



Socio-ecological resilience and the law: Exploring the adaptive capacity of the BBNJ agreement

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ABSTRACT

In search for sustainability of the oceans, the concept of resilience arises as a necessary perspective from which to analyse what course of action to take. Resilience refers to the capacity of a system to absorb change, but also to adapt and develop in face of those changes. Resilience thinking has recently permeated the sphere of legal studies, and the two fields have been interested in exploring the impact they have on one another. To explore this interaction further in the context of the management of the oceans, the present paper looks at areas beyond national jurisdiction (ABNJ) as a socio-ecological system. It argues that the law can be a tool for improving the resilience of a system, but that it must, for that purpose, be able to ensure at least some adaptive capacity. In light of the upcoming, consolidated regime for the sustainable management of biodiversity beyond national jurisdiction (BBNJ) through the development of an internationally legally binding agreement on the topic, and considering the uncertainty surrounding our knowledge of ABNJ, this paper suggests to look at the BBNJ agreement from the perspective of resilience thinking. The paper explores how this perspective could bring new insights to the development of the BBNJ agreement, as well as the emerging literature linking law and resilience.

1. Introduction

In search for sustainability of the oceans, the concept of resilience arises as a necessary perspective from which to analyse what course of action to take. Resilience is the capacity of a system to absorb change, but also to adapt and develop in face of those changes. This is something “essential for the sustainability discourse” [1], which also aims to maintain and/or adapt the capacity of natural capital, impacted by various pressures such as climate change and exploitation from human activities, to a level which ensures their non-exhaustion. A concept originating from natural sciences, resilience has in the past decades raised the attention of social sciences scholars, who have discussed its applicability to socio-ecological systems, triggered by the interconnectivity and interactions between ecological systems and the socio-economic system [2].

Resilience thinking has recently permeated the sphere of legal studies, and the two fields have been interested in exploring the impact they have on one another [3]. In fact, research linked to the resilience of socio-ecological systems has a normative dimension, as it “seeks to identify factors that enhance the resilience of such systems” [4]. This normative function is shared by the legal discipline, which, through the development and implementation of rules, principles, norms, standards and structures, aims at regulating the behavior of actors and functioning of processes shaping the same socio-ecological systems. The

relationship between law and resilience is therefore two-faceted: the normative dimension of law has the capacity to influence resilience, and, conversely, the need for resilience affects the development and implementation of legal structures.

Resilience can be achieved through adaptive strategies. These strategies are prone to the use of various governance measures rooted in polycentricity, multimodality and scalarity, a wide variety of actors, iterative processes and feedback loops [5], which ensure the flexibility required to adapt and transform. For example, review processes allow for measures to be reassessed in light of new knowledge, and an iterative decision-making would ensure a possibility for these reviewed measures to be adopted and implemented accordingly. Similarly, having the possibility to rely on different instruments, of different legally binding force and of different nature, creates a variety of regulatory possibilities that can accommodate different elements of a system. A legal structure that would ensure such features would act as a catalyzer for adaptability and help the socio-ecological system it regulates, through the regulation of human behaviour, to be more resilient to changes occurring over time and across scales (e.g. global vs local). Additionally, without losing sight of its function as an agent for stability and predictability [6], the law must itself be adaptive to provide a legal framework that evolves and transforms to remain a relevant management tool for the system it regulates. In other words, the law is also a system in itself that must display resilience, through adaptability and

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transformability.

To explore adaptability further in the context of the management of the oceans, this paper looks at areas beyond national jurisdiction (ABNJ) as a socio-ecological system. It argues that the law can be a tool for improving its resilience, but that it must, for that purpose, present features of adaptive strategies. In light of the upcoming, consolidated regime for the sustainable management of biodiversity beyond national jurisdiction (BBNJ) that is currently being negotiated at the United Nations (BBNJ agreement), and considering the uncertainty surrounding our knowledge of ABNJ, this paper looks at the BBNJ agreement from the perspective of resilience thinking. It explores how this perspective could bring new insights to the emerging literature addressing the link between law and resilience. To do so, this paper focuses on four resilience factors and conditions listed by Ebbesson [7], complemented by criteria for analyzing resilience and adaptive capacity of legal instruments identified by Soininen & Platjouw [8], to analyse the adaptive capacity of the BBNJ agreement and provide options to strengthen such capacity. This analysis is opportune considering the significant steps towards the development of the BBNJ agreement to be expected in the upcoming year.

This paper first considers the framework of resilience research, from its origins in the field of ecology to its expansion to the social sciences. It further looks at the role adaptive strategies plays to ensure resilience of socio-ecological systems, as well as the relationship between resilience thinking, adaptive strategies and the law (section 2). Then, section 3 maps out initial thoughts on how adaptive strategies have found their way into the development of the BBNJ agreement and may be translated into concrete measures to be included in its text. The paper also explores the role that stakeholders could play to ensure the adaptability and transformability of the regulatory and governance framework for BBNJ and, consequently, foster its resilience. Section 4 presents concluding remarks and additional thoughts for reflection.

2. Theoretical framework: resilience and adaptive strategies

2.1. Resilience: origins and characteristics¹

Stemming from ecology research in the 1960s, it is in the seminal work of Holling that the idea of resilience, which he defined as “the persistence of relationships within a system and [...] a measure of the ability of these systems to absorb changes of state variables, driving variables, and parameters, and still persist” [9], was studied in relations to ecological systems more generally. Simply put, resilience was described as the ability for a natural system to tolerate change [10]. After expanding to the study of environmental interactions and environmental management, resilience perspectives later broke the boundaries of natural sciences and permeated the sphere of social sciences [11].

The influence of socio-economic and ecological systems on one another became evident, especially in fields such as environmental management. Socio-economic systems rely on ecological systems for as basic things as daily survival (e.g. food, water), for larger economic activities (e.g. fisheries), as well as for cultural and/or recreational purposes. Conversely, ecological systems are impacted by the way socio-economic systems use, regulate and manage them [12]. Therefore, the resilience of the interlinkages between the two, referred to as socio-ecological systems, also became a topic of interest in resilience research. What also triggered interest in these systems is their complexity; they are non-linear,² emergent,³ multi-scalar, and uncertain,⁴

especially when dealing with natural resources [13].

As a result, resilience became a lens through which one would assess not only the capacity of a system to maintain its functions, but also its “capacity for renewal, re-organization and development” [14]. Resilience thinking focuses on “strengthening the ability to deal with uncertainties and surprises, rather than attempting to control nature” or to maintain the state of a system at all costs [15]. This means that “resilience provides for adaptive capacity” [16]; to be resilient, a system needs to be persistent, adaptive and transformable [17]. While the question of persistence is well acknowledged since it draws from initial understandings of resilience perspectives, adaptability and transformability are increasingly the subject of further consideration in the resilience research. The present paper takes part in such exploration and addresses these two components in further details in the following section.

