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# Transnational maritime environmental crime and the BBNJ Agreement

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Marine areas beyond national jurisdiction are a prime target for transnational maritime environmental crime due to a fragmented international legal framework and a lack of coordination and cooperation between governance and institutional structures. On 19 June 2023, member States of the United Nations adopted the Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction (BBNJ Agreement). As the third Implementing Agreement to the 1982 United Nations Convention on the Law of the Sea (LOSC), the BBNJ Agreement seeks to secure the long term protection and integrated management of marine biodiversity through the effective implementation of relevant provisions of the LOSC and by strengthening and promoting cooperation and coordination between and among relevant legal instruments, frameworks and relevant global, regional, subregional and sectoral bodies. This article examines the relationship between the BBNJ Agreement and transnational maritime environmental crime and considers ways the instrument could assist in efforts to combat such crime. As part of this analysis, this article explores how the BBNJ Agreement could provide an important platform for the formation of key partnerships and alliances by means of regional and bilateral dialogues, outreach and coalition-building to address transnational maritime environmental crime and mobilize and sustain the momentum for global action on this issue.

## KEYWORDS

BBNJ, maritime environmental crime, data-sharing, capacity-building, cooperative tools

## 1 Introduction

The oceans face an increasing list of security issues, from threats to freedom of navigation and biodiversity to climate challenges and environmental degradation. One of the most concerning threats is the rise of transnational organized crime at sea. Despite its prevalence, there is no precise and comprehensive definition for the term *transnational organized crime at sea*. As the concept remains nebulous, there has been a “tendency to

focus on individual challenges such as piracy or illegal fishing, rather than convergencies and synergies between and across issues” (Bueger and Edmunds, 2020: 1). Arguably, this has hindered a concerted international policy response (Bueger and Edmunds, 2020), particularly when it comes to policing criminal and illegal activities on the high seas. In 2019, the Executive Director of the United Nations Office on Drugs and Crime warned the Security Council that crime on the high seas was becoming increasingly sophisticated (United Nations, 2019a) due in large part to the ability of criminal groups to exploit jurisdictional and enforcement gaps and limitations (DefenceWeb, 2019). To complicate matters, data on maritime crimes is also fragmented across global, regional and national organizations and bodies, oftentimes by issue and geographical scope (Lycan and Van Buskirk, 2021).

Similar problems have been encountered in efforts to protect biodiversity beyond national jurisdiction (BBNJ). To date, the protection of BBNJ has been undertaken by a patchwork of global, regional and sectoral organizations and bodies, each with their own specific mandates and priorities, but none having a core focus on BBNJ (Lothian, 2022). This has resulted in coverage gaps, weak implementation of and compliance with existing arrangements and a general lack of cooperation when it comes to the protection of our deep ocean environment (Lothian, 2022; Blanchard et al., 2019).

On 19 June 2023, member States of the United Nations adopted, by consensus, the *Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction* (BBNJ Agreement) (United Nations, 2023). As the third Implementing Agreement to the 1982 *United Nations Convention on the Law of the Sea* (LOSC) (United Nations, 1982), the BBNJ Agreement seeks to secure the long term protection and integrated management of BBNJ through the effective implementation of relevant provisions of the LOSC and by strengthening and enhancing cooperation and coordination between and among relevant legal instruments, frameworks and relevant global, regional, subregional and sectoral bodies (United Nations, 2023: Articles 2 and 8(1)).

This article will examine the relationship between the BBNJ Agreement and transnational maritime environmental crime and consider ways the recently adopted instrument could assist in efforts to combat such crime, particularly in areas beyond national jurisdiction. As part of this analysis, this article explores how the BBNJ Agreement could provide an important platform for the formation of key partnerships and alliances by means of regional and bilateral dialogues, outreach and coalition-building to address transnational maritime environmental crime and mobilize and sustain the momentum for global action on this issue.

## 2 Transnational organized crime

Transnational organized crime is one of the six clusters of threats faced by the international community in the 21<sup>st</sup> century, and it is one that “no nation can hope to master by acting alone”

(United Nations, 2004a: 12 and Foreward, vii).<sup>1</sup> The 2004 report of the United Nations Secretary General’s High-level Panel on Threats, Challenges and Change, entitled *A More Secured World: Our Shared Responsibility* describes transnational organized crime “as a menace to States and societies, eroding human security and the fundamental obligation of States to provide for law and order” (United Nations, 2004a: 52). Prior to the 1980s, organized crime was generally considered the internal problem of a few States (Proelss and Hofmann, 2016), however in an era of globalization, organized crime has developed into a transnational challenge (Proelss and Hofmann, 2016). Although there is no universally accepted definition for the term *transnational organized crime*, in its ordinary sense, it is understood to refer to transboundary “acts committed by an organized criminal group in order to obtain a financial or other material benefit” (Proelss and Hofmann, 2016).

