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Agreeing to disagree on what we have or have not agreed on: The current state of play of the BBNJ negotiations on the status of marine genetic resources in areas beyond national jurisdiction

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ABSTRACT

United Nations General Assembly Resolution 69/292 has committed States to develop an international legally binding instrument under the 1982 United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (BBNJ). The instrument must address a 'package deal' including questions relating to access and benefit sharing in relation to marine genetic resources ('MGRs') in areas beyond national jurisdiction ('ABNJ'). This paper examines the recommendations to the UN General Assembly of the recently convened Preparatory Committee (Prep-Comm) to negotiations of the international instrument relating to MGRs. It examines the less controversial issues which in the words of the Prep Comm includes "non-exclusive elements that generated convergence among most delegations" and notes significant areas of agreement and some consequences of agreement on those points. This includes the preamble to the proposed instrument, its geographical scope, material scope, relationship to UNCLOS and other instruments and frameworks (globally and regionally). The second part of the paper then goes on to examine in detail some of the main issues on which there is a divergence of views including the ideological divide over the purported common heritage of mankind status of such resources, regulating access, the nature of the resources covered by the proposed instrument, what benefits are to be shared, the relationship with intellectual property rights and monitoring of the utilization of MGRs in ABNJ.

1. Introduction

United Nations General Assembly Resolution 69/292 [1] adopted in 2015 has committed States to develop an international legally binding instrument under the 1982 *United Nations Convention on the Law of the Sea* (hereinafter UNCLOS') on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction ('BBNJ'). Critically the international legally binding instrument must be a 'package deal' addressing

> "the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, in particular, together and as a whole, marine genetic resources, including questions on the sharing of benefits, measures such as area-based management tools, including marine protected areas, environmental impact assessments and capacity-building and the transfer of marine technology" [2].

To that end Resolution 69/292 adopted in 2017 also established a Preparatory Committee (hereinafter the 'Prep Comm') to make substantive recommendations to the General Assembly on the elements of a draft text of an international legally binding instrument under UNCLOS, with a view to convening an intergovernmental conference to carry out negotiations towards the international legally binding instrument. The Prep Comm was open to all State Members of the United Nations, members of the specialised agencies and Parties to the Convention, with others invited as observers in accordance with past practice of the United Nations [3]. Given the convening of the Prep Comm represented the culmination of over a decade of debates at the United Nations on these issues, in addition to the views of State Members and others who participated in the Prep Comm, the Prep Comm was also required to take into account the various reports of the Co-Chairs on the work of the *Ad Hoc Open-ended Informal Working Group to study issues relation to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction* [4].

In accordance with its mandate the Prep Comm met on four occasions throughout 2016 and 2017 (28 March-8 April 2016; 26 August-9 September 2016; 27 March-7 April 2017; and 10 July-21 July 2017). At its fourth and final session the Prep Comm adopted its report to the United Nations General Assembly [5].

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Following its receipt of the report of the final session of the Prep Comm the United Nations General Assembly passed Resolution 72/249 whereby it formally decided to convene an intergovernmental conference under the auspices of the United Nations

> "to consider the recommendations of the Preparatory Committee on the elements and to elaborate the text of 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, with a view to developing the instrument as soon as possible" [6].

Consistent with its earlier resolutions the General Assembly also decided that the negotiations must address all the elements of the package deal [7]. In anticipation of the planned intergovernmental conference a three day meeting was held in New York from 16 to 18 April 2018 to discuss organizational matters, including the process for preparation of a zero draft of the instrument. The first formal session of the Intergovernmental conference will be held from 4 to 17 September 2108 with a further three formal sessions scheduled to occur in 2019 and the first half of 2020 [8].

This paper focusses on one key element of the package deal currently under negotiation, namely marine genetic resources ('MGRs'), including questions on the sharing of benefits. As noted elsewhere there are very significant gaps in the data used to justify the need for regulation of access to and benefit sharing in relation to MGRs in areas beyond national jurisdiction ('ABNJ') [9]. Contrary to repeated assertions at the United Nations there has been little meaningful evidence of commercial interest in MGR from ABNJ brought forward during debates at the United Nations (such evidence is also lacking in the academic and scholarly literature) to justify the inclusion of MGRs within the 'package deal'. Perhaps controversially in the same paper [10] it is argued that much like the phenomena of 'fake news' in the era of the Trump Presidency, a similar phenomena can also be observed in debates on MGRs at the United Nations over the past decade and a half. That is to say certain 'alternate facts' relating to the level and extent of commercial interest in MGRs in ABNJ have repeatedly been asserted loud enough and often enough that they have now come to be accepted as fact, even though the supporting evidence for these claims is woefully lacking. The 'alternate facts are the repeated assertions that there is huge industry interest in the commercialization of MGR from ABNJ; that numerous products are already on the market or are very close to commercial sale; and that massive profits are already being reaped by developed State companies without any equitable sharing of these benefits with developing countries. The available evidence simply does not support these assertions.