2.2. Adaptability and transformability: the main features of adaptive strategies

It is important to mention that this paper considers adaptability and transformability as being two sides of the same coin. While adaptability refers to the “capacity of actors in the system to manage change so as to maintain the system within sustainability boundaries” [18] through common action, transformability goes a step further, by relying on this collective action “to create fundamentally new [...] systems” [19]. This is why the two characteristics are dealt with together, as two facets of adaptive strategies.

The literature addressing adaptive strategies and resilience identifies a set of common variables. First, adaptive strategies rely on an iterative, as opposed to a one-time, decision making process [20]. Second, they are “built around a continuous process of monitoring the effects of decisions and adjusting decisions accordingly” [21]; hence, it commits to learning over time [22]. Further, more particularly to assist socio-ecological systems and common pool resources in facing changes, a context relevant for our assessment of the BBNJ process, Ebbesson summarizes his findings on resilience and adaptive capacity in four factors and conditions:

1. *Flexibility* in social systems and institutions to deal with changes.
2. *Openness* of institutions so as to provide for *broad participation*, not least in local decision-making and administration.
3. Effectiveness of *multilevel governance*.
4. Social structures that promote *learning and adaptability* without limiting the options for future development [23].

The first criterion refers to flexibility both in the nature of rules and principles forming the regime and in decision-making procedure (e.g. through permits and authorizations which can be reviewed periodically, or through general review procedures) [24]. The second and third criteria refer to the participation of all ranges of actors, and their effective involvement at different levels (i.e. local, national, regional, global). The last element denotes the “open-minded” nature of the procedural transformation.

Similarly, Cooney and Lang [25] observe characteristics that act as guiding concepts for the management and governance of systems characterized by uncertainty and complexity. Among them, the notion of learning is reiterated as “a necessary part of any response to pervasive uncertainty and systemic unpredictability.” [26] Further, monitoring and feedback loops become a necessity when coupled with iterative decision-making processes [27]. Finally, pluralism encourages

(footnote continued)

part of the system alone.

⁴ Uncertainty comes from data gaps, but also from indeterminacy, i.e. the lack of a determined end point.

¹ This section is based on the literature review made in Folke (2006).

² Processes to which linear responses, i.e. identifying the problem, assessing the problem, planning the response, make a decision as to this response, and implement it, are normally inadequate.

³ The emergence of behaviors stems from the interactions of the different parts of the systems, behaviors that could not have been foreseen within one

decision-makers to rely on multiple sources of knowledge, but also on multiple forms of regulation.

Although adaptive strategies and resilience should not be considered as a panacea, they have a great potential for understanding the cross-cutting and transboundary realities characterizing socio-ecological systems and finding appropriate methods for their management [28]. Different governance mechanisms can be used to embrace resilience thinking and pursue adaptive strategies, and law can be one of them. It is to be asked, however, how the law, an agent for stability and predictability, can ensure the adaptability required to keeping up to speed with changing, fluid phenomena, while ensuring that the results stemming from its application translate into meaningful mechanisms for resilience in the field.

2.3. Resilience, adaptive strategies and the law

Law and resilience are interrelated: to ensure the resilience of the socio-ecological system it wishes to regulate, and therefore the capacity of such a system to adapt and transform, the law must ensure adaptive strategies by itself showing adaptive capabilities. This paper recognizes that law plays “an essential stabilizing function by aspiring to provide a consistent and comprehensive response to challenges” [29]. It also acknowledges that it would be exaggerated to only perceive the law as a static mechanism; it is indeed capable of flexibility through, for example, legal interpretation or through informal law-making (e.g. Codes of conduct, Plans of action, etc.) [30]. However, in order to be able to provide consistent and comprehensive responses to the complexity of the management of natural resources, the law needs to be revisited, rethought, so that it can provide not stability at all costs, but stability adapted to changing circumstances. As underlined by Langlet and Rayfuse, “[a] central challenge to successful marine governance is thus the need for legal structures capable of providing both stability and a high degree of flexibility and responsiveness to changes both in natural ecosystems and in our understanding of those systems, as well as the human behaviour that affects those systems.” [31].

Relying on the model of adaptive law developed by Arnold and Gunderson, which revolves around goals, structures, methods and processes of the law,⁵ Soininen and Platjouw have identified criteria to conduct a “systematic and analytical review of law’s resilience and adaptive capacity” in an attempt at exploring “what adaptive law would look like.” [32] These criteria analyse [33]:

1. the substance of the law (goals and “discretion to adjust management in light of new [...] knowledge”);
2. procedural aspects of the law (iteration, increasing of knowledge and cross-cutting approaches);
3. the choice of regulatory instruments (direct regulation, but also other instruments of different legal binding force or different nature);
4. enforcement measures (specific obligations, sanctions in case of non-compliance); and
5. the cross-cutting criteria of coherence among all elements.

As a matter of fact, features of adaptive law and elements of flexibility are not unfamiliar to the international legal field, and characterize, to some extent, the structure of many of its regimes, including

⁵ Adaptive goals recognize the need for various forms of resilience, of both social and ecological systems, but also socio-ecological ones. Adaptive structure is based in polycentricity, where multiscale and multimodal/pluralist responses are sought, through a multiplicity of actors. Adaptive methods refer to flexibility in decision-making. Finally, adaptive processes focus on iteration, feedback loops and regular monitoring and review mechanisms. While described as four distinct elements, these features should also be considered as overlapping, and one should not ignore the interactions that exist between them to form an integrate adaptive model for the law.

environmental law and the law of the sea, the two main legal regimes linked to the BBNJ process.⁶ The way these regimes have been shaped through the reliance on these features of adaptive law and elements of flexibility sheds light on how they could further be developed and adapted, and on how they could be used to steer actors’ behaviors within the regime. Although the law normally ensures stability and changes slowly, this paper argues that it can be the vehicle of adaptive strategies.

3. Analysing the adaptive capacity of the BBNJ agreement

It is now widely acknowledged that the resilience of marine biodiversity to environmental changes and anthropogenic activities is currently under pressure. One of the reasons for the vulnerability of biodiversity in ABNJ is that the legal, regulatory and governance framework applying to ABNJ has not kept up with the continuing and emerging human activities, the interconnectedness of such activities and their impacts on the marine environment. Not only are some regions or marine living resources not covered by any regulatory framework, but some existing mechanisms, that have the potential of leading to successful sustainability performances, are just starting to be implemented or have not yet been implemented [34]. Further, no global coordination mechanism exists, which has led to a lack of harmonization and cooperation in the measures undertaken by various States, international organizations, and other global and regional stakeholders operating in ABNJ [35].

