

## The emergence of a new legally binding agreement for a marine complex system: are we going beyond panaceas?

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## ABSTRACT

Many warn against the use of panaceas, or overly simple “solutions” applied to a wide array of complex problems without regard for effectiveness or negative side effects. Scholars developed several diagnostic approaches to avoid panaceas by allowing people to tailor institutions to complex social-ecological systems at the local and international levels of analysis. However, panaceas still persist and are, in fact, pervasive in environmental governance at all levels of analysis. In this paper, we examine how interactions between two main components of the panacea mindset, power disconnects and problem narratives, are affecting UN negotiations for a new treaty regarding biodiversity beyond national jurisdiction (BBNJ). We find that combating panaceas requires a better understanding of conflicting hierarchies of institutions that limit the effectiveness of institutional design. Our research indicates that the negotiated outcome will not reflect the best institutional design for the conservation of biodiversity beyond national jurisdiction, but rather the best institutional design for the benefit of powerful states. This implies that institutional diagnostics must account for these type of barriers, which can only be removed through system-wide political and economic transitions, to ensure effective design rather than the creation of expedient panaceas.

## Introduction

Oceans cover more than 70% of the planet’s surface and contain 97% of our water. They are also home to innumerable species, many of which are endemic to unique ecosystems like coral reefs and deep sea vents (Kummu et al, 2016). Oceans also provide food for billions of people, cheap transport routes for international trade, sinks for many pollutants, sources for oil and other resources, and much of the oxygen that is required for life on this planet (FAO, 2016; Inniss and Simcock, 2016). Even so, the oceans and their biodiversity are under threat from multiple sources including overfishing, pollution, habitat destruction, and climate change (IPBES, 2019).

Within national boundaries, or exclusive economic zones, governments are responsible to protect this biodiversity under the Convention of Biological Diversity mandate (CBD). Outside of these areas of national jurisdiction, biodiversity is governed under a patchwork of international agreements that were largely created for other purposes, like the management of fish stocks, seabed mining regulations and/or the regulation of shipping. There is ample evidence that this fragmented approach to governance is not sufficient (Ban et al, 2014; Bigagli, 2016), however, and that life in the oceans is severely threatened by human activities (Brown, 2003; Persson, 2004; Biermann et al, 2009; Garcia et, 2014). Recognizing this growing problem, members of the United Nations are negotiating a new treaty under the United Nations Convention on the Law of the Sea (UNCLOS) with the stated goal of promoting the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (BBNJ).

We use the concept of the *panacea mindset*, as developed by Young et al. (2018) to explain how cross-level interactions between problem narratives and vested interests shaped the BBNJ negotiations to date. While conservation was the stated goal of the agreement, our analysis of preliminary texts shows that this new treaty will focus instead on the distribution of benefits from exploiting BBNJ and that those few conservation issues addressed will institutionalize management measures that are already recognized as panaceas at the national level, such as marine protected areas and environmental impact assessments. The paper also provides theoretical advances for integrated analysis across levels of analysis and identifies important roadblocks to effective institutional design.

## Institutional Design and the Panacea Mindset

The problem of biodiversity beyond national jurisdiction (BBNJ) has many facets. When considering fisheries, deep sea mining, and genetic material, BBNJ is a common pool resource (CPR) because it is rival and non-excludable, at least in the absence of international regulation (Ostrom, 2015). BBNJ is also a public goods problem, as marine biodiversity provides substantial ecosystem services, such as carbon sequestration, temperature regulation, and, of course, support for living marine resources that people enjoy for food and other uses (Turner et al, 1990).

For much of human history, resource extraction in areas beyond national jurisdiction was not commercially viable but recent technological innovations now allow people to go further, deeper and faster into the sea, leading also to an increase in the impacts on and threats to a still unknown marine biodiversity found in these areas (Druel & Gjerde, 2014). Furthermore, larger, systemic problems like climate change and pollution are also affecting BBNJ in ways that are still not well-understood. For instance, plastic waste has been found in the deepest parts of the ocean (Challenger Deep) (Peng et al, 2018) and in remote areas (Barnes et al, 2010) and the melting of glaciers in the Arctic threatens to disrupt the thermohaline circulation that moves large masses of water through the deep oceans (Rahmstorf, 2000).