Despite these reservations about the inclusion of MGRs in the package deal it is now clear that in some form or other MGRs will form part of the package deal. Accordingly, rather than recounting the long academic and policy debates which surround the legal status of MGRs this paper instead examines the recommendations of the Prep Comm with a view to highlighting the key points of convergence and divergence on issues currently under negotiations and offers some thoughts on the challenges ahead. This paper confines its analysis to the MGR issue. The other elements of the package deal discussed at the PrepComm are not examined but may be mentioned in passing when they are relevant to the MGR issue.

Adopting the structure of the recommendations of the Prep Comm, consideration of MGR is divided into two parts. The first part of the paper considers the less controversial issues which in the words of the Prep Comm includes "non-exclusive elements that generated convergence among most delegations" [11]. This first part of the paper will note significant areas of agreement and some consequences of agreement on those points. The second part of the paper then (following the language of the Prep Comm) goes on to examine in detail "some of the main issues on which there is a divergence of views" [12]. Again due to space constraints not all issues will be examined in equal depth and discussion will of necessity be selective. This paper does not purport to examine all issues in the current negotiations, nor does it deal with the position of all states on all issues currently under negotiation. Rather it seeks to offer a snap shot of some of the key issues and the challenges that lie ahead in concluding negotiations on MGR in the context of the overall negotiations for the proposed international instrument.

2. Non-exclusive elements that generated convergence among most delegations

2.1. Preamble

The recommendations of the Prep Comm relating to the Preamble to the proposed instrument are not controversial. These matters include reference to matters commonly forming the basis of a preamble to any convention such as: the background to the convention; the role of the existing international law; the need for enhanced co-operation and co-ordination; the interests of developing states; the need for a comprehensive global regime relating to the conservation and sustainable use of BBNJ: how the instrument best serves the maintenance of international peace and security; and importantly an affirmation that general principles of international law continue to apply where UNCLOS, other implementing agreements under UNCLOS and the proposed instruments do not apply [13].

2.2. Geographical scope

It is clear the instrument is to apply only to ABNJ and this has been the case since debates on a potential instrument on BBNJ emerged. The Prep Comms report also makes clear that the existing rights and jurisdiction of coastal States over all areas under national jurisdiction will remain unchanged [14]. Again this should not be controversial.

However, it is worth noting that discussion of the coastal states jurisdiction explicitly refers to rights in relation to the continental shelf. Unanswered questions remain as to the extent of the coastal states rights in relation to biodiversity of the extended continental shelf beyond the exclusive economic zone, especially species associated with hydrothermal vents such as some molluscs, gastropods and certain species of microbes. Some of which may be of interest for potential biotechnology. Rights to such species are essentially determined by whether or not they fall within the definition of sedentary species under Article 77(4) of UNCLOS. But an extensive debate in the academic literature to date has highlighted applying this definition can be problematic [15]. Perhaps further consideration needs to be given to whether or not the proposed access and benefit sharing regime needs to address this question one way or the other. In the lead up to the Prep Comm it has been suggested by at least one state that sovereign rights in relation to sedentary species on the continental shelf needs to be re-examined. For example, Bangladesh in its written submission to the Prep Comm has commented:

> "In case of the UNCLOS Article 77(4) relating to Continental shelf Beyond 200 nm, natural resources consist of the mineral and other non-living resources of the seabed and subsoil, together with living organisms belonging to sedentary species.
>
> Here, the definition of sedentary species for harvesting [sic], and would not to be applicable for Marine Genetic Resources (MGRs). Many MGRs are partially mobile and are at different stages in their life cycle [sic]]; their forms may be permanently or temporarily attached to rocks or may be free swimming or floating in the water column. As such, settling for sedentary species alone would leave out the vast majority of deep sea MGRs" [16].

It is worth noting that these comments attributable to Bangladesh were made in the context of a specific proposal relating to the scope of the proposed instrument. Thus Bangladesh proposed text for the

instrument which would define the scope of MGRs to be covered by the proposed instrument in the following terms:

> "Marine genetic resources of the area beyond the outer limits of the Continental shelf beyond 200 nm or of the area beyond national jurisdiction including waters superjacent to the seabed and of the ocean floor and of the subsoil thereof" [17].

So far as the author is aware, Bangladesh is the only State to suggest reopening the question of sovereign rights in relation to sedentary species. In that regard, it is worth noting that as far as the author has been able to ascertain no such position has been adopted by the G77. Bangladesh is a member of the G77 so it would appear in this regard that this position is a position of one state alone. No doubt, however, States that have historically been strong advocates for sovereign rights in relation to sedentary species such as Australia, the United Kingdom, Ireland, Tunisia, Libya, Sri Lanka, Algeria and Norway would resist any attempt to reopen the issue in current negotiations [18].

