The Expert Briefing Document: A Developing Country Perspective on the Making of The BBNJ Treaty

Siva Thambisetty, Paul Oldham, and Claudio Chiarolla

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Siva Thambisetty,[*] Paul Oldham,[**] and Claudio Chiarolla[***]

Abstract: The Biodiversity Beyond National Jurisdiction (BBNJ) Treaty, also called the Oceans or the High Seas Agreement is the newest international law Treaty negotiated at the United Nations. The conclusion of this Treaty is widely regarded as an expression of successful multilateralism. The substantive provisions on marine genetic resources in Part II of this progressive Treaty set the agenda for biodiversity governance globally by incorporating several novel elements including digital sequence information on marine genetic resources, the use of a standardised batch identifier to label genetic resources collected from areas beyond national jurisdiction and the introduction of an assessment model based on aggregate usage of genetic resources rather than individual products and uses. These elements were proposed by the G77/China, a group of 134 developing countries in the final round of negotiations. This briefing document is significant not just for the achievement of textual and substantive elements in the final text of the Treaty, but it is also as a record, representative of different ways in which knowledge and expertise contribute to the making of international law.

Keywords: BBNJ, oceans, high seas, UNCLOS, treaty-making, biodiversity, DSI, marine genetic resources

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FOREWORD

Richard Tur de la Concepción
Lead negotiator from the Cuban G77/China Chairmanship during IGC-5+

Looking backwards, it might seem that the reconvened meeting of the fifth session on the Intergovernmental Conference (IGC5+) for the negotiation of the Biodiversity Beyond National Jurisdiction (BBNJ) instrument was basically a linear continuation of the previous sessions. Even when chronologically speaking this seems obvious, from a substantial perspective there was a profound change in the course of negotiations, mainly in Part II of the Treaty.

This significant alteration in the course of the process was evident since the very first day of IGC-5+, when the delegation of Cuba, as Chair of the Group of 77 and China, announced that this very large negotiating block of 134 countries had sent to the President of the Conference a formal submission on how the Group envisaged most of the main articles of this Part of the Treaty, which was something unprecedented by then. At the end, this strategy of presenting concrete proposals to shape the provisions on the fair and equitable sharing of benefits arising from MGRs and their related DSI was key to the success achieved at the final adoption.

Then, the question of how and why at this last stage of the process this was possible arises. The answer to it is the combination of many elements, both political and technical. More used to the political dynamics in an international organization like the United Nations, the political sensitivities were less complex to deal with for the Chairmanship team than the technicalities of these discussions with such a scientific background.

This is where the invaluable support offered by the team of scientists led by Dr. Siva Thambisetty, and including Paul Oldham and Claudio Chiarolla, was essential for the G77/China Chairmanship to see beyond what was considered up to that moment. The paper that is provided here represented an important basis to add features to the positions defended by developing countries in the interest of having an effective model of benefit-sharing in the BBNJ treaty.

From the insertion of the concept of the batch-identifier for the samples, to the full display of the monetary benefit-sharing based on aggregate parameters to estimate the use of these resources, the formal proposal of the G77/China became much more solid because of these elements. Once a valid, legitimate and scientifically based model was conceived within the G77/China members, it was basically for developing countries to remain consistent and to hold firm in the face of the push-back from developed countries during the negotiation. This expert briefing document is a necessary testimony to register how many of the new ideas presented by the Global South during the last tranche of the process were scientifically grounded.

Even when it has been said multiple times, I would never have enough words to thank Dr. Siva, her team, and the very close collaborators to the Chairmanship, like Daniel Stewart, for their immense contribution to international law.

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ARTEFACTS OF INTERNATIONAL LAW: THE CASE FOR PUBLISHING THE BRIEFING DOCUMENT

Siva Thambisetty[i]

Sometime in the early hours of March 4th 2023, the final text of the Biodiversity Beyond National Jurisdiction Treaty (BBNJ Treaty) under the United Nations Convention on the Law of the Sea (UNCLOS) was finalised by state parties and their exhausted negotiators. Critical discussions were conducted behind closed doors and in small working groups where all manner of frustrations, proposed compromises and hortatory elements played out in front of a small group of experts and advisors. These aspects of process, while critical to the composition of substantive provisions are hard to record and institutionalise. Nonetheless, a record of negotiating positions explaining what was achieved, what had to be dropped and which positions were transformed in the final days and hours is crucial to how the Treaty will be received and studied by scholars and policy makers. Transparency matters not just to legitimacy, but the perception of legitimacy of substantive provisions and their implementation.

In the months preceding the Resumed Intergovernmental Conference in 2023, there was much trepidation about the state of play around marine genetic resources and benefit sharing in Part II of the draft agreement which had largely contributed to the failure of the previous IGC5. There was therefore a need for new proposals to catalyse internal discussions so that differences can be bridged and consensus positions might be reached prior to the start of what turned out to be the last round of negotiations. This briefing document was produced for and presented to the Chair of the G77/China Group of 134 countries on January 19th 2023, at a meeting attended by negotiators and facilitated by Prof Carlos Correa and the Geneva based South Centre. The briefing document was produced by a group of three advisors to the Chair – Dr Siva Thambisetty (lead author), Dr Paul Oldham and Dr Claudio Chiarolla - as a basis for further rounds of internal political coordination. Some elements of this briefing were subsequently published in early February 2023 as a way to further stress test ideas in the lead up to IGC5+.[ii] Dr Thambisetty and Dr Oldham attended the Resumed IGC5, with Dr Chiarolla acting remotely. The presence of the Advisors during the negotiations on the G77/China Chair's team allowed for further consultations on text-based proposals.

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[i] My attendance at the Intergovernmental Conferences and work on the BBNJ Treaty during 2019-2023 was funded by an LSE Knowledge Exchange and Impact Grant. The briefing document and its presentation benefitted considerably from the assistance of Daniel Stewart, founder of Independent International Legal Advocates (IILA).

[ii] P Oldham, C Chiarolla and S Thambisetty 'Digital Sequence Information in the UN High Seas Treaty: Insights from the Global Biodiversity Framework-related Decisions' LSE Law School, Policy Briefing Series 53/2023 (February 2023) (Annex A in this document); and P Oldham and S Thambisetty 'P Oldham and S Thambisetty 'ONEST: The Middle Way for Monetary Benefit Sharing in BBNJ Negotiations' (January 26 2023) Available here < https://zenodo.org/record/7573700> (Annex B in this document)

We have chosen to publish the paper in the exact form that it was first presented to developing countries in order to highlight several developments of note for scholarship and policy-making. First, the changing nature of international negotiations in many fora runs counter to the common perception that developing countries lack epistemic authority in technical negotiations. Small, underfunded delegations cannot be present in multiple rooms at the same time and cannot bring experts on all issues to IGCs to respond to time-based pressures. Smaller developing or least developed countries may have little experience of biodiversity research on the high seas, and while they certainly have geopolitical and economic interests, may lack capital-based expertise to operationalise those interests. The convening role of the G77/China Chair in building consensus was therefore vital.

Secondly, comprehensive consensus text on Part II was developed by the G77/China Group proposing several new critical elements drawn from this briefing document and building on progress made by cross-regional groups thus far which is also recorded in this document. New elements included *inter alia* – a non-definition approach to digital sequence information (DSI), the inclusion of data management principles, the standardised BBNJ batch identifier, the reporting of outcomes using this identifier, and tiered fees based on aggregate resource use. With the incorporation of these elements the BBNJ Treaty now sets the agenda for biodiversity governance globally and should have persuasive authority in aligned fora where such issues are discussed. The entwined roles played by cross regional developing country groups, the role of the Chair of G77/China and the form of use of academic and practical expertise all present valuable lessons for future negotiations.

Thirdly, we believe this document publicises the need for greater text-based and ethnographic work around state-led global conferences where agenda-setting can cause particular documents, or themes to have run-away impacts.[iii] It's not just documents, modelling of 'indigenous peoples' interests', 'the conservation movement', and 'the scientific expert' circulate in Conferences not just as abstractions but as intriguing real-world forces of change and persuasion. The model of intergovernmental conference itself is a political rather than a legal event, emphasising a statist model of the international system, and yet they are also as Annalise Riles observes, 'among the most important quotidian aspects of the international legal practitioner's work.'[iv] As such these conferences and the documents associated with them, present unique insights into knowledge exchange

[iii]For a large duration of the negotiating process, a widely circulated paper recommending unilateral notification of the taking of marine genetic resources proved highly influential. A Broggiato, T Vanagt, L Lallier, M Jaspars, G Burton, and D Muyldermans 'Mare Geneticum : Balancing Governance of Marine Genetic Resources in International Waters.' International Journal of Marine and Coastal Law 33 (1): 3–33 (2018)

[iv] A Riles 'Models and Documents: Artefacts of International Legal Knowledge' International and Comparative Law Quarterly, 48 (4) (October 1999). This paper 'compares the work of academic international lawyers - founded in making models of an international system - to the work of practitioners - exemplified by the work of making documents, and demonstrates the particular, peculiar nature of each kind of knowledge, from the point of view of the observer.'

and power imbalances in the theory and practice of international law. The publication of this briefing document therefore invites closer study of not just subsequent Treaty text, but of *this* text as an artefact of law and process that had a vital role to play in the achievement of the BBNJ Treaty.[v]

[v] The Treaty text is available here. <https://undocs.org/Home/Mobile?FinalSymbol=a%2Fconf.232%2F2023%2F4&Language=E&DeviceType=Desktop&LangRequested=False> Note that the paragraph numbering in the Treaty since Adoption differs from those used in the briefing document.

BBNJ Draft Textual Proposals on Marine Genetic Resources: Prepared for the 5th Resumed IGC, Feb 20th – Mar 3rd 2023†

Prepared By G77 Chair's Team

† The text of this document has been lightly edited for spelling, grammar, and formatting in preparation for its publication in the LSE Law Working Paper Series. Additionally, expanded terms have also been added where the first use of abbreviations did not previously provide them. No changes have been made to its substance.

17th January 2023

This document presents textual proposals for Arts 1, 5,8, 9, 10, *10bis*, 11, 11*bis*, 12, and 13 relevant to marine genetic resources.

These proposals have been prepared by Dr Siva Thambisetty (Lead author), Dr Claudio Chiarolla and Dr Paul Oldham.

KEY:

- Text proposals amending original in Further Refreshed Draft Text are in this colour
- Deletions from the text are indicated ~~like this~~
- Explanatory notes have wider margins on each side and are in this colour
- To draw attention, underlining like this, or highlighting like this is used.
- SWG: Small working group
- PACC: The cross-regional CRP proposal submitted during IGC5 [Aug 15-26 2022][1].
- Relevant current provisions refer to Further Refreshed Draft Text (FRDT) [2]

HOW TO USE THIS DOCUMENT

This working document is the expression of two distinct approaches by Chair's Team experts – first, it takes a 'common denominator' approach to G77 positions gathered from negotiations and textual proposals submitted. Secondly, it formulates positions that are aligned with stated views to provide workable negotiating options.

The document begins with relevant provisions of Further Refreshed Draft Text, followed by suggested text with amendments, followed by short explanatory notes. For ease of reference relevant provisions from the cross-regional CRP proposals are then included.

Please refer to the key above for more information.

Please see background notes included that supplement this document: These notes include:

A. Digital Sequence Information in the UN High Seas Treaty: An Equitable Roadmap in the wake of the Kunming-Montreal Global Biodiversity Framework (forthcoming as LSE Law Policy Brief, Jan 2023)
B. ONEST: The middle way for monetary benefit sharing in BBNJ Negotiations
C. Rationale for Limitations and Exceptions Approach to Article 12
D. A comparison table of different forms of monetary benefits in Art 11

[1]Available here <https://www.un.org/bbnj/sites/www.un.org.bbnj/files/20220803bbnjigc5compilationproposals.pdf>

[2] A/CONF.232/2022/CRP.13 (26th Aug 2022) <https://www.un.org/bbnj/igc-5th-oral-reports-of-the-facilitators>

SUMMARY INCLUDING ON BENEFIT SHARING

The textual proposals present a comprehensive approach to the governance of activities related to marine genetic resources in areas beyond national jurisdiction, including providing the fundamental obligation and operative bases of monetary and non-monetary benefit sharing mechanisms. The 'Use of terms' proposals benefit from clarity on how to include digital sequence information on marine genetic resources following the developments at the Fifteenth Meeting of the Parties to the Convention on Biodiversity (CBD COP15).

The proposals take a State Party measure-based approach, rather than user-based obligations, with clearer direction as to what such obligations comprise of when directed to natural or juridical persons under State Party jurisdiction, except when there is collection *in situ*, when the UNCLOS language of 'jurisdiction and control' is used. This ensures that private entities are also included in the remit of this Part of the agreement.

Set against the scope, objective and application provisions, the proposals lay out a notification system involving the clearing house mechanism and an interface within the clearing house that can receive and acknowledge pre-cruise notifications related to the collection *in situ* of marine genetic resources in areas beyond national jurisdiction. The notification and acknowledgement results in a collective identifier for the resources, termed in these proposals as 'batch identifier'. Subsequently post-cruise, database or repository-related, and utilization and commercialization notifications all use the batch identifier. The role of the national focal points with respect to notifications, bring clarity to State Party obligations.

The batch identifier has a dual effect. First, it has a cascading effect along the pipeline of all subsequent activities related to marine genetic resources; and does the heavy lifting of bringing transparency to access and conditions of use of marine genetic resources. Secondly, it overcomes a major analytical problem in distinguishing between activity inside the Exclusive Economic Zone (EEZ) and Areas Beyond National Jurisdiction (ABNJ) with respect to marine genetic resources and enables reporting on activity in ABNJ.

On this basis then, the structure of notifications in Articles 10 and 11 supports a fair and equitable benefit sharing system. Sharing of marine genetic resources and digital sequence information on marine genetic resources according to internationally accepted principles of good data governance are key non-monetary benefits, as is capacity building. The proposals include Indigenous Peoples and Local Communities (IPLCs) in provisions relating to capacity building and equitable sharing of benefits.

The monetary benefit sharing mechanism aims to diversify the basis of revenue streams to operationalise the agreement as soon as possible using a streamlined structure of notifications. The Access and Benefit Sharing (ABS) mechanism is able to set out contributing payments to a partnership fund corresponding to tiers that are based on five distinct criteria – nature and extent of activities related to marine genetic resources; commercialization; valuation of the monetary and non-monetary benefits to State Parties arising from utilization of marine genetic resources; contributions to capacity building; and amount and source of funding made available to support activities related to marine genetic resources.

These proposals take comfort from the developments in the CBD COP15 with respect to the recognition of the need to share monetary benefits from the use of digital sequence information, and avoids putting all expectations of revenue in speculative, future commercial gains alone. The proposals centralise the role of the Access and

Benefit Sharing mechanism under the Conference of the Parties with implementation, compliance and transparency functions.

Part 6 contains Explanatory Notes **A**, **B**, **C**, **D** providing further useful context to the rationales provided for textual proposals.

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Article 1 - Use of Terms Definitions Including explanatory notes

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PART I
GENERAL PROVISIONS

Article 1
Use of terms

For the purposes of this Agreement:

1. "Access *ex situ*", in relation to marine genetic resources of areas beyond national jurisdiction, means access to samples, and access to associated data and information [, as defined in article 1, paragraph2].

[2. "Associated data and information", in relation to marine genetic resources of areas beyond national jurisdiction, means relevant data and information in any format, including such data and information that could be considered as digital sequence information on genetic resources under the Convention on Biological Diversity.]

3. "Area-based management tool" means a tool, including a marine protected area, for a geographically defined area through which one or several sectors or activities are managed with the aim of achieving particular conservation and sustainable use objectives in accordance with this Agreement.

4. "Areas beyond national jurisdiction" means the high seas and the Area.

5. "Biotechnology" means any technological application that uses biological systems, living organisms, or derivatives thereof, to make or modify products or processes for specific use.

6. "Collection *in situ*", in relation to marine genetic resources, means the collection or sampling of marine genetic resources in areas beyond national jurisdiction.

7. "Convention" means the United Nations Convention on the Law of the Sea of 10 December 1982.

8. "Cumulative impacts" means [the combined] [incremental] [combined and incremental] impacts

resulting from different activities, including known past and present and reasonably foreseeable activities, or from the repetition of similar activities over time, and the consequences of climate change, ocean acidification and related impacts.

9. "Derivative" means a naturally occurring biochemical compound resulting from the genetic expression or metabolism of biological or genetic resources, even if it does not contain functional units of heredity.

10. "Environmental impact assessment" means a process to identify and evaluate the potential impacts of an activity to inform decision making.

11. "Marine genetic resources" means any material of marine plant, animal, microbial or other origin containing functional units of heredity of actual or potential value.

12. "Marine protected area" means a geographically defined marine area that is designated and managed to achieve specific [long-term biodiversity] conservation objectives and may allow, where appropriate, sustainable use provided it is consistent with the conservation objectives.

[13. "Marine technology" includes information and data, provided in a user-friendly format, on marine sciences and related marine operations and services; manuals, guidelines, criteria, standards, reference materials; sampling and methodology equipment; observation facilities and equipment for *in situ* and laboratory observations, analysis and experimentation; computer and computer software, including models and modelling techniques; and expertise, knowledge, skills, technical, scientific and legal know-how and analytical methods related to the conservation and sustainable use of marine biodiversity.]

14. "Party" means a State or regional economic integration organization that has consented to be bound by this Agreement and for which this Agreement is in force.

15. "Regional economic integration organization" means an organization constituted by sovereign States of a given region to which its member States have transferred competence in respect of matters governed by this Agreement and which has been duly authorized, in accordance with its internal procedures, to sign, ratify, accept, approve or accede to this Agreement.

[16. "Sustainable use" means the use of components of biological diversity in a way and at a rate that does not lead to a long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations.]

17. "Utilization of marine genetic resources" means to conduct research and development on marine genetic resources or associated data and information, including through the application of biotechnology, as defined in article 1, paragraph 5, and commercialization.

Article 1
Use of terms

1. 'Activities with respect to marine genetic resources' includes collection in situ, storage of, access ex situ, and the utilization of marine genetic resources and digital sequence information on marine genetic resources, and their commercialization.

Activities with respect to marine genetic resources

'Activities with respect to marine genetic resources' as a term appears in a number of contexts in the Further Refreshed Draft Text (FRDT) – Article 8 (1), 7 (b), 9(1), 9(2) and 9(6), 10 (only in Article title), 11 (1), 11(8). It is not clear whether it includes the full range of activities from collection *in situ*, *ex situ*, utilization, commercialisation and research & development.

The ambiguity has different implications in different articles. For instance, in Article 8(1), it is central to the scope and application of this Part with respect to whether the agreement will apply to resources collected before entry into force and utilized after; and in Article 7(b) it can impact on scope of capacity building and technology transfer activities unless it refers to the full range of activities. In Article 9, the term is used in the title but disaggregates references in Article 9(3) (to [access] [collection]) and in Article 9 (5) (to utilization). As Article 10 does not refer to it in the sub-provisions but only in the title, it could be taken to mean that all the activities referred to in Article 10 are encompassed by the phrase. Without further elaboration 'activities with respect to

marine genetic resources' could lead to an interpretational approach where it has different scope depending on the context in which it is used.

The proposed definition here enumerates, rather than 'defines' the term for purposes of specifying scope of the phrase. It is also helpful as a composite term for reference to State Party obligations in this Part.

The inclusion of the term 'store' it is submitted, is necessary because before 'access ex situ' can happen as a form of non-monetary benefit-sharing the samples of marine genetic resources or digital sequence information on marine genetic resources will be made ready for storage using standardised protocols. This process enables a key part of the benefits to be shared, yet it is not an element of 'utilization' as conventionally understood or defined here.

In the Convention on Biological Diversity 'storing' is not specifically acknowledged perhaps because user obligations there will implicitly include it. In the BBNJ agreement, obligations are likely to be directed to State Parties, rather than users in this Part.

Research and development is not listed, as it is an element of 'utilization' as defined in these proposals.

> For the purposes of this Agreement:
> 1. "Access *ex situ*", in relation to marine genetic resources of areas beyond national jurisdiction, means access to samples, marine genetic resources and/or digital sequence information on marine genetic resources held in repositories or databases ~~associated data and information [, as defined in article 1, paragraph2]~~.

The proposed language takes into account the approach with respect to digital sequence information on marine genetic resources as discussed below with respect to Article 1(2); the 'and/or' necessary to cover different contexts in which it is used in the operative provisions.