Ideally, institutional design could be used to determine the best suite of formal rules and norms to govern this complex set of issues. The literature on institutional diagnostics developed almost in parallel for local and international issues, but work bridging levels of analysis is still lacking (Keohane and Ostrom 1995). Ostrom (2007) and Ostrom and Cox (2010) develop the Institutional Analysis and Development (IAD) framework, which is meant to guide decision makers through a comprehensive analysis of the complex social ecological system that they govern and help them develop effective institutions for it. In general, this framework has been applied to local and regional problems. Young (2002; 2008) developed a separate institutional diagnostics tool to help with the design of international environmental regimes. His approach focuses on identifying specific aspects of the environmental problems, practices, politics, and players that block effective environmental governance and reduce or neutralize them using relevant design principles derived from the study of other international regimes.

One of the most difficult components of institutional diagnostics is accounting for existing institutions, particularly those that conflict with design principles and those that cross levels of analysis. Young (2017) suggests that goal-oriented governance may perform better when

there are conflicts over institutional design than practice-based governance, because it provides more flexibility to strengthen institutions as the politics of the issue changes. At the local/sub-national levels, Ostrom and Cox (2010) make a similar argument. Although they do not suggest goal-oriented governance *per se*, they note that idealized collective action approaches are often used as panaceas when pressure for change comes from one group (action arena) without accounting for others who are involved with resource governance. They conclude that avoiding panaceas means ensuring uptake of diagnostic principles in all relevant action arenas. Others use similar approaches to describe how contestation affects institutional design and subsequent institutional effectiveness (Berardo and Gerlak 2014).

Building on this past work, we use the concept of the panacea mindset to show how the process of institutional design can be co-opted by existing institutions at different levels of analysis, and ask what this result means for institutional diagnostics. Panaceas are relatively simple solutions that are applied to a wide array of problems regardless of fit and potential effectiveness. Young et al (2018) describe the panacea mindset as a combination of factors that promote the spread and persistence of panaceas. There are three major components of the mindset: problem narratives, power disconnects, and heuristics and biases. We focus on the first two components in this paper, largely because it was not possible to collect data on heuristics and biases (the psychological factors that make people more inclined to accept panaceas while reducing the likelihood that they will recognize the ineffectiveness of panaceas once in place).

Returning to the other elements of the mindset, problem narratives are “just so stories” that people use to explain the causes of problems and potential solutions. Problem narratives promote panaceas when they oversimplify causal relationships and thereby make simple solutions seem plausible. Power disconnects occur when those with power are insulated from the costs of their actions and/or, when those who lack power experience the costs of other’s decisions. When power disconnects are wide, it is easier to implement panaceas that provide benefits to the powerful and to disregard any negative impacts on marginalized populations or the environment. There are often feedbacks between the elements of the mindset. As people seek to rationalize the choice of a panacea, they may change their problem narratives to suite their vested interests.

In this paper, we are most interested in the cross-level interactions between the problem narratives and power disconnects that are shaping negotiations on biodiversity beyond national jurisdiction. We argue that the existence of well-accepted panaceas at the local or issue-specific level can create space for the institutionalization of panaceas at higher levels and *visa versa*. This argument is similar to that of Ostrom and Cox (2010) described above, but it delves more deeply into the specific attributes of institutions in the different action arenas that lead to the incorporation of panaceas in international agreements.

Methodologically, we start by describing those problem narratives that are most prevalent for international oceans issues generally at three different levels, global governance (level 1), oceans governance (level 2), and issue-specific governance (level 3). We then evaluate state’s domestic interests to predict which type of problem narrative they are likely to espouse in BBNJ negotiations. Comparison with actual policy positions within negotiations confirms that our interest-based explanation of problem narratives holds, though it is not sufficient to say that one prescribes the other. Instead, it is only evidence that these two factors evolved together as states created the oceans regime complex. Lastly, we evaluate

international power disconnects and use this information to predict likely outcomes of the negotiations. Although there is as yet no agreement, the trajectory of current negotiations suggests that there will either be a weak agreement that includes panaceas for certain types of biodiversity protection or no agreement, since there is so little common ground over the sharing of benefits from BBNJ. Either way, the negotiated outcome will not reflect the best institutional design for the conservation of biodiversity beyond national jurisdiction, but rather the best institutional design for the benefit of powerful states.