2.3. Material scope

It is intended that the material scope of the instrument is to apply to all elements of the package deal. However, it is worth noting that the recommendations already clearly flag the possibility of exclusions from the scope of the application of the instrument. Just what these exclusions may be is unclear at this stage, but consistent with the provisions of UNCLOS it is expected that these will include issues related to immunities in the high seas recognised by UNCLOS. For example, Article 95 of UNCLOS which recognises the complete immunity of warships from the jurisdiction of all States except for the flag state is likely to be unaffected by the proposed instrument. Similarly ships owned or operated by a State and used only on government non-commercial services have complete immunity from the jurisdiction of any State other than the flag State on the High Seas by virtue of Article 96.

Perhaps more controversially Article 236 of UNCLOS currently provides that the provisions of UNCLOS regarding the protection and preservation of the marine environment do not apply to any warship, naval auxiliary, other vessels or aircraft owned or operated by a State and used only on government non-commercial service. It would be unwise for the current negotiations to attempt to unwind these provisions. However, it is possible to envisage a scenario where vessels owned and operated by a state engaged in "government non-commercial service" could be involved in sampling of marine biodiversity which may eventually form part of a research and development process for novel biotechnology. Obvious questions therefore arise of whether any subsequent commercialization would fall within the proposed access and benefit sharing regime? To some extent this raises very complex definitional issues similar to those relating to the whether or not it is possible to distinguish between bioprospecting and so called 'pure' marine scientific research which remains unresolved and has been debated extensively in the academic literature [19].

2.4. Relationship to the convention and other instruments and frameworks and relevant global regional and sectoral bodies

It is clear that the proposed instrument is not intended to prejudice the rights, jurisdiction and duties of states under UNCLOS and that it should be interpreted in the context of and in a manner consistent with UNCLOS [20]. Perhaps more controversially it is proposed that the instrument would aim to promote greater coherence with and complement existing relevant global, regional and sectoral bodies. Specifically, it is suggested that the instrument should be interpreted and applied in manner which would not undermine these instruments, frameworks and bodies.

This commitment immediately raises the question of how the provisions of the new instrument would interact with relevant international organisations such as the International Seabed Authority (which has a defined mandate in relation to deep sea mining in ABNJ), and the Intergovernmental Oceanographic Commission of UNESCO ('IOC-UNESCO') (which is the only competent organisation for marine science within the UN system). The relationship with the International Seabed Authority will of course become clearer as negotiations for the instrument progress as some States appear to be arguing for some form of expanded mandate for the International Seabed Authority. No clear proposal with respect to IOC-UNESCO's future role has yet emerged.

Similarly, it is unclear at this point in time what the interrelationship of the new instrument will be with the provisions of the 1992 *Convention on Biological Diversity (CBD)* [21]. This will become clearer once definitional issues and institutional mechanisms under the proposed instrument take shape. Some of these issues are canvassed in more detail later in this paper.

2.5. Marine genetic resource specific points of convergence

Beyond the more generic matters discussed above there is actually very little else specific to MGRs that the Prep Comm has reached some agreement on beyond vague generalities. Thus the Prep Comm Report vaguely notes that the text of the proposed instrument would:

> "…set out the geographical and material scope of the application of the [Marine genetic resources] section of the instrument…[it]… would address access…[and]…set out the types of benefits that could be shared…[and] it could set out the relationship between the instrument and intellectual property rights…[and it] could address the monitoring of the utilization of marine genetic resources of areas beyond national jurisdiction" [22].

The alternate use of "would" and "could" suggests that for the majority of States support for even these vague generalities is questionable. That is to say does "could" suggest even these matters may ultimately be discarded during future negotiations? Time will tell.

It is worth noting, however, that three areas seem to have more substance, albeit they are still couched in terms of vague generalities. Thus there seems to be reasonably strong convergence that principles and approaches guiding benefit-sharing should be beneficial to current and future generations and that they should promote marine scientific research and development [23]. Implicit in this later aspect is that freedom of marine scientific research, as a high seas freedom must continue in its current absolute form. Any attempt to more closely regulate marine scientific research would be deeply regrettable and would undermine a cornerstone of the current legal regime applying in the high seas.

It is also suggested that the modalities of benefit sharing should take into account existing instruments and frameworks, and that such modalities could make provision for a clearing-house mechanism with regard to the sharing of benefits [24]. However, no specific proposal has yet been agreed.

3. Main areas where there was a divergence of views

It is clear after the Prep Comm that six key significant issues relating to MGRs remain for negotiation. Some of these issues are more complex than others.

3.1. Common heritage of mankind vs freedom of the high seas

The Pre Comm report vaguely notes:

> "With regard to the common heritage of mankind and the freedom of the high seas, further discussions are required" [25].

This rather vague statement glosses over a hotly contested issue which has dominated debates surrounding MGRs from the very

beginning. More than twenty two years ago the father of the MGR debate Lyle Glowka commented

> "[w]hile it may be worthwhile to create a legal and institutional regime for the Area's genetic resources, it is difficult to determine conclusively without further study whether it is useful or even necessary, to declare the Area's genetic resources a common heritage of mankind" [26].