The *United Nations Convention against Transnational Organized Crime* defines a crime as being transnational in nature if it is committed in more than one State or if it is committed in one State then either its preparation or planning has taken place in another State, it involves an organized group that engages in criminal activities in more than one State or the crime itself has substantial effects in another State (United Nations, 2000: Article 3(2)).

While the concept of transnational organized crime is considered to be evolutionary in nature, its “typical manifestations” include drug trafficking, migrant smuggling and human trafficking, all of which require a mode of transportation, oftentimes by sea (Proelss and Hofmann, 2016).

## 3 Transnational organized crime at sea

The maritime domain has “evolved into a fertile environment for a wide range of transnational criminal endeavors” (Usman et al., 2021). While crimes such as piracy and armed robbery at sea, the illicit trafficking of people, narcotics, arms or waste, and environmental crimes such as illegal fishing or marine pollution pose a threat to the safety, political stability, economic interests and ecological equilibrium of maritime regions globally (Usman et al., 2021), transnational organized crime at sea has only recently been recognized as a major security issue (Bueger and Edmunds, 2020).

In 2019, the United Nations Security Council held its first meeting on transnational organized crime at sea (United Nations, 2019b). During discussions, Ambassador Jonathan Cohen of the United States Mission to the United Nations stressed that “we all have a stake in stopping crime at sea” and “all countries should be deploying a

<sup>1</sup> In its 2004 Report, ‘A More Secured World: Our Shared Responsibility’ the High Level Panel on Threats, Challenges and Change identified six clusters of threats faced by the international community in the 21<sup>st</sup> century, namely (1) economic and social threats, including poverty, infectious disease and environmental degradation; (2) inter-State conflict; (3) internal conflict, including civil war, genocide, and other large-scale atrocities, (4) nuclear, radiological, chemical and biological weapons; (5) terrorism; and (6) transnational organized crime.

broad range of tools: diplomatic, economic, social, military, intelligence, law enforcement, and judicial to tackle this problem” (United Nations, 2019b).<sup>2</sup> Yuri Fedotov, the Executive Chief of the United Nations Office of Drugs and Crimes underscored the importance of international cooperation in tackling transnational organized crime by sea and urged member States to better implement the existing international legal framework (United Nations, 2019a), including the LOSC, the *United Nations Convention against Transnational Organized Crime* and its protocols as well as the *United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances* (United Nations, 1990) and the *Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation* (International Maritime Organisation, 1992). While representatives at the meeting agreed that transnational organized crime by sea was a significant threat to international peace and security, confusion remained on the meaning of the concept and what illicit activities fall within its scope (Bueger and Edmunds, 2020).

Bueger and Edmunds identify three main categories of transnational organized crime at sea, namely:

- (1) Crimes against mobility (e.g. crimes that target shipping, supply chains and maritime trade);
- (2) Criminal flows (e.g. the sea is used as a conduit for criminal activities, in particular smuggling); and
- (3) Environmental crimes (e.g. crimes that cause significant harm to the marine environment and its resources) (Bueger and Edmunds, 2020).

The focus of this article rests on the last category, transnational maritime environmental crime.

## 4 Transnational maritime environmental crime

In similar vein to its parent concept, there is no universally accepted definition of the term *transnational maritime environmental crime*. However, arguably, a broad interpretation of the term encompasses any illegal activity that targets or causes significant harm to the marine environment, including its natural resources or crimes against critical infrastructure and cultural heritage (Bueger and Edmunds, 2020; Lycan and Van Buskirk, 2021). Lycan and Van Buskirk suggest that the three most ‘visible and emblematic examples’ of maritime environmental crime are (1) marine pollution; (2) illegal mining, resource extraction and dredging; and (3) fisheries crimes, including illegal, unregulated, and unreported fishing (Lycan and Van Buskirk, 2021). Each of these crimes pose threats to the health

and well-being of the marine environment and its associated biodiversity, particularly in areas beyond national jurisdiction.

Taking illegal, unregulated, and unreported fishing as an example. The term *illegal, unregulated, and unreported fishing* is defined by the Food and Agriculture Organization of the United Nations in its International Plan to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (FAO, 2001) and comprises different types of illicit activities, including, but not limited, to:

- Fishing without a license or authorization;
- Not reporting or misreporting catches;
- Fishing in prohibited areas and catching or selling prohibited species; or
- Fishing in areas not covered by a regulatory framework (FAO, 2024a).

In essence, illegal, unregulated, and unreported fishing occurs when fishing vessels fail to operate in accordance with national, regional and international regulatory schemes and management systems (FAO, 2024a).

