An International Instrument on Conservation and Sustainable Use of Biodiversity in Marine Areas beyond National Jurisdiction

Exploring Different Elements to Consider

PAPER IX

Technology Transfer and Capacity-building*

By Carole Durussel and Robin Warner, with input from Duncan Currie

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1. Background

At the 2012 United Nations Conference on Sustainable Development (Rio+20), States committed themselves '*to address, on an urgent basis, building on the work of the Ad Hoc Open-ended Informal Working Group and before the end of the sixty-ninth session of the General Assembly, the issue of the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, including by taking a decision on the development of an international instrument under the United Nations Convention on the Law of the Sea.'*[1] This commitment was recalled and reaffirmed by the United Nations General Assembly (UNGA) in its 67th and 68th session.[2] In its resolution 68/70, the UNGA also requested the United Nations 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 Working Group) to make recommendations to the UNGA '*on the scope, parameters and feasibility of an international instrument under the Convention'*.[3] These recommendations shall help to prepare for the decision to be taken at the 69th session of the UNGA in 2015, whether to start the negotiation of an international instrument on the conservation and sustainable use of biodiversity in areas beyond national jurisdiction (ABNJ).

The International Union for Conservation of Nature (IUCN) in collaboration with different partners has prepared a series of policy briefs to provide technical input to the ongoing ABNJ discussions, and thereby support the UNGA decision-making process. As indicated in ***Paper I***, one of the operational mechanisms to be discussed under 'parameters' could be technology transfer as well as capacity-building. The following paper aims to explain the rational for promoting technology transfer and capacity-building in the ABNJ context, provide examples of related activities at the international and regional level, clarify some of the existing challenges, and draw possible lessons that can be learnt for a future international instrument for ABNJ under the United Nations Convention on the Law of the Sea (UNCLOS).

2. Rational

Scientific research, technology transfer and capacity-building are important foundations for conservation and sustainable use of marine biodiversity in ABNJ. With the high seas representing 64% of the oceans and less than 5% of the oceans explored, ongoing scientific research is critical in providing comprehensive information on marine biodiversity to better inform decision-making on its conservation and sustainable use. Technology transfer, data-sharing and capacity-building are important for all States as a baseline for cooperation both at the global and regional levels and to achieve a more coordinated approach to the conservation and sustainable use of marine biodiversity in ABNJ.

Data-sharing and transfer of technology need to take place on a global basis and include processes for both developed and developing countries to benefit from scientific and technological knowledge on marine biodiversity in ABNJ. In this respect, capacity-building is of paramount importance to ensure the participation of all States in the development of a new regime to conserve and

[1] UNGA resolution 66/288. *'The future we want.'* UN doc. A/RES/66/288, of 11 September 2012. Paragraph 162.
[2] UNGA resolution 67/78. *'Oceans and the law of the sea.'* UN doc. A/RES/67/78, of 11 December 2012. Paragraph 181. UNGA resolution 68/70. *'Oceans and the law of the sea.'* UN doc. A/RES/68/70, of 9 December 2013. Paragraph 197.
[3] UNGA resolution 68/70. *'Oceans and the law of the sea.'* UN doc. A/RES/68/70, of 9 December 2013. Paragraph 198.

sustainably use marine biodiversity in ABNJ. Cooperation between States is a necessary underpinning for the equitable sharing of data and technology as well as to foster the scientific and technical capacity of developing countries. All these components would be essential elements in any future international instrument to conserve and sustainably use marine biodiversity in ABNJ.

3. Activities at International and Regional Level

A variety of cooperative initiatives focused on marine scientific research, the conservation and management of marine living resources and marine environmental protection already exist at the global and regional levels. Many of these have ABNJ elements and in some cases focus specifically on ABNJ. These include scientific research programmes undertaken by universities, research institutes and international organisations as well as the work undertaken by regional fisheries bodies, regional seas organisations and initiatives funded by the Global Environment Facility (GEF). To date, GEF-funded initiatives include three regional and four global projects, all of which are ABNJ-focused. The regional projects include:

- A UNDP-led initiative on the management of ABNJ fisheries in the Pacific Islands[4], aiming at establishing a Western and Central Pacific Fisheries Commission (WCPFC) for the management of highly migratory fisheries in the region and developing capacity-building, which was completed in 2011.
- Another UNDP-led project[5] (approved in 2007) which focuses on the conservation and management of highly migratory fish stocks in the Western Pacific Ocean and East Asia Sea with a view to strengthen cooperation and develop capacity-building.
- An IUCN-led initiative[6] (approved in 2008) which focuses on the development of a framework for the conservation and management of marine biodiversity around seamounts and shallow banks of the Western Indian Ocean.