Glowka was conscious from the beginning that the purported (and also denied) common heritage of mankind status of MGRs would be a contentious element of the debate surrounding MGRs. In a similar vein, the author of the current paper has argued repeatedly that invoking the common heritage of mankind is neither useful or necessary as it distracts us from the more fundamental questions of whether access and benefit sharing needs to be regulated and if so how that regulation is to be effected. Channelling [sic] the language of the 'war on terrorism' in 2010 [27] the author deliberately labelled advocates of the common heritage of mankind as advocating for a 'fundamentalist approach' to the issue. By that I meant "interpretations of international law that are not very useful as a means to achieving practical and just solutions of difficult political, economic and social problems" [28]. This was an attempt to provoke debate out of concern for the fact that it was difficult to see how the two sides could be reconciled. The aim was to alert scholars (and perhaps even some policy makers) to the fact that continued debate on the common heritage of mankind will only serve to delay even further the long overdue need to take measures to protect and conserve biodiversity in ABNJ. As long as the North and South continue their ideological battles over the common heritage of mankind, then concluding negotiations on more important aspects of the package deal will be further delayed.

Unfortunately, these deliberate attempts to be controversial and provoke debate on the desirability or need to invoke the common heritage of mankind were a total failure. Instead, the debate in both the academic literature, and more importantly at the UN, has proceeded to further entrench already deeply held ideological commitments to both sides of this ideological debate along the familiar patterns of the North-South divide.

Most recently this North-South divide is best illustrated by the submissions of States to the Prep-Comm. Thus in its submission the G77 and the People Republic of China (PRC) argue

> "The Group of 77 and China reaffirm their view that the principle of common heritage of mankind must underpin the new regime governing MGRs of areas beyond national jurisdiction. Given its cross-cutting nature, the principle should be at the core of the new instrument. The Group is of the view that the principle of the common heritage of mankind provides the legal foundation for a fair and equitable regime of conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, including the access and sharing of benefits of MGRs" [29].

In contrast Iceland in its submissions to the Prep-Comm has stated

> "The Common Heritage of Mankind (CHM) principle of Art 136 of the UNCLOS, applies to mineral resources "at or beneath the seabed" as defined in Art 133, and is in Iceland's view not applicable to renewable, biological resources on the seabed all in the water-column [sic] beyond national jurisdictions. The principle of the freedom of the high seas which is enshrined in Art 87 of UNCLOS seems more suitable in regard to marine genetic resources. Given that neither of the aforementioned principles seem to be directly applicable, a practical, possibly hybrid, definition and solution … needs to be found" [30].

Similarly, the European Union and its Member States are advocating for a more pragmatic solution that avoids debates over the common heritage of mankind. Thus, in their submission the EU and Member States call for

> "a pragmatic approach whereby progress in the negotiations is not dependent on the determination of the legal status of marine genetic resources (MGRs) in areas beyond national jurisdiction. Determination of the legal status is not a precondition for addressing relevant provisions concerning potential benefit sharing with respect to MGRs in a future Implementing Agreement" [31].

Norway likewise argues for a pragmatic approach to this issue. Thus in it's submissions to the Prep Comm Norway stated

> "so far the discussion on access and sharing of benefits from marine genetic resources (MGRs) in ABNJ has been tied to the disagreement on wheteher [sic] MGRs in the Area are the common heritage of mankind under Part XI of UNCLOS, or whether the provisions on the high seas freedom [sic] apply. It appears to be difficult to reach agreement on this issue. Norway would hope that this disagreement will not be allowed to prevent states from utilising this opportunity to establish a new regime for MGRs in ABNJ, including the sharing of benefits. Norway therefore support a pragmatic approach to this difficult issue" [32].

The extent to which States adopt either a 'fundamentalist approach' or a 'pragmatic approach' in attempts to conclude negotiations on this aspect of the international instrument remains to be seen. As Norway has noted, it would be very unfortunate however if these differing ideological commitments were to prevent conclusion of the international instrument.

Clearly some very proactive diplomatic negotiations will be required to bridge the North-South divide. In that regard, one way forward may be for elements of the 'common heritage of mankind' to be incorporated in the international instrument without as such calling it the 'common heritage of mankind'. In the context of the Law of the Sea the common heritage of mankind is generally regarded as reflecting three key elements: (1) non-appropriation of the deep seabed beyond national jurisdiction by any state; (2) common management of the mineral resources of the deep seabed beyond national jurisdiction; and (3) sharing of the benefits of such mining. If these three principles were implicit in the access and benefit sharing regime under the new legal instrument for MGRs, would the advocates of the 'common heritage of mankind' accept such an outcome even if the proposed international instrument does not formally label MGRs as the 'common heritage of mankind'? There are precedents for other terminology being used to avoid divisive debates over the 'common heritage of mankind'. For example, the 'common concern of humankind' was the terminology used in the 1992 *United Nations Convention on Biological Diversity* (CBD) [33]. In the case of the CBD, states explicitly rejected attempts to designate biodiversity as the 'common heritage of mankind' referring only to the 'common concern of humankind'. This was in part due to the fact that the CBD related principally to biodiversity within areas of national jurisdiction subject to state sovereignty.

