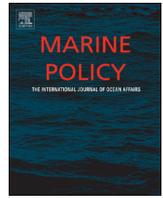




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Sustaining marine life beyond boundaries: Options for an implementing agreement for marine biodiversity beyond national jurisdiction under the United Nations Convention on the Law of the Sea



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ABSTRACT

For nearly a decade, governments have been discussing the need to improve efforts to conserve and sustainably use marine biodiversity in areas beyond national jurisdiction (ABNJ). Support for a new international agreement under the United Nations Convention on the Law of the Sea (UNCLOS) – an Implementing Agreement – on the conservation and sustainable use of marine biodiversity in ABNJ has been growing. In June 2012, at the United Nations Conference on Sustainable Development held in Rio de Janeiro, Brazil, States agreed to take a decision on the development of an international instrument under UNCLOS before the end of the 69th session of the United Nations General Assembly (UNGA), which runs from September 2014 to August 2015. In follow-up to this commitment, it was agreed to consider the “scope, parameters and feasibility” of this instrument. To inform these international discussions, this article highlights some potential options for the content of a new UNCLOS Implementing Agreement. It first reviews the history of UN discussions, and then elaborates on options to address key elements identified as priorities for States in 2011: marine genetic resources, including the sharing of benefits, area-based management tools, including marine protected areas, environmental impact assessments, capacity-building and the transfer of marine technology. It addresses cross-cutting issues such as the governing principles, institutional structure as well as on other critical points such as High Seas fishing and flag State responsibilities. The article concludes with suggestions on possible next steps in order to succeed in the negotiations for an agreement.

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1. Introduction

The adoption in 1982 of the United Nations Convention on the Law of the Sea (UNCLOS) constituted a milestone in the history of ocean governance. In terms of ocean space, it defined or recognised various maritime zones, including two in areas beyond national jurisdiction (ABNJ): the High Seas and the Area (the deep-seabed beyond national jurisdiction). According to UNCLOS, the High Seas is the water column found beyond the limits of national jurisdiction of States and a traditional regime of freedom of the seas applies there (UNCLOS, Part VII, Article 87). The Area, which encompasses the seabed, ocean floor and subsoil thereof in ABNJ, and its mineral resources, are considered by UNCLOS to be the common heritage of mankind (UNCLOS, Part XI, Article 136). Activities related to seabed mining are organised and controlled by the International Seabed Authority (ISA) (UNCLOS,

Part XI, Article 153 (1)). Together, the High Seas and the Area represent almost half of the planet’s surface and host a significant amount of its biodiversity.

As stated in the Preamble, States adopted UNCLOS with the desire to establish “through this Convention, with due regard for the sovereignty of all States, a legal order for the seas and oceans which will facilitate international communication, and will promote the peaceful uses of the seas and oceans, the equitable and efficient utilisation of their resources, the conservation of their living resources and the study, protection and preservation of the marine environment”. Yet, more than 30 years after the adoption of UNCLOS, despite its outstanding achievements in transforming ocean law and governance, it is clear that many of these ambitions have yet to be fulfilled, especially as they relate to the protection and preservation of the marine environment and the conservation of biodiversity in ABNJ [1].

Over the past decades, human activities in ABNJ have developed exponentially, leading also to an increase in the impacts on and threats to marine biodiversity found in these areas. For example, around 90% of world trade is now carried out by the shipping industry [2], with associated risks of oil, garbage, and

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noise pollution, collisions with large marine animals, and introduction of alien species through ballast waters. Fishing activities have expanded to the High Seas and even into the deep sea, with growing concerns regarding the overexploitation of fish stocks, illegal, unreported and unregulated fishing (IUU fishing) and damage to deep-water habitats due to destructive fishing practices such as bottom trawling [3]. Exploration of mineral resources in the Area is now underway, with 19 contracts for exploration already approved by the ISA [4–6]. These are no longer limited to the Clarion-Clipperton Zone in the Pacific Ocean, but also cover areas in the Western Indian Ocean and on the Mid-Atlantic Ridge. The impacts on marine biodiversity of any future exploitation of these resources will hinge on the adoption of effective measures, such as environmental management plans, that can take into account not only direct impacts but also the cumulative impacts of other human uses as well as climate change and ocean acidification. New uses are also emerging, such as bioprospecting (research and development related to genetic resources), with an increasing number of patents associated with genes of marine origin [7] and climate engineering activities, including ocean fertilisation [8]. The growing impacts of climate change and ocean acidification are already apparent, and it is assumed that in the future climate change will be the anthropogenic threat having the greatest impact in the deep ocean [9,10].

