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GOVERNING THE HIGH SEAS: MARINE GENETIC RESOURCES IN AREAS BEYOND NATIONAL JURISDICTION

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EXECUTIVE SUMMARY

Marine genetic resources hold significant potential for a range of commercial applications. Appropriate institutional and regulatory mechanisms for these resources are needed as part of a broader effort to support the conservation and sustainable use of marine biological resources, both within and beyond the national jurisdiction of states. To this end, and for well over a decade, the UN General Assembly has been working towards creating an international legally binding instrument under the UN Convention on the Law of the Sea. This policy insights paper assesses the progress made to date in establishing a governance regime for marine genetic resources in areas beyond national jurisdiction, with a particular focus on developing country perspectives.

INTRODUCTION

The 2012 UN Conference on Sustainable Development (Rio+20) was an important milestone for generating political momentum to address ocean governance challenges and incorporating maritime concerns within the broader sustainable development agenda. This development was the result of a growing recognition of the economic/developmental potential of maritime industries, and the increasing vulnerability of marine ecosystem services to a range of

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anthropogenic impacts. Such impacts include the detrimental effect of climate change on the maritime ecosystem through ocean warming and acidification.[1] Ocean governance formed one of the Sustainable Development Goals (SDGs), adopted in 2015 under the UN Agenda 2030.[2] The inclusion of ocean governance concerns as part of Agenda 2030 concretely linked the health of ocean ecosystems to sustainable development and equity. This pertains not only to the ocean domains that fall within countries' exclusive economic zones, but also to the high seas, or areas beyond national jurisdiction (ABNJ).

This policy insights paper explores the progress made to date in establishing a governance regime for marine genetic resources in the ABNJ. This governance regime brings together two broad policy processes. The first of these is the multilateral efforts to explore rights and responsibilities in relation to ocean resources. Such efforts can be traced as far back as the first exposition of the 'freedom of the seas' principle by Hugo Grotius in the 17th century, through to the first UN Conference of the Law of the Sea in 1956, the promulgation of the UN Convention on the Law of the Sea (UNCLOS) in 1994, and a number of other important milestones leading to the inclusion of ocean governance concerns in Agenda 2030.[3] The second policy process relates to the question of access and benefit sharing of genetic resources. This was highlighted in the 1993 UN Convention on Biological Diversity (CBD); and significantly elaborated upon in the 2010 Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation (Nagoya Protocol).[4]

AREAS BEYOND NATIONAL JURISDICTION AND THE PREPCOM PROCESS

The ABNJ is not without existing governance frameworks and institutions. They cover fisheries (regional fisheries management organisations), shipping (the International Maritime Organisation), and mineral and hydrocarbon resources (the International Seabed Authority).[5] Yet the existing regulatory regime faces numerous shortcomings. These include the sustainable use of biological resources in the context of bioprospecting, and other conservation and exploitation imperatives that extend beyond traditional maritime industries.

In 2004 the UN General Assembly established an Ad Hoc Open-ended Informal Working Group to strengthen the international regulatory regime for the conservation and sustainable use of marine biological diversity in the ABNJ. The working group met several times in subsequent years, and made a series of recommendations to the General Assembly.[6] This culminated in a decision by the UN General Assembly in 2015 to establish an international legally binding instrument under UNCLOS for the conservation and sustainable use of marine biological diversity in the ABNJ. The instrument would aim to address a range of issues, including area-based management tools, environmental impact assessments, capacity building and technology, and marine genetic resources. A preparatory committee (Prepcom) was established to deliberate on these issues, and to make substantive recommendations to the General Assembly on elements of a draft text for this instrument.[7]

Prepcom did not proceed as smoothly as initially anticipated. Obstacles impeding its progress particularly concerned questions pertaining to access and benefit

sharing of marine genetic resources in the ABNJ. The fourth and final Prepcom meeting (Prepcom 4) was convened in July 2017.

The following section discusses some of the central issues relating to the governance of marine genetic resources in the ABNJ.