Most recently and at the global level, the GEF granted, in cooperation with various international organisations, a five-year ABNJ Programme composed of four projects focusing on the sustainable management of fisheries and biodiversity conservation in ABNJ with a view to protecting vulnerable and important marine ecosystems and species:

- The first of these projects[7], a FAO-led initiative approved in 2011, aims to apply an ecosystem approach to tuna fisheries in order to reduce illegal, unreported and unregulated (IUU) fishing and ecosystem impacts on biodiversity, including the mitigation of bycatch impacts, and to promote the use of sustainable fishing practices and management.
- The second project[8], a FAO/UNEP-led initiative approved in 2012, aims to apply an ecosystem approach to deep-sea fisheries by promoting the use of sustainable fishing practices and management, protecting vulnerable marine ecosystems (VMEs) and

[4] *'Pacific Islands Oceanic Fisheries Management Project'* (GEF Project ID 2131). Approved in 2005, this project was completed in 2011.
[5] *'CTI West Pacific-East Asia Oceanic Fisheries Management Project'* (GEF Project ID 3523).
[6] *'Applying an Ecosystem-based Approach to Fisheries Management: Focus on Seamounts in the Southern Indian Ocean'* (GEF Project ID 3138).
[7] *'Sustainable Management of Tuna Fisheries and Biodiversity Conservation in the Areas Beyond National Jurisdiction (ABNJ)'* (GEF Project ID 4581).
[8] *'Sustainable Fisheries Management and Biodiversity Conservation of Deep-Sea Living Marine Resources and Ecosystems in the Areas Beyond National Jurisdiction (ABNJ)'* (GEF Project ID 4660).

ecologically and biologically significant marine areas (EBSAs), and improving area-based planning for deep-sea ecosystems.

- A third World Bank-led project established the Oceans Partnership Fund in 2012 with a view to catalysing investment in marine areas to enhance both conservation and economic return of marine living resources.
- The fourth FAO-led project[9] aims to promote the effective coordination and exchange of information at the global and regional levels notably by fostering cross-sectoral coordination and building decision-makers' capacity.

4. Challenges

Most marine scientific research, data-sharing and capacity-building initiatives involving ABNJ elements are North-led and, although both developed and developing countries are involved in them, those displaying the most advanced progress are mainly located in developed regions. While regional projects, such as GEF-funded projects and the work done by regional fisheries bodies and regional seas programmes, help to foster South-South cooperation and enhance North-South cooperation, only limited exchanges and cooperation between these regions exist. Further examples of South integration initiatives include the 'Census of Marine Life' as well as the work undertaken under the auspices of FAO on VMEs and the Convention on Biological Diversity (CBD) on EBSAs.

Current cooperative initiatives are mainly the result of multilateral and regional cooperation; they have been carried out independently from each other and are therefore *ad hoc* and fragmentary in nature. There is limited cross-sectoral stakeholder involvement and these initiatives mostly adopt a competitive rather than a collaborative approach. Cooperation between industry, the scientific community as well as the political level will thus need to be enhanced to ensure an adequate exchange of knowledge and technology as well as to build the scientific and technical capacity of States on the conservation and sustainable use of marine biodiversity in ABNJ.

Information exchange, technology transfer and capacity-building programmes within existing marine scientific research initiatives on ABNJ as well as global funding mechanisms to facilitate and develop these areas are limited. No global mechanism for technology transfer on ABNJ exists. Apart from the Census of Marine Life, its subsequent project 'Life in a Changing Ocean' and the GEF-funded projects, other scientific and research initiatives entail only small ABNJ components. Increasing the number of projects targeted at ABNJ will therefore be necessary to ensure the gathering of more data and knowledge relevant to the conservation and sustainable use of marine biodiversity in ABNJ. There is no centralised data depository where ABNJ biodiversity-related data collected can be archived as well as effectively and adequately accessed and shared. To date, only a number of *ad hoc* databanks related to science and biodiversity exist.[10]

[9] *'Strengthening Global Capacity to Effectively Manage ABNJ'.*

[10] Databank examples include amongst other the Ocean Biogeographic Information System (OBIS), the International Oceanographic Data and Information Exchange (IODE), the Global Biodiversity Information Facility (GBIF), the Group on Earth Observations Biodiversity Observation Network (GEO BON), the UNEP-World Conservation Monitoring Centre (UNEP-WCMC), and the Barcode of Life Database.

5. Options

A number of elements regarding technology transfer and capacity-building could therefore be considered in the development of a future international instrument on the conservation and sustainable use of marine biodiversity in ABNJ, with international cooperation as their baseline (*see **Paper IV** on Governance Principles*).

Capacity-building

There are several ways that can be explored to develop and enhance capacity-building in this regard:

- Firstly, it is important to increase the cooperative links between regional institutions through for instance the establishment of mentoring and partnership linkages between North and South regional organisations, such as regional fisheries bodies and the regional seas organisations. In this context, the use of combined regional training programmes, exchange postings and workshops as well as facilitating access to technologies could be promoted.
- Secondly, the number of GEF-funded projects and other global funding mechanisms could be increased to help strengthen South-South cooperation. A global fund could also be established to support capacity-building projects as well as to fund the development of a possible Clearing House for technology transfer.[11]
- Thirdly, a global scholarship programme to foster science, policy and governance research into high seas biodiversity conservation could be established. This programme could be established in a similar manner to the UN-Nippon Fellowships which provide capacity-building through the provision of advanced education and research opportunities in ocean affairs for developing country professionals.[12]
- It will also be important to monitor projects and initiatives to ensure continuity and enforcement.
- A strengthening of UN Oceans to become a successful coordination body for the oceans, including ABNJ, could also be important. In this respect, the establishment of a UN Oceans Commission with the power to coordinate ABNJ initiatives, including the development of cooperative marine scientific research, training and information exchange, and budget allocation might also be useful.