According to the Food and Agriculture Organization of the United Nations, illegal, unregulated, and unreported fishing is now responsible for the loss of 11 to 26 million tons of fish caught annually which equates to approximately 20 per cent (or 1 in 5) of the global catch (FAO, 2024a; United Nations, 2024a). This carries an estimated economic value of US\$10–23 billion (United Nations, 2024a). As conventional fisheries collapse, deep-sea fish stocks face increasing exploitation (Kituya and Thomson, 2018). Deep-sea fishes are “often long lived, with slow growth and delayed maturity making them poorly adapted to sustain heavy fishing pressure” (Ramirez-Llodra et al., 2011). These species are also commonly found at deep-sea vulnerable marine ecosystems, such as seamounts and cold-water corals. Due to their unique biological and physical composition, vulnerable marine ecosystems are particularly sensitive to anthropogenic disturbance from the over-utilization of marine living resources and the use of destructive fishing practices (Lothian, 2024a; United Nations, 2024b). The removal of a target species from a vulnerable marine ecosystem can disrupt the food web making the ecosystem functionally vulnerable (United Nations, 2006b). Destructive fishing gear also poses a serious threat (Clark, 2016). For example, the ground-gear used in bottom trawling (steel plates, heavy cables and giant nets) can remove the benthic fauna from seamounts, reduce habitat complexity, and alter benthic community structure (Goode et al., 2020). Bottom trawling has already been responsible for the destruction of over half of the cold-water corals located in the North East Atlantic Sea, including in areas beyond national jurisdiction (Clark, 2016).

While a significant amount of illegal, unregulated, and unreported fishing is “small-scale, coastal and domestic” (Mendenhall, 2023), it is particularly challenging to combat on the high seas due to patchy regulation and weak enforcement (Österblom et al., 2015; The Pew Charitable Trusts, 2013). Another issue is the “common property and/or open access nature” of high seas fishery

<sup>2</sup> Ambassador Jonathan Cohen, Acting Permanent Representative to U.S. Mission to the United Nations remarks at a UN Security Council Open Debate on Transnational Organized Crime at Sea as a Threat to International Peace and Security (5 February 2019) available at <https://usun.usmission.gov/remarks-at-a-un-security-council-open-debate-on-transnational-organized-crime-at-sea-as-a-threat-to-international-peace-and-security/>.

resources the ownership of which is generally shared among States (Österblom et al., 2015). As Ostrom explains, when resource units (such as fish) produced by a common-pool resource are highly valued and access is not restricted or limited “individuals face strong incentives to appropriate more and more resource units leading eventually to congestion, overuse, and even the destruction of the resources itself” (Ostrom, 2010: 172). Harmful fishing subsidies have also posed a challenge. Annually, governments around the world have provided \$35.4 billion to the fishing sector (Briley, 2023). While these funds were to be used for vessel repair, fuel and other expenses, a 2019 Pew-commissioned study (Sumaila et al., 2019) found that an estimated \$22 billion qualified as harmful subsidies which are a key driver of overfishing (Briley, 2023; Brondizio et al., 2019). The *WTO Agreement on Fisheries Subsidies* (WTO, 2022), adopted on 7 June 2022 delivers on the mandate of Sustainable Development Goal 14.6 (United Nations, 2015) and the Eleventh WTO Ministerial Conference by setting new binding multilateral rules to curb harmful fisheries subsidies and prohibiting certain forms of subsidies that contribute to overcapacity, overfishing and illegal, unregulated, and unreported fishing (WTO, 2024). While this is a promising development, the *WTO Agreement on Fisheries Subsidies* has not yet entered into force and will require acceptance by two-thirds of the WTO membership (WTO, 1994).

Frustratingly, the slow acceptance of the *WTO Agreement on Fisheries Subsidies* is emblematic of a much larger issue when it comes to instruments in the maritime crime context. Many of the international instruments that have been adopted over the past couple of decades concerning global ocean protection and sustainability have been slow to get off the ground, in terms of achieving the necessary level of support and acceptance. Thus, while the purposes, principles and philosophy that lie behind the development of these instruments is promising, inconsistency in their adoption between States has hindered effective international and national responses (Lindley and Lothian, 2024) including to transnational maritime crime, such as illegal, unregulated and unreported fishing. Take for example, the *Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing* (FAO, 2016b), which was approved by the FAO Conference at its 36<sup>th</sup> Session in November 2009, entered into force on 5 June 2016 and has just 79 Parties covering 65% of the world’s coastal States (FAO, 2024b). The slow uptake of these types of instruments serves as an important lesson for the BBNJ Agreement, which will arguably require universal participation not only in formal adherence to the instrument but also to its full and effective implementation (Lothian, 2022). Thus, it will be essential to urgently raise awareness of the benefits of the BBNJ Agreement in order to promote and encourage its early entry into force.

Turning back to fisheries crimes, to further complicate matters, these types of crimes are often linked to other forms of transnational organized crime at sea (Bueger and Edmunds, 2020). A fishing vessel, for example, can be used to smuggle illicit cargo, such as weapons, narcotics, wildlife and people (Noonan and Williams, 2016). Illegal fishing is also associated with a series of wider crimes connected to the fisheries sector, including forced

labor, human rights abuses, money laundering, tax evasion, and document fraud (Environmental Justice Foundation, 2023).