This has raised serious questions as to whether the current governance framework for the conservation and sustainable use of marine biodiversity in ABNJ is robust enough to respond to these threats and whether the legal and institutional machinery is in place to ensure the adoption of the necessary and appropriate policies. A number of international and regional organisations have a mandate for managing activities in ABNJ, mostly on a sector or issue-based basis, and sometimes also on a geographical basis. They include *inter alia* (i) the ISA for the prospection, exploration and exploitation of mineral resources in the Area; (ii) regional fisheries management organisations (RFMOs) for fisheries; (iii) through several conventions, the International Maritime Organisation (IMO) for vessel-source pollution and dumping of wastes; and (iv) a few regional seas conventions¹ which have a mandate over the protection of the marine environment in ABNJ [11]. However, a crucial problem exists in that “the myriad of institutions described above bear no real relationship to one another and operate independent of each other without an overarching framework to ensure structure, consistency and coherence” [12]. In addition, it has already been pointed out that a number of regulatory and governance gaps exist in the current system (Tables 1 and 2), making it even harder to ensure the conservation and sustainable use of marine biodiversity in ABNJ.

For all these reasons, a majority of States² are now convinced that it is time to adopt a new international instrument under UNCLOS (an UNCLOS Implementing Agreement) to conserve and sustainably use marine biodiversity in ABNJ [14]. These States believe that better use of existing instruments will not be able to fully address these weaknesses and gaps. Rather, many believe that a globally enforceable mandate is needed to ensure that

conservation and long-term sustainable use of marine biodiversity and questions of access to and equitable benefit sharing of resources are effectively dealt with in an integrated manner across an interconnected ocean. During the 2012 United Nations Conference on Sustainable Development, States agreed to take a decision regarding the development of a new international instrument by the end of the 69th session of the United Nations General Assembly (UNGA), in August 2015.

It is against this background that Section 2 will look at the current state of play of international discussions on the subject, highlighting the opportunity to launch soon the negotiations for an UNCLOS Implementing Agreement on the conservation and sustainable use of marine biodiversity in ABNJ. Sections 3 and 4 provide a range of building blocks which could be considered when designing the UNCLOS Implementing Agreement: Section 3 will focus on the four elements which States are currently discussing under the auspices of the UNGA; Section 4 will propose other potential cross-cutting elements such as the principles applicable to activities and decision-making processes in ABNJ and the issue of the institutional framework, and on sectoral but important issues encompassing High Seas fishing and States responsibilities over vessels flying their flag. Section 5 concludes with suggestions on possible next steps to promote a successful launch of the negotiations.

2. State of play of international discussions on the conservation and sustainable use of marine biodiversity in ABNJ

2.1. The institutional framework of the discussions

At the global level, discussions on the conservation and sustainable use of marine biodiversity in ABNJ have taken place at the United Nations for nearly a decade. Initially, two goals drove these discussions: (i) eliminating the destructive impacts of bottom fishing on the High Seas; and (ii) establishing representative networks of MPAs in ABNJ – both commitments agreed at the highest level by States at the World Summit on Sustainable Development in 2002. In 2004, the United Nations Informal Consultative Process on Oceans and Law of the Sea (ICP) was devoted to “New Sustainable Uses of the Oceans, including the Conservation and Management of the Biological Diversity of the Seabed in Areas beyond National Jurisdiction”. During this early debate, two issues started to generate some important discussions: the effective balance between High Seas freedoms and the duty to protect and preserve the marine environment and the applicability of the concept of the common heritage of mankind to MGRs in ABNJ [14]. That same year, the UNGA established an *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 or BBNJ Working Group [15]. This BBNJ Working Group was originally tasked with identifying possible options and approaches to promote international cooperation and coordination for the conservation and sustainable use of marine biodiversity in ABNJ. It met under this mandate in 2006 and 2008. Then its mandate was slightly upgraded to enable it to make recommendations directly to the UNGA [16] and it has met on an annual basis since 2010.

2.2. An overview of the ongoing discussions

From the beginning of the discussions within the BBNJ Working Group, a central issue has been the existence or not of regulatory and governance gaps in the current system and whether these gaps would justify the adoption of an Implementing Agreement to

¹ They include the Antarctic Treaty System with the Madrid Protocol on Environmental Protection and the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR); the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean; the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention); and the Convention for the Protection of the Natural Resources and Environment of the South Pacific (SPREP Convention).

² Recent official statements in support of the opening of the negotiations and on the need for an UNCLOS IA are available online for consultations, for example on the website of the EU Delegation to the UN (http://www.eu-un.europa.eu/articles/en/article_13885_en.htm) or on the website of the G77 (<http://www.g77.org/statement/getstatement.php?id=130820a>).

Table 1
Regulatory gaps in the current governance system in ABNJ [13].