Technology transfer

Technology transfer is both an essential basis for the development of capacity-building as well as for benefit-sharing. Given its wide-ranging scope, the way technology transfer could be addressed in a potential international instrument on the conservation and sustainable use of marine biodiversity in ABNJ needs to be further clarified:

- Firstly, a distinction should be made between collaboration and cooperation in technology and scientific research on the one hand and the actual transfer of hardware on the other hand.

[11] Druel, E., Gjerde, K. M. (2013). *'Sustaining marine life beyond boundaries: the need for and potential content of an UNCLOS Implementing Agreement for marine biodiversity beyond national jurisdiction.'* Marine Policy. Druel and Gjerde suggest that such a fund could be funded for example by a tax on activities in ABNJ.

[12] This Fellowship Programme is the result of a trust fund project agreement in 2004 between the United Nations and the Nippon Foundation of Japan.

- An international instrument would need to address both how the sharing of data and the sharing of technology should take place and whether this transfer should be voluntary or compulsory.
- Whether technology transfer should have a broader outreach as a stand-alone provision within an international instrument or whether it should be specifically addressed within the context of capacity-building and non-monetary benefit-sharing would also need to be clarified.
- Further specification would be required as to the areas in which technology should be transferred. In this regard, it would be prudent to broaden the fields of transfer rather than to limit them to marine genetic resources while keeping them within the general fields of conservation and sustainable use.
- Another aspect of technology transfer which could be considered in a future international instrument is the type of mechanism that would be adopted to facilitate the access of scientific data and knowledge to relevant ocean stakeholders. Should there be a central data depository or regional data nodes; which institution should take the hosting responsibility and which rules should apply. Although several *ad hoc* depositories exist, the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) established in 2012 could provide a possible global mechanism for the discussion and creation of a centralised data depository and data-sharing platform for marine biodiversity. It could provide the linkage between the scientific and policy worlds to allow relevant knowledge and information to be readily available, synthesised and assessed to provide better informed decision-making and strengthen capacity-building initiatives.
- Finally, the international instrument could determine whether or not a Clearing House would be necessary and which role it would play. Article 14 of the 2010 Nagoya Protocol established under the CBD provides an example of a legal basis for the establishment of a Clearing House for the sharing of and access to information.

Funding

Lastly, the question of funding would need to be addressed in a future international instrument. The determination as to how funding for these components could be raised and equitably allocated would need to be discussed. As a possibility to provide sufficient funding to the development of technology transfer and the building of capacity, the number of GEF projects targeted at ABNJ should be increased. To date, only 2% of the full-sized GEF projects and 1% of the medium-sized GEF projects have an ABNJ focus.

6. Conclusion

The UNCLOS provides the legal basis for the development of legal provisions on technology transfer in a future international instrument. Article 144 of the UNCLOS outlines the principles of technology transfer relative to the Area but these could be extended to all of ABNJ. These principles include the acquisition of knowledge and its transfer to developing countries notably through cooperative measures such as the development of programmes for technology transfer and other capacity-building measures, including training opportunities to allow for the full participation of developing countries.

International cooperation is required for the development and transfer of marine technology through the facilitation of marine scientific research, technology transfer and funding.[13] Programmes established by States in relation to technology transfer should be coordinated by competent international organisations.[14] The UNCLOS also promotes the strengthening and establishment of national and regional centres for marine science and technology[15] with training and research perspectives. The 2003 non-legally binding Criteria and Guidelines on Transfer of Marine Technology established by the Intergovernmental Oceanographic Commission (IOC) could additionally provide a discussion basis for the elaboration of technology transfer guidelines for ABNJ.

Box: IOC Criteria and Guidelines on Transfer of Marine Technology

In 2003, the International Oceanographic Commission (IOC) adopted Criteria and Guidelines on the Transfer of Marine Technology.

Criteria include that

- Schemes should be developed to facilitate marine technology transfer;
- The transfer should be conducted on fair and reasonable terms and conditions, and
- Due regard should be paid to the needs and interests of developing States and the rights and duties of marine technology holders, suppliers and recipients.

Guidelines include that the IOC should establish and coordinate a clearing house mechanism for the transfer of marine technology to

- Provide access to relevant sources of information, practical experience and scientific and technical expertise;
- Promote regional or sub-regional focal points on the transfer of marine technology;
- Organize seminars, symposia and similar events; and
- Seek contributions on a trust fund to promote transfer of marine technology.

A State may submit to the IOC Secretariat an application for the transfer of marine technology, for forwarding to appropriate donors. The IOC has recently responded to the focus in Rio+20 on capacity-building by developing a Strategic Plan on Capacity-building.

[13] Articles 270 and 273 of the UNCLOS.
[14] Articles 272 of the UNCLOS.
[15] Articles 275 and 276 of the UNCLOS.

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