The BBNJ process was launched to find durable solutions in order to fill these gaps [36]. This process has been – and continues to be – at the heart of the development of the law of the sea and environmental law [37], but also of oceans governance and management [38] and science [39]. The start of the negotiations at the Intergovernmental Conference (IGC) in September 2018 has breathed new life into the process, resulting in concrete discussions for the development of the agreement. The *President’s aid to negotiations* document [40], which was published in January 2019 and lays out different options for the formulation of the treaty text’s provisions, was discussed during the second session of the IGC in March/April 2019. This meeting provided the basis for concrete, text-based discussions, which were streamlined by the president of the conference in the *Draft text of the agreement* [41] published in late June 2019. These treaty text options are meant to structure the negotiations at the third session of the IGC in August 2019.⁷

At the moment, three elements must be mentioned when reflecting upon the design of the agreement [42]. First, the agreement must address four issue-areas [43] of a different nature, which might require different regulatory responses. Second, since the agreement will take part in an existing network of global, regional and sectoral structures, it should “not undermine existing relevant legal instruments and frameworks and relevant global, regional and sectoral bodies” [44]. Finally, it must be kept in mind that specific sectoral activities, e.g. fisheries, are currently excluded from the BBNJ negotiations; since these activities have a major impact on marine biodiversity in ABNJ, it will be necessary to find mechanisms to ensure coherence between existing structures and the new agreement.

Considering the realities characterizing BBNJ and the negotiations process, how could the BBNJ agreement be resilient to complexity and change, which could then help make the marine environment more resilient? From the outset, it is worth mentioning that although the negotiations surrounding the development of the BBNJ agreement do not currently include direct discussions for adaptive goals or mechanisms to ensure adaptability, resilience thinking and related concepts are not completely foreign to the process. In fact, the *Draft text* does refer to

⁶ Some examples are discussed in section 3.

⁷ For more information on the IGC, see <https://www.un.org/bbnj/> (last accessed 3 May 2019).

ecosystem resilience to stressors [45], adaptive management [46], the possibility to adapt to evolving regional needs [47], uncertainty [48], and review mechanisms.⁸ However, complexity, which forms one of the basic characteristics of socio-ecological systems, has so far not been included in the suggested options for the instrument's text. For the instrument to fully integrate the needs of the system it is aiming to regulate, it needs to first acknowledge the nature of such a system: an interrelation between ecological and social factors, translating in a complex, nonlinear and uncertain process.

How could the instrument include references to these concepts and be built around mechanisms that promote their embodiment into concrete and efficient measures for adaptability? The present section pursues the exploration of how adaptive components have found their way into the legal structure of the BBNJ process, and looks at selected elements ensuring flexibility, adaptability and transformability in the development of the agreement, as well as its implementation. The discussion presents options that are already on the table, and alternatives that could be envisaged.

3.1. Flexibility to deal with changes

The first resilience factor refers to the flexibility of systems and institutions to deal with changes. Flexibility recognizes that there is no "one size fits all" [49] for the context at hand, and it must exist at the level of both procedural and substantive law [50].

First, flexibility related to the substance of the instrument, i.e. what is managed and who is regulated [51], can be achieved through the goals of the instrument, identified by Sojinen and Platjouw as one factor to be assessed for measuring its adaptive capacity. The BBNJ agreement does aim for adaptive goals. The dual objective of the agreement, the conservation and sustainable use, integrates both the notion of preservation of the marine environment and that of the responsible exploitation of its resources. This ensures poly-resilience [52]; while conservation/preservation normally favours the resilience of ecological systems, sustainable use tends to give priority to socio-economic systems. Having both notions form part of the aims of the agreement ensures a balance between the various components of the socio-ecological system that the BBNJ represents, and therefore strengthens its resilience. While these goals are broad and, as just mentioned, have the potential of encompassing not only legal considerations, but also environmental, economic and social ones [53], they should be complemented by narrower and more specific goals, which would target considerations of one field only. The development of specific goals can be expected at a later stage of the process, once delegates start negotiating the actual text of the agreement.

Further, substantial flexibility can be translated by the inclusion, in the legal text, of what Ebbesson calls "open-textured rules" [54]. Such rules can take the form of principles and/or goal-oriented norms. Principles normally prescribe a certain conduct, but do not dictate the result. They can also form the basis upon which more specific legal obligations are developed. Goal-oriented norms, for their part, establish the result to be reached, but not the way to get there, leaving it up to the discretion of actors to undertake relevant measures according to their capabilities. As a matter of fact, "open-textured rules" are advantageous for allowing more responsiveness to changes, and to accommodate a plethora of actors who have different resources, strengths and weaknesses [55].

In the context of the BBNJ, one adequate way of including in the agreement general principles and principles applicable to each issue areas would be through a general provision. It is currently the model followed by the *Draft text* [56]. This approach has been chosen in the Fish Stocks Agreement [57], and it has the advantage of being directly included in the text instrument, which bears full binding authority.

Such general provisions under the BBNJ agreement could be complemented by specific guidelines, possibly within an annex, on how to achieve these principles. Although there is general consensus on the nature of these principles for ABNJ, which borrow from the IUCN high seas principles [58], the discussions have so far lacked any elaboration on how these principles could be operationalised [59], which is also a weakness identified in relation to the article on general principles in the Fish Stocks Agreement.

Although the normative content of the agreement presents some flexible elements, this by itself is not enough to cope with complexity if it is not coupled with a flexible procedural and institutional design [60]. One way of achieving procedural flexibility is through the use of review mechanisms. Such mechanisms allow for a periodical or regular revision of measures and management tools, and is open to the possibility of adjusting management/decision-making in light of new (scientific) knowledge [61]. This is to ensure that the measures and tools chosen under the instrument are still effective in achieving the objectives for which they were initially established [62]. For example, review mechanisms within the BBNJ instrument could be mandated to look into the revision of the size, location and/or management of area-based management tools (ABMTs), marine protected areas (MPAs) and other tools, so that they are still relevant for the goal sought by the agreement, i.e. the conservation and sustainable use of BBNJ, based on the latest scientific evidence on changes to high seas biodiversity, potentially assessed within a technical body. Further, review mechanisms do not only ensure that new knowledge is taken into consideration, but also identify other concerns and gaps that need to be addressed [63]. In that sense, if the legal instrument includes mechanisms for review, it acts as a tool to support adaptability. Ensuring that the management of ABNJ is adapted according to new knowledge is also a step forward in safeguarding the resilience of the agreement, and to confirm that the instrument remains relevant in regulating the system.