Regulatory gaps
Absence of global procedures and standards for applying modern conservation tools such as marine protected areas (MPAs), environmental impact assessments (EIAs) and strategic environmental assessments (SEAs)
Absence of a global instrument or mechanism to ensure that modern conservation principles such as ecosystem-based management and the precautionary principle are incorporated and applied by existing global and regional bodies
Lack of a sufficient legal mandate for ecosystem-based management, biodiversity conservation, cooperation and coordination in sectoral bodies in ABNJ
Lack of compliance and enforcement mechanisms to provide incentives for effective flag State performance
Lack of standards, procedures and guidance for capacity-building and marine technology transfer

Table 2
Governance gaps in the current governance system in ABNJ [13].

Governance gaps
Absence of mechanisms to enable coordination and cooperation within and across sectors, States, regions and institutions
Lack of a global institution or process to oversee progress, verify compliance, adopt binding decisions and provide assistance in the application of modern conservation principles and tools
Lack, in many regions, of organisations with a mandate for promoting conservation and sustainable use of marine biodiversity in ABNJ or with regulatory capacity for oceans uses not regulated elsewhere
Lack of clarity regarding the applicable regime relating to the access and the utilisation of marine genetic resources (MGRs) in ABNJ

UNCLOS on the conservation and sustainable use of marine biodiversity in ABNJ (UNCLOS IA) to fill them [14]. There is now a divide between a large majority of States which advocate the opening of negotiations for the adoption of a new instrument and some others who believe gaps can be addressed through the implementation of existing instruments.

During the first years of the BBNJ Working Group, discussions focused on the legal status of MGRs found in ABNJ. UNCLOS does not specifically address this issue. It deems the Area and its resources as the common heritage of mankind but then defines resources as “all solid, liquid or gaseous mineral resources in situ in the Area at or beneath the seabed, including polymetallic nodules” (UNCLOS, Article 133 (a)). Some developed countries have used this article to argue that MGRs in the Area do not fall under the common heritage of mankind regime developed in Part XI of UNCLOS, but rather under the freedom of the High Seas regime developed in Part VII of the same convention. Developing countries from the G77/China have adopted an opposing position, based on a 1970 UNGA resolution according to which “the seabed and ocean floor and the subsoil thereof, beyond the limits of national jurisdiction (hereinafter referred to as the Area), as well as the resources of the Area and the exploitation of its resources shall be carried out for the benefit of mankind as a whole” [17]. Since several years, these positions are well-entrenched, and for long it seemed impossible to overcome the blockage in the BBNJ Working Group due to these divergent views [14], particularly as the Working Group adopts its recommendations by consensus.

In the meantime, other States kept their focus on issues such as the application of the precautionary principle and the establishment of marine protected areas (MPAs) in ABNJ. As early as 2006, recognising that a regulatory gap existed in UNCLOS with respect to the protection of marine biodiversity in ABNJ, the EU called for the adoption of an UNCLOS IA [18]. In its early calls, it did not, however, consider the issue of MGRs, EIAs, capacity-building and transfer of marine technology as being potential building-blocks for a future UNCLOS IA [18], and its proposals did not receive the necessary consensus to be adopted.

It was only in 2011 that the BBNJ Working Group made a significant step forward. That year, making a reference to the effectiveness of the current legal framework to conserve and sustainably use marine biodiversity in ABNJ, it agreed to initiate a process to identify gaps and ways forward including through the implementation of existing instruments and the possible development of a multilateral

agreement under UNCLOS. This process, further endorsed by the UNGA, should address four different issues, considered as a “package”³: (i) marine genetic resources including questions on the sharing of benefits; (ii) area-based management tools, including marine protected areas; (iii) environmental impact assessments and (iv) capacity-building and the transfer of marine technology [19].

In June 2012, during the United Nations Conference on Sustainable Development or “Rio+20”, Heads of States and Governments committed “to address, on an urgent basis, 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” at the latest before the end of the 69th session of the UNGA in August 2015 [20]. To prepare the decision to launch (or not) the negotiations for the adoption of an UNCLOS IA, States agreed during the 2013 meeting of the BBNJ Working Group to establish, within this Working Group, a preparatory process which would make recommendations to the UNGA on the scope, parameters and feasibility of a future international instrument [21]. At least three meetings of the BBNJ Working Group will be held in 2014 and possibly in 2015.

The next few months will therefore be crucial in order to prepare the decision to be adopted by the UNGA with respect to the launch of the negotiations for the adoption of an UNCLOS IA. These following sections thus seek to inform these discussions on the scope and parameters of an international instrument under UNCLOS by proposing various options for consideration.

3. Potential content of an UNCLOS Implementing Agreement with respect to the 2011 package

This section presents various options related to the potential content of an UNCLOS IA with respect to the four elements of the 2011 package: (i) marine genetic resources; (ii) area-based management tools; (iii) environmental impact assessments and (iv) capacity-building and the transfer of marine technology.

³ The “package deal” approach idea comes from the negotiations of UNCLOS itself, during which such approach was retained. According to this approach, all the issues considered during a given negotiation are linked and a compromise or an outcome must be found for all of them, an idea often summarised in the sentence “nothing is agreed until everything is agreed”.

