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Least Developed Countries (LDCs), oceans, Sustainable Development Goals (SDGs), marine biodiversity, marine conservation



## Policy pointers

**An international** mechanism for equitably sharing the benefits from marine genetic resources can enable the Least Developed Countries (LDCs) to identify the benefits and distribution modalities that meet their specific needs and priorities.

**An international** mechanism for benefit sharing can serve to systematically and proactively assess if and how benefits actually match the needs and priorities of the LDCs, as well as global concerns, and allow necessary adjustments over time.

**Both monetary and** non-monetary benefits are usually provided under multilateral benefit-sharing regimes. This supports the LDCs' proposal to establish a trust fund in addition to focusing on non-monetary benefit sharing under a new instrument.

**Establishing a trust fund** requires consideration of its financial sustainability, including through upfront payments, as well as equitable criteria for distribution, which could guide assessments of beneficiaries' vulnerability or the selection of projects that benefit local communities and produce global benefits.

# Equity and benefit sharing from marine genetic resources in areas beyond national jurisdiction

UN member states are negotiating how to share the benefits arising from the use of marine genetic resources in the deep seas. The process will lead to a new international legally binding instrument under the UN Convention on the Law of the Sea on the conservation and sustainable use of marine biodiversity of areas beyond national jurisdiction. Negotiations have mainly focused on which marine genetic resources would be covered by a new instrument and which benefits would be shared but have not focused enough on how these benefits can be shared equitably. As the Least Developed Countries (LDCs) are not currently conducting research on marine genetic resources of areas beyond national jurisdiction, an international mechanism and criteria for sharing both monetary and non-monetary benefits equitably can enable the LDCs to identify the benefits that best allow them to participate in — and benefit from — marine research, achieve sustainable development and respond to the global threats to the health of oceans.

For more than ten years, UN member states have been debating the need to share the benefits arising from the use of marine genetic resources in the deep seas.<sup>1</sup> The genetic material of deep-sea sponges, krill, corals, seaweeds and bacteria in remote areas of the ocean possess unique characteristics that may lead to significant innovations and commercial benefits for the pharmaceutical, food and renewables sectors, among others. But the vast majority of developing countries do not engage in — or benefit from — these research efforts. This issue is now being negotiated as part of a new international legally binding instrument on the conservation and sustainable use of marine biodiversity of areas beyond national jurisdiction under the UN Convention on the Law of the Sea ('the new instrument').

Views among UN member states negotiating the new instrument diverge as to the legal status of marine genetic resources of areas beyond national jurisdiction: are they under the 'common heritage of humankind' (which is the view of the LDCs Group and the majority of other developing countries) or the 'freedoms of the high seas'? Is it possible to find a hybrid between these two legal regimes? But member states have agreed that the new instrument will address "questions on the sharing of benefits" (UNGA Res 72/249 of 2017). On that basis, negotiations have mainly focused on which marine genetic resources the agreement will apply to and which benefits (such as commercial profits, research findings and so on) should be shared. These questions are complex and will help set out the scope and

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content of an international obligation of benefit sharing. But this briefing argues that more attention should be placed on how a new instrument can address the equitable sharing

of benefits. As LDCs are not currently engaging in research on marine genetic resources, an international mechanism and criteria for sharing benefits equitably can enable LDCs to identify the benefits that best allow them to participate

in — and benefit from — marine research, achieve sustainable development and respond to the global threats to the health of oceans.

**‘Sharing’** conveys the idea that even if not everyone plays an active part in scientific endeavours, they should all derive benefits from them.<sup>2,3</sup> Ensuring beneficiaries’ participation in the identification of benefits and sharing modalities can help develop a common understanding and build a genuine partnership between those who can help accrue benefits and those who are expected to make use of them. It is not about passively receiving benefits, but about beneficiaries’ agency.<sup>2</sup> International law can facilitate such a partnership-building process by creating mechanisms and setting criteria for a process whereby all state parties define how to identify, accrue and apportion benefits, as well as monitor progress and assess challenges in matching benefits with beneficiaries’ needs and priorities.<sup>4</sup>

### **The need for an international mechanism**

The proposal to create a benefit-sharing ‘mechanism’ has already emerged in the negotiations of the new instrument. This follows a trend in other international processes concerned with benefit sharing (discussed later), which have identified the need to facilitate a proactive and iterative dialogue among member states through multilateral institutionalised approaches. These approaches may include brokering, linking, assessing and adjusting efforts in information sharing, scientific cooperation and capacity building.<sup>5</sup> The trend is based on a recognition that current disconnected initiatives have not sufficiently fulfilled existing obligations on capacity building, technology transfer and marine scientific cooperation (which can be forms of non-monetary benefits). An example of this trend can be found at the International Seabed Authority (ISA), which has developed