> ~~[2. "Associated data and information", in relation to marine genetic resources of areas beyond national jurisdiction, means relevant data and information in any format, including such data and information that could be considered as digital sequence information on genetic resources under the Convention on Biological Diversity.]~~

We propose deleting Article 1(2) and adopting instead the term '<u>digital sequence information on marine genetic resources</u>' throughout the operative parts of the text of the agreement. This approach (of not defining the term in Article 1 but using it in the substantive provisions) is less problematic now, than it was in Aug 2022 as the baseline of the contentious use of the term 'digital sequence

information' has been changed by developments under the Convention on Biological Diversity (CBD) during COP15. Under CBD there is now a decision that 'digital sequence information' need no longer be used only as a placeholder, but 'digital sequence information on genetic resources' is a valid phrase for further technical discussions (CBD/COP/DEC/15/9[3]).
In the BBNJ agreement, the use of the term 'digital sequence information on marine genetic resources' has legal implications for the scope of the agreement. The ABS Mechanism will be able to formulate guidelines should the need arise, under Article 11*bis* (3) (a) and make recommendations to the Conference of the Parties *via* an ongoing oversight function.
Please see Explanatory Note **A** Part 6 for further discussion on the implications of Decision CBD/COP/DEC/15/9 'Digital Sequence Information on Genetic Resources (19th Dec 2022).[4]

PACC: "Digital sequence information" means any information in electronic or other format including DNA, RNA and protein sequence information or information on derivatives resulting from the utilization of marine genetic resources of areas beyond national jurisdiction.

Comment: It would be preferable to avoid attempting to replicate the process under CBD to provide a substantive definition of this term.

> 6. "Collection *in situ*", in relation to marine genetic resources, means the collection, ~~or~~ sampling, sequencing or transmission of marine genetic resources or digital sequence information and data on marine genetic resources in areas beyond national jurisdiction.

Following the approach where digital sequence information on marine genetic resources is a firm part of the definition of marine genetic resources (as per discussion below of Article 11(1)), we propose amending 'collection *in situ*' to account for sequencing or transmission of data (not just digital sequence information) directly *in situ* through equipment placed or functioning, *in situ*. Without this necessary expansion of the scope, the BBNJ agreement is in peril of not including currently available technologies for collection *in situ* of data.

> x. "Data Management Plan" under this agreement is one that sets out how marine genetic resources, samples or digital sequence information on marine genetic resources, research data, or data products, conform to principles of open and responsible data governance.

[3] https://www.cbd.int/doc/decisions/cop-15/cop-15-dec-09-en.pdf
[4] https://www.cbd.int/doc/decisions/cop-15/cop-15-dec-09-en.pdf

The need for inclusion of 'Data Management Plan' follows on from an understanding of how non-monetary benefit sharing from the utilization of digital sequence information on marine genetic resources can be operationalised, and the recognition of CARE[5] and FAIR[6] principles and good practice in data governance in CBD COP15 (Decision CBD/COP/DEC/15/9).

There are primarily two ways in which we can attach good practice on data governance to resources and data. First, by specifying the nature of the 'repositories or databases' that are 'credible' or 'trusted' institutions that conform to such principles. We submit that this approach could cause more problems by indicating that some existing infrastructure is not suitable for use under this agreement, and potentially make the operation of the agreement burdensome.

The second approach, which we propose here, is to attach these principles to the relevant resources and data. The inclusion is justified and necessitated by COP15 decisions and the centrality of non-monetary benefit sharing and capacity building in the BBNJ agreement. Specific reference to FAIR, CARE and OECD EASD[7] recommendations, or further elaboration on data governance can be done by the ABS mechanism. The expression 'principles of open and responsible data governance' is used to capture the range of guidance in this area.

NB: We recommend caution in using language such as 'existing international or best practice' or similar here, because of the tendency to impose or elevate a purely public domain model w.r.t data which may not be appropriate in the context of marine genetic resources of areas beyond national jurisdiction. An internationally *agreed* practice on digital sequence information sharing requires settlement on the foundations of data governance principles, not the imposition of what current dominant users regard as 'best practice'. It is important that standards are agreed by the wider community rather than imposed by an elite developed country group. This is of relevance in Articles 11(2)(a) and 11(2) (e) in these proposals.

~~9. "Derivative" means a naturally occurring biochemical compound resulting from the genetic expression or metabolism of biological or genetic resources, even if it does not contain functional units of heredity.~~

In the FRDT, 'derivative' is not used in any of the operative parts of the agreement. It is included in Article 1 (5) under 'Biotechnology'. The definition here is extremely narrow and is accompanied by its problematic negotiating history in the Nagoya Protocol. The use of the term 'naturally occurring' is unduly restrictive in an age when

[5] Collective benefit, Authority to control, Responsibility, and Ethics, and their respective sub-principles.
[6] Findable, Accessible, Interoperable, and Reusable, and their respective sub-principles.
[7] < https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0463>

many biochemicals can be synthesised, irrespective of whether they are naturally occurring.

We considered amended definitions but have concluded that it is best to not have text on 'derivatives'. In these proposals, the definition of marine genetic resources does not include 'derivatives', therefore if needed in operative parts of the text, 'derivatives' can be brought in via the definition of 'biotechnology'. For example, in so far as there is need to refer to 'derivatives' with respect to say, 'commercialization' (in Article 11(5)(b) of these proposals) we can do so via the use of the term 'biotechnology'; which for the same reasons is also included in the definition of 'utilization'.

PACC: "Derivative" means a naturally occurring biochemical compound resulting from the genetic expression or metabolism of biological or genetic resources, even if it does not contain functional units of heredity.

Comment: 'naturally occurring' here is extremely narrow and to be avoided.

> 11. "Marine genetic resources" means any material or information of marine plant, animal, microbial or other origin ~~containing functional units of heredity~~ of actual or potential value.

We propose the above text as an adequate definition and to avoid the term 'functional units of heredity'. The term is used in Art 2 of the CBD in the definition of 'genetic material'. Since the FRDT does not arrive at 'marine genetic resources' through 'marine genetic material' we propose that it can be deleted in order to focus on the resource rather than the material per se.

From a technical perspective, 'functional unit of heredity' serves no useful purpose in conjunction with 'genetic resources'; in the CBD as it is formulated it is arguably an antiquated and restrictive approach that did not accord with scientific understanding of genetics even at the time it was negotiated. Under the CBD, no legal disagreement has pivoted on the use of the term 'functional units of heredity'. A term originally used as comforting language in the CBD has caused problems down the line and for these reasons, we propose a definition that does not use the term.

In the proposal above 'material' and 'information' are separate descriptive categories. Including marine genetic resources to reflect 'information' in the scope is particularly important, give our approach to Article 1(2) above.

Super PACC: "Marine genetic resources" means any genetic material of marine plant, animal, microbial or other origin containing functional units of heredity, as well as any material, derivative and noncoding regions of nucleic acids, with actual or potential value of their genetic, chemical and biochemical properties, including digital sequence information and data.

Comment: The list is at least partly necessary to moderate the impact of 'functional units of heredity'. The instability of genes throws doubt on the

meaning of 'regions' as well as on 'functional units of heredity'. An enumeration of such technical terms can cause legal uncertainty as not all of the terms may be relevant in every operative context.

> ~~[~~13. "Marine technology" includes~~:~~
>
> (a) information and data, provided in a user-friendly format, on marine sciences and related marine operations and services;
>
> (b) manuals, guidelines, criteria, standards, reference materials;
>
> (c) sampling and methodology equipment;
>
> (d) observation facilities and equipment for *in situ* and laboratory observations, analysis and experimentation; computer and computer software, including models and modelling techniques;
>
> (e) equipment and research tools necessary to conduct research and development on marine genetic resources and digital sequence information on marine genetic resources;
>
> (f) ~~and~~ expertise, knowledge, skills, technical, scientific and legal know-how and analytical methods~~;~~
>
> (g) (a) to (f) as applicable to marine genetic resources and digital sequence information on marine genetic resources, and the fair and equitable sharing of benefits thereof;
>
> (h) (a) to (g) as related to the conservation and sustainable use of marine biodiversity ~~]~~

Notably there are two primary concerns with the definition of 'marine technology'. First, it is a list of things that might be considered as 'marine technology' in a generic sense; the items of the list can apply to a number of specific contexts.

Secondly, the definition does not include physical samples, digital sequence information on marine genetic resources or reference to marine genetic resources. By not including terms specific to marine genetic resources, it appears to carve out a scope that is not relevant to this Part of the agreement. For example, provisions on 'transfer of marine technology' will not automatically apply to Part II of the agreement. It is significant for instance with respect to 'Objectives' in Article 7(d).

The above definition and arrangement are therefore proposed to deal with both concerns.

While (d) refers to equipment necessary to undertake research *in situ*, in the proposal above (e) refers to equipment necessary to undertake *ex situ* research and development on marine genetic resources and digital sequence information on marine genetic resources. The inclusion of (g) and (h) bring legal certainty and bring coherence to the link with sharing of benefits.

> 17. "Utilization of marine genetic resources" means to conduct any research and development on marine genetic resources or digital sequence information on marine genetic resources [~~associated data and information~~], ~~including through the application of biotechnology, as defined in article 1, paragraph 5,~~ and commercialization, including through the application of biotechnology, as defined in article 1, paragraph 5

The term 'any' is used here to cover research on genetic, biochemical, informational and sequence composition so as not to limit it to an enumerated list of the kinds of study applicable.

PACC: 19. "Utilization of marine genetic resources" means to conduct research and development on the genetic, biochemical, informational and sequence composition of marine genetic resources and their derivatives thereof, as well as subsequent applications and commercialization of products arising from or related to marine genetic resources of areas beyond national jurisdiction, including biotechnology as defined in this Agreement.

Comment: Note the use of 'derivatives' here and the impact of 'naturally occurring' if retained in the definition of derivatives in Article 1(9) of the FRDT (as discussed above). Additionally, listing kinds of research may lead to future problems or legal uncertainty as to what exactly each category means.

Article 5
General principles and approaches

> In order to achieve the objective of this Agreement, Parties shall be guided by the following:
> (a) The polluter-pays principle;
> ~~[~~(b) The principle of the common heritage of mankind;~~]~~

For some State Parties, the CHM principle is linked to the appropriability of marine genetic resources in the form of information through intellectual property rights. If

there is 'no text' on 'common heritage of mankind' then retention of language on Article 12 that emphasises the unique circumstances of BBNJ may become even more relevant.

(c) **Option 1**: The principle of equity;
Option 2: The principle of fair and equitable sharing of benefits;

Option 1 and option 2 here do not appear to be alternatives. Principle of equity potentially has a broader application than 'fair and equitable benefit sharing'. Option 1 appears to justify the textual proposal made here with respect to Option 2 wording.

In terms of Option 2, there is support in the academic literature for fair and equitable benefit sharing to be treated as a principle of international law; as opposed to a mere operational modality.[8] There are two ways a 'principle' may be justified here as an emerging norm whose time has come. First as a remnant of, or an expression of the CHM principle in the context of marine genetic resources in areas beyond national jurisdiction. The second, as an independent principle that brings together the many different modalities that already exist for access and benefit sharing, tailored for myriad contexts but with similar normative underpinning – equity in the use of genetic resources, or the right to benefit from scientific progress and its application (Art 15, International Covenant on Economic, Social and Cultural Rights). It is also enshrined in Goal C of the Post 2020 Global Biodiversity Framework. These reasons appear to justify, and even perhaps necessitate, the inclusion of 'principle' here.

As a principle of international law benefit sharing would permit State Parties greater interpretational leeway in devising measures in accordance with the BBNJ agreement. As a major international binding agreement on genetic resources, and the first after the Global Biodiversity Framework the adoption of this principle here as an unequivocal treaty provision would help consolidate developments with respect to the conservation, sustainable and equitable use of genetic resources.

[8] E Morgera (2019) Under the radar: the role of fair and equitable benefit-sharing in protecting and realising human rights connected to natural resources, The International Journal of Human Rights, 23:7, 1098-1139, DOI: 10.1080/13642987.2019.1592161 and D. Tladi, 'The Common Heritage of Mankind in the Proposed Implementing Agreement' in M.H. Nordquist, J.N. Moore and R. Long (eds), *Legal Order in the World's Oceans: UN Convention on the Law of the Sea* (Brill Publications, 2017) 72–90

Part 2: Articles 7, 8 and 9

Article 7 - Objectives

Article 8 – Application

Article 9 - Activities with respect to marine genetic resources of areas beyond national jurisdiction

PART II
MARINE GENETIC RESOURCES, AND ~~INCLUDING QUESTIONS ON~~ THE SHARING OF BENEFITS

Article 7
Objectives

The objectives of this Part are:

(a) The fair and equitable sharing of benefits arising from marine genetic resources of areas beyond national jurisdiction for the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction;

(b) The building and development of the capacity of Parties, particularly developing States Parties, in particular the least developed countries, landlocked developing countries, geographically disadvantaged States, small island developing States, coastal African States, archipelagic States and developing middle-income countries, taking into account the special circumstances of small island developing States, to carry out activities with respect to marine genetic resources of areas beyond national jurisdiction;

(c) The generation of knowledge, scientific understanding and technological innovation, [including through the development and conduct of marine scientific research] as fundamental contributions to the implementation of this Agreement;

(d) The development and transfer of marine technology in accordance with this Agreement.

Article 7
Objectives

The objectives of this Part are:

(a) The fair and equitable sharing of benefits arising from marine genetic resources of areas beyond national jurisdiction for the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction;

(b) The building and development of the capacity of Parties, particularly developing States Parties, in particular the least developed countries, landlocked developing countries, geographically disadvantaged States, small island developing States, coastal African States, archipelagic States and developing middle-income countries, taking into account the special circumstances of small island developing States and indigenous peoples and local communities, to carry out activities with respect to marine genetic resources and digital sequence information on marine genetic resources of areas beyond national jurisdiction, through *inter alia* the transfer of marine technology, and the sharing of benefits;

(c) The generation of knowledge, scientific understanding and technological innovation, [including through the development and conduct of marine scientific research] as fundamental contributions to the implementation of this Agreement;

(d) The development and transfer of marine technology in favour of developing countries in accordance with this Agreement.

In Article 7(a) 'marine genetic resources' is used, but as per definition in these proposals, it will include 'material and information' so 'digital sequence information on marine genetic resources' has not been added here, whereas it has been added in Article 7(b). The context of 'all activities' and 'transfer of marine technology' provides a different context in (b).

Article 7(b) does not specify how capacity will be built and could be read as a weak provision -the transfer of marine technology and the sharing of benefits in the proposed text builds on (a) and sharpens the binding nature of the Article. The proposal to clarify the definition of 'marine technology' in Article 1 in these proposals presents an opportunity to add the text 'transfer of marine technology' in Article 7(b).

In 7(b) addition of IPLCs is referred to in the context of capacity building. Article 10*bis* alludes only to approval or consent, and not to capacity building or equitable benefit sharing.

Note here that the term 'activities' relies on the definition of the term included in these proposals.

PACC:

Article 7
Objectives

The objectives of this Part are to:
(a) Ensure the fair and equitable sharing of benefits arising from marine genetic resources, including as digital sequence information, of areas beyond national jurisdiction;
(b) Build and develop the capacity of developing States Parties, in particular the least developed countries, landlocked developing countries, geographically disadvantaged States, small island developing States, coastal African States and developing middle-income countries, to collect in situ, access ex situ, including as digital sequence information, and utilize marine genetic resources of areas beyond national jurisdiction;
(c) Promote the generation of knowledge and technological innovations, including by promoting and facilitating the development and conduct of marine scientific research in areas beyond national jurisdiction, in accordance with the Convention;
(d) Ensure the development and transfer of marine technology.

Article 8
Application

1. The provisions of this Agreement shall apply to activities with respect to marine genetic resources of areas beyond national jurisdiction after the entry into force of this Agreement and benefits arising from these activities.
2. The provisions of this Part shall not apply to the use of fish and other biological resources as a commodity and fishing and fishing activities regulated under relevant international law.

Article 8
Application

> 1. The provisions of this Agreement shall apply to all activities with respect to marine genetic resources of areas beyond national jurisdiction after the entry into force of this Agreement and benefits arising from these activities.

The term 'all activities' is necessary here, but only makes sense if the definition of 'activities' with respect to marine genetic resources is defined as it has been here in the proposal presented in Article 1.

> 2. The provisions of this Part shall not apply to the use of fish and other biological resources as a commodity and fishing and fishing activities regulated under relevant international law.

Art 8(2) was subject to intense negotiations on the afternoon of August 26th. 2022. In the absence of reference in the FRDT to the wording that appeared to emerge there, no analysis has been undertaken here.

PACC:

Article 8
Application

1. The provisions of this Agreement shall apply to the collection in situ of, access ex situ, including as digital sequence information, to, and to the utilization of marine genetic resources and their derivatives of areas beyond national jurisdiction, as defined in this Agreement.

2. The provisions of this Part shall not apply to [the use of fish and other biological resources as a commodity] [fishing and fishing activities regulated under relevant international law].

3. Option A: The provisions of this Agreement shall apply to marine genetic resources collected in situ, and accessed ex situ, including as digital sequence information, after the entry into force of the Agreement, as well as to those resources collected in situ before its entry into force but utilized after its entry into force.

Article 9
Activities with respect to marine genetic resources of areas beyond national jurisdiction

1. Activities with respect to marine genetic resources of areas beyond national jurisdiction may be carried out by all Parties, irrespective of their geographical location, and natural or juridical persons under the jurisdiction and control of the Parties in accordance with this Agreement.

2. Parties shall promote cooperation in activities with respect to marine genetic resources of areas beyond national jurisdiction.

3. [Access] [Collection] *in situ* of marine genetic resources of areas beyond national jurisdiction shall be [carried out] [conducted] with due regard for the rights and legitimate interests of coastal States in areas within their national jurisdiction and also with due regard for the interests of other States in areas beyond national jurisdiction, in accordance with the Convention. To this end, Parties shall endeavour to cooperate, as appropriate, including through specific modalities for the operation of the clearing-house mechanism determined under article 51, with a view to implement this Agreement.

4. No State shall claim or exercise sovereignty or sovereign rights over marine genetic resources of areas beyond national jurisdiction. No such claim or exercise of sovereignty or sovereign rights shall be recognized.

[5. The utilization of marine genetic resources of areas beyond national jurisdiction shall be for the interests of all States and the benefit of mankind as a whole, particularly for the benefit of advancing the scientific knowledge of humanity and promoting the conservation and sustainable use of marine biological diversity, taking into consideration the interests and needs of developing States.]

6. Activities with respect to marine genetic resources of areas beyond national jurisdiction shall be carried out exclusively for peaceful purposes.

Article 9
Activities with respect to marine genetic resources of areas beyond national jurisdiction

1. Activities with respect to marine genetic resources of areas beyond national jurisdiction may be carried out by all Parties, irrespective of their geographical location, and natural or juridical persons under the jurisdiction ~~and control~~ of the Parties in accordance with this Agreement.

2. Parties shall promote cooperation ~~in~~ on all activities with respect to marine genetic resources of areas beyond national jurisdiction.

3. ~~[Access]~~ [Collection] *in situ* of marine genetic resources of areas beyond national jurisdiction shall be ~~[carried out]~~ ~~[~~conducted~~]~~ with due regard for the rights and legitimate interests of coastal States in areas within their national jurisdiction and also with due regard for the interests of other States in areas beyond national jurisdiction, in accordance with the Convention. To this end, Parties shall ~~endeavour to~~ cooperate, in accordance with this Part, ~~as appropriate,~~ including through specific modalities for the operation of the access and benefit sharing mechanism and clearing-house mechanism determined under article 51 with a view to implement this Agreement.

4. No State shall claim or exercise sovereignty or sovereign rights over marine genetic resources of areas beyond national jurisdiction. No such claim or exercise of sovereignty or sovereign rights shall be recognized.

~~[~~5. The utilization of marine genetic resources of areas beyond national jurisdiction shall be for the interests of all States and the benefit of mankind as a whole, particularly for the benefit of advancing the scientific knowledge of humanity and promoting the conservation and sustainable use of marine biological diversity, taking into consideration the interests and needs of developing States.~~]~~

> 6. All ~~A~~activities with respect to marine genetic resources of areas beyond national jurisdiction shall be carried out exclusively for peaceful purposes.