The current BBNJ negotiations have so far been opened to the inclusion of review mechanisms in the agreement, which are suggested in relations to most issue areas. For example, the *Draft text* suggests "[r]evueing the needs and priorities of developing States Parties in terms of capacity-building and transfer of marine technology, including the support required, provided and mobilized, and gaps" [64]. Further, ABMTs should be open to periodical review [65], and so should the content of environmental impact assessments (EIAs) [66].

Yet, reviews are really meaningful only if they are conducted by an independent body and/or according to objective, pre-established criteria. They are also relevant only if there are methods in place to act upon the results stemming out from them; indeed, if changes need to be made, but there are no ways of undertaking them, adaptability cannot be ensured. As a point of comparison, the review procedures established to make regional fisheries management organizations (RFMOs) more accountable for the improvement of their performance and the harmonization of their practices are often criticized. Not only are these review procedures undertaken on a voluntary basis,⁹ but in practice RFMOs rely on criteria they have established themselves, even if criteria have been established for the conducting of the assessment [67]. Further, it is often the case that, even if an assessment is conducted, no measures will be undertaken following the conclusion of the performance review, and, because of the soft-compliance nature of the assessments, RFMOs will not face any consequences [68]. Changes in RFMOs practices therefore result mostly from international pressure [69]. More specifically for tuna RFMOs, the implementation of regular performance reviews seems to be lacking [70] even if it was recommended by the Kobe process, a process seeking to harmonize the practices of tuna RFMOs through the sharing of information and

⁹ Except for the South Pacific Regional Fisheries Management Organization (SPRFMO), which has included it in its constitutive instrument that a performance review must be done every 5 years.

⁸ On references to review mechanisms in the *Draft text*, see section 3.1.

experiences to fulfil their functions. Although most RFMOs have undergone at least one assessment procedure [71], the Kobe process has not been strongly active in recent years, and ensuring the effectiveness of this oversight mechanism is a challenge.¹⁰ Such weaknesses should be avoided in the BBNJ agreement.

There are so far no fleshed out suggestions in the BBNJ text options on how to guarantee that relevant actors act upon the results of review mechanisms. This could however be explained by the fact that it will be left for a later stage and/or will fall under the competence/mandate of one or several specific bodies. For example, review of management tools according to new (scientific) knowledge could be undertaken by a technical/scientific body, while ensuring that parties act upon the results of reviews might be left to a future compliance committee.

Review mechanisms allow the taking into consideration of constant monitoring [72] and renewal and/or increase of knowledge in decision-making. In that sense, they include feedback loops, i.e. adapting an element on the basis of the learnings stemming from monitoring, control and evaluation of said element, which is another way of working towards adaptability [73]. This can be accommodated only through a decision-making process that is “flexible to changing circumstances” [74] by being open to iteration. This is ensured through appropriate institutional design, another criterion for adaptability in procedure which relates directly to the flexibility of structures and institutions.

The *Draft text* suggests that the effectiveness of the implementation of the instrument itself, as well as the adequacy and effectiveness of its provisions, are to be reviewed through a conference [75]. A similar process of review conference exists in the Fish Stocks Agreement [76]. Since the Agreement came into force in 2001, the review conference has only met three times (2006, 2010 and 2016), and seem to have the limited role of highlighting progresses and weaknesses, and of adopting recommendations on how to improve the instrument's implementation. However, the same recommendations to improve the same weaknesses seem to come back on the table from one conference to another, seemingly underlining that although the same weaknesses persist, the review conference does not have the power to make any decisions or adopt any measure to function otherwise [77]. A similar review process exists under article 154 of the UN Convention on the Law of the Sea (UNCLOS) to assess how the international regime of the deep seabed has operated in practice. Although it provides for a review process every five years after the entry into force of the Convention, it has taken place only once, in 2016 [78]. Facing the rapidity of the changes impacting ABNJ, a review conference modelled on the Fish Stocks Agreement, which does not have any clear decision-making power, or one modelled on article 154 of UNCLOS, which does not occur as established by law, would not be efficient. Not only do reviews need to occur more frequently, but a review body must be mandated to make decisions that have a direct impact on the functioning of the instrument and its related structures. Other fora to conduct reviews must therefore be envisaged.

This is why a model based on yearly meetings of a Conference of the Parties (COP) would be more appropriate. The role of a COP is also important in ensuring flexibility, as a conference that meets regularly can also be a forum for adopting decisions that complement existing instruments [79]. The role of COPs indeed ensures a “continuous interactional processes”, an alternative form of law-making that allows for “[overcoming] the constraints of the consent requirement” [80]. In that sense, setting up a COP for the BBNJ agreement would follow the model established under other conventions for environmental protection. This is for example the case with the UN Framework Convention on Climate Change (UNFCCC) [140] and the Convention on Biological

Diversity (CBD) [141], which meet yearly and once every two years respectively. For example, the Jakarta Mandate on the conservation and sustainable use of marine and coastal biodiversity adopted by the COP of the CBD [81], committed the CBD to goals that specifically target the marine environment.¹¹ Similarly, the COP of the UNFCCC adopted in 2018 the rulebook, the operating manual containing the rules and guidance required for Parties to implement the Paris Agreement [82]. Regular meetings of a BBNJ COP are therefore necessary for the periodical monitoring of existing engagement and for debating the need for further developments. Following a similar model as environmental treaties could also send a message as to the nature of the agreement being an instrument for environmental protection. Decisions-making under a COP on what to do when a new issue arises also seems more efficient than triggering an official amendment of the agreement.

However, COPs can present characteristics that are not always efficient for decision-making, which the BBNJ COP could avoid. For example, most COPs function on the basis of consensus, and this can slow down and even block the process of adopting measures that are meaningful and have “some teeth”. To find an alternative to consensus, this paper suggests that a decision-making procedure based on the one adopted for example by the South Pacific Regional Fisheries Management Organization (SPRFMO) could be chosen. Article 16 of the SPRFMO Convention [83] mentions that if “all efforts to reach a decision by consensus have been exhausted”, decisions on substance “shall be taken by a three-fourths majority” while decisions on questions of procedure would require a simple majority. A similar decision-making procedure is also followed by the Western and Central Pacific Fisheries Commission (WCPFC) [84]. If a COP is to be chosen as part of an institutional structure that would ensure adaptability in decision-making, it should be empowered with the means to do so, and an option for a vote in case of a dead-end in reaching consensus might be an adequate option. Reaching the political support for the inclusion of such mechanisms might however prove to be a challenge.