In that respect it is curious to note a degree of inconsistency in the language used by certain states in the current negotiations. For example, the PRC in one of its submissions to the Prep Comm highlighted that the institutional arrangements of the new instrument should be developed with a view to "advancing the common well-being of humankind" [34]. This does not appear to be an isolated variation in language. Thus, in a subsequent more detailed submission the PRC stated

> "MGRs in areas beyond national jurisdiction (ABNJ) are of tremendous actual all potential value for humankind. The institutional arrangements of the new international instrument should help to promote scientific research, encourage innovation, facilitate fair and equitable sharing of the benefits from the conservation and sustainable use of marine biological diversity of ABNJ, with a view to

advancing the common well-being of humankind." [emphasis added] [35].

These two examples of statements by the PRC beg the question whether or not this represents a signal from the PRC as to a softening of its attitude to the terminology the "common heritage of mankind"? Is the use of the terminology "the common well-being of humankind" a signal from the PRC that it is open to a more pragmatic approach to the status of MGRs? This will no doubt become clearer as negotiations progress.

In a similar vein, it is also worth noting that Argentina in its submission to the Prep Comm stated

> "The principle of the common heritage of humanity will contribute to this objective, since through the application of such a principal the interests and needs of humankind as a whole and especially of developing countries will be addressed in fair way" [36].

Does the reference to the 'common heritage of humanity' and 'humankind' by Argentina suggest a more pragmatic approach? It is hard to judge. One must approach this particular statement by Argentina with caution because it is taken from an unofficial English translation. It may well be that references to 'humanity' rather than 'mankind' merely reflect an attempt at gender neutral language by the translator. It may simply be the case that the translator was using gender neutral language not understanding the significance in terms of the legal meaning. As noted above there is a clear distinction in international law between the 'common heritage of mankind' (a concept that embodies the three key concepts outlined above and associated with the institutional mechanisms established under Part XI of UNCLOS), and other less clearly defined concepts such as the 'common concern of humankind' selected in instruments such as the CBD to avoid importing the key elements of the 'common heritage of mankind' into the CBD regime. Perhaps the translator just did not appreciate the significance of the different terminology.

3.2. Regulating access to MGRs

In just one very brief paragraph of its report to the General Assembly the Prep Comm summarises many other key issues on which there is clearly divergence between states. Thus the report comments

> "With regard to marine genetic resources, including the question of the sharing of benefits, further discussions are required on whether the instrument should regulate access to marine genetic resources; the nature of these resources; what benefits should be shared; whether to address intellectual property rights; and whether to provide for the monitoring of the utilization of marine genetic resources of areas beyond national jurisdiction" [37].

It is too early at this stage of the negotiations to determine the extent to which access to MGRs will be regulated under the proposed international instrument. Even assuming that agreement can be reached that access is to be regulated, it is likewise difficult to determine the nature of the institutional structure and mechanisms that will give effect to regulation of access.

The complexity of the task ahead in designing an appropriate mechanism to regulate access is increasingly being recognised by parties to the negotiations. This complexity and the diverse range of subsidiary issues that the negotiations will need to navigate has perhaps been most clearly articulated by Mexico in its submission to the Prep Comm where it observed

> "access to MGRs must be approached differently from the provisions of previous conventions, due to the fact that ABNJ are subject to the common heritage of mankind principle, consequently barring the appropriation of any Maritime zone. While the establishment of previous informed consent or mutually agreed terms requirements may prove ineffective, the underlying objectives (responsible access, transparency, and benefit sharing) must be preserved in regulating access in ABNJ. Another important issue to consider is that MGR does not stay put in a determined zone of the oceans; rather, they can travel and be moved by marine currents and other factors. In this sense, a system of allocation of zones similar to the [International seabed authority] may not be useful. Rather, an approach based on a specific species, specific range of areas, or other kind of distribution can prove more useful…[t]he issue of whether access to MGR must be approved by some institutional mechanism, or through a decision-making process is to be considered. Terms and conditions (T&C) for such access need to be discussed, as to ensure that they do not hamper marine investigation and scientific research. In this regard, attention must be paid to the possibility of change of use, due to the effects that this may have in the sharing of benefits and the overall regime. Additionally, jurisdiction to enforce the T&C by the flag state/ Port state/ nationality state of the enterprise must be considered, as to provide for the most efficient mechanism" [38].

Given the complexity of the issues still to be negotiated it is also not surprising that a range of different models for regulating access have been proposed by States in their submissions to the Prep Comm. These proposals include a focus on transparency by States such as Australia that have argued

> "the goal should be [to] capture useful information while avoiding duplication. A depository of information on MGR extraction could also serve as a mechanism to trace the provenance of MGRs obtained in ABNJ" [39].

Others such as the Group of Pacific Small Island States also acknowledge the importance of the traceability of provenance calling for a "global and universal system [to be implemented]…so as to enable identification of the origins for resources used in the development of products [40].