## Problem Narratives

As described above, problem narratives are stories told by actors that describe the causes of problems and thereby help to define plausible solutions. This is an expansion on the conceptual narrative, which is an explanation of cause and effect usually developed by academics in explaining various phenomena (Diner 2000). Problem narratives contribute to the panacea mindset when they oversimplify cause and effect, making it easier for people to believe that a panacea will be effective. There are also more complicated problem narratives that can prevent the panacea mindset and lead to greater dependence on institutional diagnostic practices. As we explain in the next section, the outcome of BBNJ negotiations will depend on the relative political power of states that espouse either simple, panacea-promoting problem narratives or complex, panacea-preventing problem narratives.

We identify key problem narratives around the issue of marine biodiversity conservation in areas beyond national jurisdiction through a review of the recent literature and political discourse oceans governance more broadly. These narratives can be found at three interacting levels of analysis. Two levels occur in the realm of international relations. The highest (level 1) deals with the structure of the international system itself. The discourse here revolves around the fragmentation of environmental governance among multiple separate regimes or regime complexes and the resulting lack of coordination and potential for duplication. For some, the distribution of power is also determined by the current system and should be changed or maintained.

For international oceans governance (level 2) the “problem” around which narratives have formed is in relation with the (inadequate) level of marine conservation and/or the (inequitable) distribution patterns of access to, and sharing of benefits derived from, the use of resources in areas beyond national jurisdiction. The former narrative tends to be embedded in the discourse on global environmental politics, and particularly features conflicting views on the effectiveness of the existing regime complex in (failing/succeeding) to prevent degradation of the marine environment due to anthropogenic stressors such as overfishing, pollution, and climate change. The latter is centered in discussions regarding environmental justice and sustainable development, including well-known issues such as common but differentiated responsibilities, the additionality of aid, and the common heritage of mankind.

At the level of implementation (3)—which is not exactly local but can be thought of as issue-specific—we limit our analysis to those issues that are considered under BBNJ. This is an interesting topic in itself, as some of the threats described in the introduction are not included in the negotiations, such as climate change and pollution (e.g. plastics, marine diesel, ballast water, etc.). For most of these issues, the argument is that they come from

terrestrial sources and are therefore within the jurisdiction of states, but even pollution from ships on the high seas is not under discussion. While we explain this outcome in our Level 1 and 2 analysis, in the interest of space we limit our discussion of issue-specific problem narratives to those topics that are under consideration, notably fisheries, deep sea mining, and marine genetic resources (MGR).

This section provides more detail on each level of problem narratives described above while also building up a framework of hybrid narratives that are combined across levels of analysis. Within the framework, some hybrid narratives are identified as being panacea-promoting, while others are shown to be panacea-preventing for BBNJ. Evidence for these narratives is largely based on the literature and our own extensive knowledge of environmental governance at the international and domestic levels. However, we chose to limit the assessment to problem narratives that are relevant to BBNJ negotiations, as determined from our own analysis of BBNJ negotiations to date. This allows us to keep the problem narratives section short and focused so that we have room to explore interactions with domestic interests and to investigate the impacts of both of these elements of the panacea mindset on BBNJ negotiations to date.

## Fragmentation in Global Environmental Governance (Level 1)

There are several competing institutional problem narratives in the area of international oceans governance – all of which can be bracketed by two ideal types which we call “Filling Gaps” and “Fixing the System”. These narratives are closely related to the conceptual narratives studied by academics around the analytical problem of fragmentation in global governance, but they take on different dimensions when used by other stakeholders, including states, business interests, NGOs, and even scholars who focus on other aspects of international oceans governance (notably conservation/effectiveness).

“Filling Gaps” has arguably been the dominant problem narrative in state-led global governance, at least since the signing of the Law of Sea Convention in 1982. Whenever a new problem such as climate change surfaces, a new instrument is negotiated to fill the gap. This leads to fragmentation of global governance—or the proliferation of multiple, separate regimes governing different aspects of the environment (Biermann et al, 2009). Academics (particularly legal scholars) who subscribe to this as a conceptual narrative are generally concerned about the possibility of duplicating work, so they try to make sure there is as little gap and overlap as possible. Demarcation of boundaries between institutions is of a primary concern rather than their relationships.