As the above example of illegal, unregulated, and unreported fishing demonstrates, transnational maritime environmental crime is both complex and multifaceted and presents a challenge to effective law enforcement, particularly on the high seas (de Coning and Stolsvik, 2013). Areas beyond national jurisdiction are a prime target for transnational maritime environmental crime, due to the fragmented international legal frameworks and institutions that govern law enforcement activities (de Coning and Stolsvik, 2013), alongside a lack of coordination and cooperation. As these maritime zones are located far offshore, the myriad of criminal activities and their associated impacts on the marine environment (including its resources and ecosystems) are extremely challenging to monitor and control. In the absence of effective oversight, areas beyond national jurisdiction are facing a growing list of threats from transnational maritime environmental crime, and this will inevitably have an impact on the health and resilience of BBNJ.

The following sections examine the relationship between the recently adopted BBNJ Agreement and transnational maritime environmental crime and considers ways the new instrument could assist in efforts to combat such crime in areas beyond national jurisdiction.

## 5 Challenges in protecting biodiversity beyond national jurisdiction

Areas beyond national jurisdiction are one of Earth’s largest reservoirs of biodiversity, home to a rich and diverse web of life (The Pew Charitable Trusts, 2016). However, knowledge of the deep sea remains very limited (Levin et al., 2019). Scientists are just starting to scratch the surface in terms of understanding the full extent of biodiversity in the world’s oceans and the majority of activities at sea are taking place “in a climate of uncertainty as to their long-term impacts” on the marine environment and more particularly BBNJ (Warner, 2015). Hence the protection of BBNJ has been high on the agenda of the United Nations since the turn of the 21<sup>st</sup> century.

For a long time, because of their remoteness, areas beyond national jurisdiction were thought to be pristine and protected from the impacts of human activities (Druel et al., 2013). However, the once popular view that the ocean was too big to be affected by human actions “has been replaced by the reality of the Anthropocene Ocean” (Jouffray et al., 2020). Areas beyond national jurisdiction are now suffering under the weight of an increasing list of anthropogenic activities and stressors. For example, the overexploitation of fish stocks. According to the Food and Agriculture Organization of the United Nations, 37.7% of fishery stocks are being fished at unsustainable levels (FAO, 2024b). There is also the threat of marine litter with approximately 14 million tons of plastic entering the oceans annually (IUCN, 2021). As plastics now account for 80 per cent of all debris from surface waters to deep-sea sediments (IUCN, 2021), the ocean floor is predicted to be one of the largest reservoirs for plastic pollution

(Zhu et al., 2024). In addition, there is emerging ocean industries, such as deep-seabed mining, the bioprospecting of marine genetic resources and ocean fertilization, as well as increasing pressure from climate-associated stressors, such as ocean warming, ocean acidification and deoxygenation. All of these activities and stressors present increasing threats to the biodiversity of the world's oceans and seas.

Unfortunately, the rules, regulations and institutional structures of the current international law framework have not kept pace with the increase in activities in areas beyond national jurisdiction (Lothian, 2021; Blanchard et al., 2019). While the adoption of the LOSC did mark an important turning point in the protection of the marine environment (Proelss and Houghton, 2015), its environmental protection provisions are framework in nature and lack modern governance principles and conservation tools (Churchill, 2015). Also missing are detailed provisions for the establishment of area-based management tools, including marine protected areas and environmental impact assessments, both considered crucial mechanisms for the protection of BBNJ (The Pew Charitable Trusts, 2012). Arguably, however, cooperation (or a lack thereof) has really been the Achilles heel of the existing international law framework for areas beyond national jurisdiction (Ardron et al., 2014).

Under the LOSC, marine areas beyond national jurisdiction are regulated and managed by a patchwork of governance organizations and bodies, each with their own mandates and priorities (Lothian, 2022). Fishing is addressed by the Food and Agriculture Organization of the United Nations at the international level and complemented at the regional level by Regional Fisheries Management Organizations and Arrangements. The exploration and exploitation of mineral resources in the deep-seabed is regulated by the International Seabed Authority, while the dumping of wastes is regulated through international conventions adopted under the auspices of the International Maritime Organization. In addition, there are numerous sectoral and regional conventions and agreements. While all of these instruments have provided some opportunities to enhance the conservation and sustainable use of BBNJ, none have a core focus on the protection of marine biodiversity (The Pew Charitable Trusts, 2020). And, despite some sectors taking steps to implement measures to protect BBNJ, their mandates typically extend to specific regions or activities and oftentimes their jurisdictions overlap (Lothian, 2022). There are also coverage gaps with some regions and resources not covered by any regulatory framework and there has been weak implementation of and compliance with existing arrangements (Blanchard et al., 2019; Barritt and Viñuales, 2016).

The inadequate protection afforded to BBNJ under the current legal and institutional framework is emblematic of the regulatory, governance and institutional gaps that have characterized the overall fragmented approach to governing areas beyond national jurisdiction, including when it comes to addressing transnational maritime environmental crime. As there has been no single instrument to deal with the protection of the deep ocean environment in a comprehensive manner, the development of the BBNJ Agreement marks a new chapter in the law of the sea and one

that places the conservation and sustainable use of BBNJ at its center.