In the FRDT, the phrase 'jurisdiction and control' is used only in Part II of the agreement, and it is done so consistently appearing in five provisions (in Articles 9, 10 and 11). This wording restricts the application of the operative provision in which it appears to entities that are in the control of State Parties, in other words, public sector or state funded entities only. This is problematic for obvious reasons because this part of the agreement would then not apply to private entities.

The phrase 'jurisdiction and control' is seen in UNCLOS Article 94.[9] The use of 'jurisdiction and control' is only required in Article 10 (1), where flag state control is assumed because of the need for a sea going vessel when collection *in situ* in areas beyond national jurisdiction takes place. A flag state is the country of registry of the ship whereby control on aspects like certification on safety or pollution etc can take place.

In other parts its inclusion misunderstands the land-based obligations underlying many of the notifications. In order to ensure therefore that the BBNJ agreement applies to all kinds of entities, public and private, we propose to use 'jurisdiction' where appropriate and as reflected in Article 9 that deals with Application of this Part; and 'jurisdiction and control' in Article 10(1). The Nagoya Protocol uses 'jurisdiction'.

The inclusion of 'all activities' (instead of 'activities') in Article 9(2) and (6) is based on the specific definition of 'activities with respect to marine genetic resources' in Article 1 above; and to indicate application to range of activities.

[9] Article 94(1) Every State shall effectively exercise its jurisdiction and control in administrative, technical and social matters over ships flying its flag.

Part 3: Articles 10, 10*bis*, 11, 11*bis*, 13

Article 10 Notification on activities with respect to marine genetic resources of areas beyond national jurisdiction

Article 10*bis*- Traditional knowledge of indigenous peoples and local communities associated with marine genetic resources in areas beyond national jurisdiction

Article 11 - Fair and equitable sharing of monetary and non-monetary benefits

Article 11*bis* Access and benefit-sharing mechanism

Article 13 - Monitoring Compliance and Transparency ~~and traceability~~

Article 10
Notification on activities with respect to marine genetic resources of areas beyond national jurisdiction

1. Parties shall take the necessary legislative, administrative or policy measures to ensure that collection *in situ* of marine genetic resources of areas beyond national jurisdiction shall be subject to notification to the clearing-house mechanism in accordance with this Part.

2. The following information shall be notified to the clearing-house mechanism six months or as early as possible prior to the collection *in situ* of marine genetic resources of areas beyond national jurisdiction:

(a) The nature and objectives of the project under which the collection is carried out, including, as appropriate, any programme(s) of which it forms part;

(b) The subject matter of the research or, if known, marine genetic resources to be targeted or collected, and the purposes for which the marine genetic resources will be collected;

(c) The geographical areas in which the collection is to be undertaken;

(d) A summary of the method and means to be used for collection, including the name, tonnage, type and class of vessels, scientific equipment and/or study methods employed, and any contribution to major programmes;

(e) The expected date of first appearance and final departure of the research vessels, or deployment of the equipment and its removal, as appropriate.

(f) The name(s) of the sponsoring institution(s) and the person in charge of the project;

(g) Opportunities for scientists of all States, in particular for scientists from developing States, to be involved in or associated with the project;

(h) The extent to which it is considered that States that may need and request technical assistance, in particular developing States, should be able to participate or to be represented in the project.

3. Where there is a material change to the information provided to the clearing-house mechanism prior to the planned collection, updated information shall be notified to the clearing-house mechanism within a reasonable period of time and no later than the start of collection *in situ*.

4. Parties shall ensure that the following information is notified to the clearing-house mechanism as soon as it becomes available, but no later than one year from the collection *in situ* of marine genetic resources of areas beyond national jurisdiction:

(a) The repository or database where associated data and information, where available, are or will be deposited;

(b) Where the original samples, if available, [with their associated unique identifiers,] are or will be held;

(c) A report detailing the geographical area from which marine genetic resources were collected, including information on the latitude, longitude and depth of collection, and, to the extent available, the findings from the activity undertaken.

5. Parties shall ensure that databases and repositories under their jurisdiction are required to periodically notify the notification system within the clearing-house mechanism regarding access *ex situ* during that period of time.

6. Where marine genetic resources of areas beyond national jurisdiction are subject to utilization by natural or juridical persons under their jurisdiction and control, the following information shall be notified to the clearing-house mechanism no later than three years from the start of the relevant utilization or as soon as such information becomes available:

(a) Where the results of the utilization can be found, including associated data and information;

(b) Where available, details of the post-collection notification to the clearing-house mechanism related to the marine genetic resources that were the subject of utilization;

(c) Where the original sample that is the subject of utilization, if available, is held;

(d) The modalities envisaged for access *ex situ*;

7. In case of commercialization of products based on the utilization of marine genetic resource of areas beyond national jurisdiction, Parties shall notify the clearing-house mechanism of information received from natural or juridical persons under their jurisdiction and control on such commercialization.

Article 10
Notification on activities with respect to marine genetic resources of areas beyond national jurisdiction

1. Parties shall take the necessary legislative, administrative or policy measures to ensure that any natural or juridical persons under their jurisdiction and control that engage in the collection *in situ* of marine genetic resources of areas beyond national jurisdiction make available the information specified in paragraph 2 of this Article. Such collection *in situ* shall be subject to notification to a web platform or similar, within the clearing-house mechanism in accordance with this Part and shall be acknowledged by an automatically generated batch identifier.

2. The following information, and necessary updates, shall be notified to the web platform or similar, within the clearing-house mechanism six months or as early as possible prior to the collection *in situ* of marine genetic resources of areas beyond national jurisdiction:

(a) The nature and objectives of the project under which the collection is carried out, including, as appropriate, any programme(s) of which it forms part, and the amount and source of funding.

(b) ~~[~~The subject matter of the research or, if known, marine genetic resources to be targeted or collected, and the purposes for which the marine genetic resources will be collected;~~]~~

(c) The geographical areas in which the collection is to be undertaken;

(d) A summary of the method and means to be used for collection, including the name, tonnage, type and class of vessels, scientific equipment and/or study methods employed, and any contribution to major programmes;

(e) The expected date of first appearance and final departure of the research vessels, or deployment of the equipment and its removal, as appropriate.

(f) The name(s) of the sponsoring institution(s) and the person in charge of the project;

(g) A data management plan, including the repository and/or databases in which any marine genetic resource samples or digital sequence information on marine genetic resources, research data or data products reside or will reside

~~(g)~~ (h) Opportunities for scientists of all States, in particular for scientists from developing States, to be directly and substantially involved in or associated with the project;

~~(h)~~ (i) The extent to which it is considered that States that may need and request technical assistance, in particular developing States, should be able to participate or to be represented in the project.

~~3. Where there is a material change to the information provided to the clearing-house mechanism prior to the planned collection, updated information shall be notified to the clearing-house mechanism within a reasonable period of time and no later than the start of collection *in situ*.~~

~~4.~~3. Parties shall ensure that natural or juridical persons under their jurisdiction, having completed *in situ* collection of marine genetic resources of areas beyond national jurisdiction, shall make the following information available in order to enable notification to the web platform or similar within the clearing-house mechanism as soon as it becomes available, but no later than one year from the collection *in situ* ~~of marine genetic resources of areas beyond national jurisdiction:~~

~~(a) The repository or database where associated data and information, where available, are or will be deposited~~;

~~(b)~~ (a) The repositories and/or databases, ~~W~~where ~~the original samples,~~ all marine genetic resources collected *in situ* and digital sequence information on marine genetic resources ~~if available~~, are or will be held; ~~[~~with their associated batch ~~unique~~ identifier~~s~~]

~~(c)~~ (b) A report detailing the geographical area from which marine genetic resources were collected, including information on the latitude, longitude and depth of collection, and, to the extent available, ~~the~~ [any] findings from the activity undertaken.

(c) Any necessary updates to the data management plan provided under 10 (2) (g) above

~~5.~~4 Parties shall ensure that all databases and repositories under their jurisdiction are required to ~~periodically~~ [annually] notify the web platform or similar ~~notification system~~ within the clearing-house mechanism of all ~~regarding~~ access *ex situ* ~~during that period of time~~ of samples, marine genetic resources and digital sequence information on marine genetic resources, linked to their batch identifiers, in a manner that is publicly searchable and accessible

~~6.~~5 Parties shall ensure ~~Where~~ that natural or juridical persons under their jurisdiction utilizing marine genetic resources of areas beyond national jurisdiction and digital sequence information on such resources ~~are subject to utilization by natural or juridical persons under their jurisdiction and control~~,

make the following information, including batch identifiers, ~~shall~~ available in order that ~~be notified to~~ the clearing-house mechanism can be notified immediately or as soon as possible thereafter ~~and no later than three years from the start of the relevant utilization~~. ~~or as soon as such information becomes available:~~

(a) Where the results of the utilization can be found, including digital sequence information on marine genetic resources ~~associated data and information~~;

(b) Where available, details of the post-collection notification to the clearing-house mechanism related to the marine genetic resources that were the subject of utilization;

(c) Where the original sample(s) that is the subject of utilization, is held;

(d)The modalities envisaged for access *ex situ* of samples and of digital sequence information on marine genetic resources being utilized; and a data management plan for the same

(e)Any [material] outcomes of the utilization such as publications, intellectual property rights and product development

(f) Once marketed, information on sales of relevant products and any further developments

~~7~~.6 Parties shall obtain information on commercialization of products based on the utilization of marine genetic resource and digital sequence information on such resources from natural or juridical persons under their jurisdiction and notify the clearing-house mechanism of the information received ~~from natural or juridical persons under their jurisdiction and control~~ along with all relevant batch identifiers

~~8~~.7 State Parties shall [periodically] [annually] notify the clearing house mechanism of the amount and source of philanthropic, private and state funding made available to support any activities related to

> marine genetic resource and digital sequence information on marine genetic resources, including any investment in repositories and databases.
>
> 8. Parties shall nominate a National Focal Point responsible for collecting or receiving, and transmitting the information to be notified in accordance with this Article to the web portal or similar within the clearing house mechanism.

In these proposals, the obligation of notification remains a State Party obligation (not an obligation of the user) throughout Article 10. In Article 10(1), the relevant State Party will be the State which effectively exercises its jurisdiction and control on 'collection *in situ*', that is, the flag state. The textual proposals here obligate State Parties to ensure that relevant national and juridical persons make available the information that is necessary for notification of collection *in situ* to be made. This emphasises the function of the measure-based implementation, while retaining notifications as primarily a State Party obligation.

The clearing house mechanism is a Treaty mechanism. Here reference to web platform or similar, within the clearing house mechanism is used to indicate an electronic platform or user interface, that can automatically acknowledge the notification and respond with a 'batch identifier'. Batch identifier is used to indicate a 'collective' (or aggregate), that will reference all of the marine genetic resources sampled per 'collection in situ' notified under Article 10(1). The identifier complements the use of existing mechanisms like accession numbers which are currently used in conventional scientific practice and can be used to bunch together accessions numbers.

BioProject and BioSamples identifiers as used by participating databases in the International Nucleotide Sequence Database Collaboration (INSDC) are examples of existing batch identifier systems that group or aggregate individual sequence accessions together by overall project (BioProject) and individual samples (BioSamples). These batch identifiers played an important role in facilitating international research on COVID19. Other examples are dataset identifiers as used by the Global Biodiversity Information Facility (GBIF) for taxonomic records including sequence metadata.

Please see Explanatory note **B** in Part 6 for additional information on batch identifiers and the pathway by which it can form a middle ground for transparency in the BBNJ agreement.

Critically, the batch identifier has a cascading effect through Arts 10(3) – (7), which makes it central to monitoring, compliance and transparency in this Part. When combined with other notification requirements, particularly in Art 10(5), the batch identifier removes the need for the Internationally Recognised Certificate of Compliance seen in Art (10) (5) (d) of the PACC proposal. A further critical advantage of the batch identifier is that it becomes possible to distinguish marine genetic resources originating from areas beyond national jurisdiction from other marine genetic resources. It enables reporting and indicators on activity in areas beyond national jurisdiction and

overcomes a major analytical problem in distinguishing between activity inside the EEZ and ABNJ.

In Article 10(2), the notification provides information pre-cruise, including a Data Management Plan (DMP), as defined in Article 1. As benefit sharing through access to resources and data is a major objective of this agreement a DMP is warranted. Please see relevant notes in Article 1.

The obligation to update material changes in Article 10(3) of FRDT before collection *in situ* appears to be onerous and impractical from a field research point of view. It has been replaced in Art 10(2) in the form of a general encouragement to make necessary updates as part of the notification in that Article.

Article 10(3) of these proposals comprise the post-cruise notifications which includes the obligation to update the DMP. From this point onwards, the batch identifier must be used where relevant in the notifications.

Article 10(4) obliges repositories and databases to notify access ex situ. Here the intention is not to keep track of individual instances of access but to provide information that is necessary for transparency that facilitates both monetary and non-monetary benefit sharing. Eventually such notifications ought to be automated and streamlined. See text proposals in Article 11 *bis* (3)(d) and Article 13(5) on automation, and Explanatory Note **B** in Part 6 on how such automation may work using existing infrastructure.

Article 10 (5) refers to notifications of utilization. Here the 'three year' period has been deleted as excessive and unreasonable running counter to established policies for sequence information in particular. In the case of sequence data, practice following the 1996 Bermuda Principles and 2003 Fort Lauderdale Agreement requires immediate release of data when sequencing is performed, and the text proposal here reflects that requirement.

Articles 10(5) (e) and (f), 10(6) and 10(7) are necessary for the ABS mechanism to gather sound basis to establish tiered payment as monetary benefits to the partnership fund (Article 11(5).

The national focal point in Article 10(8) is necessary not only for making notifications to the clearing house mechanism but also to ensure that national or juridical persons under a State Party's jurisdiction are aware of the authority to whom relevant information must be sent. The wording of 'collection or receiving' comes from the Nagoya Protocol rubric over functions of checkpoints. In the BBNJ agreement, it is a state party obligation to notify, hence 'transmitting' is used.

PACC:

Article 10

[Access][Collection] in situ of, access ex situ to, including as digital sequence information, and utilization of marine genetic resources of areas beyond national jurisdiction

1. Collection in situ / access / utilization of marine genetic resources within the scope of this Part shall be subject to [an electronic] self-declaratory notification to the clearing-house mechanism.

2. Parties shall ensure that the following information regarding the collection in situ of marine genetic resources of areas beyond national jurisdiction is [periodically] [annually] transmitted to the open and self-declaratory electronic system within the clearing-house mechanism at least six months prior to the collection in situ of marine genetic resources of areas beyond national jurisdiction:

(a) The repository or database where environmental meta-data, taxonomic information and digital sequence information related to marine genetic resources, where available, are or will be deposited;
(b) Where the original samples, if available, are or will be held;
(c) The results of the project, including a report detailing the geographical area from which marine genetic resources were collected, including information on the latitude, longitude, and depth of collection, and, to the extent available, the findings of the activity undertaken, including, but not limited to:

(i) The nature, the objectives and the time length of the project, including as appropriate, any programme(s) of which they form part;
(ii) The resources collected including their unique identifiers associated with the original samples, and the purposes for which these resources were collected;
(iii) The geographical areas in which the collection was undertaken;
(iv) The date of first appearance and final departure of the research vessels, or deployment of the equipment and its removal, as appropriate;
(v) A summary of the method and means used for collection, including the name, tonnage, type and class of vessels, scientific equipment and/or study methods employed;
(vi) The name(s) of the sponsoring institution(s), the director(s), and the person in charge of the project;
(vii) Indication of opportunities, for scientists of all States, in particular for scientists from developing countries to be involved/associated in the Project and further developments;
(viii) The extent to which it is considered that States that may need and request technical assistance, in particular developing countries, should be able to participate or to be represented in the Project and further developments;.
(ix) Development of any commercial products including marine genetic resources of areas beyond national jurisdiction in their composition;

(x) Submission for intellectual property rights and/or the intellectual property right licences, including the indication of the respective jurisdictions of interest;
(xi) Contact details for enquiries or access to samples.

3. Parties shall take the necessary legislative, administrative or policy measures, as appropriate, to ensure that databases, repositories and gene banks under their jurisdiction are required to periodically notify the open and self-declaratory notification system within the clearing-house mechanism regarding marine genetic resources of areas beyond national jurisdiction that were accessed during that period of time, including as digital sequence information, based on recommendations of the access and benefit sharing mechanism.

4. The utilization of marine genetic resources of areas beyond national jurisdiction, such as defined in this Agreement, shall be subject to self-declaratory electronic notification to the clearing-house mechanism, and shall include an indication of the location, collection or database of the used resources, the date of utilization of the resources, the resources that were utilized, the purposes for which the resources were utilized and the person or entity that utilized the resources, among other recommendations of the access and benefit sharing mechanism, in accordance with the following provisions:

(a) in the case of research and development, the notification of utilization shall be made no later than the moment when the results are made public in scientific publications or databases;
(b) in the case of commercialization, the notification of utilization shall be made no later than the commercialization of a final product; and
(c) in the case of intellectual property rights claims, such as patents and cultivars, the notification of utilization shall be made no later than the deposit of such claim at the intellectual property rights correspondent office.

5. The open and self-declaratory notification system within the clearing-house mechanism shall operate according to, but no limited to, the following provisions:

(a) Users of marine genetic resources of areas beyond national jurisdiction shall have a valid profile in the electronic system and accept the terms and conditions as internationally agreed;
(b) The valid profile in the electronic system shall be used to notify activities related to the collection in situ of, access ex situ, including as digital sequence information, to, and utilization of marine genetic resources of areas beyond national jurisdiction, and benefit-sharing, in accordance to this Article;
(c) Users shall regularly update their profiles by providing the appropriate notifications in accordance to this Article;
(d) For each self-declaratory notification made under this Article, a [receipt] [certificate] will be automatically [generated] [provided] by the electronic system, which will be called Internationally Recognised Certificate of Compliance.

6. Parties shall take the necessary legislative, administrative or policy measures, as appropriate, to ensure that:

(a) Users under their jurisdiction are required to notify the open and self-declaratory notification system within the clearing-house mechanism in the cases of collection in situ of, access ex situ, including as digital sequence information, to, and utilization of marine genetic resources of areas beyond national jurisdiction, in accordance with this Article;
(b) Profiles in the electronic system are properly updated by their users;
(c) The information provided to the open and self-declaratory electronic system is accurate and reliable.

7. Parties shall promote cooperation in collection in situ of marine genetic resources of areas beyond national jurisdiction, such as giving information on current and future cruise opportunities for the benefit of developing countries, and cooperation in access ex situ to, including as digital sequence information, and utilization of marine genetic resources of areas beyond national jurisdiction.

8. Parties shall transmit information received from natural or juridical persons under their jurisdiction or control to the clearing-house mechanism in case of commercialization of products containing marine genetic resources of areas beyond national jurisdiction. The access and benefit sharing mechanism shall review such information and make recommendations to the Conference of the Parties.

9. Parties shall nominate a National Focal Point to the clearing-house mechanism with a view to monitoring compliance with this agreement by their nationals.

10. Parties shall take the necessary legislative, administrative or policy measures, as appropriate, to ensure that marine genetic resources of areas beyond national jurisdiction and their derivatives utilized within their jurisdiction have been accessed and utilized in accordance with this Part.

Article 10 bis
Traditional knowledge of indigenous peoples and local communities associated with marine genetic resources in areas beyond national jurisdiction

Parties shall take legislative, administrative or policy measures, where relevant and as appropriate, with the aim of ensuring that traditional knowledge associated with marine genetic resources in areas beyond national jurisdiction that is held by indigenous peoples and local communities shall only

> be accessed with the free, prior and informed consent or approval and involvement of these indigenous peoples and local communities. Access to such traditional knowledge may be facilitated by the clearing-house mechanism. Access to and use of such traditional knowledge shall be on mutually agreed terms.

As there is a measure of consensus on inclusion of Article 10*bis* we present at least three considerations here that are relevant without amending the text above.

First, with respect to 'free, prior and informed consent or approval and involvement' the language of 'approval or involvement' imports the language of CBD article 8j, that was used to weaken prior informed consent (PIC) or free, prior informed consent (FPIC) to a lower standard. Given that the international standard is PIC/FPIC, current language in the FRDT can be seen as regressive, depending on the objective of Article 10*bis*.