States and other actors may be concerned with these technical issues as well, but for them this problem narrative is more about maintaining power structure that is embedded in the *status quo*. In other words, states or other actors who benefit from the existing system prefer “filling gaps” because it ensures that they can continue to control regimes that are strategically important to them. This helps to explain why “filling gaps” is so dominant in state-lead international governance. We’ll describe what this means for BBNJ negotiations specifically in the section on International Power Disconnects.

The “Fixing the System” problem narrative is more recent and is largely espoused by those who are not satisfied with the current, fragmented system. Here again, there are conceptual narratives from academia, but these focus on the lack of coherence and coordination among the many disparate regimes as an important problem in global governance. They therefore

argue that filling gaps is not enough to govern effectively, and so structural reform is necessary through, for example, agreeing on a small number of overarching norms and principles as well as establishing a central organization. As described in greater detail below, states or other actors that are not satisfied with the working of existing international regimes may also ascribe to “fixing the system” problem narratives because systemic change could give them a chance to increase their power and thereby advance their own interests.

It is also interesting to note that stakeholders who believe in “system fixing” press for the creation of new, overarching agreements that can coordinate and, if necessary, overrule decisions by existing regimes. They also believe that system-fixing agreements must be binding (member states are required to implement the agreement) rather than non-binding or soft law (member states are encouraged to implement the agreement), because the former is not thought to be effective in altering the behavior of states. This practical problem narrative contrasts to conceptual narratives in the institutional and constructivist schools of international relations, which show that non-binding agreements can have some influence.

## Goal Appropriateness in Oceans Governance (+ Level 2)

Within the level 1 ideal types, actors also differ in their perception of the appropriate goals for oceans governance at the international level. Two major types of goals are discussed throughout the literature and were clearly important in shaping the existing oceans regime complex: conservation and distribution. Interestingly, scholars in global environmental politics tend to accept protection of marine ecosystems as the primary goal and often see either fragmentation or distributional concerns as impediments to effective conservation. In contrast, political economists and other critical scholars view fairness as the appropriate goal and see the focus on conservation as a means to prevent needed system change. A few authors argue that environmental goals cannot be attained without distributional reforms and visa versa, essentially suggesting that both goals are important and should be considered simultaneously.

For each of these goal types, scholars and other actors also vary in the level of environmental protection or distributional fairness that they desire from the international system. On the environmental front, there is a classic distinction between conservation for use and preservation for its own sake. As described in greater detail in the next section, people also vary in their perception of the current state of marine ecosystems and the potential for harm from human activities. Discussions over distribution tend to be embedded in North-South dialogues. While some actors do not believe that distributional changes are needed (see above), others espouse small concessions (e.g. voluntary financial and technical assistance programs are common in a number of international environmental agreements), while others want very large changes in the distribution of the costs and benefits of environmental governance (i.e. mandatory benefits sharing as per the UNCLOS agreement on seabed mining or additional, mandatory financial and technical assistance as per the Montreal Protocol on Ozone Depletion).

This variation in goal preferences and related assessment of goal attainment dovetails with the level 1 narratives regarding system effectiveness. Generally, those who have less stringent requirements for goal attainment, whether for the environment or for distributional fairness, are happier with the existing system and more likely to prefer “filling gaps” narratives. They therefore work to prevent any new agreements from altering or

superseding existing agreements or institutions. Those who have more stringent requirements are less happy with the existing system and are more likely to believe in “system fixing” narratives.

Table 1 summarizes the four hybrid problem narratives that result if we combine level 1 (system narratives) with level 2 (goal narratives). The first hybrid narrative we identify is “fill gaps and fix all” (top left). Here believers argue that the current system works fine, and we only need to fill the institutional void left by the yet non-existent international legally binding instrument on BBNJ. This narrative downplays problems with the existing oceans regime complex (or suite of international treaties that govern areas beyond national jurisdiction) and would limit the negotiation of new rules to those few topics that are not already covered under international law. On the environmental side, this includes protection of biodiversity in areas/for species that are not yet governed by Regional Fisheries Management Organizations, the International Seabed Authority, Convention of Biological Diversity or some other regime, as well as any problems that originate in terrestrial systems and are therefore within state jurisdiction (e.g. plastics pollution). Furthermore, no special access and benefit-sharing regime is deemed necessary, except in the one area where it is not yet regulated: marine genetic resources. We’ll delve into issue-specific aspects of this problem narrative in the next section.