## 6 The BBNJ agreement

The adoption of the BBNJ Agreement is a “significant addition to the existing international ocean governance framework” and will provide a vital platform to improve integrated management of areas beyond national jurisdiction (Gjerde et al., 2022). The instrument revolves around a package deal of four main issues namely:

- (1) Marine genetic resources, including the fair and equitable sharing of benefits;
- (2) Measures such as area-based management tools, including marine protected areas;
- (3) Environmental impact assessments; and
- (4) Capacity-building and the transfer of marine technology.

In summary, the BBNJ Agreement sets up a procedure to establish a network of high seas marine protected areas and also establishes a regime for the sharing of monetary and non-monetary benefits derived from marine genetic resources. In addition, the Agreement contains a clear set of rules and thresholds for the conduct of environmental impact assessments in areas beyond national jurisdiction and provides a strong capacity-building framework between States Parties.

## 7 Relationship between the BBNJ agreement and transnational maritime environmental crime

As the overriding objective of the BBNJ Agreement is to ensure the long-term conservation and sustainable use of BBNJ (United Nations, 2023: Article 2), its provisions are not intended to directly address transnational maritime environmental crime. In any case, the regulation of transnational maritime environmental crime already falls under a network of national laws, international conventions, customary international laws, and bilateral and regional agreements between States (Bueger and Edmunds, 2020). The problem, however, is that the governance and institutional structures in place to address maritime environmental crime are fragmented at both an international and regional level (Bueger and Edmunds, 2020).

However, the purpose of the BBNJ Agreement is not to deal with ocean governance matters afresh (Barnes et al., 2006). Instead, it was developed to fill gaps in the LOSC and respond to the Convention's very general environmental protection provisions (Lothian, 2023). The BBNJ Agreement is to therefore work with and alongside existing legal regimes that already play a role in governing, regulating and managing activities in areas beyond national jurisdiction. This is clear from Article 5 of the Agreement which explicitly stipulates that the instrument is to “be interpreted and applied in a manner that does not undermine

relevant legal instruments and frameworks and relevant global, regional, subregional and sectoral bodies” (IFBs). Thus, for example, in the fisheries context, the not undermine proviso essentially preserves the jurisdiction of Regional Fisheries Management Organizations and Arrangements, as the key bodies responsible for fisheries management in areas beyond national jurisdiction (Mendenhall, 2023). The BBNJ Agreement does not define the ambiguous term *not undermine* leaving it open to different interpretations and divergent views as to its precise scope and implications (De Lucia, 2019; Scanlon, 2017). While a detailed analysis of the *not undermine* proviso is beyond the scope of this article and has already been extensively treated elsewhere (Lothian, 2024a; Langlet and Vadrot, 2023; Scanlon, 2017), the following sections instead consider how the BBNJ Agreement’s tools and mechanisms could provide inspiration and lessons for the development of a more harmonized, cooperative and coordinated multilateral response to transnational organized crime at sea, and specifically transnational maritime environmental crime.

## 8 Area-based management tools, including marine protected areas

One of the overriding aims of the BBNJ Agreement is to conserve and sustainably use priority protection areas through the establishment of a comprehensive system of area-based management tools, with ecologically representative and well-connected networks of marine protected areas (United Nations, 2023: Article17(a)). The BBNJ Agreement is therefore seen as a vital step toward achieving the Kunming–Montreal Biodiversity Pact to protect at least 30 percent of marine habitats by 2030 (CBD, 2022), and its area-based management tools process could also prove promising as a potential mechanism for progress in the battle against certain types of transnational maritime environmental crime, such as illegal fishing and marine pollution (Mendenhall, 2023). For instance, the consultation and cooperative mechanisms incorporated into the BBNJ Agreement’s process for the designation of area-based management tools could present opportunities to further regional and bilateral dialogue on fisheries crimes, including overfishing, illegal, unregulated, and unreported fishing as well as the incidental catch of deep-sea vulnerable fish stocks. While the BBNJ Agreement cannot directly impose its procedures on existing fisheries management bodies and it remains to be seen how its consultation and cooperative mechanisms will work in practice (Mendenhall, 2023), its elaborate institutional arrangements could provide a setting to promote and encourage efforts in crafting solutions to fisheries issues, including the adoption of spatial management measures that provide for lasting conservation benefit and sustainable use (Mendenhall, 2023).