The various options are not mutually exclusive and there is no hierarchy amongst them. They aim to elucidate a range of approaches available for specific issues in order to provide some sense of the options for States to consider once the negotiations are launched.

3.1. On marine genetic resources

Option 1: an UNCLOS IA might establish that the principles of fair and equitable access and benefit-sharing (ABS) shall apply to the utilisation of MGRs in ABNJ and set out a commitment to develop a global multilateral access and benefit-sharing mechanism, such as what was done in Article 10 of the Nagoya Protocol [on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation (ABS)] to the Convention on Biological Diversity (CBD). The procedures, timelines and modalities for establishing such mechanism would also be set out by the UNCLOS IA.

Option 2: an UNCLOS IA might concentrate on the establishment of a multilateral benefit-sharing mechanism, leaving aside the question of access. It could provide for monetary and non-monetary benefit-sharing. For monetary benefit-sharing, it could use as an inspiration Article 82 of UNCLOS on the payments and contributions with respect to the exploitation of the continental shelf beyond 200 nautical miles. The multilateral benefit-sharing mechanism could be administered by a newly established international body or a re-mandated existing international body, such as the ISA or the Intergovernmental Oceanographic Commission (IOC).

Option 3: an UNCLOS IA might concentrate on the establishment of general rules and standards for access to MGRs in ABNJ and on the establishment of a multilateral benefit-sharing mechanism. It would leave to Contracting Parties the responsibility to implement the general rules and standards related to access to MGRs (i.e. permits, traceability, compliance, monitoring and enforcement would be subject to State responsibilities, based on nationality or control). The multilateral benefit-sharing mechanism could provide for both monetary and non-monetary benefit-sharing such as those identified in the Annex to the Nagoya Protocol. Revenues collected from the multilateral benefit-sharing mechanism could be allocated to a trust fund to support capacity development and projects that provide global benefits in respect of the conservation and sustainable use of marine biodiversity in ABNJ, including marine biotechnology, marine scientific research and MPAs. The benefit-sharing mechanism and the trust fund could be administered by a newly established body or a re-mandated existing international body, such as the ISA or the IOC.

Option 4: an UNCLOS IA might establish a multilateral system of access and benefit-sharing, as is already the case, for example, for plant genetic resources for food and agriculture in the FAO International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA). An international body, such as a newly created one or a re-mandated ISA or IOC could be responsible for the implementation and management of this multilateral system. This body could facilitate access to MGRs in ABNJ by managing a clearinghouse for data and information related to bioprospecting activities in ABNJ (similar to the ISA' role in Articles 143 and 145 of UNCLOS). The clearinghouse could cooperate with the ABS clearinghouse mechanism provided for in Article 14 of the Nagoya Protocol (e.g. interoperability) in particular with regard to MGRs in transboundary situations and transient MGRs. As above, the multilateral system could provide for monetary and non-monetary benefit-sharing, such as those identified in the Annex to the Nagoya Protocol. It could also establish a trust fund to allocate revenues to support capacity development and projects that provide global benefits in respect of the conservation and sustainable use of marine biodiversity in ABNJ, including marine biotechnology, marine scientific research and MPAs.

3.2. On area-based management tools

Option 1: an UNCLOS IA might establish the common objectives of ensuring the conservation and sustainable use of marine biological diversity and developing an effectively managed, ecologically and biogeographically representative and connected network of marine protected areas in ABNJ. It could call on States and competent global and regional organisations to cooperate for these purposes and to annually report on specific activities carried out and progress made.

Option 2: an UNCLOS IA might establish a largely regional approach by giving a mandate to States, regional organisations and other competent bodies to submit MPA proposals for international endorsement. The agreement could define the criteria, conservation objectives and processes for submitting proposals, agreeing management measures and procedures for scientific review and endorsement as well as monitoring, control and enforcement. Management responsibility could remain at the regional level, operating through existing, expanded or new regional bodies or *ad hoc* collaborations amongst interested States (for example, the Sargasso Sea Alliance).

Option 3: an UNCLOS IA might establish a systematic approach in which a global scientific body develops proposals for MPAs, complementary to already existing processes (i.e. at the regional level). Proposals would be based on the results of a scientifically-driven process to identify areas of significance for ecological, biological, scientific or cultural reasons, a review of existing and anticipated uses, and design criteria for biogeographically and ecologically representative and connected MPA systems. Proposals would be submitted to and adopted by the Contracting Parties. Management responsibility could remain at the regional level, with oversight and assistance at the global level.