*Table 1 International-Level Problem Narratives associated with BBNJ*

	Fill gaps (conservation)	Fix the system (conservation)
Fill gaps (distribution)	<p><b>Fill gaps and fix all</b> Current system works fine, just need to fill gaps for areas beyond national jurisdiction</p>	<p><b>Fix and fill for the environment</b> Stronger environmental protection required through a strong ILBI, but no special distributive rule required</p>
Fix the system (distribution)	<p><b>Fix and fill for fairness</b> No stricter environmental protection necessary, but more equitable benefit sharing from marine genetic resources</p>	<p><b>Overhaul the system</b> Complete system overhaul is required through a strong ILBI and the expansion of the common heritage of mankind principle</p>

The second problem narrative we identify is “fix and fill for the environment” (top right). Here believers are less worried about the absence of clear distributive rules. Existing regimes control the distribution of benefits from different types of resources through carefully negotiated institutions. But they argue that the system needs to be fixed for marine biodiversity to be protected adequately. Because of ongoing overfishing, climate change, and other threats to BBNJ described above, proponents of this problem narrative believe that simple gap filling will not be enough to protect marine biodiversity. What is necessary is a strong international instrument on BBNJ that will sit above existing international instruments and bodies such as RFMOs in a new normative hierarchy. Although this narrative appears to accept the complexity of BBNJ as an environmental problem, it



simplifies the political and economic difficulties that would be encountered with any attempt to negotiate a new oceans regime.

The third problem narrative we identify is “fix and fill for a fair distribution of benefits” (bottom left). Subscribers to this narrative argue that no stricter environmental protection is necessary. Their focus is on the injustice that prevails when only a few technologically and financially capable countries have access to high seas resources including marine genetic resources and deep sea minerals. They demand a more equitable sharing of benefits derived from these resources and additional capacity building to help developing states take advantage of BBNJ resources. This includes extending the concept of the common heritage of humankind, which currently applies to the mineral resources in the Area only (the seabed outside of national jurisdiction), to genetic resources from ABNJ. The legal implications of this are interesting, given that the strong sharing and capacity building arrangements established for the Area under UNCLOS were weakened substantially under the 1994 implementation agreement, which finally convinced some reticent states the Global North to ratify both treaties.

The fourth problem narrative we identify is “overhaul the system”. Combining the second and third narratives, the subscribers to the fourth problem narrative demand to go beyond gap filling on both dimensions of conservation and distribution. In particular, they see the intricate connection between environmental protection and socio-economic justice, that one cannot be achieved without the other. For example, conflicts over allocation often weakens attempts at conservation within these regimes, creating a very interesting space in which the proposed BBNJ regime might need to undermine existing distributional institutions to strengthen rules regarding conservation. A system overhaul is sought after, with a view to achieve sustainable development within, what was referred to as, a new international economic order during the UNCLOS negotiations in the 1970s.

### **Panaceas in Issue-Specific Narratives (+ Level 3)**

Feedbacks between international and issue-specific problem narratives determine where and how panaceas will arise in negotiations. As noted above, the filling the gaps problem narrative creates room for issue-specific panaceas by limiting the scope of BBNJ negotiations to a few topics. However, the relationships between these problem narratives and negotiated outcome is more complex. When system-fixers accept issue-specific problem narratives that foster panaceas, this creates grounds for compromise between gap fillers and system fixers. In contrast, the lack of overly simple problem narratives can prevent compromise in the arena of benefits sharing and distributional issues because no such common ground is available. These relationships are shown in Figure 1.



Figure 1 Relationships between Issue-specific and International Problem Narratives

### Environmental Issue-Specific Problem Narratives

First, we'll look at the interactions between international and issue-specific problem narratives for the environment. Many of these narratives parallel the international problem narratives described above, with one important difference: some people who ascribe to the environmental system fixer narrative also believe in overly-simple, panacea promoting issue specific narratives. As shown in Table 2, we call this sub-narrative "weak system fixing" as opposed to "strong system fixing". This is what gives them common ground with gap fillers and ultimately provides for powerful coalition building between the two groups as described in greater detail in the next section.