Secondly, there is no reference in this Part of the agreement to IPLCs as explicit beneficiaries of benefit sharing. While PIC is important, there is a case to be made for their explicit inclusion as beneficiaries (as recognised in the Nagoya Protocol and in Decision CBD/COP/DEC/15/9), that is of equal or greater importance. One of the benefits could relate to capacity building, and in these text proposals an addition has been made to Articles 7(b), 11 (2) (d) and 11 (6) to reflect this.

Thirdly, it would be worthwhile here to consider including reference to CARE Principles for Indigenous Data Governance (standing for Collective Benefit, Authority to Control, Responsibility and Ethics) which complement the widely adopted FAIR principles (that data be Findable, Accessible, Interoperable, and Reusable) which encourage open and other data movements to consider both people and purpose.[10] The aim of CARE principles is to 'shift the focus of data governance from consultation to values-based relationships that promote indigenous participation in processes of data reuse, which will result in more equitable outcomes, as well as preserving relationships built on trust and respect.'[11]

Support for the inclusion of the FAIR Principles can be found in Article 7b of the November 2021 *UNESCO Recommendation on Open Science* in connection with promoting open data and for the CARE Principles in Article 11 promoting open dialogue with other knowledge systems. The FAIR and CARE principles, the UNESCO Recommendation and 2021 OECD recommendation on Enhancing Access to and Sharing of Data (EASD) are also acknowledged in CBD COP Decision CBD/COP/DEC/15/9 on digital sequence information in connection with data governance.

[10] https://www.go-fair.org/fair-principles/
[11] https://www.gida-global.org/care

Article 11

Fair and equitable sharing of benefits

1. The benefits arising from activities with respect to marine genetic resources of areas beyond national jurisdiction shall be shared in a fair and equitable manner in accordance with this Part and contribute to the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction.

2. [Non-monetary] benefits shall be shared [and may be] in the form of:

(a) Access *ex situ*;

(b) Information contained in the notifications provided in accordance with article 10;

(c) Transfer of technology in line with relevant modalities provided under Part V of this Agreement;

(d) Capacity-building, including by financing research programmes, and partnership opportunities for scientists and researchers in research projects, and dedicated initiatives, particularly for developing States, taking into account the special circumstances of small island developing States;

(e) Open access to findable, accessible, interoperable and reusable (FAIR) scientific data in accordance with international practice in those fields;

(f) Scientific cooperation, in particular with scientists from and scientific institutions in developing States;

[(g) Other forms of benefits as determined by the Conference of the Parties on the basis of recommendations by the access and benefit-sharing mechanism.]

3. Parties shall take the necessary legislative, administrative or policy measures to ensure that available samples, as well as associated data and information, subject to utilization by natural or juridical persons under their jurisdiction and control are deposited in publicly accessible databases or repositories, maintained either nationally or

internationally, as soon as they become available and no later than three years from the start of the relevant utilization, taking into account current international practice in these fields.

4. Access to the original samples and associated data and information in the databases and repositories under a Party's jurisdiction may be subject to reasonable conditions as set out in this paragraph:

(a) The need to preserve the physical integrity of original samples;

(b) The reasonable costs associated with maintaining the relevant database, biorepository or gene bank in which the sample, data or information is held;

(c) The reasonable costs associated with providing access to the sample, data or information.

[5. Monetary benefits shall be shared through the financial mechanism with the modalities determined by the Conference of the Parties such as:

(a) Milestone payments;

(b) Royalties;

(c) Other forms as are determined by the Conference of the Parties on the basis of recommendations by the access and benefit-sharing mechanism.]

[6. The Conference of the Parties shall determine the rate of payments related to monetary benefits on the basis of the recommendations of the access and benefit-sharing mechanism. The initial rate of payment shall be 2 per cent of the value of sales of the product the commercialization of which is based on the utilization of marine genetic resources of areas beyond national jurisdiction. The rate shall increase by 1 per cent for each subsequent year until the twelfth year and shall remain at 8 per cent thereafter, except as otherwise determined by the Conference of the Parties.]

[7. The payments shall be made through the financial mechanism established under article 52,

which shall distribute them to Parties to this Agreement, on the basis of equitable sharing criteria, taking into account the interests and needs of developing States Parties, in particular the least developed countries, landlocked developing countries, geographically disadvantaged States, small island developing States, coastal African States, archipelagic States and developing middle-income countries, taking into account the special circumstances of small island developing States, in accordance with mechanisms established by the access and benefit-sharing mechanism.]

8. Parties shall take the necessary legislative, administrative or policy measures, as appropriate, with the aim of ensuring that benefits arising from activities with respect to marine genetic resources of areas beyond national jurisdiction by natural or juridical persons under their jurisdiction and control are shared in accordance with this Agreement.

Article 11
Fair and equitable sharing of monetary and non-monetary benefits

1. The monetary and non-monetary benefits arising from activities with respect to marine genetic resources of areas beyond national jurisdiction shall be shared in a fair and equitable manner in accordance with this Part and contribute to the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction.

2. ~~[~~Non-monetary~~]~~ benefits shall be shared ~~[and may be]~~ in the form of:

(a) Access *ex situ* to marine genetic resource samples, sample collections and digital sequence information on marine genetic resources, as per FAIR and CARE principles and good practice in data governance in accordance with internationally agreed practice;

(b) Information contained in the notifications, along with relevant batch identifiers provided in accordance with article 10 in publicly searchable and accessible forms;

(c) Transfer of technology to meet the objectives of this Part, ~~in line with relevant modalities provided under Part V of this Agreement;~~ /

(d) Capacity-building, including by financing research programmes, and directly relevant and substantial partnership opportunities for scientists and researchers in research projects, and dedicated initiatives, particularly for developing States, taking into account the special circumstances of small island developing States and indigenous peoples and local communities;

(e) Open access to findable, accessible, interoperable and reusable (FAIR) scientific data in accordance with internationally agreed practice in those fields;

(f) Increased technical and scientific cooperation, in particular with scientists from and scientific institutions in developing States;

~~†~~(g) Other forms of benefits as determined by the Conference of the Parties on the basis of recommendations by the access and benefit-sharing mechanism.~~†~~

3. Parties shall take the necessary legislative, administrative or policy measures to ensure that:

(a) original or available samples subject to utilization by natural or juridical persons under their jurisdiction are deposited in publicly accessible repositories as soon as possible and no later than one year from the start of the relevant utilization;

(b) metadata and digital sequence information on genetic resources subject to utilization by natural or juridical persons under their jurisdiction are deposited in publicly accessible databases immediately or as soon as justifiably necessary thereafter;

~~shall be maintained either nationally or internationally, as soon as they become available and no later than three years from the start of the relevant~~

~~utilization, taking into account current international practice in these fields.~~

4. Access to the original samples and associated metadata and information in the databases and repositories under a Party's jurisdiction may be subject to reasonable conditions as set out in this paragraph:

(a) The need to preserve the physical integrity of original samples;

(b) The reasonable costs associated with maintaining the relevant database, biorepository or gene bank in which the sample, data or information is held;

(c) The reasonable costs associated with providing access to the sample, data or information;

(d) The need to provide access on fair, most favourable terms, including on concessional and preferential terms, to researchers and research institutions from developing countries.

5. Monetary benefits shall be ~~shared~~ paid annually into a tiered partnership fund; the applicable tier to be determined by the Conference of the Parties based on the recommendations of the access and benefit sharing mechanism taking into account, *inter alia*:

(a) The nature and extent of all activities related to marine genetic resources, and outcomes reported under Article 10;

(b) The commercialization of products based on the utilization of marine genetic resources and digital sequence information on such resources, including through the application of biotechnology;

(c) The valuation of the monetary and non-monetary benefits to State Parties arising from the utilization of marine genetic resources and digital sequence information on such resources

(d) Contributions to capacity building and technical and scientific cooperation programmes and projects with respect to the activities regulated under this Part;

(d) The amount and source of philanthropic, private and state funding made available to support

activities related to marine genetic resource and digital sequence information on such resources, including any investment in trusted repositories and databases.

~~Monetary benefits shall be shared through the financial mechanism with the modalities determined by the Conference of the Parties such as:~~

(a) ~~Milestone payments;~~

~~(b) Royalties;~~

~~(c) Other forms as are determined by the Conference of the Parties on the basis of recommendations by the access and benefit-sharing mechanism.~~]

~~5 The Conference of the Parties shall determine the rate of payments related to monetary benefits on the basis of the recommendations of the access and benefit-sharing mechanism. The initial rate of payment shall be 2 per cent of the value of sales of the product the commercialization of which is based on the utilization of marine genetic resources of areas beyond national jurisdiction. The rate shall increase by 1 per cent for each subsequent year until the twelfth year and shall remain at 8 per cent thereafter, except as otherwise determined by the Conference of the Parties.~~]

[6. The tiered partnership fund payments shall be made through the financial mechanism established under article 52, which shall distribute them to Parties to this Agreement, on the basis of equitable sharing criteria, taking into account the interests and needs of developing States Parties, in particular the least developed countries, landlocked developing countries, geographically disadvantaged States, small island developing States, coastal African States, archipelagic States and developing middle-income countries, taking into account the special circumstances of small island developing States, and indigenous people and local communities, in accordance with mechanisms established by the access and benefit-sharing mechanism.].

> ~~8.~~ 7. Parties shall take the necessary legislative, administrative or policy measures, as appropriate, with the aim of ensuring that benefits arising from activities with respect to marine genetic resources of areas beyond national jurisdiction by natural or juridical persons under their jurisdiction ~~and control~~ are shared in accordance with this Agreement.

A critical element of non-monetary benefit sharing in Article 11 is the conditions on which access to resources and information is provided both before and after utilization commences. Therefore, primacy is given in these proposals to wording that imbues resources and information with accessibility and good governance where relevant. Further, the timeline and conditions for access being made available, differs depending on whether samples, original samples, marine genetic resources or digital sequence information on marine genetic resources are being referenced in an operative provision.

In text proposals under Article 11(2) (a) and (e) there is reference to good practices on data governance but note the qualification of 'internationally agreed' (see notes under 'Data management plan' in Article 1). Article 11 (2) list of non-monetary benefits will be a closed list unless Article 11(2) (f) is included. Art 11 (2) (f) also refers to the ABS mechanism and gives it authority to specify other forms of non-monetary benefits that may be unprecedented or emerging.

Article 11 (3) has been streamlined in line with the kinds of resource or information that is being referenced to make the specific obligation much clearer.

Article 11(2) (b) involves information related to Article 10 notifications which are submitted to the clearing house mechanism. The publicly accessible and searchable format of the data generated is an important part of the transparency of arrangements in Part II of the BBNJ agreement.

In Article 11 (2) (d) 'direct and substantial' emphasises the quality of partnership opportunities afforded to relevant scientists.

We recognise the need for Article 11(4) as there are costs to sharing samples; but we include a proposal to add 11(4)(d) to assuage any concerns about fairness. The terminology used here is taken from Article 45 of the FRDT (Modalities for the transfer of marine technology)

The Partnership Fund:

Article 11 (5) in the proposed text sets out monetary benefit sharing in the form of a recurring, tiered payment system as contributions to a partnership fund. The monetary benefit sharing proposal here combines five bases for monetary benefits to be assessed by the ABS mechanism. These are first, the nature and extent of activities related to marine genetic resources; this basis underpins flat fee payment models where users of marine genetic resources calibrate payments to usage of the resources. Individual access is not the key indicator. The aggregate level of activity is the key indicator.

Second is the principle of sharing of profits that may accrue from commercialization. Third is the valuation of the monetary and non-monetary benefits to State Parties arising from utilization of marine genetic resources. Fourth and fifth are

contributions to capacity building; and amount and source of funding made available to support activities related to marine genetic resources. The proposal is deliberately relatively open-ended and allows for a range of different ways in which the ABS Mechanism can set out the tier to which each State Party will contribute based on the information collected through notifications sent to the clearing house mechanism

These proposals take comfort from the developments in the CBD COP15 with respect to the recognition of the need to diversify revenue generation streams (Decision CBD/COP/DEC/15/7 'Resource Mobilisation' (19th December 2022)[12] and an long overdue acknowledgment of the need to share monetary benefits from the use of digital sequence information (Decision CBD/COP/DEC/15/9 'Digital Sequence Information on Genetic Resources (19th Dec 2022).[13] But above all, it avoids the pitfall of assuming all monetary benefits ought to come from a single untested revenue generation measure that relies on speculative, future commercial gains alone.

The approach in the textual proposals here is based on valuing in the round, the gains made by the activities and outcomes generated by scientific and economic activities related to marine genetic resources and digital sequence information on marine genetic resources. This, in our view is the right approach to actualise agreed common goals. It is backed up by for instance the Dasgupta report,[14] and by analysts like Oldham and Kindness who suggest in a report commissioned by the European Commission (2022) that the age of 'free' biodiversity is finished.[15]

[12] https://www.cbd.int/doc/decisions/cop-15/cop-15-dec-07-en.pdf
[13] https://www.cbd.int/doc/decisions/cop-15/cop-15-dec-09-en.pdf
[14] P. Dasgupta, 'The Economics of Biodiversity' (2021) UK Government Report
[15] P. Oldham and J. Kindness, 'Biodiversity Research and Innovation in Antarctica and the Southern Ocean' (2020) *bioRxiv* and P. Oldham, J. Kindness 'Sharing Digital Sequence Information' Study for the European Commission (2022), Available here https://doi.org/10.5281/zenodo.6557191

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Article 11
Fair and equitable sharing of benefits

OPTION II:

1. The benefits arising from marine genetic resources of areas beyond national jurisdiction shall be shared in a fair and equitable manner according to this Part.

2. Benefits shall include monetary and non-monetary benefits, including various types of contributions to support the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction.

3. Non-monetary benefits shall be shared in the form of:

(a) Access to samples and sample collections;
(b) Collection, access and utilization information contained in the notifications to the electronic system within the clearing-house mechanism provided in accordance with article 10;
(c) Transfer of technology;
(d) Capacity-building, including by financing dedicated initiatives, and partnership opportunities in research projects, particularly for developing countries;
(e) Findable, accessible, interoperable and reusable scientific data, including digital sequence information according to international practice in these fields;
(f) Access to digital sequence information and data related to marine genetic resources of areas beyond national jurisdiction, taking into account current international practice in the field;
(g) Increased scientific cooperation, particularly with scientists and scientific institutions from developing countries;
(h) Other forms as determined by the Conference of the Parties based on recommendations of the access and benefit sharing mechanism.

4. Monetary benefits shall be shared through the modalities determined by the Conference of the Parties such as:

(a) Milestone payments;
(b) Royalties;
(c) The initial rate of payment shall be 2 per cent of the value of sales of the Product at the first year. The rate shall increase by 1 per cent for each subsequent year until the twelfth year and shall remain at 8 per cent thereafter, except as otherwise determined by the Access and Benefit Sharing Mechanism;
(d) Other forms as are determined by the Conference of the Parties based on recommendations of the access and benefit sharing mechanism.

5. The Conference of the Parties shall determine the rate of payments related to monetary benefits based on the recommendations of the access and benefit sharing mechanism.

6. The payments shall be made through the financial mechanism established under article 52, which shall distribute them to Parties to this Agreement, on the basis of equitable sharing criteria, taking into account the interests and needs of developing States Parties, in particular least developed countries, landlocked developing countries, geographically disadvantaged States, small island developing States, coastal African States and developing middle-income countries, according to mechanisms established by the access and benefit sharing mechanism.

7. Parties shall take the necessary legislative, administrative or policy measures, as appropriate, with the aim of ensuring that benefits arising from the collection *in situ* of, access *ex situ*, including as digital sequence information, to, and the utilization of marine genetic resources of areas beyond national jurisdiction by natural or juridical persons under their jurisdiction are shared in accordance with this Agreement.

8. Parties shall promote cooperation on compliance concerning benefit sharing according to this Agreement.

Article 11 bis
Access and benefit-sharing mechanism

1. An access and benefit-sharing mechanism is hereby established.

2. The access and benefit-sharing mechanism shall be composed of members possessing appropriate qualifications nominated by Parties and elected by the Conference of the Parties taking into account gender balance and equitable geographic distribution, and providing for representation on the committee from developing States, including the least developed countries and small island developing States. The terms of reference and modalities for the operation of the committee shall be determined by the Conference of the Parties.

3. The mechanism may make recommendations to the Conference of the Parties on matters relating to this Part, including:

(a) Rules, guidelines or a code of conduct for the collection *in situ* of marine genetic resources, access *ex situ* and the utilization of such resources in accordance with this Part;

(b) Measures to implement decisions taken in accordance with this Part;

[(c) Rates or mechanisms for the sharing of monetary benefits in accordance with article 11;]

(d) Matters relating to this Part in relation to the clearing-house mechanism;

(e) Matters relating to this Part in relation to the financial mechanism established under article 52;

(f) Any other matters relating to this Part that the Conference of the Parties may request the access and benefit-sharing mechanism to address.

4. Each Party shall make available to the access and benefit-sharing mechanism, through the clearing-house mechanism, the information required under this Agreement, which shall include:

(a) Legislative, administrative and policy measures on access and benefit-sharing;

(b) Contact details and other relevant information on national focal points;

(c) Other information required pursuant to the decisions taken by the Conference of the Parties.

Article 11 bis
Access and benefit-sharing mechanism

1. An access and benefit-sharing mechanism is hereby established; The modalities for the operation of the mechanism shall be determined by the Conference of the Parties. A Preparatory Committee is tasked with immediately preparing for the establishment of such modalities and other necessary institutional arrangements for their consideration and adoption by the first Conference of the Parties.

2. The access and benefit-sharing mechanism shall be composed of members possessing appropriate technical, legal and ethical qualifications of the highest standards to ensure the effective exercise of the functions of the mechanism and will be nominated by Parties and elected by the Conference

of the Parties taking into account gender balance and equitable geographic distribution, ~~and providing for representation on the committee from developing States,~~ including the least developed countries and small island developing States, and at least [X]/[two] representatives of IPLCs. ~~The terms of reference and modalities for the operation of the committee shall be determined by the Conference of the Parties~~. No less than half of the members shall be from developing States.

3. The mechanism may make recommendations to the Conference of the Parties on matters relating to this Part, in a timely manner and as necessary, including:

(a) Rules~~,~~ guidelines or a code of conduct for all activities related to marine genetic resources and digital sequence information on marine genetic resources in accordance with this Part;

(b) Measures necessary to implement decisions taken in accordance with this Part;

(b)*bis* Measures necessary to implement a notification system, comprising the web platform or similar, within the clearing house mechanism, and the issuance of batch identifiers, notifications to the clearing house mechanism, or additional information required under art 11(5); and to ensure that information is submitted through standardised common formats that are publicly findable, accessible, interoperable and reusable, as appropriate.

(b)*ter* Guidelines for the implementation of open and responsible data governance in relation to marine genetic resources and digital sequence information on marine genetic resources, and research data and results from the utilization of both, including the consideration of FAIR, CARE and other international agreed principles.

(c) ~~[~~ Rates of tiered payments as per Art 11(5) and any other measures ~~mechanisms~~ necessary in relation to the partnership fund established under art 52 ~~for the sharing of monetary benefits in accordance with article 11;]~~

(d) Matters relating to this Part in relation to the clearing-house mechanism; and progress towards greater levels of automation of the notification system;

(e) Matters relating to this Part in relation to the financial mechanism established under article 52;

(e)*bis* The implementation of capacity building, technical and scientific cooperation and technology transfer measures, in accordance with this Part;

(f) the mechanisms, modalities and criteria to promote and enforce compliance with the obligations in this Part, and having recourse, as appropriate to the Implementation and Compliance Committee established in Article 53*ter*;

(g) the efficacy of the measures taken to ensure the equitable and fair sharing of monetary benefits and any payments made by Parties as per the tiered payment system;

(h) compliance with requests for information related to Article 10 and 11 notifications; Article 11 (5) and Art 11*bis*(4)(d);

[(i) guidance on limitations on the exercise of intellectual property rights under Art 12 that is in accordance with the objectives of this Part, and mutually supportive and consistent with relevant international agreements will be made available by the access and benefit sharing mechanism for use by Parties;]

~~(f)~~ (j) Any other matters relating to this Part that the Conference of the Parties may request the access and benefit-sharing mechanism to address.

4. Each Party shall make available to the access and benefit-sharing mechanism, through the clearing-house mechanism, the information required under this Agreement, which shall include:

(a) Legislative, administrative and policy measures on access and benefit-sharing;

(b) Contact details and other relevant information on national focal points;

(c) Other information required pursuant to the decisions taken by the Conference of the Parties.