Option 4: an UNCLOS IA could further initiate a framework for integrated spatial planning and management, aimed at facilitating discussions between State Parties and competent regional and sectoral organisations to coordinate to develop spatial management plans so as to achieve healthy, productive and resilient oceans and marine ecosystems. The agreement could mandate a coordinated process for developing an ecologically and biologically coherent system of MPAs as well as other area-based (and non-area-based) management measures to achieve the goals, objectives and targets set forth in the agreement and any annexes thereto.

3.3. On environmental impact assessments

Option 1: an UNCLOS IA could reiterate the obligation of prior assessment of activities with the potential to significantly affect biodiversity in ABNJ (Article 206 of UNCLOS). It might establish the operating principles for conducting these EIAs and set up an obligation to carry out SEAs for national and sectoral organisational plans, policies and programmes. These operating principles could include, for example, a no-net biodiversity loss principle,⁴ the precautionary principle, the ecosystem approach and open and transparent decision-making processes, against which the outcomes of an EIA or an SEA could be reviewed.

Option 2: an UNCLOS IA could include general provisions on EIAs and SEAs to further implement the operating principles which should guide the conduct of these assessments, such as provisions on:

- The establishment of a mandatory framework for new, emerging and unregulated activities;

⁴ According to the Business and Biodiversity Offsets Programme (BBOP) definition, no net loss is "a target for a development project in which the impacts on biodiversity caused by the project are balanced or outweighed by measures taken to avoid or minimise the project's impacts, to undertake on-site restoration and finally to offset the residual impacts, so that no loss remains. Where the gain exceeds the loss, the term 'net gain' may be used instead of no net loss" (BBOP 2012).

- Guidance for States in their conduct of EIAs and SEAs;
- Notification to and participation of potentially affected States;
- Transparency and participation of stakeholders⁵;
- The assessment of cumulative impacts;
- The establishment of a level of global review by a global body or a Conference of the Parties (COP).

Particular attention should be given to locations where ecologically or biologically significant marine areas (EBSAs) or vulnerable marine ecosystems (VMEs) occur or are likely to occur, through for example the establishment of a lower threshold for EIAs carried out in these areas.

Option 3: an UNCLOS IA might also include more detailed provisions on EIAs and SEAs, such as an explicit requirement to adopt measures to prevent significant adverse impacts on marine biodiversity. It could detail minimum standards and requirements for all assessments conducted in ABNJ, including the requirement to authorise only activities which can be managed to prevent significant adverse impacts, individually or cumulatively and do not imply any more erosion of biodiversity or net biodiversity loss.⁶ It could also state that for activities potentially affecting EBSAs or VMEs, a net gain or net positive impact will be required [22]. EIAs and SEAs could be conducted at the national or regional level and reviewed by a global scientific body. A COP or other global body could review national, regional and sectoral implementation and compliance.

3.4. On capacity-building and transfer of marine technology

Option 1: an UNCLOS IA might include a recognition of the need for capacity-building and technology transfer on conservation and sustainable use of marine biodiversity in ABNJ, especially for developing States, and reiterate the requirements contained in UNCLOS (Article 244 on publication and dissemination of information and knowledge; Part XIV on development and transfer of marine technology). It could also build on/take into consideration the principles developed in the IOC Criteria and Guidelines on the Transfer of Marine Technology.⁷

Option 2: an UNCLOS IA might additionally include provisions requiring States Parties to provide and/or facilitate access to technologies related to MGRs, with due respect to applicable property rights and access law. The agreement could also include provisions on the promotion of research and training, for example through the development of a dedicated programme for cooperation on marine scientific research (including MGRs) and exchange of information through a global body.

Option 3: an UNCLOS IA may establish a fund, possibly funded by a tax on activities in ABNJ, to support capacity-building projects as well as projects that provide global benefits in respect of the conservation and sustainable use of marine biodiversity in ABNJ. It

could include projects on MPAs and marine scientific research. This fund could also support a clearing-house for technology transfer and capacity-building, where Contracting Parties can contribute and share data and research results.

4. Beyond the “package”: other issues for potential consideration

Although current international discussions are focused on the four elements of the 2011 “package”, there are a number of other issues that deserve consideration. These include underlying conservation, management and governance principles and an institutional framework for its implementation (Fig. 1), elements common in most recent international agreements. At the same time, the expressed desire by some States to exclude High Seas fishing and the issue of the genuine link between flag States and their flag vessels from the current discussions could also be questioned.

4.1. The governing principles

Option 1: an UNCLOS IA could include a preambular declaration of conservation, management and governance principles to guide States Parties both individually and operating through competent organisations in the responsible management of activities that may affect marine biodiversity in ABNJ. It could, for example, recall the language agreed by Heads of States and Governments at Rio + 20, wherein they committed to “protect and restore the health, productivity and resilience of oceans and marine ecosystems, and to maintain their biodiversity, enabling their conservation and sustainable use for present and future generations, and to effectively apply an ecosystem approach and the precautionary approach in the management, in accordance with international law, of activities impacting on the marine environment, to deliver on all three dimensions of sustainable development” [20].