Evidence for these narratives can be found in the academic literature, position statements in national and international-level regulatory processes, and materials produced by the interest groups themselves. The bifurcation between living and non-living resources in Figure 2 reflects both the legal treatment of these issues (which are dealt with under separate articles of UNCLOS) and the de facto divide between experts and interest groups that tend to specialize in one issue area or the other. Indeed, conceptual narratives from academia also tend to be segregated in this way, though there is more overlap among strong system fixers, most of whom recognize the complex interconnections between anthropogenic stressors.

Table 2 Issue-Specific Sub-Narratives in the Environmental Dimension of BBNJ

	Living Marine Resources	Non-Living Marine Resources
Optimistic about ability to manage BBNJ (Fill in Gaps)	<b>Problem = Tragedy of the Commons</b> Traditional management can work if well-designed. Might need area-based management to resolve conflicts/protect ecosystems from multiple stressors	<b>Problem = Minimize Impact</b> Environmental impact assessments w/ stakeholder engagement are successful/ provide social license to operate
"Pragmatic" (Weak Fix the System)	<b>Problem = Crisis in the World's Oceans/Limited Resources to Cope</b> Support easy options that improve on traditional management and which can be implemented quickly all over the world	

Pessimistic about ability to manage BBNJ (Strong Fix the System for the Environment)	<b>Problem = Traditional Management</b> Replace with more complex, environmentally oriented techniques such as ecosystem based management, space based management, etc.; reduce pollution, climate change, and other stressors as well → including marine mining →	<b>Problem = Ecosystem Impacts of Mining</b> Based on the precautionary principle, severely restrict or even ban mining in the Area until there are sufficient data on the large-scale, long-run impacts.
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Gap-fillers tend to be optimistic with regards to our ability to prevent major environmental destruction in the oceans. They also tend to look at issues separately, so issue-specific problem narratives are considered in isolation or, in many cases, groups concern themselves with only one issue (e.g. fisheries, mining, etc.). In regards to living marine resources, environmental gap-fillers focus on property rights as the primary problem that drives overexploitation. They view single-stock management via catch and effort limits—a.k.a. traditional fisheries management techniques—as sufficient for the protection of marine living resources if they are correctly designed. At the domestic level, some also espouse individual transferable quotas (ITQs) or other rights-based measures as solutions (see Young et al. 2018’s critique of ITQs as panaceas; Degnbol et al. 2006). ITQs are not commonly accepted at the international level, where states jealously guard their rights to benefit from shared living marine resources, but other traditional practices are common, including the focus on single-stock management via maximum sustainable yield (Webster 2015, etc.). Gap-fillers also ascribe to a few newer practices, such as marine protect areas, which can be effective if well-designed but are now arguably used as a panacea because so many poorly designed MPAs are being put in place around the world.

For instance, although marine protected areas (MPAs) are widely known as an essential tool to recover biodiversity (Lubchenco et al., 2003), there is ample evidence that this approach has been applied as a panacea in multiple cases, without attention to the actual diversity or level of protection in MPAs around the world. Since 2008, for instance, researchers have critiqued large scale marine protected areas because they are difficult to enforce and not necessarily are based on science (Wood et al, 2008). Moreover, the establishment of large scale MPAs provides uniform conservation within arbitrary targets (i.e. 10% may not be enough everywhere), and may thus be inadequate for meeting biodiversity conservation objectives (De Santo, 2013; Rodrigues et al., 2004), and may ultimately weaken the political process to create protected areas if the expected benefits are not observed, particularly within the electoral time frame. Nonetheless, MPAs have been implemented at an increasing rate all over the world, generally without consideration of context-specific concerns, making them a panacea. There are already 12 high seas MPAs, two of them operating under the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR), and ten under the the OSPAR Convention and the North-East Atlantic Fisheries Commission (NEAFC) mandate.

Similarly, environmental gap-fillers accept the status quo when it comes to management of non-living resources in areas beyond national jurisdiction, particularly the use of

environmental impact assessments (EIAs) and area-based measures like ecological reserves to “minimize” the environmental impact of mining operations and build a social license to operate. Ecological reserves are similar to MPAs, both fit together under the heading area based management tools (ABMTs) in BBNJ negotiations. Seabed reserves can also be considered an extension of terrestrial reserves, which were found to be applied as a panacea throughout the world.

