common purpose (e.g. "the conservation of marine biodiversity in ABNJ is the common concern of humanity"); providing a set of governance and conservation principles to guide decision making to assist in integrating biodiversity considerations; and enabling a regular global review and reporting process to assess progress. In addition, the ILBI could provide default regime for precautionary fisheries management in ABNJ where gaps remain in geographical coverage by RFMOs.

5.2.1. Fostering integration

As described in the extensive literature on ocean governance, long-term ecosystem-based management and integration will not be achieved absent the conditions necessary for effective interplay between organisations: non-hierarchical organisations must operate in sync based on a common purpose and set of principles in order to improve vertical horizontal interplay (Fanning *et al.*, 2007; Mahon *et al.*, 2015; Young, 2002a; Young, 2002b). As noted by Mahon *et al.* (2015), "questions about limited mandates, rigid hierarchies and varying priorities (a lack of a common purpose and shared set of principles) leave the future of constructive interplay unsure absent a strong call for enabling mechanisms for cooperation from the UNGA or *via* a new international agreement" (Mahon *et al.*, 2015). A new ILBI could call on States to redouble efforts to ensure integration between regional,

sectoral, and international organisations, and provide a framework within which such integration can take place.

5.2.2. Guiding principles

As noted by the Global Ocean Commission, the "fundamental principles [that] could lead to sustainable fisheries management, are contained in many of the binding and non- binding fisheries agreements, and in the UNFSA in particular. What is needed is effective and uniform application of these principles and obligations in practice".[52]

A new instrument could outline the guiding principles of international law for the conservation and sustainable use of marine biodiversity in ABNJ. This could help to institutionalise and reinforce existing legal principles and ensure their application in the fisheries context. Such principles could include: precaution, science-based management, the ecosystem approach, transparency, accountability, public participation, and intra- and inter-generational equity (Freestone, 2008; Houghton, 2014).

Furthermore, as "significant differences exist between the objectives of some of the older RFBs, which are exclusively aimed at the sustainable utilisation and conservation of target species, and the newer RFBs, which pursue an ecosystem approach to fisheries (EAF)" (Billé *et al.*, 2016; Rochette *et al.*, 2015a), the ILBI also presents an opportunity to harmonise understanding and implementation of the EAF across RFMOs. Regular review by the Parties to the ILBI of the progress of RFMOs in implementing these principles with respect to biodiversity could also help institutionalize some level of global accountability for RFMO performance.

52. Global Ocean Commission, Improving Accountability and Performance in International Fisheries Management (Policy Options Paper #9, 2013).

5.2.3. Complementary obligations

A new ILBI could place specific obligations on States to take action in relation to fisheries management that complement existing agreements and organisations. Such actions could include, for example: requiring flag States to cooperate with other States and/or relevant sectoral and regional organisations to adopt measures for the conservation and sustainable use of marine biodiversity in ABNJ, either as standalone measures or measures complementary to the establishment of MPAs; and an obligation for States and international competent organisations to promote in-situ conservation, including the protection of ecosystems, natural habitats and maintenance of viable populations of species in natural surroundings (as in CBD Article 8).

5.2.4. Progressive development of international law

A new ILBI could directly benefit fisheries management by urging States to ratify or accede to international agreements relevant to fisheries (e.g. the UNCLOS, the UNFSA and the FAO Port State Measures Agreement (PSMA), as well as RFMOs, and relevant regional agreements). The ILBI could also directly strengthen and formalise certain provisions of existing agreements and guidelines by restating them as concrete obligations, thereby contributing to the progressive development of international law. Such provisions could include, e.g. Article 20(3) of the PSMA, which encourages parties to develop "fair, transparent and non-discriminatory procedures for identifying any State that may not be acting in accordance with, or in a manner consistent with, [the PSMA]"; or Article 50 of the FAO Guidelines, which states that RFMOs should develop appropriate review mechanisms.

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High seas fisheries: what role for a new international instrument?

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