guidelines to ensure that training opportunities meet certain minimum criteria to the benefit of developing countries. In addition, the ISA has put together a list of pre-approved candidates to benefit from these training opportunities, who are selected according to transparent criteria and subject to regular reviews to ensure equitable and geographic sharing of opportunities. Another example can be found under the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), which is developing an institutionalised multilateral approach to information sharing.<sup>6</sup> This Global Information System aims to integrate, coordinate and enhance existing systems (including those containing digital sequence information),<sup>7</sup> as well as assess progress and monitor effectiveness. This is based on the understanding that even if open access online databases exist, information may not be easily or effectively navigated, compared and utilised by those with limited research capacities. The ITPGRFA Global Information System is also expected to support collaboration on priority materials, capacity development and technology transfer, to fill the gap between having access to information and having the capacity to use it. While the system is not yet functional and therefore its effectiveness cannot be assessed, its development highlights the potential for more institutionalised approaches to: respond to the needs of those expected to benefit from information sharing, provide oversight of the distribution of benefits across different regions and facilitate targeted capacity building.<sup>8</sup>

### **Addressing global challenges**

An international mechanism for fair and equitable benefit sharing can also enable the international community to identify and address other global challenges around marine genetic resources of areas beyond national jurisdiction. It could create a forum where specific concerns about the human rights implications of international scientific cooperation can be discussed,<sup>9</sup> such as: avoiding discrimination in benefit sharing; providing the opportunity for all to contribute to scientific research; protecting against the negative consequences of scientific research or its applications on food, health, security and environment; and prioritising scientific research on key issues for the most vulnerable.<sup>10</sup> These considerations could be used to assess the extent to which benefit sharing from marine genetic resources contributes to the raising of living standards and the realisation of the Sustainable

Development Goals (SDGs), such as the alleviation of poverty, the reduction of hunger and the improvement of health (SDGs 1–3); the creation of decent work in marine science and addressing inequalities (SDGs 8 and 10); and various threats to the oceans including climate change (SDGs 13 and 14).

### **Providing for both monetary and non-monetary benefits**

In other areas of international law (under the ISA, the World Health Organization (WHO) and the ITPGRFA), multilateral benefit sharing encompasses both monetary and non-monetary benefits. This provides more flexibility to respond to beneficiaries' needs and priorities,<sup>4,11</sup> and supports the proposal by the LDCs and the majority of developing countries to establish a trust fund under a new instrument.

Two lessons learnt in existing multilateral benefit-sharing mechanisms provide important considerations to ensure that a proposed trust fund effectively leads to benefits for the LDCs and others. First, distributing non-monetary benefits has costs and thus requires accruing money upfront. For instance, sharing raw data on marine genetic resources as an open access resource still requires the development of adequate infrastructure and curation; training has costs related to trainees' travel, space and resources on expensive scientific research vessels, trainers' staff time and scholarships; and the sharing of best practices requires analysis and effective delivery of information. Both under the ISA (under the Endowment Fund for marine scientific research) and ITPGRFA, the distribution of non-monetary benefits has relied on voluntary monetary donations. Second, accruing monetary benefits by tying them to commercialisation of products derived from genetic resources entails more uncertainties than accruing monetary benefits from other resources, such as minerals under the ISA. This uncertainty raises an issue of ensuring financial sustainability of monetary and non-monetary benefit sharing, and has led existing multilateral benefit-sharing mechanisms related to genetic resources to put in place, or consider putting in place, an upfront regular payment of fees by users. The WHO is implementing a system of mandatory contributions (annual partnership contributions).<sup>12</sup> Each year, the WHO issues a questionnaire that identifies potential contributors, such as companies and institutions that conduct research and development in the field of influenza. Under the ITPGRFA, a similar idea is under consideration:

the development of a users' subscription system to obtain access to the genetic materials under the ITPGRFA Multilateral System.<sup>13,14</sup> The key question in developing an upfront payment is determining a payment level that can be accepted by users (possibly differentiating between different types of users) and is sufficient to ensure the viability of a benefit-sharing mechanism.

### **Equity in distributing benefits**

Benefit sharing is accompanied by the qualification 'equitable' or 'fair and equitable' in existing international treaties,<sup>15,16</sup> but this aspect is not yet clear in the negotiations of the new instrument. In some international regimes, specific guidance is developed to operationalise equity in benefit sharing that provides examples of how the new instrument could match benefits with LDCs' needs and priorities. For instance, the WHO has developed a benchmark for equity based on the principles of public health risk and needs to guide the distribution of monetary benefits arising from the use of pandemic influenza viruses.<sup>12</sup> On this basis, a prioritisation of beneficiary countries is carried out by WHO's regional officers. WHO's Director General oversees the distribution of benefits, with the support of an advisory group (comprising a mix of internationally recognised policymakers, public health experts and technical experts) that monitors implementation and may provide recommendations on the fair and equitable sharing of benefits. A similar model to identify beneficiary countries could be adopted under the new instrument, based on global assessments of countries' vulnerability to threats to ocean health and needs to adequately address them.<sup>15</sup>