(d) Any additional information needed to establish or revise the level of payments as per Art 11(5)

Article 11*bis* establishes the ABS mechanism as an institution under the BBNJ agreement. We propose that a Preparatory Committee is established immediately so that resources can be mobilized for the speedy implementation of the Treaty once it enters into force. This move appears to find support from key observers of the BBNJ process.[16]

Art 11*bis* (2) – representation from developing states is not the same as 'adequate' or 'balanced' representation. Composition of the mechanism is likely to be critical to achieve procedural fairness in accordance with this Part, so a 'majority or at least half' is suggested. We also propose representation by IPLCs as seen in the Compliance Committee of the Nagoya Protocol (COP MOP Decision NP1/4 para B2)

In this provision reference to qualifications – technical, legal and ethical – is used to ensure a rounded approach to the interpretation of the treaty modalities by the ABS mechanism. Equivalent wording could also be used that sees the function of the mechanism as straddling legal, scientific and aspirational terrain.

Article 11*bis*(3) provides the functions or terms of reference of the ABS mechanism. Article 11*bis* (3) (a) will allow for the mechanism to scrutinise the approach to 'digital sequence information on genetic resources' taken in these text proposals, namely the 'no-text' in Article 1, but use in operative provisions, and suggest recommendations to the Conference of the Parties as necessary.

Article 11*bis* (3)(b)*bis* is about the monitoring function for implementation of the agreement in a transparent way, and (3)(b)*ter* demonstrates the primacy of good practice in data governance. Here the ABS mechanism will have the ability to settle shared principles of good data governance as necessary to implement the agreement.

Article 11*bis* (3) (f) is an important element of compliance, bringing greater coherence with other Parts of the agreement. Sub para (h) is a necessary element of implementing the partnership fund in a transparent manner.

Article 11*bis* (3) (i) is in square brackets as it will depend on the approach taken in Article 12. The ABS mechanism will be able to make recommendations to the Conference of the Parties on the modalities of implementing a limitations and exceptions approach to intellectual property in this agreement.

Please see Explanatory Notes **C** in Part 6 for further information.

[16] KM Gjerde et al 'Getting beyond yes: fast-tracking implementation of the United Nations agreement for marine biodiversity beyond national jurisdiction' Ocean Sustainability (2022) 1:6; https://doi.org/10.1038/s44183-022-00006-2

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Article 11bis
Access and benefit sharing mechanism

1. An access and benefit sharing mechanism is hereby established. It shall serve, inter alia, as a means for establishing mandatory guidelines for benefit-sharing, in accordance with article 11, providing transparency and ensuring a fair and equitable sharing of both monetary and non-monetary benefits.

2. The access and benefit sharing mechanism shall be composed of members elected by the Conference of the Parties from among the candidates nominated by the Parties. If necessary, the Conference of the Parties may decide to increase the size of the mechanism having due regard to economy and efficiency. In the election of members of the mechanism, due account shall be taken of the need for equitable geographical representation, and majority of the members shall be from developing States.

3. Members of the mechanism shall have appropriate qualifications in the area of competence of that mechanism. Parties shall nominate candidates of the highest standards of competence and integrity with qualifications in relevant fields so as to ensure the effective exercise of the functions of the mechanism.

4. The mechanism shall:

(a) Make recommendations to the Conference of the Parties on matters relating to this Part of the agreement;
(b) Propose measures to implement decisions taken in accordance with this Agreement;
(c) Propose rates or mechanisms for the sharing of monetary benefits according to article 11;
(d) Review reports from Parties made under article 13;
(e) Make recommendations on matters relating to the clearing-house mechanism according to article 51 on access and benefit-sharing;
(f) Make recommendations on matters relating to the financial mechanism established under article 52;
(g) Make recommendations on other matters relating to this Part of the agreement.

5. Parties shall make available to the access and benefit sharing mechanism the information required by this Agreement, which shall include:

(a) Legislative, administrative and policy measures on access and benefit sharing;
(b) Information on national focal points;
(c) Other information required pursuant to the decisions taken by the Conference of the Parties.

6. The access and benefit sharing mechanism shall collect information on current international best practices relating to marine genetic resources of areas beyond national jurisdiction and make recommendations to the Conference of the Parties in the adoption of appropriate rules, guidelines or a code of conduct for the collection in situ of, access ex situ, including as digital sequence information, to, the utilization of such resources, and benefit sharing, according to this Agreement.

Article 13
Transparency and traceability

1. The Scientific and Technical Body shall, on instruction from the Conference of the Parties, collect information on current international best practices relating to activities with respect to marine genetic resources of areas beyond national jurisdiction. On the basis of its work, the Conference of the Parties may recognize these as guidelines or best practices on activities with respect to marine genetic resources of areas beyond national jurisdiction.

2. Transparency regarding the sharing of benefits arising from activities with respect to marine genetic resources of areas beyond national jurisdiction and traceability shall be achieved through notification to the clearing-house mechanism

3. Parties shall [annually] [biennially] [periodically] submit reports to the access and benefit-sharing mechanism on their implementation of the provisions in the Part on the utilization of marine genetic resources of areas beyond national jurisdiction and the sharing of benefits therefrom. The access and benefit-sharing mechanism shall review such reports and make recommendations to the Conference of the Parties. The Conference of the Parties may adopt the recommendations of the access and benefit-sharing mechanism to facilitate the implementation of this Part.

[4. The Conference of the Parties shall assess and review, at regular intervals, the issue of commercialization of products based on the utilization of marine genetic resources of areas

beyond national jurisdiction. If tangible and substantial monetary benefits arise therefrom, the Conference of the Parties will explore alternatives to identify the most appropriate processes for relevant financial contributions.]

[5. The Conference of the Parties shall determine appropriate guidelines for the implementation of this article, which shall take into account the national capabilities and circumstances of Parties.]

Article 13
Monitoring, Compliance and Transparency ~~and traceability~~

1. ~~[The Scientific and Technical Body shall, on instruction from the Conference of the Parties, collect information on current international best practices relating to activities with respect to marine genetic resources of areas beyond national jurisdiction. On the basis of its work, the Conference of the Parties may recognize these as guidelines or best practices on activities with respect to marine genetic resources of areas beyond national jurisdiction.]~~

~~2~~. 1 Transparency regarding the sharing of monetary and non-monetary benefits arising from activities with respect to marine genetic resources and digital sequence information on marine genetic resources of areas beyond national jurisdiction ~~and traceability~~ shall be achieved through notification to the web platform or similar within the clearing-house mechanism, use of batch identifiers in accordance with this part, and any relevant compliance measures elaborated in accordance with Article 11 *bis*.

~~3~~. 2 Parties shall ~~[annually]~~ ~~[~~biennially~~]~~ ~~[periodically]~~ submit publicly accessible compliance reports to the access and benefit-sharing mechanism on their implementation of the provisions in ~~the~~ this Part on all activities with respect to ~~the utilization of~~ marine genetic resources and digital sequence information on marine genetic resource of areas beyond national jurisdiction and the sharing of benefits therefrom; including measures taken to ensure information

related to notifications in arts 10, 11 and art 11*bis*(4) is collected from national or juridical persons under their jurisdiction. The access and benefit-sharing mechanism shall review such reports in light of the objectives of this Part and make recommendations to the Conference of the Parties. The Conference of the Parties may adopt the recommendations of the access and benefit-sharing mechanism to facilitate the implementation of this Part.

3. Recommendations made by the access and benefit sharing mechanism to the Conference of the Parties based on compliance reports, may include the recommendation that natural or juridical persons under the jurisdiction of the Parties, taking into account the national capabilities and circumstances of Parties, cease any or all activities related to marine genetic resources.

4. Parties shall take the necessary legislative, administrative or policy measures to ensure cooperation, transparency and monitoring of compliance by national or juridical persons under their jurisdiction in accordance with State Party obligations set out this Part.

5. Parties shall cooperate in the automation of all notifications, collection and receipt of information to the ABS mechanism through the further development and enhancement of existing information systems and cooperation in the establishment of cost-effective systems at the appropriate level such as the subregional or regional level.

~~[4. The Conference of the Parties shall assess and review, at regular intervals, the issue of commercialization of products based on the utilization of marine genetic resources of areas beyond national jurisdiction. If tangible and substantial monetary benefits arise therefrom, the Conference of the Parties will explore alternatives to identify the most appropriate processes for relevant financial contributions.]~~

~~[5. The Conference of the Parties shall determine appropriate guidelines for the implementation of this~~

~~article, which shall take into account the national capabilities and circumstances of Parties.]~~

Article 13 (1) sets out the mandate of the ABS mechanism to have oversight of transparency modalities including appropriate notifications and use of the 'batch identifier'; hence 'traceability' is deleted as redundant here. Article 13 (2) provides a mechanism for State Parties to monitor their own compliance by the device of 'compliance reports'. Any implications of non-compliance under Article 13(3) would be a matter for the Conference of the Parties and will be monitored by the ABS mechanism under Article 11*bis* (3) (f).

Compliance reports may be fulfilled by designated national focal points. It may also be possible to institute regional focal points for compliance in order to ease the burden of developing State Parties. Article 13(4) ensure that State Party obligations apply to nationals and juridical persons under their jurisdiction and is necessary given the trend away from user obligation to State Party obligations in the BBNJ negotiations.

Article 13(5) is an important provision that takes into account the challenges of implementation and the desire for non-onerous measures. As explained further in Explanatory Note **B** in Part 6, automation can be enhanced using existing information-based systems. In the future it ought to be possible to connect entities making information available to the entities making notifications in a streamlined and transparent manner. In that sense the text proposal here is both necessary and aspirational.

PACC:

Article 13
Monitoring and transparency system for benefit sharing

OPTION I:

1. Monitoring and transparency of the collection in situ of, access ex situ, including as digital sequence information, to, and the utilization of marine genetic resources of areas beyond national jurisdiction shall be carried out through an open and self-declaratory [electronic] system within the clearing-house mechanism, according to rules, regulations and procedures adopted by the Conference of the Parties as recommended by the access and benefit sharing mechanism.

2. Parties shall [annually] [biennially] [periodically] submit reports to the access and benefit sharing mechanism about the utilization of marine genetic resources of areas beyond national jurisdiction under their national jurisdiction and sharing of benefits therefrom. Such reports shall be submitted through a national focal point designated by each Party. The access and benefit sharing mechanism shall review such reports and make recommendations to the Conference of the Parties.

3. The access and benefit sharing mechanism shall gather the information received through the clearing-house mechanism, including that submitted by national focal points, and make it available to Parties, which may submit comments.

4. The access and benefit sharing mechanism will prepare a report that shall include the comments received in accordance with paragraph 5 above, for the consideration of the Conference of the Parties, and the Conference of the Parties may adopt the recommendations of the access and benefit sharing mechanism to facilitate the implementation of this Part.

5. The Conference of the Parties shall determine appropriate guidelines for the implementation of this [article] [Part], which shall consider the national capabilities and circumstances of Parties.

Part 4: Article 12

Article 12 – Intellectual Property Rights

[Article 12
Intellectual property rights

Parties shall implement this Agreement and relevant agreements concluded under the auspices of the World Intellectual Property Organization and the World Trade Organization in a mutually supportive and consistent manner.]

~~[~~Article 12
Intellectual property rights

1. The access, utilisation and commercial exploitation of marine genetic resources under this Agreement and protected by intellectual property rights may be subject to reasonable limitations and exceptions that further the objectives of this Agreement, including equitable benefit sharing, capacity building and technology transfer. ~~Parties shall implement this Agreement and relevant agreements concluded under the auspices of the World Intellectual Property Organization and the World Trade Organization in a mutually supportive and consistent manner.]~~

2. The provisions of this Agreement shall not affect the rights and obligations of any Party deriving from any existing international agreement, except where the exercise of those rights and obligations would cause serious damage or threat to marine biological diversity or be detrimental to achieving the Objectives of this Agreement or the fulfilment of the obligations established under this Part.

The current FRDT text has some problematic elements. Not all State Parties here may have signed up to the same intellectual property related agreements; in that context the reference to be 'mutually supportive' is unclear. Reference to 'relevant agreements' may create confusion if future agreements are entered into and constrain State Party measures in unforeseen ways.

Alternatively, given the square brackets in the FRDT the no-text option on intellectual property rights also presents certain knotty considerations:

1. Monopolisation of information (through IP rights) is a form of 'appropriation' or laying claim to resources and would therefore, arguably,

contravene Art 241 UNLCOS.[17] 'No-text' on intellectual property option removes the possibility of moderating the constricting effect of such rights in carefully justified circumstances.

2. 'No text' on intellectual property is a *de facto* acceptance that the BBNJ agreement cannot change the status quo with respect to the private appropriation of marine genetic resources; this position arguably diminishes the common heritage of mankind principle (such as it might exist in the BBNJ agreement) in areas beyond national jurisdiction.
3. Intellectual property has implications not just for commercialisation and monetary benefit sharing but also for technology transfer and sharing of information in general and for information that can be unilaterally designated confidential or commercially sensitive, in particular.

Two alternative textual proposals are provided here. Both proposals take a 'limitations and exceptions' (L&E) approach to Article 12. Para 1 uses 'may be subject' to which means where limitations or exceptions are justified and necessary. In para 2, there is emphasis on the obligations under this Part of the agreement (rather than the whole agreement), which is a moderate approach in a context where the implications of intellectual property rights are perhaps better understood.

Para 1 states the possibility of limitations and exceptions when circumstances require it, whereas para 1 is the formulation of a BBNJ exception.

As there has been little substantive discussion on Article 12, additional notes are provided in Explanatory Note **C** in Part 6.

These proposals do not prevent the grant of IP rights, and so arguably do not interfere directly with any international legal obligations. However, they provide an opportunity to use existing interpretative space for limitations and exceptions to the exploitation of these rights, without implying a hierarchy of operation. There will be no direct impact in national laws, only State Parties that desire to institute such measures would do so. Such measures will continue to need to be cognizant of existing international legal obligations. In these proposals the ABS mechanism would have the authority to formulate guidelines on the specific circumstances under which a limitation or an exception may apply under Art 11*bis* (3) (i)

[17] Art 241 (Non-recognition of marine scientific research activities as the legal basis for claims) Marine scientific research activities shall not constitute the legal basis for any claim to any part of the marine environment or its resources.

Part 5: Clean Text Proposals

Article 1
Use of terms

x. 'Activities with respect to marine genetic resources' includes collection in situ, storage of, access ex situ, and the utilization of marine genetic resources and digital sequence information on marine genetic resources, and their commercialization.

For the purposes of this Agreement:

1. "Access *ex situ*", in relation to marine genetic resources of areas beyond national jurisdiction, means access to samples, marine genetic resources and/or digital sequence information on marine genetic resources held in repositories or databases.

6. "Collection *in situ*", in relation to marine genetic resources, means the collection, ~~or~~ sampling, sequencing or transmission of marine genetic resources or digital sequence information and data on marine genetic resources in areas beyond national jurisdiction.

x. "Data Management Plan" under this agreement is one that sets out how marine genetic resources, samples or digital sequence information on marine genetic resources, research data, or data products, conform to principles of open and responsible data governance.

11. "Marine genetic resources" means any material or information of marine plant, animal, microbial or other origin of actual or potential value.

13. "Marine technology" includes:

(i) information and data, provided in a user-friendly format, on marine sciences and related marine operations and services;

(j) manuals, guidelines, criteria, standards, reference materials;

(k) sampling and methodology equipment;

(l) observation facilities and equipment for *in situ* and laboratory observations, analysis and experimentation; computer and computer software, including models and modelling techniques;

(m) equipment and research tools necessary to conduct research and development on marine genetic resources and digital sequence information on marine genetic resources;

(n) ~~and~~ expertise, knowledge, skills, technical, scientific and legal know-how and analytical methods;

(o) (a) to (f) as applicable to marine genetic resources and digital sequence information on marine genetic resources, and the fair and equitable sharing of benefits thereof;

(p) (a) to (g) as related to the conservation and sustainable use of marine biodiversity

17. "Utilization of marine genetic resources" means to conduct any research and development on marine genetic resources or digital sequence information on marine genetic resources and commercialization, including through the application of biotechnology, as defined in article 1, paragraph 5

Article 5
General principles and approaches

In order to achieve the objective of this Agreement, Parties shall be guided by the following:

(a) The polluter-pays principle;

(b) The principle of the common heritage of mankind~~;~~

(c) The principle of fair and equitable sharing of benefits;

PART II
MARINE GENETIC RESOURCES, AND THE SHARING OF BENEFITS

Article 7
Objectives

The objectives of this Part are:

(a) The fair and equitable sharing of benefits arising from marine genetic resources of areas beyond national jurisdiction for the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction;

(b) The building and development of the capacity of Parties, particularly developing States Parties, in particular the least developed countries, landlocked developing countries, geographically disadvantaged States, small island developing States, coastal African States, archipelagic States and developing middle-income countries, taking into account the special circumstances of small island developing States and indigenous peoples and local communities, to carry out activities with respect to marine genetic resources and digital sequence information on marine genetic resources of areas beyond national jurisdiction, through *inter alia* the transfer of marine technology, and the sharing of benefits;

(c) The generation of knowledge, scientific understanding and technological innovation, [including through the development and conduct of marine scientific research] as fundamental contributions to the implementation of this Agreement;

(d) The development and transfer of marine technology in favour of developing countries in accordance with this Agreement

Article 8
Application

1. The provisions of this Agreement shall apply to all activities with respect to marine genetic resources of areas beyond national jurisdiction after the entry into force of this Agreement and benefits arising from these activities.

2. The provisions of this Part shall not apply to the use of fish and other biological resources as a commodity and fishing and fishing activities regulated under relevant international law.

Article 9
Activities with respect to marine genetic resources of areas beyond national jurisdiction

1. Activities with respect to marine genetic resources of areas beyond national jurisdiction may be carried out by all Parties, irrespective of their geographical location, and natural or juridical persons under the jurisdiction of the Parties in accordance with this Agreement.

2. Parties shall promote cooperation ~~in~~ on all activities with respect to marine genetic resources of areas beyond national jurisdiction.

3. Collection *in situ* of marine genetic resources of areas beyond national jurisdiction shall be conducted with due regard for the rights and legitimate interests of coastal States in areas within their national jurisdiction and also with due regard for the interests of other States in areas beyond national jurisdiction, in accordance with the Convention. To this end, Parties shall cooperate, in accordance with this Part, including through specific modalities for the operation of the access and benefit sharing mechanism and clearing-house mechanism determined under article 51 with a view to implement this Agreement.

4. No State shall claim or exercise sovereignty or sovereign rights over marine genetic resources of

areas beyond national jurisdiction. No such claim or exercise of sovereignty or sovereign rights shall be recognized.

5. The utilization of marine genetic resources of areas beyond national jurisdiction shall be for the interests of all States and the benefit of mankind as a whole, particularly for the benefit of advancing the scientific knowledge of humanity and promoting the conservation and sustainable use of marine biological diversity, taking into consideration the interests and needs of developing States.

6. All activities with respect to marine genetic resources of areas beyond national jurisdiction shall be carried out exclusively for peaceful purposes.

Article 10
Notification on activities with respect to marine genetic resources of areas beyond national jurisdiction

1. Parties shall take the necessary legislative, administrative or policy measures to ensure that any natural or juridical persons under their jurisdiction and control that engage in the collection *in situ* of marine genetic resources of areas beyond national jurisdiction make available the information specified in paragraph 2 of this Article. Such collection *in situ* shall be subject to notification to a web platform or similar, within the clearing-house mechanism in accordance with this Part, and shall be acknowledged by an automatically generated batch identifier.

2. The following information, and necessary updates, shall be notified to the web platform or similar, within the clearing-house mechanism six months or as early as possible prior to the collection *in situ* of marine genetic resources of areas beyond national jurisdiction:

(a) The nature and objectives of the project under which the collection is carried out, including,

as appropriate, any programme(s) of which it forms part; and the amount and source of funding.

(b) ŧThe subject matter of the research or, if known, marine genetic resources to be targeted or collected, and the purposes for which the marine genetic resources will be collected;ŧ

(c) The geographical areas in which the collection is to be undertaken;

(d) A summary of the method and means to be used for collection, including the name, tonnage, type and class of vessels, scientific equipment and/or study methods employed, and any contribution to major programmes;

(e) The expected date of first appearance and final departure of the research vessels, or deployment of the equipment and its removal, as appropriate.