MARINE GENETIC RESOURCES AT PREPCOM

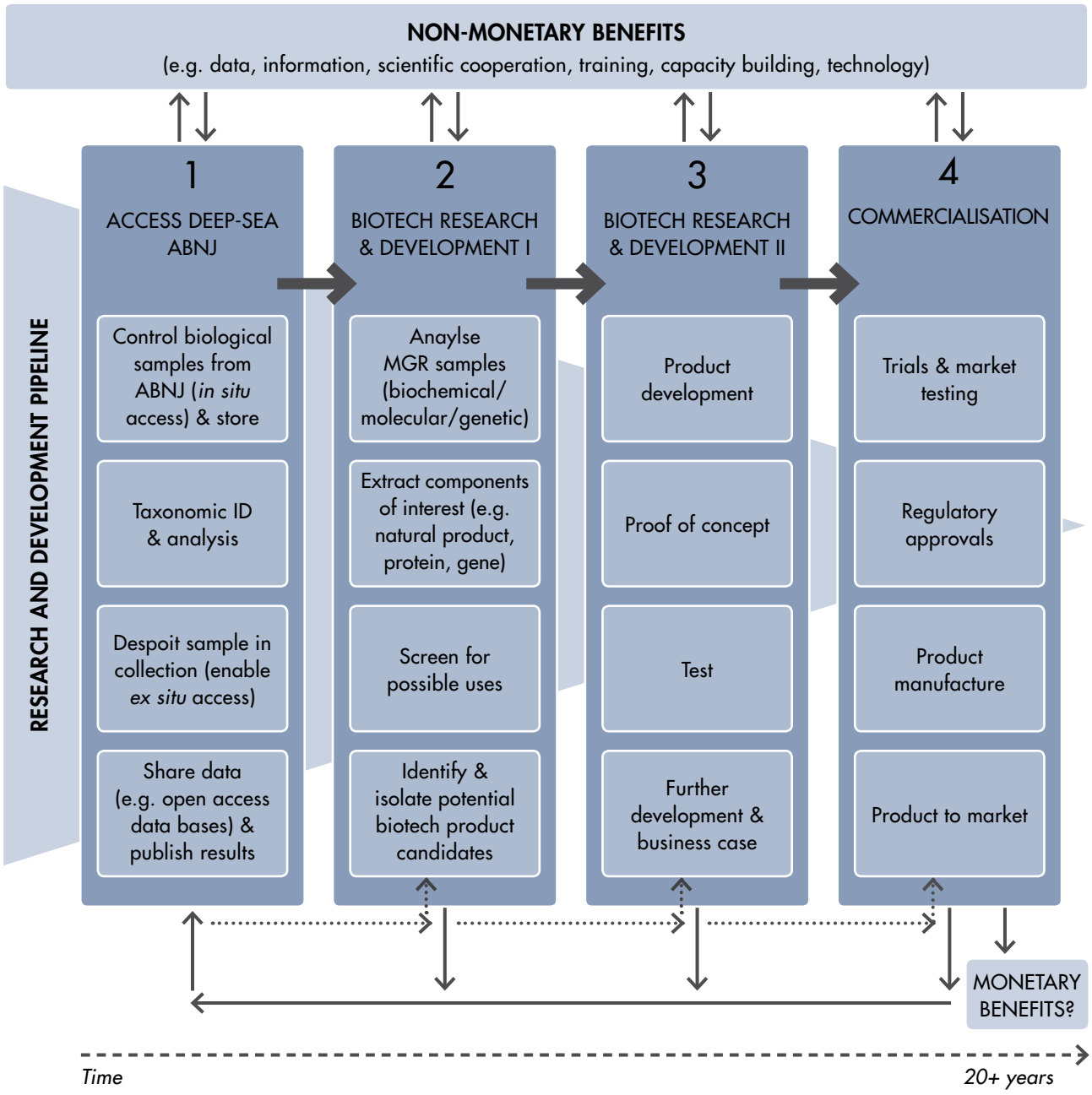
Negotiations at Prepcom 4 revealed significant divergence on a wide range of issues related to the conservation and sustainable use of marine biodiversity in the ABNJ. Nevertheless, Prepcom was able to produce an outcome document. The document presented elements of a draft international legally binding instrument – differentiating between issues that generated convergence among most delegations (section A of the outcome document), and those on which there was a divergence of views (section B).[8]

As an indication of the ground to be covered in future negotiations, the outcome document reflects no consensus on the definitions of many key terms in this debate. Even the concept of marine genetic resources is disputed. There is also significant divergence on access and benefit sharing as it relates to the exploitation of marine genetic resources. The CBD and Nagoya Protocol reflect the principle of fair and equitable sharing of benefits resulting from the exploitation of genetic resources. However, this is based on attempts to ensure that countries from which genetic resources are sourced derive such benefits, and requires a clear agreement between state parties to the Nagoya Protocol as user or provider countries. How this principle would be applied in the ABNJ, where there is no clear 'providing party', remains unclear. Moreover, there is considerable disagreement on the form that such benefit sharing should take, and even whether this principle should be applied at all. At its most extreme it has been argued that the high seas freedoms apply to marine genetic resources, as well as to derivatives. Developing states have largely supported a comprehensive access and benefit-sharing regime, arguing that the idea of natural resources as the 'common heritage of mankind' – a principle established in relation to non-living resources from the seafloor of the ABNJ through UNCLOS[9] – applies also to genetic resources in the ABNJ. Even if the principle is to be accepted, debate continues over the extent to which this would include monetary and/or non-monetary benefits; and how the value of such benefits should be determined, collected and distributed.