Further, a COP established under the BBNJ agreement will most probably be coupled with a scientific and/or technical body. Such a body could meet more regularly and could be mandated to adopt specific decisions of a more technical nature. It could draw some inspiration from the existing similar mechanisms under other conventions, such as the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) of the CBD, which invites contribution from non-governmental organizations (NGOs), and ensures cooperation with relevant international, regional and national organizations [85]. The BBNJ scientific and technical body could be composed of government focal points and interested representatives of international/regional organizations, while making sure it remains scientifically focused. If possible, the body should be composed of experts from different fields, where a global list of experts could be established for each country, drawing from the selection procedure of the Consultative Group of Experts under the UNFCCC [86]. The body could then establish ad hoc expert working groups on selected issues to be worked on by the nominated experts [87]. They could report back to the body, who would validate the recommendations made before forwarding them to the COP. These recommendations should also include options and alternatives [88]. There could further be nominations of experts from stakeholders, to make sure that the recommendations have a scientific priority rather than a political one.

On that aspect, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) could be a possible example on how to involve stakeholders in the operation of the agreement. The IPBES has an open registry of stakeholders, open to “any individuals or organizations who can benefit from or contribute to the

¹⁰ The Common Oceans ABNJ Programme of the Food and Agriculture Organization has a component that has looked into bringing the tuna RFMOs together to try to revive the process, see generally <http://www.fao.org/in-action/commonoceans/en/>.

¹¹ Indeed, biodiversity specifically in the context of the coastal and marine environment are not discussed at length in the Convention. The Jakarta mandate completes the CBD in that field.

implementation of the IPBES work programme, or who can motivate others to do so.” [89] Although the network of stakeholders under the IPBES is a self-organized initiative [90], a formal recognition of stakeholders involvement by the BBNJ scientific and technical body, similarly to what has been done by IPBES [91], could give them the tribune necessary for their input to officially have a voice in the process. In fact, the possibility to receive and address external inputs on current or new topics from a wide range of stakeholders would constitute an additional element of flexibility provided by this structure. This could help bring and strengthen scientific expertise from the outside, also from developing countries.

It would be surprising, following the current discussions, if the decision-making and the scientific and technical bodies were not created under the instrument. It is mostly their exact structure and mandate that remains to be agreed upon. We must also include other structural elements for flexibility, in regard to both the content of the agreement and its implementation. For example, the instrument must be open to spatial flexibility to adapt to changes in the ecosystem, e.g., fish stocks moving, hotspots of biodiversity changing, or to new science in regard to e.g. species migration routes. Further, the instrument must be open to temporal flexibility, through mechanisms that would enable the option of reacting quickly when new science becomes available, such as to protect a seamount or species.

3.2. Openness of institutions allowing for broad participation

Complex and multi-scale situations require “embrace[ing] a diversity of knowledges and values.” [92] Engaging a variety of relevant stakeholders allows for their interests to be considered holistically, and reflected in the quality and durability of environmental decisions [93], hence contributing to adaptiveness and resilience [94]. It is thus important to involve stakeholders as early as possible and throughout the process [95].

This is why a resilient and adaptive structure relies on the involvement of a broad variety of relevant stakeholders. In the context of the BBNJ, these include States themselves, but also international organizations or instruments working at the global level (e.g. International Maritime Organization (IMO), International Seabed Authority (ISA), Food and Agriculture Organization, UN Environmental Programme, CBD) and/or regional/sectoral level (e.g. RFMOs, Regional Seas Programmes). At the non-State level, relevant stakeholders include, but are not limited to, non-governmental organizations and civil society, the scientific and academic community, the private sector, and local, coastal and indigenous communities [96]. It is important to identify the relevant stakeholders to identify and assess their needs and interests, to better accommodate them in the agreement [97].

Further, this openness to broad participation needs to take place at different stages of the process. The BBNJ process has already shown some openness by allowing international organizations and NGOs to not only attend the PrepCom and IGC meetings as observers, but also by allowing them to make interventions [98]. Moreover, data and knowledge gathering shall incorporate the knowledge of local users [99] and indigenous communities [100]. This has been an issue strongly defended mostly by small island developing States in the BBNJ context [101]. Finally, the review mechanisms described above should also be open to input from all relevant actors [102]; this ensures continuity in the participation of stakeholders. In any case, the institutionalisation of stakeholder participation should be sought to ensure long-term inclusion of broad participation [103].

Stakeholders could be invited to provide different sorts of input, from simple communication and information sharing to co-decision and co-production of results,¹² where the decision-making power is shared

among all stakeholders [104]. While it is not to be expected that all stakeholders would be allowed to actively participate in decision-making, as the implementation of the agreement would be State-driven, non-State stakeholders should still be strongly encouraged to submit and share data and information, for example through a clearing-house mechanism [105], to participate and intervene in different fora, such as the COP, the scientific and technical body, or even in ad-hoc working groups that could eventually be created as support structures to the main bodies. They could also be given the opportunity to submit proposals for MPAs and other ABMTs, or at least to be consulted in the process leading to the preparation of such proposals [106]. The agreement should provide a platform where as many levels of engagements as possible are open to stakeholders.¹³

3.3. Effectiveness of multilevel governance

Multilevel governance entails that governance structures are polycentric, meaning that they are based on multiple centers of agency and authority [107], from within governmental spheres (State, regional, local, etc.), but also outside (i.e. private sector and civil society), which overlap, but are also complementary [108]. Polycentricity further refers to a system that relies on responses based on multimodality or pluralism (the use of multiple modes or methods for achieving a certain objective, “a versatile choice of policy instruments” [109]), multiscalarity (organizations at all institutional levels (local, regional, national, global) and on their horizontal and vertical interactions [110]), and a multiplicity of actors.¹⁴ In situations marked with complexity like the management of natural resources and the environment, and in situations where diverse values, cultures, norms and politics coexist – a situation particularly true at the international level – polycentricity is a way to connect different perspectives.

While there is benefit in polycentricity, it must be acknowledged that fragmentation of processes and institutions has been an ongoing problem for the management of the oceans. The number of agencies and institutions operating, often in silos, within different sectors and regions has prevented a holistic management of ABNJ. Yet, this can be mitigated by reinforcing the integration of these processes, agencies and institutions. Integration is primordial to enable cross-sectoral cooperation, but also cooperation across scales, and help develop and strengthen coalitions [111]. Integration further offers a response to the negative impacts of fragmentation. The fragmentation of the law through creation of new instruments and structures is not always bad; it illustrates the will to address specific issues. It however becomes a problem when these instruments and structures do not communicate and evolve in parallel. Integration therefore creates a space for dialogue and for building connections, which ensures coherence, identified by Soininen and Platjouw as being an essential element of adaptive capacity [112].