(f) The name(s) of the sponsoring institution(s) and the person in charge of the project;

(g) A data management plan, including the repository and/or databases in which any marine genetic resource samples or digital sequence information on marine genetic resources, research data or data products reside or will reside

(h) Opportunities for scientists of all States, in particular for scientists from developing States, to be directly and substantially involved in or associated with the project;

(i) The extent to which it is considered that States that may need and request technical assistance, in particular developing States, should be able to participate or to be represented in the project.

3. Parties shall ensure that natural or juridical persons under their jurisdiction, having completed *in situ* collection of marine genetic resources of areas beyond national jurisdiction, shall make the following information available in order to enable notification to the web platform or similar within the clearing-house mechanism as soon as it becomes available, but no later than one year from the collection *in situ*

(a) The repositories and/or databases, where all marine genetic resources collected *in situ* and digital sequence information on marine genetic

resources, are or will be held; with their associated batch identifiers

(b) A report detailing the geographical area from which marine genetic resources were collected, including information on the latitude, longitude and depth of collection, and, to the extent available, ~~the~~ [any] findings from the activity undertaken.

(c) Any necessary updates to the data management plan provided under 10 (2) (g) above

4 Parties shall ensure that all databases and repositories under their jurisdiction are required to annually notify the web platform or similar within the clearing-house mechanism of all access *ex situ* of samples, marine genetic resources and digital sequence information on marine genetic resources, linked to their batch identifiers, in a manner that is publicly searchable and accessible

5 Parties shall ensure that natural or juridical persons under their jurisdiction utilizing marine genetic resources of areas beyond national jurisdiction and digital sequence information on such resources, make the following information, including batch identifiers, available in order that the clearing-house mechanism can be notified immediately or as soon as possible thereafter

(a) Where the results of the utilization can be found, including digital sequence information on marine genetic resources;

(b) Where available, details of the post-collection notification to the clearing-house mechanism related to the marine genetic resources that were the subject of utilization;

(c) Where the original sample(s) that is the subject of utilization, is held;

(d)The modalities envisaged for access *ex situ* of samples and of digital sequence information on marine genetic resources being utilized; and a data management plan for the same

(e) Any [material] outcomes of the utilization such as publications, intellectual property rights and product development

(f) Once marketed, information on sales of relevant products and any further developments

~~7~~.6 Parties shall obtain information on commercialization of products based on the utilization of marine genetic resource and digital sequence information on such resources from natural or juridical persons under their jurisdiction and notify the clearing-house mechanism of the information received along with all relevant batch identifiers

~~8~~.7 State Parties shall [periodically] [annually] notify the clearing house mechanism of the amount and source of philanthropic, private and state funding made available to support any activities related to marine genetic resource and digital sequence information on marine genetic resources, including any investment in repositories and databases.

8. Parties shall nominate a National Focal Point responsible for collecting or receiving, and transmitting the information to be notified in accordance with this Article to the web portal or similar within the clearing house mechanism.

Article 11
Fair and equitable sharing of monetary and non-monetary benefits

1. The monetary and non-monetary benefits arising from activities with respect to marine genetic resources of areas beyond national jurisdiction shall be shared in a fair and equitable manner in accordance with this Part and contribute to the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction.

2. Non-monetary benefits shall be shared in the form of:

(a) Access *ex situ* to marine genetic resource samples, sample collections and digital sequence information on marine genetic resources, as per FAIR and CARE principles and good practice in

data governance in accordance with internationally agreed practice;

(b) Information contained in the notifications, along with relevant batch identifiers provided in accordance with article 10 in publicly searchable and accessible forms;

(c) Transfer of technology to meet the objectives of this Part,

(d) Capacity-building, including by financing research programmes, and directly relevant and substantial partnership opportunities for scientists and researchers in research projects, and dedicated initiatives, particularly for developing States, taking into account the special circumstances of small island developing States and indigenous peoples and local communities;

(e) Open access to findable, accessible, interoperable and reusable (FAIR) scientific data in accordance with internationally agreed practice in those fields;

(f) Increased technical and scientific cooperation, in particular with scientists from and scientific institutions in developing States;

(g) Other forms of benefits as determined by the Conference of the Parties on the basis of recommendations by the access and benefit-sharing mechanism.

3. Parties shall take the necessary legislative, administrative or policy measures to ensure that:

(a) original or available samples subject to utilization by natural or juridical persons under their jurisdiction are deposited in publicly accessible repositories as soon as possible and no later than one year from the start of the relevant utilization;

(b) metadata and digital sequence information on genetic resources subject to utilization by natural or juridical persons under their jurisdiction are deposited in publicly accessible databases immediately or as soon as justifiably necessary thereafter;

4. Access to the original samples and associated metadata and information in the databases and repositories under a Party's jurisdiction may be subject to reasonable conditions as set out in this paragraph:

(a) The need to preserve the physical integrity of original samples;

(b) The reasonable costs associated with maintaining the relevant database, biorepository or gene bank in which the sample, data or information is held;

(c) The reasonable costs associated with providing access to the sample, data or information;

(d) The need to provide access on fair, most favourable terms, including on concessional and preferential terms, to researchers and research institutions from developing countries.

5. Monetary benefits shall be ~~shared~~ paid annually into a tiered partnership fund; the applicable tier to be determined by the Conference of the Parties based on the recommendations of the access and benefit sharing mechanism taking into account, *inter alia*:

(a) The nature and extent of all activities related to marine genetic resources, and outcomes reported under Article 10;

(b) The commercialization of products based on the utilization of marine genetic resources and digital sequence information on such resources, including through the application of biotechnology;

(c) The valuation of the monetary and non-monetary benefits to State Parties arising from the utilization of marine genetic resources and digital sequence information on such resources

(d) Contributions to capacity building and technical and scientific cooperation programmes and projects with respect to the activities regulated under this Part;

(d) The amount and source of philanthropic, private and state funding made available to support activities related to marine genetic resource and digital sequence information on such resources,

including any investment in trusted repositories and databases.

6. The tiered partnership fund payments shall be made through the financial mechanism established under article 52, which shall distribute them to Parties to this Agreement, on the basis of equitable sharing criteria, taking into account the interests and needs of developing States Parties, in particular the least developed countries, landlocked developing countries, geographically disadvantaged States, small island developing States, coastal African States, archipelagic States and developing middle-income countries, taking into account the special circumstances of small island developing States, and indigenous people and local communities, in accordance with mechanisms established by the access and benefit-sharing mechanism.

7. Parties shall take the necessary legislative, administrative or policy measures, as appropriate, with the aim of ensuring that benefits arising from activities with respect to marine genetic resources of areas beyond national jurisdiction by natural or juridical persons under their jurisdiction ~~and control~~ are shared in accordance with this Agreement.

Article 11 bis
Access and benefit-sharing mechanism

1. An access and benefit-sharing mechanism is hereby established; the modalities for the operation of the mechanism shall be determined by the Conference of the Parties. A Preparatory Committee is tasked with immediately preparing for the establishment of such modalities and other necessary institutional arrangements for their consideration and adoption by the first Conference of the Parties.

2. The access and benefit-sharing mechanism shall be composed of members possessing appropriate technical, legal and ethical qualifications of the highest standards to ensure the effective exercise of the functions of the mechanism and will be

nominated by Parties and elected by the Conference of the Parties taking into account gender balance and equitable geographic distribution, including the least developed countries and small island developing States, and at least [X]/[two] representatives of IPLCs. No less than half of the members shall be from developing States.

3. The mechanism may make recommendations to the Conference of the Parties on matters relating to this Part, in a timely manner and as necessary, including:

(f) Rules~~,~~ guidelines or a code of conduct for all activities related to marine genetic resources and digital sequence information on marine genetic resources in accordance with this Part;

(g) Measures necessary to implement decisions taken in accordance with this Part;

(b)*bis* Measures necessary to implement a notification system, comprising the web platform or similar, within the clearing house mechanism, and the issuance of batch identifiers, notifications to the clearing house mechanism, or additional information required under art 11(5); and to ensure that information is submitted through standardised common formats that are publicly findable, accessible, interoperable and reusable, as appropriate.

(b)*ter* Guidelines for the implementation of open and responsible data governance in relation to marine genetic resources and digital sequence information on marine genetic resources, and research data and results from the utilization of both, including the consideration of FAIR, CARE and other international agreed principles.

(h) Rates of tiered payments as per Art 11(5) and any other measures ~~mechanisms~~ necessary in relation to the partnership fund established under art 52

(i) Matters relating to this Part in relation to the clearing-house mechanism; and progress

towards greater levels of automation of the notification system;

(j) Matters relating to this Part in relation to the financial mechanism established under article 52;

(e)*bis* The implementation of capacity building, technical and scientific cooperation and technology transfer measures, in accordance with this Part;

(k) the mechanisms, modalities and criteria to promote and enforce compliance with the obligations in this Part, and having recourse, as appropriate to the Implementation and Compliance Committee established in Article 53*ter*;

(l) the efficacy of the measures taken to ensure the equitable and fair sharing of monetary benefits and any payments made by Parties as per the tiered payment system;

(m) compliance with requests for information related to Article 10 and 11 notifications; Article 11 (5) and Art 11*bis*(4)(d);

[(i) guidance on limitations on the exercise of intellectual property rights under Art 12 that is in accordance with the objectives of this Part, and mutually supportive and consistent with relevant international agreements will be made available by the access and benefit sharing mechanism for use by Parties;]

(j) Any other matters relating to this Part that the Conference of the Parties may request the access and benefit-sharing mechanism to address.

4. Each Party shall make available to the access and benefit-sharing mechanism, through the clearing-house mechanism, the information required under this Agreement, which shall include:

(a) Legislative, administrative and policy measures on access and benefit-sharing;

(b) Contact details and other relevant information on national focal points;

(c) Other information required pursuant to the decisions taken by the Conference of the Parties.

(d) Any additional information needed to establish or revise the level of payments as per Art 11(5)

Article 12
Intellectual property rights

1. The access, utilisation and commercial exploitation of marine genetic resources under this Agreement and protected by intellectual property rights may be subject to reasonable limitations and exceptions that further the objectives of this Agreement, including equitable benefit sharing, capacity building and technology transfer.

2. The provisions of this Agreement shall not affect the rights and obligations of any Party deriving from any existing international agreement, except where the exercise of those rights and obligations would cause serious damage or threat to marine biological diversity or be detrimental to achieving the Objectives of this Agreement or the fulfilment of the obligations established under this Part.

Article 13
Monitoring, Compliance and Transparency

1 Transparency regarding the sharing of monetary and non-monetary benefits arising from activities with respect to marine genetic resources and digital sequence information on marine genetic resources of areas beyond national jurisdiction shall be achieved through notification to the web platform or similar within the clearing-house mechanism, use of batch identifiers in accordance with this part, and any relevant compliance measures elaborated in accordance with Article 11*bis*.

2 Parties shall biennially submit publicly accessible compliance reports to the access and benefit-sharing mechanism on their implementation of the provisions in ~~the~~ this Part on all activities with

respect to marine genetic resources and digital sequence information on marine genetic resource of areas beyond national jurisdiction and the sharing of benefits therefrom; including measures taken to ensure information related to notifications in arts 10, 11 and art 11*bis*(4) is collected from national or juridical persons under their jurisdiction. The access and benefit-sharing mechanism shall review such reports in light of the objectives of this Part and make recommendations to the Conference of the Parties. The Conference of the Parties may adopt the recommendations of the access and benefit-sharing mechanism to facilitate the implementation of this Part.

3. Recommendations made by the access and benefit sharing mechanism to the Conference of the Parties based on compliance reports, may include the recommendation that natural or juridical persons under the jurisdiction of the Parties, taking into account the national capabilities and circumstances of Parties, cease any or all activities related to marine genetic resources.

4. Parties shall take the necessary legislative, administrative or policy measures to ensure cooperation, transparency and monitoring of compliance by national or juridical persons under their jurisdiction in accordance with State Party obligations set out this Part.

5. Parties shall cooperate in the automation of all notifications, collection and receipt of information to the ABS mechanism through the further development and enhancement of existing information systems and cooperation in the establishment of cost-effective systems at the appropriate level such as the subregional or regional level.

Part 6: Explanatory Notes

Law Society Economy Working Papers

30/2023

A. Digital Sequence Information in the UN High Seas Treaty in the wake of the Global Biodiversity Framework

Claudio Chiarolla, Paul Oldham, and Siva Thambisetty*

Do not circulate.

(Forthcoming as an LSE Law and Policy Brief, January 2023)

In December 2022, the 15th meeting of the Conference of the Parties (COP) to the Convention on Biological Diversity (CBD) adopted the Kunming-Montreal Global Biodiversity Framework (GBF).[1] The GBF comprises a set of 4 goals and 23 targets for the protection and restoration of biodiversity, including a North-South target for the effective conservation and management of at least 30% of the world's land and water by 2030. The GBF itself was adopted as a package within a bundle of six intertwined CBD COP decisions addressing: resource mobilization; capacity building and technical and scientific cooperation; a monitoring framework; mechanisms for planning, monitoring, reporting, and review; and, importantly, a decision on benefit-sharing from the use of digital sequence information (DSI) on genetic resources.[2] However, the latter decision should have been anticipated more than a decade ago. That it was not remains as an indictment of the asymmetric nature of international negotiations on common goals and interests.

In 1992, when the Convention on Biological Diversity was adopted, there was limited awareness of the importance of the intangible or informational components of genetic resources outside the scientific community. The informational dimension of genetic resources was recognised early on by economists in connection with intellectual property rights but the main focus of debates on benefit-sharing concentrated on

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[1] CBD/COP/DEC/15/4

[2] E Tsioumani et al., Summary of the UN Biodiversity Conference: 7-19 December 2022, Earth Negotiations Bulletin (IISD) Vol. 9, No. 796, <https://enb.iisd.org/sites/default/files/2022-12/enb09796e_0.pdf>

physical material.[3] The negotiations for what became the Nagoya Protocol were initiated in 2003 at the time of the completion of the Human Genome Project, the rapid expansion of whole genome sequencing projects to a wide range of other organisms and the emergence of synthetic biology. It was widely recognised that genomics raised a wide range of ethical, legal, economic, social and environmental challenges with questions of intellectual property rights as a significant focus of controversy. The challenges presented by genome sequencing and genomics for access and benefit sharing were directly raised in the early stages of the negotiation of the Nagoya Protocol by Paul Oldham and subsequently by others and pursued by developing countries.[4] However, explicit recognition of the informational dimensions of genetic resources in the scope of what became the Protocol was categorically rejected by developed countries.

As a consequence, the Nagoya Protocol is silent on the informational dimensions of genetic resources. This left Parties, notably developing countries, to elaborate their own laws and regulations to include genetic information while for developed countries it was possible to argue that DSI is out of scope of laws and implementing regulations setting out user obligations under the Protocol. In 2015, the expression 'digital sequence information' emerged in CBD expert discussions on synthetic biology.[5] Shortly thereafter, developing countries, led by the Africa Group, increasingly demanded action on DSI as a wider issue under the CBD, the Nagoya Protocol, and related processes including BBNJ. A full twelve years after the adoption of the Nagoya Protocol and six years after the subject of digital sequence information first appeared on the CBD COP agenda, COP 15 adopted decision CBD/COP/DEC/15/9 (hereafter Decision 15/9) on digital sequence information consisting of a set of criteria and framing principles and a process through which the Convention will ultimately address digital sequence information.

This paper considers the implications of this decision for the final stages of the negotiation of the new UN High Seas Treaty. The failure of the CBD to address digital sequence information at the time of the negotiation of the Nagoya Protocol has led governments to a messy and tangled place. Failure to explicitly recognise digital sequence information in the text of the new High Seas Treaty threatens to repeat and exacerbate this mess. In light of the recognition of digital sequence information by the CBD COP, lack of explicit recognition of digital sequence information would be regressive and raise serious questions about the credibility of the new instrument and whether it was negotiated in good faith.

The Kunming-Montreal Global Biodiversity Framework and the CBD COP Decision on DSI provide a technical framework which makes it clear that the world

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[3] JH Vogel, Genes for Sale: Privatization as a Conservation Strategy. Oxford University Press (1994). T Swanson, (Ed) Intellectual Property Rights and Biodiversity Conservation. Cambridge University Press: Cambridge (1995).

[4] P Oldham 'Global Status and Trends in Intellectual Property Claims: Genomics, Proteomics and Biotechnology; Submission to the AD HOC OPEN-ENDED WORKING GROUP ON ACCESS AND BENEFIT-SHARING 14-18 February 2005 UNEP/CBD/WG-ABS/3/INF/4 <https://www.cbd.int/doc/meetings/abs/abswg-03/information/abswg-03-inf-04-en.pdf> Also see: dx.doi.org/10.2139/ssrn.1331514

[5] P Oldham, personal communication with Edward Hammond, Pierre du Plessis and Joseph Vogel, February 2019.

needs to find solutions that are practical, feasible and efficient to address the sharing of the benefits arising from the use of digital sequence information on genetic resources. It does so through the establishment of a multilateral benefit-sharing mechanism while setting out the parameters of a process to further develop and operationalize the mechanism by CBD COP 16. It is important to recognise that the CBD decision sets out a technical process for addressing DSI under the CBD, while it does not establish as such legally binding obligations for the Contracting Parties. In contrast negotiation of the new High Seas Treaty is focused on establishing consensus on legally binding obligations. Nevertheless, the recent CBD COP decisions provide useful insights to inform the negotiation process of the former.

The new High Seas Treaty negotiations on Biodiversity Beyond National Jurisdiction (BBNJ) has long tussled with appropriate incorporation of digital sequence or associated information and data. The current draft that will be used as the basis for the BBNJ negotiations in February 2023 does not include a definition of the term DSI in the 'Use of Terms', which – if it was included – could more clearly set the legal scope of the Treaty. However, several Member States have made proposals to use the term in the text of the substantive provisions. From a legal perspective, this is not ideal, but we acknowledge the difficulty in agreeing on a technical term that provides legal certainty and the complexity of defining which information should or could constitute DSI for the purpose of subjecting it to a benefit-sharing regime.

What a possible omission of DSI does do is to create future legal uncertainty about whether DSI is in scope or out of scope. In doing so, it threatens to repeat the ambiguity of the Nagoya Protocol and hold the new fledgling instrument hostage to the years of dispute on DSI that have afflicted the CBD. Inclusion of digital sequence information in the BBNJ Treaty would create the conditions for legal certainty and elaboration of the full implications of its inclusion. Likewise, such inclusion would also require consensus on the remit of monetary and other benefit-sharing, consensus that has so far proven elusive.

Debates under the CBD over the last 6 years, which have resulted in COP Decision 15/9, have produced two important insights. The first of these is that recognition and action on an issue does not require a fully elaborated and precise definition if consensus can be achieved that an issue is important and needs to be addressed. Indeed, many Parties to the CBD deliberations appear to have arrived at the conclusion that an obsessive focus on defining DSI was a deliberate distraction to block agreement. In this case we are speaking to the informational dimensions or elements of marine genetic resources from BBNJ. However, it is important to recognise the challenges involved in deliberately refraining from precise definition in text that seeks to set out binding obligations.

The second is that even given consensus on the principle of benefit-sharing from DSI it is not necessarily possible for Parties to make considered evidence-based decisions on the precise modalities for benefit sharing right now in anything other than a broad and flexible outline. The lesson of the FAO Treaty on Plant Genetic Resources for Food and Agriculture is that it is a mistake to bet everything on a single untested approach to benefit sharing in pursuit of an agreement as there will be no available

alternatives if the approach fails. Rather, what is required is a range of revenue generating measures inside the agreement combined with an agreed process to allow Parties to make informed choices in implementing the options.

In this paper we argue that with respect to the inclusion of digital sequence information and benefit sharing, in a post-2020 GBF world the minimum standard is already set – at least as a matter a principle and procedure – that the "benefits from the use of digital sequence information on genetic resources should be shared fairly and equitably."[6] The reticence to do so or to engage in good faith in developing a distinctive solution for fair and equitable benefit-sharing from the use of DSI from BBNJ, however it is couched and phrased, is unforgiveable intransigence.

In the following note we present five points on how, as part of the Post-2020 GBF package, the CBD COP 15 Decision on Digital Sequence Information is directly relevant for the negotiations on BBNJ.