Option 2: the conservation, management and governance principles could become core operating principles for all States Parties and intergovernmental organisations, with provisions for reforming existing institutions having a mandate over ABNJ to incorporate those principles. As in the United Nations Fish Stocks Agreement (UNFSA) and other instruments, such principles could be included as specific articles of the main text. Relevant principles could include: respect for the law of the sea, including the duty to control nationals and flag vessels; protection and preservation of the marine environment; international cooperation; science-based approach to management; the precautionary principle; the ecosystem approach; sustainable and equitable use; public availability of information; transparent and open decision-making processes; and responsibility of States as stewards of the marine environment [24].

Option 3: in addition to including conservation, management and governance principles, an UNCLOS IA could develop an explicit operationalisation of the precautionary principle [25]: all human activities likely to significantly affect marine biodiversity would be subject to prior assessment and the only activities allowed to proceed would be the ones which could be managed to prevent significant adverse impacts, individually or cumulatively, to ensure that there is not net biodiversity loss in general and a net positive impact in critical habitats.

4.2. The institutional framework

To more effectively bring coherence and consistency to the current fragmented governance system in ABNJ, an UNCLOS IA could establish mechanisms to make sure that States as well as

⁵ These stakeholders could include international organisations having a mandate in the region concerned as well as civil society in particular conservation non-governmental organisations, scientists, industry and others with an interest in the long term conservation and sustainable use of marine biodiversity in ABNJ.

⁶ Actions which could be implemented to support the no net biodiversity loss objective could include: the identification and protection of set-asides; the implementation of measures to avoid habitat fragmentation; the restoration of habitats during or after the operations and the implementation of biodiversity offsets (BBOP, 2012).

⁷ The IOC Criteria and Guidelines on the Transfer of Marine Technology were adopted by the XXII session of the Assembly of the IOC in 2003. They were drawn up by the Advisory Body of Experts on the Law of the Sea following the mandate established in Article 271 of UNCLOS. Their guiding principle is that the transfer of marine technology must always be conducted on fair and reasonable terms and conditions and should enable all parties concerned to benefit, on an equitable basis, from developments in marine science related activities, particularly those aiming at stimulating the social and economic contexts in developing countries.

	Marine Genetic Resources (MGRs)	Area-based management tools	Environmental Impact Assessments (EIAs)	Capacity-building and transfer of marine technologies	
Governing Principles	1. Access and benefit-sharing (ABS) principle included in a framework agreement	1. Marine Protected Area (MPA) objective included in a framework agreement	1. Guiding principles for EIAs/Strategic Environmental Assessments (SEAs) included in a framework agreement	1. Recognition of capacity-building and transfer of marine technologies needs	Institutional Framework
	2. Establishment of a multilateral benefit-sharing mechanism	2. MPA objective and mandate to States and international organisations to submit proposals	2. Provisions on EIAs/SEAs and mandatory framework for new activities	2. States to provide/facilitate access to MGRs technologies	
	3. Regulation of access by States and establishment of a multilateral benefit-sharing mechanism	3. Global scientific body to develop proposals and regional management	3. Development of minimum standards, including in respect of cumulative impact assessments (CIA)	3. Fund and Clearing-House mechanism for capacity-building and transfer of marine technologies	
	4. Regulation of access by a global body and establishment of a multilateral benefit-sharing mechanism	4. Framework for integrated ecosystem-based planning-management			

Fig. 1. Various options relating to the potential content of an UNCLOS IA with respect to the four elements of the 2011 «package» with the governing principles and the institutional framework figured as cross-cutting issues [23].

existing sectoral and regional organisations cooperate and coordinate their activities. This would address one of the major governance gaps underlying many of the original calls for an UNCLOS IA.

Option 1: an UNCLOS IA could establish a governing body. It could be, for example, a COP with a permanent secretariat. The COP could be mandated to keep under regular review the implementation of the agreement and to adopt the decisions necessary to promote its effective implementation. Subsidiary organs, such as a global scientific body, could be tasked with the provision of scientific and technical advice on issues such as the establishment of networks of MPAs, or the preliminary review of EIAs/SEAs conducted at the national, regional or sectoral levels. This could be done with the help of already existing bodies such as the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) of the CBD, the Intergovernmental Platform on Biodiversity and Ecosystem Services, or the World Ocean Assessment.

Option 2: an UNCLOS IA might include an explicit mandate for institutional cooperation and coordination based on its governing

principles and explicit requirements for reforming existing institutions where necessary to ensure consistency with the governing principles and objectives of the agreement. This way, it would provide authority, clarity and coherence to existing management frameworks. The COP might be given the mandate to review and assess institutional performance and to take decisions as necessary to promote effective cooperation, reform and compliance.