Mendenhall points to the *WTO’s Agreement on Fisheries Subsidies* as a clear example of how an international forum can be utilized to address illegal, unregulated, and unreported fishing and encourages States to “seek out parallel forums that could enable productive international cooperation to achieve the same goals” (Mendenhall, 2023). A number of States are already engaging in “activities to improve maritime domain awareness and encourage

sharing more information to help those countries who are losing the most to illegal fishing, such as Pacific Islands nations” (Medina, 2024). For example, in August 2023, the United States and the Republic of Palau signed a bilateral law enforcement agreement with the aim of assisting in the monitoring of Palau’s exclusive economic zone against illegal, unreported and unregulated fishing and to deter uninvited vessels from conducting questionable maneuvers within these waters in an attempt to counter illicit maritime activities in the region (United States Coast Guard News, 2023). As the BBNJ Agreement marks the dawn of a new era in oceans governance and represents another significant development in the institutionalization of international cooperation (Lothian, 2024b), the instrument’s framework for cooperation and the specific mechanisms and techniques it utilizes to strengthen, enhance and foster coordination, coherence and harmonization between and among States and existing governance organizations and bodies could make it an ideal parallel forum for discussing fisheries issues, as well as a broader range of challenges affecting the health and well-being of the oceans, including transnational maritime environmental crime. It could also be a useful platform for forging further key partnerships and alliances between States, whether it be on a bilateral or multilateral basis.

Until the adoption of the BBNJ Agreement, there was no global mechanism for the establishment and management of area-based management tools including marine protected areas in areas beyond national jurisdiction (Lothian, 2023). To date, the designation of high seas marine protected areas has taken place largely under the auspices of the UN Environment’s Regional Seas Programme, which is limited in its geographical coverage (Freestone, 2019). Aside from regional initiatives, the prevailing approach in areas beyond national jurisdiction has been sectoral, with several international organizations having area-based management tools at their disposal (Wright and Rochette, 2019). For example, Regional Fisheries Management Organizations and Arrangements can close fisheries; the International Maritime Organization can designate Particularly Sensitive Seas Areas and Special Areas established under *International Convention for the Prevention of Pollution from Ships, as modified by the Protocol 1978 (MARPOL 73/78)* (International Maritime Organisation, 1973), while the International Seabed Authority has the mandate to designate Areas of Particular Environmental Interest. These sectoral measures tend to focus on threats posed by one specific activity without considering cumulative impacts (Tiller et al., 2019). As there has been no global mechanism or overarching framework to ensure coordination, consistency and coherence of sectoral area-based management tools, the BBNJ Agreement seeks to remedy this by strengthening cooperation and coordination in the use of spatial management tools, not only among States, but also amongst relevant IFBs (United Nations, 2023: Article 17(b)).

The BBNJ Agreement lays out a sophisticated process for States Parties to submit proposals for the establishment of area-based management tools (including marine protected areas). Pursuant to Article 19(1) of the Agreement, proposals regarding the establishment of area-based management tools must be submitted by States Parties,

either individually or collectively, to the Secretariat. In developing a proposal for an area-based management tool, States Parties will be required to cooperate, by way of collaboration and consultation with relevant stakeholders, including IFBs to achieve the objectives of the BBNJ Agreement (United Nations, 2023: Article 19(2)). For example, these stakeholders will naturally include the International Maritime Organization as the specialized agency of the UN responsible for the safety and security of international shipping and the prevention of vessel source pollution, as well as Regional Fisheries Management Organizations and Arrangements which form one of the building blocks of high seas fisheries management. The BBNJ Agreement thereby provides an important platform for all sectors and stakeholders to contribute effectively to the protection of BBNJ by fostering dialogue and bringing together the various organizations and bodies with competences in areas beyond national jurisdiction. The cooperative mechanisms incorporated into the Agreement could hold the potential to strengthen coordination between the BBNJ Agreement and existing relevant IFBs in respect to the designation and implementation of area-based management tools in areas beyond national jurisdiction. Taking the International Maritime Organization as an example. As the International Maritime Organization is already experienced in adopting MARPOL Special Areas and Particularly Sensitive Seas Areas, the International Maritime Organization will be a relevant stakeholder in the consultation process for the establishment of area-based management tools under the BBNJ Agreement, as these tools may have implications for vessel source pollution control on the high seas.

A main issue during BBNJ negotiations was finding ways to resolve potential overlaps, inconsistencies and conflicts between area-based management tools established under the new instrument and those adopted under relevant IFBs (Lothian, 2024b). Delegations generally agreed that cooperation and coordination would be indispensable to remedy the disordered and fragmented management of areas beyond national jurisdiction (Tang et al., 2021). Arguably, the same reasoning must now be applied in order to combat transnational maritime environmental crime. To overcome the lack of cooperation and coordination in the protection of marine biodiversity, the BBNJ Agreement incorporates key cooperative mechanisms. For example, the Conference of the Parties to the BBNJ Agreement, in taking a decision on the establishment of an area-based management tool, will be required to respect the competences of existing governance institutions and to make arrangements for regular consultations with relevant entities to enhance cooperation and coordination (United Nations, 2023: Articles 5(2), 22(2) and (3)). The BBNJ Agreement is therefore unusual, as its success will not only depend on implementation by States Parties, but also global, regional, and sectoral institutions and bodies that already have sectoral area-based management tools at their disposal (Lothian, 2024a). The BBNJ Agreement's provisions on area-based management tools are therefore designed to complement existing measures adopted and applied by relevant IFBs and are intended to strengthen and promote the consistency of such measures, including ones that are targeted at ensuring the sustainable use of high seas fisheries and controlling vessel source pollution (Mendenhall, 2023).