Some States, such as Jamaica, [41] support a version of prior informed consent and mutually agreed terms modelled on the *Nagoya Protocol* [42] to the CBD. Members of the Alliance of Small Island States (AOSIS) have similarly called for very detailed regulation of access including imposing obligations on capacity building, transfer of technology and/or contribution to an access and benefit-sharing fund [43].

However, other States are strongly opposed to a system modelled on the Nagoya Protocol. Norway for example has argued

> "The establishment of a regime for benefit-sharing does not depend on access requirements. Norway would favour a "light" access regime. This could for instance be done by establishing a Clearing House for MGRs which could be integrated in DOALOS. Such a regime could include an obligation on the flag state to register information on accessed genetic material with the Clearing House which in turn would make the information publicly available.
>
> A fully-fledged access regime with applications, permits and contracts by "a MGR steward of the ABNJ" on the one hand and the flag state on the other, similar to the regime for mineral resources in the Area, will be costly and cumbersome. It would potentially hinder research and development and thereby also conservation…. One that does not need a strict regime for access to MGRs subject to prior informed consent in order to prevent environmental degradation of ecosystems. Overview and control and tracking of the utilization of the MGR in order to share the benefits of the utilization should be pursued by other mechanisms than a permit system" [44].

Some States, such as the USA argue against any change to the existing position of free access. As the USA has observed

> "In the high seas regime under international law, no State nor any other entity has sovereign rights over MGR in areas beyond national jurisdiction. Anyone can freely access such MGR in accordance with

international law. As we do not have to discuss issues of ownership of MGR, we are instead free to share ideas on how sharing benefits might allow us to best achieve our overarching conservation objectives, and how such benefit sharing arrangements might work" [45].

As with many other issues discussed above it is still too early to tell what form of access regime may emerge. However, if access is to be regulated then clearly the nature of the resources to which the access regime will apply, what benefits are to be shared, whether or not such a regime will be linked to international and domestic law dealing with intellectual property rights and how the utilization of genetic resources it is to be monitored also involves many complex issues. The following discussion now turns to offer some thoughts on those issues.

3.3. The nature of the resources

The nature of the resources to be regulated under the proposed instrument has raised numerous issues. For present purposes three aspects of the nature of resources to be covered by the proposed instrument are worth noting. The first and perhaps most controversial is the relationship between marine genetic resources and fish stocks. The second aspect (which is as much about access as it is about the resources to be accessed) concerns whether the proposed access regime should only be limited to *in situ* access to resources or extend further. The third (and related aspect) is whether the covered resources should include so called "derivatives."

3.3.1. Fish and fishing

How will fishing and the main fish stocks subject to fishing be impacted by the provisions of the instrument dealing with marine genetic resource? To date this question remains unanswered, but in part this aspect of the proposed international instrument will be shaped by how "fish" and "fishing" are defined in the international instrument. In its submission to the Prep Comm Jamaica, has highlighted how problematic defining fish and fishing has been for international law to date. There has been no universally accepted definition under the various existing international law instruments. As Jamaica has observed

> "The term "fishing" is not defined in UNCLOS. However, the conventions of some regional fisheries management organisations/arrangements (RFMOs) define "fishing" to encompass the actual or attempted searching for, catching, taking or harvesting of fishery resources, along with a range of related activities, including the harvesting of fisheries resources for scientific purposes.
>
> There are also varying definitions of "fisheries resources." Under some instruments, fisheries resources means all fish within the area covered by the respective instruments, including molluscs, crustaceans, and other living marine resources, but excluding sedentary species subject to the national jurisdiction of coastal states pursuant to UNCLOS Article 77.4, and highly migratory species listed in Annex I of UNCLOS. In some instruments, "fish" also includes plant life. Some RFMOs exclude anadromous and catadromous species and marine mammals, marine reptiles and seabirds from the definition of fishery resources. Under the Fish Stocks Agreement, "fish" includes "molluscs and crustaceans except those belonging to sedentary species as defined in UNCLOS Article 77" [46].

Perhaps more significantly some states such as the USA, Canada, Jamaica, the EU (and Member States) and Argentina argue that there is a clear distinction between 'fish as a commodity' and 'fish valued for their genetic properties'. They argue that 'fish as a commodity' should not be regulated under the proposed access and benefit sharing regime. Thus Jamaica has submitted to the Prep Comm

> "Both fishing and research (whether in the form of MSR or bioprospecting) involve the taking of living resources from their natural environment in ABNJ for subsequent use. However, the similarities between these two activities end there.
>
> Where fish is used as a commodity, the aim is to exploit the tangible parts of the harvested resource for consumption. In most cases, fishing activities exploit large quantities of given living resources to product [sic] the maximum yield from the harvested species.
>
> Where fish are valued for their genetic properties, the focus is on accessing a biological material and conducting research and development on the genetic composition of MGRs. The functional units of heredity (genes) are harvested and may be stored for future research or commercial use (in the case of bioprospecting). Unlike fishing as a commodity, there is less of a need for large quantities of living resources, as the quality and difference of the resources will be more significant for laboratory research than quantity and similarity. In many cases, only minute quantities of the resource will be required for research. Additionally, where research on the genetic properties is towards commercial ends, issues of intellectual property are likely to arise, as the added work on the genetic material may give rise to patent protection of derivatives from these resources" [47].