Multilevel governance is not novel to the BBNJ process; in fact, the importance given to the requirement not to undermine existing structures [113] shows that the agreement's interaction with other instruments, frameworks and bodies will be at the forefront of the agreement's development and functioning. What is expected to be strengthened under the agreement, however, is the integration,

(footnote continued)

Consultation: gather views, comments and perceptions from stakeholders, Participation: stakeholders take part in processes, however with limited decision-making power, Representation: structural level of engagement, to develop collective choices, Partnerships: collaboration between stakeholders, joint agreements, Codification and co-production: shared power amongst stakeholders involved.

¹³The example of stakeholder engagement from the IPBES discussed above, see section 3.1, could serve as an example for the BBNJ ILBI.

¹⁴This element overlaps with the question of broad participation and stakeholder engagement discussed in section 3.2.

¹²The levels of stakeholder engagement, from least involved to more involved, are as follows: Communication: sharing of information and knowledge,

cooperation and coordination in ABNJ [114]. The agreement should therefore include substantive provisions to ensure that such connections are facilitated and encouraged. Many options are already on the table [115], but it is how they are going to be operationalised that will be relevant for measuring the instrument's adaptive capacity.

One way of ensuring this cooperation within the BBNJ agreement is to promote cross-sectoral and cross-regional cooperation. The BBNJ agreement can create the conditions and practical arrangements for effective cross-sectoral and cross-regional cooperation, coordination and action through establishing global rules and standards, ensuring an appropriate distribution of competence between the global level and the regional and/or sectoral levels, and applying "the right mix of flexible and supportive provisions that can be tailored to the needs of particular regions and sectors" [116]. In a process taking place at the global scale for example, regions themselves can be stakeholders. The respective actions, expertise and experiences of these local or regional stakeholders can be relied upon to underpin the development of the global process, and so would the networks created within and amongst regions. In this respect, the regional level can underpin global standards by ensuring that they are adapted for practical implementation and also by establishing standards that go beyond the globally agreed ones [117].

Multilevel governance also allows for more flexibility in finding mechanisms adapted to the kind of system the BBNJ instrument is trying to regulate. In fact, each issue area [118], each region, each sector might be subject to different tolerance to different stressors, and must therefore rely on different management strategies to ensure resilience [119]. While the draft text does make several references to the necessary cooperation and coordination with relevant regional and sectoral bodies [120], or even the creation of such bodies [121], the institutional design of the instrument will have to reflect the need for a variety of management strategies. As discussed above, the instrument should make a direct reference not only to the usefulness of regional mechanisms, but to the necessity for the regional and global levels to work together. It could even suggest the creation of regional components of global sectoral bodies. If these measures/bodies are coupled with clear obligations to cooperate, at the intra- and inter-levels, and if they are coupled with some sort of oversight mechanism or guidelines, then coordination will be facilitated, and a multilevel governance of ABNJs will contribute to the flexibility of the management of these areas and, consequently, the adaptability of such management.

These different management strategies could also be promoted by the pluralism embedded in multilevel governance, through instruments and measures stemming from different fields. This suggestion also takes place within the discussion on the concept of smart mixes, which rests on "the idea that the combination of regulatory instruments and actors is often more effective than a single instrument, and that instruments can be complementary." [122] This helps combining strengths, and compensating for weaknesses, of various instruments [123]. This also ensures the adaptive capacity of the regulatory framework. Smart mixes also advocate not only for mixes of instruments, but also mixes in level of governance [124]. This reaffirms the importance of ensuring a dialogue and a cooperation between regional initiatives, but also between regional and global initiatives, as discussed previously.

To follow such an approach, it could be necessary for the BBNJ agreement to consider including and/or referring to other forms of regulation. For example, economic measures, such as market-based instruments/measures [125], and voluntary measures, which "are considered crucial complements to the policy mix, in addition to direct regulation" [126] could be envisaged. This would entail including provisions that not only deal with the relationship with other instruments [127], but that specifically underline the *necessity* for the agreement to be complemented by other mechanisms. In the end, it is a mix of different regulatory mechanisms, whose functioning and interactions are made coherent through integration, cooperation and coordination, that will contribute to the adaptive capacity of the instrument.

3.4. Social structures that promote learning and adaptability

The necessity to promote learning and adaptability refers to the necessity to learn over time and to rely on the recently acquired knowledge and science not only to adapt, but also to provide guidance to stakeholders involved [128]. A close relationship with science and knowledge also allows for the socio-economic system to provide responses that are in line with what ecological systems require [129].

The BBNJ instrument must be rooted in a strong scientific basis, and it must leave enough room to evolve and be modified according to the scientific data available. In that sense, it allows for the "effective science-policy advisory mechanisms to ensure that critical scientific knowledge is communicated effectively." [130] This is why the BBNJ instrument must act as a gatherer of such information [131], and it must encourage that this information is shared and used consistently.

The gathering and sharing of information could be achieved through the clearing-house mechanism that is to be included in the instrument [132]. This mechanism "shall consist primarily of an open-access web-based platform [and] shall also include a network of experts and practitioners in relevant fields", and "shall serve as a centralized platform to enable States Parties to have access to [...] and disseminate information" [133]. The question remains what sort of information would be included in this platform. While the current suggestions seem to attribute to the clearing-house mechanism a broad range of functions, ranging from a simple repository of information (for example on EIA reports or guidelines and technical methods on EIA) to being a forum to facilitate international collaboration or enhance transparency, it is uncertain whether information and data held by other States or organizations, such as RFMOs, would be accessible through such a platform. Fisheries¹⁵ are one of the main activities impacting biodiversity in ABNJ, and it has now become clear that fish as a commodity *per se* will not be addressed under the instrument [134]. It is therefore to be seen if and how the information RFMOs, as well as other organizations, possess will be made accessible under the data gathering and sharing mechanisms of the instrument.

The promotion of learning can be achieved through monitoring and review processes, and feedback loops. Not only do these mechanisms allow for flexibility in how structures respond to changes, as discussed above,¹⁶ but they also "facilitate the integration of new knowledge into developing management practices." [135] Reviews and feedback loops then support the necessity of an iterative decision-making process, when decisions are made repetitively and spread over time, then countering a sense of finality [136]. The involvement of various stakeholders is normally necessary for the gathering of such information and knowledge; not only can scientific expertise provide new knowledge, but also decision-makers who adopt certain policy and management plans, or the civil society and the private sector who also have knowledge and information of their own linked to the positions they promote [137].

Knowledge learning and sharing is therefore the resilience factor that links together all elements of the analysis of the agreement's adaptive capacity. Not only is ensuring learning in itself a goal to be achieved, by collecting the relevant information upon which decisions are made and management is undertaken, but it is also necessary to ensure that these decisions and management are made and undertaken in a way that takes into consideration the evolution and changes in the complex socio-ecological system that BBNJ represents.