Of particular concern is whether, or to what extent, the incorporation of the access and benefit-sharing principle may act to disincentivise marine scientific research and bioprospecting. Marine scientific research, both in areas within and beyond national jurisdiction, is governed under Part XIII of UNCLOS. The relationship between marine scientific research for non-commercial purposes and bioprospecting is complex, both regarding regulation and execution. For example, the collection of genetic resources in the wild is mostly undertaken for non-commercial purposes by academic, university and non-commercial researchers (currently under the ambit of Part XIII of UNCLOS), yet data stemming from the study of these resources may ultimately lead to commercial applications.[10] The relationship between Part XIII of UNCLOS and an eventual international legally binding instrument on the conservation and sustainable use of marine genetic

resources will be particularly important given Article 241 of Part XIII states that 'marine scientific research activities shall not constitute the legal basis for any claim to any part of the marine environment or its resources'.[11] Any implementing agreement will need to ensure that both developed and developing countries agree to the terms of bioprospecting in the ABNJ.

FIGURE 1 POTENTIAL MONETARY AND NON-MONETARY BENEFITS OF MARINE GENETIC RESOURCES OVER TIME



Source: Harden-Davies H, 'Deep-sea genetic resources: New frontiers for science and stewardship in areas beyond national jurisdiction', *Deep-Sea Research II*, 137, 2017, p. 507.

Discussions around access and benefit sharing are particularly important given the current disparity in economic resources and technical capacity between developed and developing states. The vast majority of marine genetic resource-based patents are held by a small number of developed countries. The path from marine genetic research to successful commercial applications is long and complex, with many commercial, financial and other barriers, and such research only rarely results in the production of patents and profitable products. It thus follows that greater focus should be afforded to the non-monetary benefits of marine genetic research.[12] An important advantage of non-monetary benefits is that they are generated and can be shared throughout the research and development pipeline, as shown in Figure 1.

Discussions around access and benefit sharing are particularly important given the current disparity in economic resources and technical capacity between developed and developing states

In this regard, the Prepcom negotiations have included extensive discussions about capacity building and technology transfer, as well as information-sharing mechanisms. There is broad agreement among negotiating parties on the need to recognise the special requirements of developing countries, particularly small-island developing states and least-developed countries. However, the scope and modalities for capacity building, knowledge transfer and information sharing have yet to be agreed upon.[13]

Finally, a critical area of negotiation has been the issue of an appropriate institutional mechanism and funding model for governance of marine biodiversity in the ABNJ. These include the possibility of a decision-making body, a scientific/technical body and a secretariat; and a number of potential funding mechanisms. Throughout the Prepcom process there has been a range of proposals and a significant divergence of views related to appropriate institutional structures. One such example is the extent to which institutional functions may be managed through existing structures, rather than establishing new structures and mechanisms. Broadly speaking, developing countries have favoured an 'increasingly ambitious and articulated international architecture, with multiple funds and overview and support mechanisms',[14] while developing countries have advocated a light institutional structure.

TAKING STOCK

Negotiations towards establishing an international legally binding instrument for the conservation and sustainable use of marine biodiversity in the ABNJ have been long and arduous. As the outcome document of Prepcom 4 makes clear, there is still a wide range of issues around which negotiating parties differ substantially and where significant uncertainty remains regarding the final form of such an international instrument. However, the progress that has been made to date should not be underestimated. There is broad agreement on the specific areas that the international instrument will have to address, a number of proposals have been put forward and assessed, and parties have a greater understanding of negotiating positions and potential coalitions. Crucially, the parties have been able to identify those elements that have generated convergence among most delegations, and those issues on which there is a divergence of views. Prepcom's mandate was to finalise substantive recommendations on the elements of a draft text of an international legally binding instrument to the UN General Assembly, to enable the General Assembly to decide whether to convene an intergovernmental conference to elaborate the text of such an instrument. Although many negotiating parties may have undoubtedly wished for a stronger convergence of views by the close of