While this distinction between 'fish as a commodity' and 'fish valued for their genetic properties' is an accurate distinction to make in many contexts, there are situations where this distinction breaks down. For example, there are many examples of biotechnology that have involved the production of novel products from marine raw materials such as omega 3 and other fatty acids from fish oils which have required harvesting of fish on a large scale, essentially on a commodity basis. Similarly, by-products of fishing have been widely utilised in marine biotechnology in Norway and other jurisdictions [48].

In any event even if this distinction were to be adopted then some further clarification would be needed on precisely what constitutes 'fish as a commodity' and 'fish valued for their genetic properties.' To put it more bluntly the instrument would need to define:

- when and why fish are not considered as fish; and
- when and why fish are not considered as part of marine biodiversity!

These trigger points for application of the international instrument would need to be clearly defined. If this approach were to be adopted then clearly this would be at odds with the approach of the CBD which simply applies to access and benefit sharing with respect to 'genetic resources' which is defined under Article 2 of the CBD as "genetic material of actual or potential value." "Genetic material" is likewise defined in Article 2 as "any material of plant, animal, microbial or other origin containing functional units of heredity."

Going beyond the distinction between 'fish as a commodity' and 'fish valued for their genetic properties' some states such as Iceland have submitted that fisheries management and by extension fish "should not form part of the BBNJ Negotiations" [at all] [49]. Clearly the extent to which the MGR provisions of the proposed instrument apply to 'fish' and 'fishing' and just when a fish is not a fish or part of marine biodiversity for the purposes of the proposed international instrument will be a major issue in contention as negotiations progress.

3.3.2. In situ access only? What about derivatives?

The extent to which the international instrument will apply beyond sampling of genetic resources *in situ* to also include genetic resources *ex situ* and beyond that to *in silico* analysis, as well as the inter-related issue of the status of derivatives are clearly major areas of disagreement between States. *In situ* access to MGRs essentially means access in their natural environment; while *ex situ* collection means removal from the natural environment to storage in another location such as gene banks or type culture collections from which they can be accessed by researchers. *In silico* analysis "refer[*s*] to the collection of useful resources, information, selection, cultivation and computer-based simulation

analysis of …MGR samples obtained from *in situ* collection[*s*] [50].

Member States of the Caribbean Community (CARICOM) for example have argued for the widest possible application of the international instrument submitting to Prep Comm that it

> "should apply to *in situ* collection of samples from ABNJ, access to samples, data and related information of MGR ex situ, in silico and include genetic sequencing data and derivatives of MGRs" [Emphasis added] [51].

Other States vehemently disagree with such an approach and argue it is simply just not feasible to extent the regime beyond *in situ* resources. For example, the USA seeks to limit the application of the access and benefit sharing regime to *in situ* collection only and even takes issue with the use of the term *in silico* in this context. Thus the USA has maintained

> "It is essential to maintain a conceptual and definitional distinction between marine genetic resources themselves and information about those resources. Indeed, for purposes of clarity, we should refer to information taken from MGR by its proper name: genetic sequence data, or GSD, and not use the term in silico. GSD is information and its sharing can promote uses of GSD in research and development. If GSD is included, and a decision were made to attempt to trace the downloading and use of such information, how would that work? We struggle to envision a scenario that could be workable. How could we manage benefit-sharing (and promote compliance) if data, something that is freely and openly shared as part of research best-practices, were included in it?
>
> It is best to limit the definition of MGR to *in situ* collection. Including ex situ samples and procedures in the definition of MGR would introduce a range of complex variables, such as how materials are collected, transported, and stored. These would dramatically complicate the operation of BBNJ benefit-sharing and move us farther away from achieving our objectives." [Emphasis added] [52].

3.4. What benefits should be shared

Two broad approaches to the question of benefit sharing under the proposed instrument have emerged. The first main approach argues that benefit sharing should cover both monetary and non-monetary benefits. States arguing alone these lines include the G77 and the PRC and Mexico [53]. The G77 and the PRC in its submissions have called for the widest possible definition of both monetary and non-monetary benefits arguing specifically that

> "The non-monetary benefit should comprise of [sic] access to all forms of resources, data and related knowledge, transfer of technology and capacity building as well as facilitation of marine scientific research on MGRs of various [sic] beyond national jurisdiction….
>
> …MGRs can bring about monetary benefits and, consequently, the Group of 77 and China are open to discuss the different modalities of monetary benefits which may include, but would not be limited to those mentioned in the Annex of the Nagoya Protocol as well as the conditions triggering the monetary benefits" [54].