Option 3: an UNCLOS IA might focus on the development of regional capacity to protect, conserve and sustainably use marine biodiversity in ABNJ. It could provide for the creation or the improvement of regional oceans management organisations such as regional seas conventions, which would *inter alia* become focal points for the development of MPAs, EIAs, SEAs and marine spatial plans, and be responsible for regulating new, emerging and unregulated activities. Contracting Parties and regional and sectoral organisations could also be obligated to report to a COP which would remain responsible for oversight, coordination and compliance.

Option 4: an UNCLOS IA might establish a COP or designate a global body to oversee and coordinate activities in ABNJ. In order to operationalise the precautionary principle, it could have the authority to: (i) review EIAs/SEAs and disapprove the proposed project/plan if the proponents could not establish that the proposed project/plan would not cause significant adverse impacts; (ii) set standards and review and assess the performance of sectoral and regional organisations for their compliance with internationally agreed performance standards, with the power of sanctions; and (iii) act as a default mechanism for managing emerging and unregulated activities.

4.3. High Seas fishing

As of today, the state of world fisheries, including the state of highly migratory, straddling and High Seas fisheries, is a source of major concern at the global level [26]. For these reasons, fisheries issues were addressed during the first meetings of the BBNJ Working Group, with some delegations identifying IUU fishing and destructive fishing practices as “the greatest threats to marine biodiversity beyond areas of national jurisdiction” [27]. A 2008 study also pointed out that an UNCLOS IA would be useful in this respect in “(i) providing a regulatory regime by default for areas where there are no functioning RFMOs or where they are not addressing biodiversity concerns; (ii) providing for harmonised mandates and rigorous performance standards across sectors and regions; and (iii) providing scope for external review by the global community representing a broader range of interests” [28]. Such an approach would not replace RFMOs or directly regulate fisheries (other than under limited circumstances), but could provide significant impetus for their reform.

Fisheries are only tentatively discussed in the BBNJ Working Group. Several States have indicated that as fisheries are already regulated by a number of existing instruments and organisations such as RFMOs or the UNFSA, there should be no need to include them as a specific topic in an UNCLOS IA. But this does not mean that the question of how to ensure or enhance cooperation, coordination and coherency amongst all sectoral organisations, and to promote observance of modern conservation and governance principles should not be raised in the future, through for example the MPAs or EIAs issues.

4.4. The genuine link and States responsibilities in ABNJ

According to UNCLOS, “every State, whether coastal or landlocked, has the right to sail ships flying its flag on the High Seas” under the condition that “there must exist a genuine link between the State and the ship” (UNCLOS, Articles 90 and 91). The problem is that UNCLOS does not define precisely what is meant by “genuine link”. In the absence of a clear definition, the practice of “open registries” or “flags of convenience” continued, even after the entry into force of the convention. More largely, the question of the effective control of States over their nationals (companies, individuals, ships) in ABNJ is gaining an increased importance, as human activities expand in these areas. The activities carried out by entities without the effective control of the State of nationality might significantly impact marine biodiversity in ABNJ, through for example pollution incidents, IUU fishing or the lack of respect of environmental rules defined by international organisations such as the ISA, the IMO or RFMOs.

The issue is currently not discussed in the context of the BBNJ Working Group, but an UNCLOS IA could tackle it, for example by including “clear provisions requiring States to exercise adequate control of flag vessels, their beneficial owners and their nationals (private and public)” [28].

5. Conclusion

Two different elements would be needed to make a new UNCLOS IA a success: (i) ambitious objectives and commitments to protect and preserve marine biodiversity in ABNJ and ensure that it is sustainably and equitably used; (ii) ambitious means and tools to implement these objectives and commitments. Indeed, through the UNCLOS IA, there would be a unique opportunity to bring in new tools for the governance of marine biodiversity in ABNJ, such as multi-sectoral MPAs, SEAs or an ABS mechanism. There would also be an opportunity to make a better use of existing instruments, whether sectoral or regional: they would benefit from the establishment of a global framework which would give them a clear mandate to act, cooperate and coordinate in ABNJ. On the other hand, the UNCLOS IA would also benefit, for its implementation, from an existing operational framework. The various options presented in this article, although not exhaustive, intend to provide some initial thoughts on how an UNCLOS IA might be designed to truly conserve and sustainably use marine biodiversity in ABNJ.

As deliberations on the scope, contents and feasibility of a new UNCLOS IA proceed, it is hoped that government leaders and negotiators will recall the genesis of these discussions: increasing awareness of the importance of the global ocean for sustaining life on Earth, the escalating impact of human activities on marine biodiversity beyond national boundaries, scientific discoveries about entirely new marine ecosystems, species and genetic resources, the need for equity, capacity building and transfer of marine technology to fulfil promises made long ago, and the value of a sense of humility and caution as humans engage in new enterprises and expand existing ones into a largely unknown ocean realm.