The progress that has been made to date should not be underestimated

Prepcom 4, the Prepcom process has fulfilled its mandate. The next step will be for the UN General Assembly to decide on the convening and on the starting date of an intergovernmental conference to consider the recommendations of Prepcom and to elaborate the text of an international legally binding instrument. Many negotiators at Prepcom 4 expressed their desire for this to occur as soon as possible, ideally in 2018.[15]

CONCLUSION

Marine genetic resources have significant commercial potential, particularly in the context of rapid advances in biotechnology, pharmaceutical and genetic research, and technology. Ensuring that the pursuit of this economic potential does not undermine ocean health and also takes into consideration existing discrepancies in technology and financial resources between developed and developing nations will require the expansion of current institutional and regulatory systems for the governance of the ABNJ. Yet such institutional and regulatory systems should not create barriers to non-commercial marine scientific research that increase our understanding of the oceans and may support effective conservation efforts and have more broad-ranging benefits. It is vital that negotiating parties move towards a broad consensus on the governance of marine biodiversity in the ABNJ, as this is a fundamental requirement not only for establishing an international legally binding instrument, but also for its effective implementation. In this regard, the outstanding contestations concerning marine genetic resources will need to be comprehensively dealt with at the intergovernmental conference in a manner that assures the possibility of effective implementation whilst strengthening institutional and regulatory systems.

It is vital that negotiating parties move towards a broad consensus on the governance of marine biodiversity in the ABNJ

ENDNOTES

1 Jennifer Silver *et al.*, 'Blue economy and competing discourses in international oceans governance', *Journal of Environment and Development*, 2015, pp. 140–43.

2 See UN Department of Economic and Social Affairs, Sustainable Development Knowledge Platform, 'Sustainable Development Goal 14: To conserve and sustainably use the oceans, seas and marine resources for sustainable development', https://sustainabledevelopment.un.org/sdg14, accessed 15 June 2017.

3 A full exposition of these developments falls beyond the scope of this policy insights paper. For more detail see *World Ocean Review*, 'Law of the Sea: A constitution for the seas', http://worldoceanreview.com/en/wor-1/law-of-the-sea/a-constitution-for-the-seas/, accessed 15 June 2017.

4 For greater detail on the debate over access and benefit sharing as it relates to genetic resources, and associated multilateral agreements, see Pauchard N, 'Access and benefit sharing under the Convention on Biological Diversity and its protocol: What can some numbers tell us about the effectiveness of the regulatory regime?', *Resources*, 6, 1, 2017, pp. 1–15.

5 For more detail see DOALOS (UN Division for Ocean Affairs and the Law of the Sea), 'Marine biological diversity beyond areas of national jurisdiction', http://www.un.org/depts/los/biodiversityworkinggroup/webpage_legal%20and%20policy.pdf, accessed 17 June 2017; Ardron J, et. al., 'Advancing Governance of the High Seas', Institute for Advanced Sustainability Studies, Policy Brief, 1/2013, www.un.org/depts/los/biodiversityworkinggroup/documents/iass-iddri2013.pdf, accessed 5 June 2017.

6 For a detailed overview of this process, as well as relevant UN Resolutions, see DOALOS, *op. cit*.

7 See DOALOS, 'Preparatory Committee Established by General Assembly Resolution 69/292: Development of an internationally binding legal instrument 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', http://www.un.org/depts/los/biodiversity/prepcom.htm, accessed 17 June 2017.

8 For a detailed review of negotiations at Prepcom 4 see IISD (International Institute for Sustainable Development), 'Summary of the Fourth Session of the Preparatory Committee on Marine Biodiversity Beyond Areas of National Jurisdiction: 10–21 July 2017', *Earth Negotiations Bulletin*, 25, 141, 2017, pp. 1–22.

9 For more detail on the 'common heritage of mankind' principle, see Taylor P, 'The common heritage of mankind: A bold doctrine kept within strict boundaries', 2011, http://wealthofthecommons.org/essay/common-heritage-mankind-bold-doctrine-kept-within-strict-boundaries, accessed 12 June 2017.

10 Harden-Davies H, 'Deep-sea genetic resources: New frontiers for science and stewardship in areas beyond national jurisdiction', *Deep-Sea Research II*, 137, 2017, pp. 504–13.

11 UN, Part XIII: Marine Scientific Research, http://www.un.org/depts/los/convention_agreements/texts/unclos/part13.htm, accessed 10 June 2017.

12 Harden-Davies H, *op. cit*.

13 IISD, *op. cit*.

14 *Ibid*., p. 20.

15 *Ibid*.

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