A second more limited approach to benefit sharing focussing only on non-monetary benefits has been adopted by the likes of the EU and its Member States. Thus they have argued

> "with regard to the questions on the sharing of benefits, … the characteristics of living organisms are distinct and markedly different from those of minerals. In particular, while the latter have a monetary value already at the exploration phase, marine genetic resources possess only potential value. A lengthy (between at least 10–15 years) and costly research and development phase is usually needed before an actual product is on the market. Moreover, in a vast majority of cases research on MGRs will not generate a product or any financial benefit. Finally, a variety of genetic material, coming from different jurisdictions, can be used in the same product. Hence, it is not always possible to associate one specific source of genetic material with a specific product.
>
> For these reasons the EU and its Member States are of the opinion that discussions relating to this issue should primarily concentrate on the non-monetary benefits. This conclusion is all the more pertinent while bearing in mind that non-monetary benefits are the most practical and readily available option whereas monetary benefits depend on many factors outlined above and, most importantly, may never materialise" [55].

A similar approach has been adopted by States such as the PRC [56] (in contrast to the position it adopted with the G77 noted above), Iceland, [57] Australia, [58] and Eritrea [59].

While it is unlikely any significant monetary benefits will come from MGR from ABNJ in the near future, it is unfortunate that some States only wish to focus negotiations on non-monetary benefits. Such an approach is inconsistent with the approach taken by the international community under the *Nagoya Protocol* and the CBD. While the evidence for commercial interest in MGR from ABNJ is limited (perhaps even dubious) the expectations of many states (especially developing States) is that vast wealth will come from these resources. With expectations so high it is difficult to see many states concluding negotiations on the international instrument unless it also extends to potential monetary benefits to come from ABNJ.

3.5. Intellectual property rights

The relationship between any access and benefit sharing regime and intellectual property rights is another key issue in the current negotiations. Despite being acknowledged as an issue that may need to be addressed, there has in fact been little consideration given in the lead up to the current negotiations as to how the proposed regime would address intellectual property rights.

A range of different approaches have emerged in the context of the Prep Comm work, but which will prevail is still unknown. For example, Australia has maintained

> "there is broad acceptance that any MGR regime should work within the existing intellectual property (IP) frameworks. The world intellectual property organisation (WIPO) must remain the proper forum for any IP issues related to MGRs in ABNJ" [60].

Other States such as Argentina for example, advocate for a more explicit linkage to the *Nagoya Protocol* mechanism. Thus Argentina has observed

> "We understand that the Agreement must address intellectual property issues.
>
> In this sense, issues related to intellectual property rights are linked to the objective of transparency in the matter. This could be achieved by implementing a multilateral mechanism and introducing a "passport" for marine genetic resources from areas beyond national jurisdiction. This passport could be drawn from the Certificate of Compliance under the Nagoya Protocol, which will accompany genetic resources in order to demonstrate their origin at any stage of research, development, innovation, or commercialization (Article 17 of the Protocol of Nagoya) [sic].
>
> The disclosure of mandatory origin of the marine genetic resource in a patent application, or other intellectual property right, can generate an effective mechanism of transparency, which contributes to the objective of distribution of benefits" [61].

3.6. Monitoring the utilization of marine genetic resources of ABNJ

No clear agreement has yet been reached on the issue of how the utilization of MGRs in ABNJ will be monitored. How this issue is addressed will in large part be governed by the outcomes of negotiations on the issues dealt with above. This may for example, be linked to some form of clearinghouse mechanism along the lines of that under the *Nagoya Protocol*. Variations of such a proposal have been suggested by a number of States including Australia, [62] and by negotiating blocks such as AOSIS [63]. Other States such as Mexico [64] have called for such a mechanism to have a much closer link to the granting of patents. Thus Mexico has proposed:

> "National authorities in charge of [Intellectual Property Rights] can be established as a checkpoint to supervise utilization of MGR and ensure benefit sharing occurs. It could be done when an application for a patent is received, or by requiring full disclosure of the information regarding MGR used. Similarly, a mechanism within the clearing-house can be established to track the user of MGR, information relating to it or any other relevant data" [65].

It is probably unlikely that a proposal such as Mexico's will be accepted by parties to the current negotiations given it would represent such a fundamental change to the intellectual property system. Nonetheless these proposals will no doubt be considered closely as part of the current negotiations, and at this stage such an outcome cannot automatically be dismissed.

4. Conclusion

This paper has examined the current state of play in relation to the MGR aspects of the current BBNJ negotiations. It has highlighted the key points of convergence and divergence on issues currently under negotiations and offered some thoughts on the challenges ahead. This paper has sought to highlight the diverse and complex nature of the issues still up for negotiation on the MGR issue. However, it should also be noted in passing that while these issues are diverse and complex, they are only one part of the overall 'package deal' currently under negotiation. The outcomes on these issues will be shaped by the outcomes on the other aspects of the package deal. Clearly this is not a zero sum game and like all diplomatic negotiations the final treaty will not please all, but will be a product of trade off and concessions on some issues to reach a consensus document that all states are willing to sign up to. There is no doubt that if the 'package deal' negotiations can be concluded this will represent a milestone development in the history of the Law of the Sea. Precisely what shape that milestone will take to date remains unclear.

Declarations of interest

None.

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