¹⁵ A distinction however needs to be noted between fish as a commodity, which will most probably not be included in the agreement, and fish for the purpose of genetic resources, which may very likely be tackled by the agreement. Whether or not this will be linked to 'fisheries' or then to scientific research will need to be fleshed out. A more elaborate discussion on the inclusion of fisheries within the BBNJ process falls outside the scope of this paper.

¹⁶ See section 2.1.

4. Conclusion

This paper has explored the adaptive capacity of the upcoming BBNJ agreement, by assessing whether it has the potential of being an adaptable and resilient instrument. The examples discussed above as part of the four resilience factors illustrate how the structure of the instrument itself as well as some of its substantive content could be developed in order to become part of an adaptive strategy for the regulation of conservation and sustainable use of BBNJ. Consequently, by allowing its content to evolve over time and eventually be complemented, the instrument would ensure that it is able to aptly respond to the changes impacting ABNJ.

Although it is still too early to measure whether the BBNJ instrument is indeed promoting resilience of biodiversity in ABNJ, we can for the moment conclude that it shows some signs of adaptability. By relying on a detailed list of broad principles, the instrument allows States some leeway in modifying specific obligations over time. Several reviews mechanisms will be included in the instrument's text, and the discussions have shown signs of a strong will for knowledge gathering and sharing, which contributes to learning and adapting over time. Further, references to regional bodies point towards the inclusion of structures operating at several levels of governance. The process is also open to the participation of various stakeholders, as the attendance of various representatives of international organizations and NGOs has shown.

However, a weakness of the BBNJ negotiations is that discussions on its text do not pay much attention on enforcement, on ensuring that mechanisms are acted upon, that specific obligations are achieved and that non-compliance is sanctioned. For example, if review mechanisms are conducted, the instrument must ensure that results are taken into consideration and relied upon for conducting changes and adaptation. Multi-level governance needs to be embedded directly in the text of the instrument, and mandates of these various governance structures need to be defined clearly. Stakeholders might be welcomed in the negotiation room, but it is still uncertain how the instrument will include and/or interact with them. Since the instrument will target States, it might have to be complemented by other instruments and mechanisms to engage all relevant stakeholders to their maximum potential. In short, most of the ingredients seem to be on the table, but it remains to be seen how they will be used.

Suggesting an approach to law that favours flexibility triggers concerns not only regarding the stability and predictability of the law; it is also the law's legitimacy that is touched upon [138]. However, this paper argues that flexibility and adaptability is not only possible but also necessary for the BBNJ instrument – and international law more generally – to fulfil its role as coordinator and integrator of various issue-areas, scales, and sources of management and authority [139]. Through adaptive strategies, the goal is therefore to suggest making hard law somewhat flexible.

Funding

This research received funding through the Netherlands Organization for Scientific Research (NWO) and the Social Sciences and Humanities Research Council of Canada (SSHRC). This research also received funding through the project STRONG High Seas (*Strengthening Regional Ocean Governance for the High Seas*, which is supported by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety through its International Climate Initiative, IKI). This research was supported by the German Federal Ministry of Education and Research (FONA – Research for Sustainable Development) and the Ministry of Science, Research and Culture of the Federal State of Brandenburg.

Acknowledgments

The authors would like to thank prof. Alex Oude Elferink, as well as two anonymous reviewers for their valuable comments.

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- [80] See, generally, J. Brunée, *COPING with consent: law-making under multilateral environmental agreements*, *Leiden J. Int. Law* 15 (2002) 1–52 at 1–2.
- [81] *Conservation and sustainable use of marine and coastal biological diversity*, CBD COP Dec II/10, 2nd Sess (1995). See also R. Wolfrum, N. Matz, *The Interplay between UNCLOS and CBD*, *Max Planck United Nations Yearbook* 4 (2000) 445–480 at 459.
- [82] *Preparations for the implementation of the Paris Agreement and the first session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement*, UNFCCC COP Decision, UN Doc FCCC/CP/2018/L.22 (2018).
- [83] *Convention on the Conservation and Management of High Seas Fishery Resources in the South Pacific Ocean* (14 November 2009, entered into force 24 August 2012) 2899 UNTS 1 at art. 16.
- [84] *Convention on the conservation and management of highly migratory fish stocks in the Western and Central Pacific Ocean* (5 September 2000, entered into force 19 June 2004) 2275 UNTS 43 at art. 20.
- [85] CBD, *Consolidated Modus Operandi of the Subsidiary Body on Scientific, Technical and Technological advice* <https://www.cbd.int/convention/sbstta-modus.shtml>, Accessed date: 3 May 2019at para 19–20.
- [86] *Revised Rules of procedure*, Consultative group of Experts, rules 3 and 4, based on UNFCCC Cop Dec 3\CP.8 (2003), annex at para 3, and see UNFCCC, *Roster of Experts* <https://www4.unfccc.int/sites/roestaging/Pages/Home.aspx>, Accessed date: 3 May 2019.
- [87] CBD modus operandi, *supra* note 85 para 18.
- [88] Similar to the CBD SBSTTA, see CBD modus operandi, *supra* note 85 at para 8.
- [89] IPBES, *Stakeholder Registry* <https://www.ipbes.net/stakeholder-registry>, Accessed date: 3 May 2019.
- [90] IPBES, *The Open-ended Network of IPBES Stakeholders* <https://www.ipbes.net/group/onet>, Accessed date: 3 May 2019.
- [91] *Stakeholder engagement strategy, Report of the Plenary of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services on the work of its third session*, 3d Sess, Doc IPBES/3/18, (2015) at 105–110.