(1) Non-definition of DSI

Following intense debate in scholarly and policy I, Decision 15/9 appears to respond by moving the baseline from 'digital sequence information' as placeholder to using 'digital sequence information on genetic resources' as an appropriate term for further deliberations on establishing the modalities for a suitable benefit sharing mechanisms. While it is useful that digital sequence information continues to be a standard bearer for discussions, there is also explicit acknowledgement that there are different understandings of the concept and scope of digital sequence information on genetic resources. As noted above, it is worth emphasizing that while Decision 15/9 sets the terms of reference for a political and technical process to develop a suitable solution for the sharing of benefits arising from the use of DSI, it does not comprise binding legal obligations, unlike the eventual BBNJ treaty.

As a consequence, and contrary to conventional perception so far, depending on its final outcome, the BBNJ Treaty language may also lead and steer the legal and policy-making process on DSI governance under the CBD and elsewhere, in a reciprocal manner. This is supported by explicit acknowledgement in the Preamble to Decision 15/9 that digital sequence information on genetic resources is under consideration in other UN bodies and instruments, and that other *fora* may develop specialised approaches. Furthermore, Goal C of the Global Biodiversity Framework explicitly aims to ensure that "monetary and non-monetary benefits from the utilization of genetic resources, and digital sequence information on genetic resources" (CBD/COP/DEC/15/4). Viewed from this perspective, not defining the use of this term in the BBNJ draft treaty could have unintended consequences on subsequent international processes. Anything less than sound legal lexical reasons not to define, rather than linguistic manoeuvring to avoid equitable obligations, would be regressive. Unfortunately, in the current state of play in the BBNJ negotiations it is hard to tell which is which.

[6] CBD/COP/DEC/15/9, Para 2.

The BBNJ Further Revised Draft Text released on August 26th 2022[7] does not define the term 'digital sequence information' in Art 1 but the term is indirectly referenced throughout the text, where the expression 'Associated data and information' (Art. 1.2) is used. In particular, the term 'Access ex situ', in relation to marine genetic resources in Art 1 (which sets out the use of terms) currently includes a reference to 'Associated data and information'. In turn, the definition of 'Associated data and information' includes 'digital sequence information on genetic resources'.[8]

The omission of a clear inclusion of DSI within the scope of legal obligations under the draft Treaty creates legal uncertainty. Ultimately, some pragmatic and practical working definition will have to be agreed upon to address DSI issues, for instance, by the to-be established Access and Benefit-Sharing Mechanism under draft Article 11*bis* or by an appropriate technical or governing body to fast-track its implementation.[9]

If 'digital sequence information on genetic resources' or 'digital sequence information' is used in this Part (whether explicitly or indirectly via the use of the term 'Associated data and information'), without a definition, and then flexible language is used to link it to, say 'established scientific understanding' – if and when that established scientific understanding changes, it could lead to a change in the scope of the Treaty's obligations. This is not ideal but may yet present a pragmatic way forward provided it does not become an anachronism that enables delay in implementing the most significant elements of the Treaty.

In the current BBNJ draft, the non-definition of the term DSI or an explicit mandate to update or supplement its meaning is not yet a part of the terms of reference of the Conference of the Parties or the Access and Benefit-Sharing Mechanism of Art 11*bis*. We believe that this is an important gap that requires to be filled with appropriate substantive and/or process-oriented solutions in the BBNJ Treaty.

(2) Monetary Benefit-sharing, including in the context of Resource Mobilization

Language in Decision 15/9 on finding a 'solution for benefit sharing from the use of DSI on genetic resources' is broadly beneficial and helps set the tone for what the BBNJ agreement should seek to do for marine generic resources of areas beyond national jurisdiction as it recognizes that such a solution may include 'innovative revenue generation measures'.

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[7] A/CONF.232/2022/CRP.13, <https://www.un.org/bbnj/sites/www.un.org.bbnj/files/crp-13_further_refreshed_text_260822_clean.pdf>.

[8] Draft Article 1.2 states that: "'Associated data and information", in relation to marine genetic resources of areas beyond national jurisdiction, means relevant data and information in any format, including such data and information that could be considered as digital sequence information on genetic resources under the Convention on Biological Diversity.'

[9] KM Gjerde et al., "Getting beyond yes: fast-tracking implementation of the United Nations agreement for marine biodiversity beyond national jurisdiction", Ocean Sustainability (2022) 1:6, <https://doi.org/10.1038/s44183-022-00006-2>.

Decision 15/9 is linked with a wider package of decisions, such as COP 15 Decision 15/7 on Resource Mobilization that refers to a global fund to be further considered as part of the broader mandate to deliberate on a 'Global Instrument for Biodiversity Finance'.[10] Such recognition could also be indirectly inferred from Target 19(d) of the Global Biodiversity Framework in Decision 15/4, which in more general terms refers to 'innovative schemes' including 'benefit-sharing mechanisms'.[11]

COP15 Decision 15/7 on resource mobilisation include a number of other elements of relevance to monetary benefit sharing. The first of these, arising from demands from developing countries, is reform of the Global Environmental Facility to increase responsiveness to developing country needs. Second, is the establishment in 2023 of the Kunming-Montreal Biodiversity Framework Fund as a Trust Fund to be administered by the GEF to support implementation of the GBF until 2030. Third, as part of the built-in 'Review of the Strategy for Resource Mobilization', the Decision also offers the possibility to consider establishing a global instrument on biodiversity finance outside the GEF. In addition, the Decision establishes an Advisory Committee on Resource Mobilization with terms of reference as follows:

Global instrument for biodiversity finance

1. The Advisory Committee on Resource Mobilization will develop recommendation to the Subsidiary body on Implementation on:
    (a) Whether to create a dedicated financing mechanism for the CBD under the authority of the COP, which could be designated "Global Biodiversity Fund", and what the options are to operationalize it;
    (b) Whether the Trust Fund under the GEF established by decision 15/7 should be designated "Global Biodiversity Fund";
    (c) Whether and how either of the funding mechanisms mentioned above, or another alternative, would be the adequate entity to receive and disburse the revenue generated by the mechanism established under decision 15/9 on DSI.

These references suggest that there would be strong legitimacy for attempts to devise a mechanism to share benefits in the BBNJ Treaty scope. Given that there is no bilateral structure in the BBNJ process, any scheme would necessarily be multilateral in nature and will need to include a finance mechanism drawing, at least initially, from state contributions and could include innovative revenue generation measures to secure long term sustainability with respect to benefit-sharing. A key question in terms of binding legal obligations is whether such a finance mechanism can be brought into existence apart from and in addition to a mechanism for monetary benefit sharing. The overall finance architecture devised in support of the GBF implementation and Target 19(d)

[10] CBD/COP/DEC/15/7

[11] GBF Target 19 (d) provides for 'Stimulating innovative schemes such as payment for ecosystem services, green bonds, biodiversity offsets and credits, benefit-sharing mechanisms, with environmental and social safeguards.' Decision CBD/COP/DEC/15/7 on 'Resource Mobilization' also contains other interesting elements, including references to innovative approaches and National Biodiversity Finance Plans.

that promotes innovative financing schemes, including benefit-sharing mechanisms, seems to suggest that the answer can be affirmative.

The COP15 Decision on DSI provides a checklist for 'a solution for fair and equitable benefit-sharing on digital sequence information on genetic resources' (Decision 15/9 para. 9). The list sets out key mutually agreed criteria that a solution must meet and is of critical importance to key delegations. Without mutual agreement on these balanced criteria, it is unlikely that COP15 would have found a constructive way forward on DSI. We repeat these criteria below:

> A solution for fair and equitable benefit-sharing on digital sequence information on genetic resources should, *inter alia*:
>
> (a) Be efficient, feasible and practical;
>
> (b) Generate more benefits, including both monetary and non-monetary, than costs;
>
> (c) Be effective;
>
> (d) Provide certainty and legal clarity for providers and users of digital sequence information on genetic resources;
>
> (e) Not hinder research and innovation;
>
> (f) Be consistent with open access to data;
>
> (g) Not be incompatible with international legal obligations;
>
> (h) Be mutually supportive of other access and benefit-sharing instruments;
>
> (i) Take into account the rights of indigenous peoples and local communities, including with respect to the traditional knowledge associated with genetic resources that they hold;

Although not explicitly listed, it is evident that the solution should be fair and effective in nature. It is also recognised that monetary benefit-sharing must generate more benefits than costs (para 9 (b)). These criteria could provide a useful benchmark in scrutinising any monetary benefit sharing proposal that is placed on the BBNJ table in February.

Reference in Para 9(g) requires that fair and equitable benefit sharing should not be incompatible with international legal obligations. This is potentially a pressure point for intellectual property rights. Is transparency on digital sequence information on genetic resources incompatible with international legal obligations if it applies to all patent applicants? We have previously argued that it does not[12] but to avoid this debate, which is likely to be a fraught one, we argue that the focus can shift in the BBNJ process to state party obligations to report 'material' or 'tangible' outcomes in the form of publications, patents or product development – information that can be collated to measure use of marine genetic resources from areas beyond national jurisdiction.

[12] C Chiarolla, B Kilic, 'Developing Patent Disclosure Requirements Related to Genetic Resources and Traditional Knowledge – Key Questions' World Intellectual Property Organization (Geneva: WIPO, 2017), Available at SSRN: https://ssrn.com/abstract=2987820 and S Thambisetty, 'Biodiversity Beyond National Jurisdiction: (Intellectual) Property Heuristics', in *Biodiversity Beyond National Jurisdiction: Intractable Challenges and Potential Solutions*, M.H. Nordquist and R. Long (eds). (Brill Nijhoff, 2020) 131–146

Importantly, such information can be used as a key element to be taken into account by the access and benefit sharing mechanism when determining a tiered approach for the possible levels of monetary benefit-sharing contributions to be made into a benefit-sharing fund.

(3) Visibility & Transparency

The term 'track and trace' has been a key focus of contestation and bogeyman in debates on DSI at the CBD and in the BBNJ process. Amid these contestations, no definition has been offered of what 'track and trace' actually is. However, what can be called 'hard' track and trace appears to refer to the desire to follow a genetic resource from its point of collection and its transformation by public and private research and development value chains into products that are sold on the market.[13] The aim of such an exercise is to secure monetary benefits from otherwise recalcitrant private actors.

Debates around the term 'track and trace' can be divided into two separate issues. The first is feasibility, in terms of whether it is practically possible to pursue molecules from their sources into products and related questions such as who would be responsible and who would pay for such an exercise on a global scale. The second issue is the desirability of such an approach from the perspective of the economic and political interests involved and what may be a justifiable fear on the part of business to poorly defined but open-ended benefit-sharing obligations.

The COP 15 decision on DSI provides a series of useful insights that could inform BBNJ on what we call the visibility and transparency of marine genetic resources and associated DSI. Decision 15/9 in para. 5 "Recognizes that tracking and tracing of *all* digital sequence information on genetic resources is not practical" (emphasis added). This represents a compromise that suggests that *some* tracking and tracking may be practical. This is also suggested earlier in the same Decision which welcomes the efforts of databases such as the International Nucleotide Sequence Database Collaboration (INSDC) to encourage tagging of information on geographical origin.

A central feature of the criteria for a solution on DSI identified in the COP decision is legal certainty and clarity for users and providers of digital sequence information on genetic resources. In the intersessional discussions leading to the COP 15 Decision, it has become clear that for businesses legal certainty is the key desirable outcome on DSI along with avoiding the complexities of the Nagoya Protocol. At the same time, scientific research involving DSI is fundamentally predicated on retaining and making available information on samples including taxonomy, geographic location, environmental conditions and the links between physical samples and digital sequence accessions. This is particularly true in the case of marine biological research, where information on location, depth, temperature and other environmental conditions is critical. Recording such information forms part of standard scientific practice, standards that are dynamic and responsive to emerging scientific needs.

Viewed from this perspective, a change in language may be appropriate to recognise that the foundation of scientific research is recording and documenting

[13] Oldham, P and Kindness, J 2022 Sharing Digital Sequence Information. Study for the European Commission. https://doi.org/10.5281/zenodo.6557191

information about samples and maintaining the links between samples and sequence accessions. At the same time, industry requirements for legal certainty can only be secured where there is information on *where* material and sequence accessions are from and that they were lawfully acquired.

One option here is to shift the language away from 'tracking and tracing' towards 'enhancing transparency' on the utilization of genetic resources and digital sequence information on such resources. Enhancing transparency is an expression used in Article 17.1 of the Nagoya Protocol on monitoring and is perhaps uncontroversial.[14] In the current BBNJ text this approach may find limited resonance because of the lone use of 'identifier' in Art 13 which deals with 'monitoring and transparency'. However, enhancing transparency on MGRs and DSI could be grounded in existing scientific practice focusing on the recording of information and the use of identifiers to improve the visibility of marine genetic resources from BBNJ and its contribution to research and innovation. For businesses, the use of distinctive identifiers for marine genetic resources and digital sequence information on such resources combined with possible tiered contributions to a benefit sharing mechanism could provide a pathway to transparent legal certainty.

(4) Reference to Data Governance Principles

One of the clearest indications of the contours of the what's to come on DSI is the reference in Decision 15/9 to "the FAIR[15] and CARE[16] principles, the framework for data governance provided by the Organisation for Economic Co-operation and Development "Recommendation on Enhancing Access to and Sharing of Data" [17], and the recommendations set out in the United Nations Educational, Scientific and Cultural Organization "Recommendation on Open Science"[18]. These principles and recommendations are voluntary guidance that curate best practices directed to what can be called principles for Open and Responsible Data Governance (ORDG).[19] In contrast, the BBNJ treaty process involves legal commitments. In cases where state parties cannot agree among themselves on the scope of 'digital sequence information on marine genetic resources' it is difficult to assume that they will find consensus on how to read the commitments once the Treaty enters into force. There is many a slip between commitment and compliance, particularly given the weak and yet-to be-defined compliance mechanisms in the Treaty. However, the content of these guidelines

[14] https://www.cbd.int/abs/text/articles/?sec=abs-17#:~:text=Article%2017.&text=1.,the%20utilization%20of%20genetic%20resources.
[15] That data be Findable, Accessible, Interoperable and Reusable (FAIR). https://www.go-fair.org/fair-principles/
[16] Data governance involves Collective Benefit, Authority to Control, Responsibility and Ethics (CARE). https://www.gida-global.org/care
[17] https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0463
[18] https://en.unesco.org/science-sustainable-future/open-science/recommendation
[19] This term was developed by a drafting team from the International Indigenous Forum on Biodiversity (IIFB) and the interdisciplinary DSI research group (iDSI) at COP15 to capture the central purpose of the range of recent guidance that has emerged on data sharing and governance in the context of the shift toward open science.

provides welcome direction, and for the BBNJ process there are at least three consequences of note.

First, it shows up demand for a three-year embargo on samples and digital sequence information to be perverse. The three years will work like an exclusivity period, much like an intellectual property right. In the case of sequence data, scientific practice following the 1996 Bermuda Principles and 2003 Fort Lauderdale Agreement requires immediate release of data when sequencing is performed.[20] A short period may be appropriate for physical samples.

Secondly, if language derived from these data sharing principles can be adopted in BBNJ it could amount to 'conditions of use' of digital sequence information in genetic resources. The reason for this is that data sharing guidance emphasises the importance of agreeing on and specifying terms of reuse (e.g., the R in the FAIR Principles stands for Reusable). This could function like a license arrangement that can be built on in domestic regulations by state parties if necessary. This 'conditions of use' approach is also supported by the list of items to be addressed by the new CBD Working Group on the Benefit Sharing Mechanism established under COP Decision 15/9.

Thirdly, it is important to bear in mind that the principles for data sharing under the OECD Recommendation for Enhancing Access to and Data Sharing (EASD) involve recognising and balancing interests like national security, and critically for BBNJ, to intellectual property rights. This might mean the continued need to strengthen views on retention of Article 12 on Intellectual Property Rights-related issues and a formulation of text that does not impede transparency and encourages capacity building and benefit-sharing amongst other goals.

Finally, attention to the principles for open and responsible data governance for BBNJ speaks to the need to reach agreement between multiple actors, including the private sector, on approaches to data sharing over the longer term. As such, recognition of the need for agreement on such principles creates a foundation for agreement on data sharing in changing circumstances under the BBNJ Treaty.

(5) Databases and Repositories

While considering the development of solutions on benefit-sharing from use of digital sequence information on genetic resources, it is significant that the current BBNJ draft does not make a distinction between public and private databases which is seen in COP/15/9. In the BBNJ Treaty rather than differentiate between public and private databases and all the fuzzy borders that might entail, it would be preferable to use the more general term repository to capture both. This term is also preferable because not all data is, in formal terms, stored in a database. Furthermore, the term repository, which refers to an entity that stores objects of some form, is not confined to electronic data and can be used to refer to both physical collections and electronic collections such as databases.

When combined with the principles for open and responsible data governance discussed above an emphasis on repositories opens the way for the future creation of

[20] Oldham, P and Kindness, J 2022 Sharing Digital Sequence Information. Study for the European Commission. https://doi.org/10.5281/zenodo.6557191

'trusted' repositories – that is, repositories that conform to principles for open and responsible data governance adopted by or agreed under the Treaty and could play an important role in benefit sharing by contributing to define and implement innovative revenue generation measures under the benefit-sharing mechanism.

We would observe that if the intention is to not allow any private repositories to be within the purview of the Treaty's obligations, then a distinction between 'public' and 'private' would be appropriate. However, this could create a risky loophole in the system while the common heritage of mankind context in BBNJ along with Article 241 of UNCLOS cannot *prima facie* support the privatisation of marine genetic resources. In this context therefore the use of the word repository and the future development of 'trusted' repositories that meet the standards for ORDG under the Treaty is preferable as it would encourage private databases to aspire to this status, while not assuming that all public databases automatically conform to good sharing practices.

Conclusion

In this paper we have highlighted five major insights that can be gained from the recent CBD COP 15 deliberations in connection with digital sequence information for the final stages of the BBNJ Treaty process. In closing we can make some brief and broader observations.

The first of these is that the Nagoya Protocol, whatever its major merits, was negatively affected by the failure to address what is now called digital sequence information, a failure that resulted in years of further debate and negotiation. It is important that this is not repeated by recognising digital sequence information in appropriate ways in the new BBNJ Treaty.

The CBD COP Decisions establishing the Kunming-Montreal Global Biodiversity Framework, on Resource Mobilization and DSI also provide insights into the wider biodiversity finance landscape in which the new BBNJ Treaty will be situated and the increasing recognition of the importance of innovative schemes and revenue generating measures to support conservation and sustainable use and wider benefit-sharing. In particular, there is recognition of the importance of focusing on multiple revenue generation streams or measures to address these needs rather than single 'eggs in one basket' approaches. This is a notable development in international thinking on biodiversity finance that also applies to the emphasis on innovative revenue generation measures in connection with DSI and benefit sharing.

We have also argued that the often-sterile debate on so called 'track and trace' could be addressed by a shift in language towards enhancing the visibility and transparency of the utilization of marine genetic resources under the new BBNJ Treaty. This approach, coupled with a notification system, within the clearing-house mechanism, that would concern various activities with respect to marine genetic resources of ABNJ, would abandon the purported pursuit of molecules into products in favour of a lighter weight approach grounded in scientific practices and enhancing data sharing through attention to principles for open and responsible data governance. The outcome of this approach rather than imposing burdensome requirements could promote much wider recognition of the importance of biodiversity of ABNJ while providing legal certainty for business and can evolve over time within the framework set by the Treaty.

Law Society Economy Working Papers

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B. ONEST: The middle way for monetary benefit sharing in BBNJ Negotiations

Paul Oldham and Siva Thambisetty
Based on the Oldham Pathway and Licence Model*

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This short note sets out a simple, inexpensive, easy to understand and use ONEST system operable in the Biodiversity Beyond National Jurisdiction (BBNJ) Agreement – constituting a middle path to get negotiations out of a stalemate around genetic resources, digital sequence information and monetary benefit sharing that has been building over the last decade.

The **O**bligatory **N**otification and **E**lectronic **S**tandard **T**ag or batch identifier as it is referred to in the accompanying textual proposals in Article 10(1), uses existing information systems-based infrastructure to open up a spectrum of predictable revenue generating measures that can support the basis of obligatory monetary benefit sharing obligations. This proposal can also form the operative basis of tiered contributions to a fund.