## 9 Enhancing the data-sharing infrastructure

Another issue when it comes to combatting transnational environmental maritime crime is data. Currently, data on maritime environmental crime is scattered across different global, regional and national organizations and institutions, and oftentimes this data is fragmented based on its thematic and geographical coverage (Lycan and Van Buskirk, 2021). Some forms of crime at sea are better documented than others (Bueger and Edmunds, 2020). For example, while data on illegal fishing and oil spills is collected in quite a systematic way, there is minimal data available on illegal mining and dredging (Lycan and Van Buskirk, 2021). Exacerbating these issues is the fact that the data on different crimes is collected by different regulatory and oversight bodies and typically focuses on the aggregate results of the crimes rather than direct monitoring of the criminal activity (Lycan and Van Buskirk, 2021). This paints a somewhat distorted picture when it comes to transnational maritime environmental crime. Clearly, in order to enhance a collective understanding of transnational maritime environmental crime, including its root causes, urgent efforts are required to improve data collection, to identify appropriate data-sharing channels and strengthen intelligence sharing among law enforcement agencies within and among States (Lycan and Van Buskirk, 2021).

BBNJ negotiators faced similar issues. Information and data on BBNJ is currently located in different institutions and databases around the world. The gap between North–South when it comes to BBNJ research is also particularly wide (Wright et al., 2018). Sophisticated and expensive technologies are required to reach deep-sea environments and sample organisms, including specialized research vessels; *in situ* sampling tools; molecular biology techniques and technologies associated with the research and development process (Arico and Salpin, 2005). The Global South, comprising economically disadvantaged regions of the world, generally lack access to these technologies and the human and financial wherewithal required to undertake BBNJ research (Arnaud-Haond et al., 2011). This of course speaks to a wider issue and the challenges these countries continue to face. As the United Nations notes, “we live in a time of stunning technological wizardry, but unfortunately, not all of us benefit from it. Many have already been left behind and risk falling even further behind due to the political, economic and social consequences of rapidly expanding inequality” (Utoikamanu, 2018). The Global South continues to face hurdles related to technology adoption, infrastructure and financial constraints (Ukoba et al., 2024). The technological gap between the Global North and the Global South was seen ‘as a major factor in economic and political disparity’ during the negotiations of the LOSC back in the 1970s and 1980s and discussions concerning capacity-building and technology transfer during the recent BBNJ negotiations ignited old debates along a North–South divide (Lothian, 2022). For example, BBNJ delegations struggled with the thorny issue of whether capacity-building and technology transfer should be mandatory or voluntary in nature.

One of the root causes of the technological disparity is found in structural limitations, as there are marked gaps between the Global

South and other countries in areas such as science, technology and innovation (‘Utoikamanu, 2018). Access to relevant information and data also tends to be expensive and limited to academic and scientific institutions in developed States (Cicin-Sain et al., 2018). In an attempt to close existing gaps between the Global North and the Global South and recognizing that “global engagement and equity are critical pillars to achieve coherent and comprehensive measures towards ocean conservation” (Caldeira and Lopes, 2023), the BBNJ Agreement now incorporates an elaborate data-sharing infrastructure. Pursuant to Article 41 of the instrument, States Parties shall cooperate, directly or through relevant IFBs, to assist Parties, in particular developing States in achieving the objectives of the BBNJ Agreement through capacity-building and the development and transfer of marine science and technology. The BBNJ Agreement provides a non-exhaustive definition of *marine technology*, which includes, *inter alia*, information and data, provided in a user-friendly format as well as expertise knowledge related to the conservation and sustainable use of BBNJ (United Nations, 2023: Article 1). In addition, a non-exhaustive and lengthy list of capacity-building and technology transfer activities and initiatives is included in Article 44 and Annex II of the BBNJ Agreement. These activities and initiatives include the sharing and use of relevant data, information and research as well as the exchange and dissemination of information on BBNJ.

The Clearing-House Mechanism established under the BBNJ Agreement will provide an invaluable practical tool when it comes to enhancing this data-sharing infrastructure and ensuring equitable access to data (United Nations, 2023: Article 51). Significantly, the BBNJ Agreement has adopted a Hub and Spoke network model for its Clearing-House, which will serve as a central hub (overseen by the Secretariat) and provide links to other clearing-house mechanisms, repositories and databases. While the specific modalities for the operation of the Clearing-House Mechanism will be determined by the Conference of the Parties at a later date (United Nations, 2023: Article 51(2)), it is already tasked to perform a number of wide-ranging functions. For example, the Clearing-House will serve as a centralized platform to enable Parties to access, provide and disseminate information with respect to data, marine scientific and technological knowledge and research relating to BBNJ (United Nations, 2023: Article 51(3)(a)).