There may never be another time like the present to rectify key gaps and weaknesses in UNCLOS to ensure a just, sustainable and resilient regime not just for marine biodiversity in ABNJ, but for all of humanity. For the negotiations to succeed, it will be imperative that negotiators include and incorporate the concerns of the international community, setting an example for how humanity can cooperate to safeguard our global commons.

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References

- [1] Gjerde KM. Challenges to protecting the marine environment beyond national jurisdiction. *Int J Mar Coast Law* 2012;27:839–47.
- [2] UNCTAD. Review of maritime transport 2012; 2012. United Nations publications.

- [3] Gjerde KM, Currie D, Wowk K, Sack K. Oceans in peril: reforming the management of global ocean living resources in areas beyond national jurisdiction. *Mar Pollut Bull* 2013;540–51.
- [4] International Seabed Authority. ISBA/19/C/8. Status of contracts for exploration; 29 April 2013.
- [5] International Seabed Authority. ISBA/19/C/L.3. Draft decision of the Council relating to an application for approval of a plan of work for exploration for cobalt-rich ferromanganese crusts by Japan oil, gas and metals national corporation; 18 July 2013.
- [6] International Seabed Authority. ISBA/19/C/L.4. Draft decision of the Council relating to an application for approval of a plan of work for exploration for cobalt-rich ferromanganese crusts by the China ocean mineral resources research and development association; 18 July 2013.
- [7] Arnaud Haond S, Arrieta JM, Durate CM. Marine biodiversity and gene patents. *Science* 2011;331(6024):1521–2.
- [8] Rayfuse R, Lawrence MG, Gjerde KM. Ocean fertilisation and climate change: the need to regulate emerging High Seas uses. *Int J Mar Coast Law* 2008;23:297–326.
- [9] Census of marine life. Scientific results to support the sustainable use and conservation of marine life – a summary of the census of marine life for decisions makers; 2011.
- [10] Ramirez-Llodra E, Tyler PA, Baker MC, Bergstad OA, Clark MR, et al. Man and the last great wilderness: human impact on the deep-sea. *PLoS ONE* 2011;6(8): e 22588, <http://dx.doi.org/10.1371/journal.pone.0022588>.
- [11] Ban NC, Bax NJ, Gjerde KM, Devillers R, Dunn DC, Dunstan PK, et al. Systematic conservation planning: a better recipe for managing the High Seas for biodiversity conservation and sustainable use. *Conserv Lett* 2013. <http://dx.doi.org/10.1111/Conl.12010>.
- [12] Tladi D. Ocean governance – a fragmented regulatory framework. In: Jacquet P, Pachauri R, Tubiana L, editors. *Oceans: the new frontier – a planet for life*. Delhi: Teri Press; 2011. p. 99–111.
- [13] Gjerde KM, Dotinga H, Hart S, Molenaar EJ, Rayfuse R. Regulatory and governance gaps in the international regime for the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction. Gland, Switzerland: IUCN; 2008.
- [14] Druel E, Rochette J, Billé R, Chiarolla C. A long and winding road. International discussions on the governance of marine biodiversity in areas beyond national jurisdiction. IDDRI, Study no 07/13; 2013.
- [15] United Nations General Assembly. Resolution 59/24 of 17 November 2004.
- [16] United Nations General Assembly. Resolution 64/71 of 4 December 2009.
- [17] United Nations General Assembly. Resolution 2749 (XXV) of 12 December 1970.
- [18] European Union presidency statement – working group on marine biodiversity; 13 February 2006.
- [19] United Nations General Assembly. Resolution 66/231 of 24 December 2011.
- [20] United Nations General Assembly. Resolution 66/288 of 27 July 2012.
- [21] Morgera E. Summary of the sixth meeting of the working group on marine biodiversity beyond areas of national jurisdiction; 19–23 August 2013. IISD reporting services.
- [22] Business and biodiversity offset programme. Standards on biodiversity offsets. BBOP, Washington, D.C.; 2012.
- [23] Ardrion J, Druel E, Gjerde KM, Houghton K, Rochette J, Unger S. Advancing governance of the High Seas. IDDRI-IASS, policy brief no 06/13; 2013. 8p.
- [24] Freestone D. Problems of High Seas governance. University of New South Wales, Faculty of Law Research series, paper 43; 2009. 31p.
- [25] Houghton K. Identifying new pathways for ocean governance: the role of legal principles in areas beyond national jurisdiction. *Mar Pol* 2013 ([in this issue]).
- [26] FAO. The state of world fisheries and aquaculture. Rome: FAO; 2012.
- [27] Document A/61/65, 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. §33.
- [28] Gjerde KM, Dotinga H, Hart S, Molenaar EJ, Rayfuse R, Warner R. Options for addressing regulatory and governance gaps in the international regime for the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction. Gland, Switzerland: IUCN; 2008.