A different approach to the distribution of monetary benefits has been adopted under the ITPGRFA.<sup>17</sup> A global benefit sharing fund allocates money to projects in developing countries to support communities and partner research institutions for the global benefits they produce (the conservation and sustainable use of biodiversity). Project proposals are assessed by a panel of experts according to specific eligibility and selection criteria adopted by the ITPGRFA governing body, to prioritise projects that also support the livelihoods of the communities concerned. This approach could create links between international and local benefits, taking into account local contributions to the realisation of the SDGs by traditional knowledge holders. The relevance of traditional knowledge has become increasingly clear in negotiations for a new treaty, and is already

reflected in guidance under the Convention on Biological Diversity on marine biodiversity and in ongoing global scientific assessments such as the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. The competitive nature of a project-based approach, however, may take insufficient account of the unequal capacities of countries and actors.<sup>18</sup> To address these concerns, the ITPGRFA Secretariat has organised a series of workshops and a helpdesk function to assist applicants in preparing proposals, an approach that could also be adopted in the context of the

new instrument.<sup>13</sup> This further indicates that an international benefit-sharing mechanism can be adjusted over time in light of assessments of whether objectives have been met.

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### Notes

<sup>1</sup> BENELEX project blog series. Morgera, E (27 February 2018) Benefit-Sharing in marine areas beyond national jurisdiction: where are we at? [www.benelexblog.law.ed.ac.uk](http://www.benelexblog.law.ed.ac.uk) / <sup>2</sup> Mancisidor, M (2015) Is there such a thing as a human right to science in International Law? 4(1) *European Society of International Law* (blog series). / <sup>3</sup> Universal Declaration on Human Rights, Article 27(1). / <sup>4</sup> Morgera, E (2016a) The Need for an International Legal Concept of Fair and Equitable Benefit-sharing. 27:2 *European Journal of International Law* 353. / <sup>5</sup> Morgera, E (2016b) Study on Experiences Gained with the Development and Implementation of the Nagoya Protocol and Other Multilateral Mechanisms and the Potential Relevance of Ongoing Work Undertaken by Other Processes, Including Case Studies. United Nations UNEP/CBD/ABS/A10/EM/2016/1/2. / <sup>6</sup> ITPGRFA, Article 17. / <sup>7</sup> FAO, ITPGRFA Global Information System. [www.fao.org/plant-treaty/areas-of-work/global-information-system/en/](http://www.fao.org/plant-treaty/areas-of-work/global-information-system/en/) / <sup>8</sup> FAO, ITPGRFA Governing Body (2015) Resolution 3/2015. The Vision and the Programme of Work on the Global Information System. IT/GB-6/15/Res 3. / <sup>9</sup> Morgera, E (2015) Fair and Equitable Benefit-sharing at the Crossroads of the Human Right to Science and International Biodiversity Law. 4 *Laws* 803. / <sup>10</sup> Shaheed, F (2012) Report of the Special Rapporteur in the field of cultural rights: the right to enjoy the benefits of scientific progress and its applications. United Nations (UN Doc A/HRC/20/26). / <sup>11</sup> Morgera, E (2017) Fair and equitable benefit-sharing: history, normative content and status in international law. BENELEX Working Paper No 12 (SSRN). / <sup>12</sup> WHO, Pandemic Influenza Preparedness (PIP) Framework. [www.who.int/influenza/pip/en/](http://www.who.int/influenza/pip/en/) / <sup>13</sup> Tsioumani, E (2016) Beyond Access and Benefit-sharing: Lessons from the Law and Governance of Agricultural Biodiversity. SSRN. / <sup>14</sup> Tsioumani, E (13 March 2018) Why technicalities matter – On the International Treaty on Plant Genetic Resources for Food and Agriculture and the seventh session of its Governing Body. [www.benelexblog.law.ed.ac.uk/2018/03/13/why-technicalities-matter-on-itpgrfa-gb7/](http://www.benelexblog.law.ed.ac.uk/2018/03/13/why-technicalities-matter-on-itpgrfa-gb7/) / <sup>15</sup> Morgera, E (2018) Fair and equitable benefit-sharing in a new treaty on marine biodiversity: moving towards partnership building? BENELEX Working Paper No 16 (SSRN). / <sup>16</sup> Francioni (2010) Equity. In: Wolfrum, R (ed.) *Max Planck Encyclopedia of Public International Law*. OUP. / <sup>17</sup> FAO, ITPGRFA benefit-sharing fund. [www.fao.org/plant-treaty/areas-of-work/benefit-sharing-fund/overview/en/](http://www.fao.org/plant-treaty/areas-of-work/benefit-sharing-fund/overview/en/) / <sup>18</sup> Louafi, S (2013) Reflections on the resource allocation strategy of the Benefit Sharing Fund of the International Treaty on Plant Genetic Resources for Food and Agriculture. Swiss Federal Office for Agriculture.

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