The Clearing-House will also assist in facilitating scientific and technical cooperation within and between States Parties, the private sector, research institutions, civil society and traditional knowledge holders, by connecting users in a collaborative setting and providing links to other relevant global, regional, national and sectoral clearing-house mechanisms and gene banks, repositories and databases for the exchange of information (United Nations, 2023: Article 51(3)(c)). This, in turn, could strengthen cooperative links between existing governance organizations and bodies and foster collaborative initiatives and research projects amongst States (Lothian, 2024b). The BBNJ Agreement thereby recognizes that cooperative efforts when it comes to issues in areas beyond national jurisdiction should manifest themselves in different forms, at various levels, and amongst a diverse range of actors and stakeholders (Boisson de Chazournes and Ruddall, 2019).

As more work is clearly needed to understand the ways in which different actors and organizations involved in the fight against transnational maritime environmental crime share information and data between one another, the BBNJ Agreement could provide inspiration on ways to enhance increased knowledge and collaboration when it comes to such crime thereby leading to better informed policy and decision-making.

## 10 Capacity-building and cooperative tools and mechanisms

A lack of resources and technology has been another impediment in tackling transnational maritime environmental crime. Maritime law enforcement agencies around the world face limitations when it comes to the personnel and operational capacities required to carry out monitoring and surveillance of crimes, particularly in areas beyond national jurisdiction (Usman et al., 2021). Vessels, aircraft, and personnel need to be on hand to undertake efficient patrols, promptly respond to incidents, and enforce maritime regulations and laws (Usman et al., 2021). Capacity limitations have the potential to severely undermine attempts to deter and combat transnational maritime environmental crime, and it also provides opportunities for criminal elements to take advantage of areas not sufficiently monitored, enabling them to engage in criminal activities such as illegal fishing (Usman et al., 2021).

Similar issues as to capacity have been encountered in the BBNJ context. As greater scientific knowledge of areas beyond national jurisdiction is critical to ensure the long-term protection of BBNJ, innovative mechanisms have been incorporated into the BBNJ Agreement to promote cooperation and coordination for marine scientific research not only to improve the understanding of our deep-ocean environment but to facilitate better informed decision-making (United Nations, 2006a). These innovative mechanisms are underpinned by a renewed sense of, and duty, to cooperate (Lothian, 2023). As a greater level of international cooperation will be required to combat transnational maritime environmental crime, important lessons can be drawn from the cooperative mechanisms and tools in the BBNJ Agreement when it comes to capacity-building and technology transfer.

The BBNJ Agreement now sets out an explicit duty for States Parties to facilitate cooperation in capacity-building and the development and transfer of marine science and technology to assist developing States in achieving the objectives of the instrument (United Nations, 2023: Article 41). In doing so, States Parties are to cooperate at all levels and in all forms, including through collaborative partnerships with relevant stakeholders (Lothian, 2024b). In addition, in order to create and enhance the human, financial, technological, institutional, and resource capabilities of States Parties, particularly developing States, the capacity-building initiatives of the BBNJ Agreement include, among other things, the sharing and use of data, information, knowledge, and research results, including environmental and biological information collected through research conducted in areas beyond national jurisdiction; the development and strengthening of infrastructure, including equipment and capacity of personnel; the

provision of technology, including sampling and methodology equipment (e.g., for water, geological, biological or chemical samples); and the acquisition of the equipment necessary to support research and development capabilities, including in data management in the context of marine genetic resources activities, area-based management tools, and environmental impact assessments (United Nations, 2023: Article 44 and Annex II)

As cooperation underpins the BBNJ Agreement, its institutional arrangements could provide an important fora for the formation of key collaborative partnerships and alliances and it could also provide a vital platform for dialogue on ways to overcome resource constraints, shortcomings in technology and obstacles in coordination when it comes to tackling the complexities presented by transnational maritime environmental crime.

## 11 Conclusion

While some ocean problems are amenable to a bilateral or regional solution, transnational maritime environmental crime is an issue that no one State can combat on its own. It is a global challenge that will require the cooperation of all States. Similarly, the protection of BBNJ is a shared concern that extends beyond individual States and touches on values of global significance (Soltau, 2016; Horn, 2015). It is clear that collective oceans management is essential to confront major shared challenges, from the conservation and sustainable use of BBNJ to combatting transnational maritime environmental crime. As the adoption of the BBNJ Agreement marks a new chapter for the law of the sea and represents a significant development in the institutionalization of international cooperation (Lothian, 2024b), this article has examined the relationship between the recently adopted instrument and transnational maritime environmental crime and

outlined ways the BBNJ Agreement, including its cooperative tools and mechanisms, could provide vital lessons when it comes to developing a more harmonized, cooperative and coordinated multilateral response to environmental crimes at sea.

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