The Oldham Pathway is not fully integrated into the textual proposals but is presented here in order to show how a transparency measure based on the batch identifier may or could work; in conjunction with automated systems including how it connects to the obligations of databases or repositories. We invite comment on its operational feasibility from a legal and technical perspective.

The key features of the approach are as follows:

1. A cruise leader makes a straightforward notification under the Treaty
2. A batch identifier is automatically generated to accompany samples and is linked to appropriate use under the Treaty
3. The batch identifier is included in existing biodiversity information systems
4. The batch identifier is included in the outputs of scientific research, and data on its use can be retrieved through automated means in scientific, taxonomic, publication and patent databases
5. Companies gain legal certainty under the Treaty and may use the identifier in support of marketing and advertising
6. It becomes possible to automate the development of indicators on marine genetic resources and digital sequence information on genetic resources under the Treaty

7. A range of flexible monetary benefit sharing measures organised around payment tiers are enabled by the use of the identifier

ONEST:

The **O**bligatory **N**otification and **E**lectronic **S**tandard **T**ag will comprise

a) A human and machine-readable batch identifier (FAIR Principles)[1]
b) Use conditions linked to the identifier, setting out standard requirements for users;
c) Integration with existing biodiversity information infrastructure to enable lightweight monitoring and reporting;

The main scenarios for notification focus on collection of samples that become accessions, that applies to the complete record. Accessions are currently already used to identify sequences by the scientific community.

Key Legal Elements:

An organisation or individual should notify (assumed to be by the principal investigator) the relevant mechanism or State Party that is legally established to receive the notification (reflected in the accompanying BBNJ textual proposals in Art 10 (1) as a State Party obligation)

a) When planning to conduct a cruise involving *in situ* collection
b) When planning to install equipment for long term observation or collection (e.g., sea floor laboratory). The latter is distinct from a cruise in that it involves repeat visits over potentially long time periods to the same locations.

A website would be created at the Secretariat of the Treaty or equivalent consisting of:

a. A registration form with a standard template for cruise details (existing templates could be accepted or form that standard);
b. A standard identifier generator that would generate a unique batch identifier for that cruise (e.g., ONEST -202208023-1234) that resolves to an online hyperlink;
c. Appropriate use to be established in Treaty language using conventional terminology found in CBD/COP/15/9 (FAIR, CARE, OECD EASD guidelines); The terms set out good data governance principles and can be automatically issued when the batch identifier is generated. Terms of use can be built on or added to, based on best

* Oldham, P and Kindness, J 2022 Sharing Digital Sequence Information. Study for the European Commission. https://doi.org/10.5281/zenodo.6557191

[1] MD Wilkinson 'The FAIR Guiding Principles for Scientific Data Management and Stewardship' Scientific Data 3 160018 (2016). For an overview of FAIR principles see < https://www.go-fair.org/fair-principles/>

practice if basic obligations are included in the Treaty language to reflect a flexible approach.

d. The above elements can be automated programmatically using Application Programming Interfaces (APIs or web services) for easy integration with existing systems.

Chain of Events in Technical Terms:

1. The cruise organiser would complete the registration template with cruise details
2. The web form automatically generates a batch unique identifier for use uniquely by that cruise;
3. The identifier links to appropriate use under the Treaty
4. The cruise attaches the identifier as an accession number to all sample containers used for collection:
    a. Where samples in a container are later separated out from the containers, e.g., for taxonomic identification, mass spectrometry, sequencing etc. the batch identifier accompanies each separated accession in physical or digital form.
    b. The identifier resolves to a standard online licence setting out standard rights and obligations as established under the Treaty and by its Governing Body.
5. The unique identifier is ingested by databases (e.g., OBIS, GBIF, INSDC) in ways appropriate for those systems and is publicly visible and searchable and accessible through Application Programming Interfaces (web services).
6. Where appropriate, database service providers will generate Document Object Identifiers (DOIs) for datasets containing the accessions carrying the identifier.[2]
7. Users of accessions are responsible for recording the identifier in scientific publications
8. Users of accessions are responsible for recording the identifier in patent applications in accordance with existing formal and substantive disclosure requirements. No modification to patent laws or regulations is required or envisioned. [3]

[2] This approach was pioneered by GBIF to allow publishers of taxonomic data to identify publications where a record is used. In the case of taxonomy an individual dataset used in a publication may involve thousands or millions of records from multiple places. The minting of a DOI for datasets generated by users allows publishers to identify and report to funders. Publications citing GBIF data are publicly available at:
https://www.gbif.org/resource/search?contentType=literature&literatureType=journal&relevance=GBIF_USED&peerReview=true

[3] Based on the observation that over a decade of arguments about disclosure requirements at WIPO have failed to yield progress. Patent applicants will normally meet the standard disclosure requirement by providing the accession number from an INSDC database or international IDA under the Budapest Treaty. Where that accession is linked to a specimen with the treaty identifier it can be picked up using machine

9. Users of accessions in products along the value pipeline may, optionally, use some form of logo on packaging to promote public awareness of the Treaty and their support for it. It is not reasonable to expect that they would include the identifier on packaging or ingredients. However, it is reasonable to imagine that companies should gain a reputational advantage from participating in the Treaty system and contributing to benefit sharing.

   The Creative Commons use of standard "human readable" symbols as an alternative to the "lawyer readable" text may be attractive here.

State Parties to set out and enforce appropriate use in domestic measures (User Obligations):

a) Set out that the accession falls under the Treaty and accessions must be deposited with collections/databases participating in the Treaty benefit-sharing mechanism
b) Set out access terms (see the FAIR/CARE principles, Creative Commons Licences for example)
c) Require that the unique identifier and link to appropriate use terminology is preserved on any derivative outputs (a common condition of conventional open license)
d) State parties monitor usage through automated means supported by 'trusted and public repositories' and participating private databases (CBD/COP/15/9 recognises distinction between public and private databases)
e) These data sources are programmatically used to calibrate subscription payments (the benefit sharing mechanism), through fairly broad tiers or bands.

Practical:

Rather than relying on individual users to report, monitoring for the use of the identifier would be automated programmatically using*, inter alia*, the following data sources:

- Open Alex index of 240 million scientific publications https://openalex.org/
- Patent Collections (e.g., worldwide, US, European Patent Office, Patent Cooperation Treaty)
- INSDC databases (notably BioProject and BioSample databases that link samples to sequence and project records e.g., for COVID19 samples)
- Global Biodiversity Information Facility (GBIF). GBIF already includes 44 million taxonomic occurrence records from OBIS. https://www.gbif.org/network/2b7c7b4f-4d4f-40d3-94de-c28b6fa054a6

Rather than create a new monitoring structure and potentially burdensome requirements, this approach would focus on automation to extract and summarise

learning to process patent applications for identifiers (presently work in progress here: https://github.com/poldham/accession)

information on the use of the unique identifier for reporting. That is, it takes advantage of the existing and increasingly integrated digital biodiversity infrastructure to limit costs. Because no new system is created, the cost implications are marginal.

Outputs from monitoring, including for example open access repositories of Treaty related data, would be made publicly available through the clearing house mechanism.

Rollout of reporting and monitoring would require some coordination between databases and collections, but many already share data in various ways on a large scale. Hundreds of millions of records are now routinely processed using automated techniques (machine learning or artificial intelligence e.g., OpenAlex). The approach outlined above would remove the burden of reporting requirements from users and adopt a now well established 21st Century approach.

Feasibility:

A centralised web site and identifier generator is proposed (similar to Creative Commons above) using open-source software code on the basis that the number of cruises per year is likely to be limited.

However, an alternative or complementary option would be for the creation of national mirror sites that include the country code in the unique identifier, which may have additional cost implications. As such, there is flexibility (similar to the options for minting DOIs under a central authority). e.g., ONEST-UK-20220823-1234.

The Creative Commons runs an online licence generator that has been used to generate licences for billions of creative works https://creativecommons.org/choose/

The Global Biodiversity Information Facility already uses a combination of unique identifiers and Creative Commons licences on over 2 billion taxonomic records including metadata on sequence records from INSDC databases (https://www.gbif.org/dataset/d8cd16ba-bb74-4420-821e-083f2bac17c2).

Databases would continue to use existing identifiers and add this identifier in appropriate places (e.g. occurrence datasets for GBIF, most likely BioProject and BioSample databases for the INSDC).

It is important that the unique identifier for Treaty accession number is both human and machine readable - that is a human can derive useful information from ONEST-UK-20220823-1234 as can a machine.

COP Involvement:

The outline above focuses in one aspect on making Treaty related accessions Findable, Accessible, Interoperable and Reusable or FAIR (the latter through the open licence). It may be necessary for COP to update any FAIR/CARE principles with specialised options for ABNJ.

The advantage of the 'conditions of use' model compared with measures such as legal provenance/ or certificate of legality is that it steers other users regarding

requirements (is viral in this sense). An additional advantage is that billions of data items (notably 2.2 billion records at GBIF including 43 million records from OBIS) already use this approach.

It is essential that State Parties benefit-sharing requirement is elaborated prior to operation of ONEST. What is it that state parties could reasonably be expected to do without exposing themselves and individual users to onerous open ended and unsustainable obligations?

Monetary Benefit Sharing:

The most important element of ONEST is that it allows for a wide spectrum of monetary benefit sharing options. The introduction of the accession number and associated conditions of use opens up other possibilities for monetary benefit sharing using a range of revenue generating measures such as predictable rates or percentages, revisiting bands or tiered payments periodically, payments for use of infrastructure with a portion going to the fund, linked to success in commercialisation and so on. ONEST can also support a number of pathways to bring transparency to the commercialization option.

C. Article 12: Rationale for A Limitation and Exceptions Approach

Siva Thambisetty[1]

In many different intergovernmental fora there is a sense in which intellectual property (IP) laws are approached as immutable and negotiations on reform are only allowed to take place when there is a humanitarian crisis, such as the AIDs or Covid-19 Pandemic.[2] The question in the BBNJ process is, whether the UNGA mandate includes circumstances that warrant limitations to the exercise of intellectual property rights in case of specific, carefully delineated circumstances.

For example, should a successful antiviral be developed from MGRs of ABNJ can it be made available at affordable prices or be the subject of mandatory technology transfer in case of a public health crisis. Observations such as the one below suggests that BBNJ processes ought to involve anticipatory legal mechanisms:

> "[M[arine natural products have up to 4 times higher rates of successful drug discovery than other naturally derived compounds. Around 1 in 5000–10 000 tested compounds lead to applications, but this rises to 1 in 2550 for marine natural products. With some 35 000 marine natural products already identified, and over 1500 more described each year, these figures suggest the vast potential health benefits of reducing barriers to ocean biodiscovery."[3]

A critical element of arriving at the L&E approach is the recognition that IP rights are a form of appropriation of MGRs and potentially contravene Art 241 of the Convention. The broader question is whether the incentive of IP rights ought to be subject to limitations due to social or economic contingencies just as other property holdings usually are.

An(L&E) approach acknowledges that the balance between intellectual property rights holders and those who need to access and use the technology, may need to be recalibrated. The approach is a familiar one in international treaties, leaving it to State Parties to decide if a particular limitation can be legitimately applied.

Limiting intellectual property rights is a middle path between status quo and denial or constriction of the scope of such rights due to special circumstances of marine genetic resources of ABNJ.

Reason 1: If the BBNJ instrument leaves technology transfer and capacity building (the core issue of the Covid-19 related TRIPS waiver at the WTO) to voluntary measures, then we are unlikely to see voluntary transfer of valuable technologies from private entities. These tend to be protected by a cluster of different kinds of IP rights – patents, trade secrets, commercially sensitive information, copyright etc.

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[1] S Thambisetty South Centre Research Paper 148 'Marine Genetic Resources Beyond National Jurisdiction: Negotiating Options on Intellectual Property' 7 March 2022 < https://www.southcentre.int/research-paper-148-7-march-2022/

[2] See for instance Prof Anne Orford's Annual Michael Kirby Lecture where she called for a termination of the TRIPS Agreement https://www.youtube.com/watch?v=jQGQe5_-j1M Also see S Thambisetty 'Termination of the TRIPS Agreement: Necessary and Impossible' http://opiniojuris.org/2023/01/11/termination-of-the-trips-agreement-necessary-and-impossible/

[3] JD Sigwart, R Blasiak, M Jaspars, JD Jouffray, D Tasdemir (2021) 'Unlocking the potential of marine biodiscovery'. Nat. Prod. Rep., 2021, Advance Article, https://doi.org/10.1039/D0NP00067A.

Therefore, there is a good argument to be made that any serious attempt to bridge the marine scientific research capacity gap must include limitations on the use of IP in furtherance of the aims of the BBNJ instrument. Philanthropy and voluntary measures alone cannot change the status quo when it comes to capacity building, technology transfer and sharing of monetary and non-monetary benefits. In a legally binding instrument, the focus should be on enforceable legal measures and obligations to mandate behaviour that moves us all towards agreed goals.

Reason 2: It is important to note that the common heritage of mankind principle on its own will not prevent the grant of patents and other intellectual property rights on the constituent parts of this heritage (marine genetic resources). Therefore, arguably an L&E approach is a better way to actualise the common heritage of humankind.

Whether such limitations would be compatible with TRIPS is a critical question, but on balance such measures could be seen as furthering the objectives of Articles 7 and 8 and possibly Article 66.2 of TRIPS. It may also apply under Art 73 (security exceptions). Limitations would also be a way of factoring in disagreements on the normative basis of the status of MGRs in BBNJ and give effect to Art 241 UNCLOS. The L&E approach in Article 12 may also compensate for loss of ground in Article 10 related to disclosure of origin in patent applications. Disclosure of origin negotiations at WIPO do not cover MGRs of ABNJ.

Reason 3: The Post-2020 Global Biodiversity Framework relies on data sharing principles which are conventionally subject to intellectual property rights. In the BBNJ agreement primacy of non-monetary benefit sharing requires good data governance to be followed. Since such practices usually give way to IP rights, it adds greater need for conducive language in Article 12.

Examples of Limitations and Exceptions Approach

There are a few different ways in which a L&E approach to the exploitation of intellectual property rights could work in the instrument. It could be automatic (such as 'fair use' terms in copyright law) or be a means to control post-grant exploitation by controlling prices and increasing 'affordability' and access to technology products (through licensing terms or through measures that demand local working of patented inventions for example.)

An example of an L&E approach is provided by the Marrakesh Treaty which makes it easier for visually impaired and print disabled people to access works protected by copyright. The Treaty was an attempt to solve the problem of a 'book famine' experienced by visually impaired people where only 1% of publications are available in accessible format because to convert it into such formats involved copyright violations. Now it is possible for individual states to make an exception from infringement, so that more books can be converted into accessible formats.

Art 142 of the EU Partnership Agreement with Cariforum on the transfer of technology is helpful here as an example of the kinds of language that would facilitate an L&E approach

> *Art 142 Transfer of Technology 1. The EC Party and the Signatory CARIFORUM States agree to exchange views and information on their practices and policies affecting transfer of technology, both within their respective regions and with third countries. This shall in particular include measures to facilitate information flows, business partnerships, licensing and subcontracting. Particular attention shall be paid to the conditions necessary to create an adequate enabling environment for technology transfer in host countries, including issues such as development of human capital and legal framework. 2. The EC Party and the Signatory CARIFORUM States shall take measures, as appropriate, to prevent or control licensing practices or conditions pertaining to intellectual property rights which may adversely affect the international transfer of technology and that constitute an abuse of intellectual property rights by rights holder or an abuse of obvious information asymmetries in the negotiation of licenses.*

If an L&E approach is adopted in Article 12, the ABS mechanism would have authority to make recommendations on how limitations may apply or stipulate guidelines for IP rights holders.

D. Monetary Benefit Sharing Scheme: Comparison

Monetary Benefit Sharing Proposal in this document

Concedes

- Carve out access ex situ notifications by individual users
- No tracking of single instances of use or users of DSI

Requires

- Reference to digital sequence information and data on genetic resources
- Information systems-based light tracking of activities related to marine genetic resources
- Basis of payments include levels of use of marine genetic resources, valuation of the monetary and non-monetary benefits to State Parties, profit from commercialization, any major capacity building undertaken and account of funding and investment in relevant activities

Elements

- Batch identifier in Art 10 is a core component
- Material outcomes in Art 10 (5) (e) and (f) are tracked through cascading effect of the use of batch identifiers and architecture of notifications in Arts 10 and 11
- Tiered payments are calibrated to multiple criteria diversifying the basis for revenue generation so that monetary benefits can be shared immediately.

Comparison with Super PACC Proposal CRP IGC5

Key Differences with PACC/Cross-regional proposal IGC5: (there are other differences, but these are key elements)

- Art 10 reference to self-declaratory electronic system/ open and self-declaratory electronic system Art 10(1) and (2) (6)(c). Here notification results in registration, and identifier.
- Monetary benefits depend on commercialization. Art 10(2) (c) (ix) and (x):

  (ix) Development of any commercial products including marine genetic resources of areas beyond national jurisdiction in their composition;

  (x) Submission for intellectual property rights and/or the intellectual property right licences, including the indication of the respective jurisdictions of interest;

  In current proposal same purpose is achieved by batch identifier + notification by State Parties of 'material outcomes'.
- Art 11 (4) – sets out modalities of payments, or types of payments. These can still be incorporated in current proposals via ABS mechanism recommendations.
- Compliance mostly achieved by user profiles - Art 10(6) (a) and (b). Compliance here is by batch identifier attached to samples and associated information and data + state party obligations to notify (including obligations imposed on databanks)
- Certificate of legality/compliance Art 10(5) (d) replaced in current proposal by batch identifier linked to standard terms on which the information/resources/research data can be used. Its automatic, web-based and linked to issuance of batch identifier.
- National focal points retained in current proposal as obligations rest on State Parties

Comparison with UK non-paper Proposal

- Monetary benefits arising from activities with respect to marine genetic resources (no specific reference to utilization, only 'activities', which without a definition in Art 1 may or may not include access, utilization or commercialization.)
- No statement of basis for monetary benefits paid into a special fund
- No direct link to user, levels or kinds of utilization, or commercialization.
- Leaves a lot to COP over binding obligation in Agreement

Comparison with WEOG Further non-paper

- ABS Mechanism to **review** extent of commercialization of products based on utilization and if **substantial** monetary benefits arise from such utilization and through consensus decide alternate modalities
- Unclear how 'review' and decision on whether monetary benefits are 'substantial' can take place without tracking and tracing of some sort in Art 10.
- But reference in Art 11bis (4) to obligation to make information required under this Agreement available to ABS mechanism.

Comparative Elements of Monetary Benefit Sharing Models: Aid for Discussion

Elements of monetary benefit sharing	PACC proposals	Upfront payment	Tiered model in current text proposals
Brief description	**Coupling** of access and benefit sharing. Non-monetary benefits for utilisation broadly defined, accrue when profits result from outcome of utilisation, for which ongoing information from 'users' is necessary. But if unwilling to make patent system useful tool, possibility of poor self-disclosures due to commercial sensitivities are potential weakness	**Decoupled:** No link to access or explicit utilisation of GRs. No track and trace, or user obligations. Defers state party obligations to when profits accrue. Payments likely to be low because cannot factor in any success of utilization.	**Decoupled** from specific instances of utilization and user obligations. Tiered payments related to diverse criteria Contribution can be graded, ongoing and can escalate so can possibly support different modes of revenue generation. Retains 'incentives' for commercialisation, and embraces language of 'decoupling'
DSI included	Yes	Not relevant	Yes
Utilisation as trigger	Yes	No	Ongoing and related to activities, benefit-sharing,

			capacity building, commercialisation and investment and funding.
Involvement of databases, biorepositories	Yes, essential	No	Yes. But automatic batch identifier reduces burden of periodic reporting.
Transparency	Yes, traceability, potentially burdensome	No	Yes, automatic and web-based using existing resources
IP rights linked	Yes (milestone payments, royalties)	No	Delinked from specific product or process development Batch identifiers part of notifications by State Parties (For e.g., Australia-exploitation of IP taken into account as trigger for benefit sharing)
Obligations falling on users/ entities primarily	Yes	Not relevant	State party obligations
Obligations portable across users/intents	Yes, challenging to enforce	Not relevant once 'fee' paid	Yes – through batch identifier.
Payments	Yes, could be large or small, but in previous cases no sound demonstration of revenue/income generation.	Certainty. Could see immediate generation of money. Likely to be small amounts as does not depend on 'successes.	Ongoing commitment to pay – tiers corresponding to criteria.