- [92] Reed, *supra* note 74 at 2418.
- [93] Reed, *supra* note 74 at 2418.
- [94] Fazey, et al., Adaptive capacity and learning to learn as leverage for social-ecological resilience, *Front. Ecol. Environ.* 5 (7) (2007) 375–380 at 375.
- [95] Reed, *supra* note 74 at 2422–2423.
- [96] See, e.g., *Draft text, supra* note 41 at art. 34(2).
- [97] Reed, *supra* note 74 at 2423–2424.
- [98] UNGA Res 72/249, *supra* note 43 at para 12–15.
- [99] C. Folke, et al., Resilience and sustainable development: building adaptive capacity in a world of transformations, *Ambio* 31 (5) (2002) 437–440 at 438–439. On the integration of local and scientific knowledges, see Reed, *supra* note 74 at 2425–2426.
- [100] *Draft text, supra* note 41 at arts. 10(6), 11(6), 16(1), 17(3), 18(2), 34(2).
- [101] See, e.g. IISD, Summary of the Second Session of the Intergovernmental Conference on an 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, *Earth Negotiations Bulletin* 25:195 (2019) 1–19 at 2–3, 6–10 and 14–16.
- [102] See, e.g., *Draft text, supra* note 41 at art. 47(4).
- [103] Reed, *supra* note 74 at 2426, also referring to, C. Richards, K. Blackstock, C. Carter, Practical Approaches to Participation, *Macauley Land Use Research Institute (aberdeen), SERG Policy Brief No. 1, (2004), pp. 1–23 at 18.*
- [104] OECD, OECD Studies on Water Stakeholder Engagement for Inclusive Water Governance, (2015) <https://doi.org/10.1787/9789264231122-en>, Accessed date: 3 May 2019.
- [105] *Draft text, supra* note 41 at art. 41. See also *President's aid to negotiations, supra* note 40 at 62–64.
- [106] See, e.g., *Draft text, supra* note 41 at arts. 17 and 18.
- [107] DeCaro et al., *supra* note 9 at 32.
- [108] Cosens, et al., The role of law in adaptive governance, *Ecol. Soc.* 22 (2017) 1 art 30.
- [109] Soininen & Platjouw, *supra* note 8 at 27.
- [110] For a brief overview of the necessity of multilevel responses to complex issues such as the interactions between the ecological implications and management implications related to the exploitation of marine living resources, see, F. Berkes, et al., Globalization, Roving bandits and Marine resources, *Science* 311 (2006) 1557–1558.
- [111] Durussel et al., *supra* note 35 at 75.
- [112] Soininen & Platjouw, *supra* note 8 at 28.
- [113] UNGA Res 72/249, *supra* note 43 at 7. *Draft text, supra* note 41 at art. 4.
- [114] UNGA Res 72/249, *supra* note 43 at 7. *Draft text, supra* note 41 at art. 4.
- [115] UNGA Res 72/249, *supra* note 43 at 7. *Draft text, supra* note 41 at art. 2 (objective), art. 5 (general principles), art. 6 (international cooperation), art. 12(2) (for matters related to intellectual property rights), art. 14–15 (for the use, establishment and designation of ABMTs), art. 23 (for EIAs processes), art. 28 (in conducting strategic environmental assessments), art. 43 (for promoting CBTT), art. 48 (co-operation between the COP and other structures), art. 50 (coordination between the Secretariat and other secretariats), art. 51 (within the clearing-house mechanism), art. 52 (within a funding mechanism).
- [116] K. Gjerde, et al., Conservation and Sustainable Use of Marine Biodiversity in Areas beyond National Jurisdiction: Options for Underpinning a Strong Global BBNJ Agreement through Regional and Sectoral Governance, *STRONG High Seas Project*, 2018 at 13.
- [117] K. Gjerde, et al., Conservation and Sustainable Use of Marine Biodiversity in Areas beyond National Jurisdiction: Options for Underpinning a Strong Global BBNJ Agreement through Regional and Sectoral Governance, *STRONG High Seas Project*, 2018 14.
- [118] Addressing the specificities of each issue-area of the BBNJ package, “which may require different institutional responses” has indeed been identified as one of the “intricacies involved in designing [the ILBI’s] institutional framework”, see Oude Elferink, *supra* note 37.
- [119] Barnes, *supra* note 10. See also Oude Elferink, *supra* note 37.
- [120] *Draft text, supra* note 41 at art. Arts 6(1), 14(1)(a), 15(1)(a) and (3), 18(2)(b), 23(3) and (4), 43(1) and (2), 44(3), 46(2), 48(4).
- [121] *Draft text, supra* note 41 at art. Arts 6(1), 14(1)(a), 15(1)(a) and (3), 18(2)(b), 23(3) and (4), 43(1) and (2), 44(3), 46(2), 48(4).at art. 6(3).
- [122] J. van Erp, et al., Introduction. The concept of smart mixes for transboundary environmental harm, in: J. van Erp, et al., (Ed.), *Smart Mixes for Transboundary Environmental Harm*, Cambridge University Press, Cambridge, UK; New York, NY, 2019, pp. 3–24 at 7.
- [123] J. van Erp, et al., Introduction. The concept of smart mixes for transboundary environmental harm, in: J. van Erp (Ed.), *Smart Mixes for Transboundary Environmental Harm*, Cambridge University Press, Cambridge, UK; New York, NY, 2019, pp. 3–24 at 7–8.
- [124] J. van Erp, et al., Introduction. The concept of smart mixes for transboundary environmental harm, in: J. van Erp, et al. (Ed.), *Smart Mixes for Transboundary Environmental Harm*, Cambridge University Press, Cambridge, UK; New York, NY, 2019, pp. 3–24 at 8.
- [125] See, e.g. Ebbesson, *supra* note 7 at 419.
- [126] Soininen & Platjouw, *supra* note 8 at 27.
- [127] *Draft text, supra* note 41 at art. 4. See also *President's aid to negotiations, supra* note 40 at 7 and 22.
- [128] Ebbesson, *supra* note 7 at 418–420.
- [129] Soininen & Platjouw, *supra* note 8 at 22.
- [130] R. Mahon et al, Transboundary Waters Assessment Programme (TWAP) Assessment of Governance Arrangements for the Ocean. vol. 2: Areas Beyond National Jurisdiction, UNESCO-IOC, IOC Technical Series 119 (2015) at 14., cited in Gjerde et al, *supra* note 116 at 11.
- [131] Warner, *supra* note 34 at 192–193; Durussel et al., *supra* note 35 at 74–75.
- [132] *Draft text, supra* note 41 at art. 51.
- [133] *Draft text, supra* note 41 at art. 51. at art. 51(2) and (3).
- [134] G. Ortuño Crespo, R. Caddell, S. Guggisberg, No fish left behind: Fisheries under BBNJ, Side-event presented at the Second session of the Intergovernmental Conference on an international legally binding 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, UN Headquarters, NY, 25 March 2019; G. Wright et al., High seas fisheries: what role for a new instrument?, *IDDR Study no 03/16 (2016)*; Wright et al., *supra* note 35 at 36–40.
- [135] Soininen & Platjouw, *supra* note 8 at 23.
- [136] Soininen & Platjouw, *supra* note 8 at 26.
- [137] Soininen & Platjouw, *supra* note 8 at 23.
- [138] Cosens, *supra* note 9.
- [139] On the coordination role of the ILBI, see Durussel et al., *supra* note 35 at 20.
- [140] United Nations Convention on Climate Change (9 May 1992, entered into force 21 March 1994) 1771 UNTS 107 at art. 7.
- [141] Convention on Biological Diversity (5 June 1992, entered into force 29 December 1993) 1760 UNTS 79 at art. 23.