EIAs were developed in the US in the 1960s with the National Environmental Protection Act and subsequent environmental legislation (Wood, 2003). Since that time they proliferated around the world and are currently in use by the International Seabed Authority when it considered applications for exploration and (potentially) commercial exploitation of non-living resources on the seabed outside of national jurisdiction. EIAs require that the corporation requesting a permit provide the government with information on the potential environmental (and sometimes social) impacts of a proposed mine. In theory, the government should then decide whether or not to grant the permit based on the balance of costs and benefits, though in practice permits are granted more often than not (Knox, 2002). EIAs are mostly conducted by proponents of activities in question, in the ABNJ area the EIA, only becomes meaningful, when this process is sufficiently clear and articulated with precision (Barnes, 2016). Yet, it remains inconclusive “who” will be responsible for conduct the EIA, as normally, it is the State under whose jurisdiction or control a proposed activity is to take place that conducts an EIA (Marciniak, 2017). Not only the challenge of “who”, but “how” will also face difficulties once the information in areas beyond national jurisdiction is mostly concentrated on industrial actors (Blasiak, 2018). In other words, although detailed, transparent, accountable EIA processes might be effective for environmental protection, in practice, EIAs are widely applied as simple fixes to complex problems and so can be considered a panacea.

Strong system fixers critique existing management approaches, pointing out high levels of overexploitation and environmental degradation both within and outside national jurisdiction. They believe that traditional management, and human use more broadly, are the primary causes of environmental problems in the oceans, though they often admit that the tragedy of the commons is an issue as well. They tend to be pessimistic in their interpretation of existing data, citing the potential for widespread collapse through ecosystem cascades and the compounding effects of multiple stressors. Strong environmental system fixers generally believe that marine management needs to be overhauled completely, reducing all types of human impacts, not just overfishing. This includes reducing pollution, controlling invasive species, severely restricting or banning mining, and using more complicated management methods for fisheries, such as ecosystem based management or space based management.

Weak system fixers agree with strong system fixers regarding the nature of the problem(s) but are more pragmatic with regards to potential solutions. They tend to be extremely concerned about the state of the world’s oceans generally and protection of marine ecosystems specifically. This sense of urgency is combined with a belief that governance resources are limited, either for the group specifically or for the international community as a whole. To grapple with these problems, weak system fixers promote relatively simple improvements on existing management, even though they might prefer the more extensive options advocated by strong environmental system fixers. In particular, a number of groups advocate for area based management measures, particularly marine protected areas (water

column) and marine reserves (seabed) as refuges for marine biodiversity. These are seen as politically feasible options that can quickly prevent further loss of BBNJ. Of course, weak system-fixers also recognize that area based management will not solve problems created by pollution or climate change, but they do believe that including area based management tools in the new BBNJ agreement will be an improvement over existing regulation and could perhaps provide for some flexibility for the promotion of more comprehensive approaches like space based management.

### **Distributional Issue-Specific Narratives**

Next, we look at issue-specific narratives regarding the distribution of benefits from BBNJ. These fall into two related categories, benefits sharing and capacity building. Under benefits sharing, companies and/or states that benefit from exploiting BBNJ resources would need to contribute some percentage of their revenues to a general fund that would then distribute these benefits to states that do not participate in BBNJ exploitation in some way. Capacity building entails providing financial and technical assistance to developing countries so that they can participate in the exploitation of BBNJ resources directly. Funding for capacity building could come from benefits sharing (the general fund described above) or other sources (e.g. traditional development aid) but should be additional rather than replacing aid for other sustainable development projects (based on the Rio Principles).

As noted above, distribution gap-fillers believe that current international law is sufficient to cover existing methods of exploitation but should be extended to include benefits from marine genetic resources. Under UNCLOS, no benefits sharing is required for the commercial exploitation of living marine resources in areas beyond national jurisdiction. Where capacity building is discussed it refers to building domestic regulatory capacity, rather than capacity for exploitation.

In contrast, UNCLOS provides for extensive benefit sharing and capacity building for mineral resources extracted from the seabed, via a general fund that is supposed to be managed by the International Seabed Authority. These arrangements were negotiated under the larger principle of the Common Heritage of Mankind (CHM), which contrasts strongly against the dominant principle for fisheries and other ocean uses, which is generally known as Freedom of the Seas. However, in the 1994 implementing agreement to UNCLOS, many of these distributive arrangements were substantially weakened so, though the principle of CHM remains it has not been implemented in practice. UNCLOS does not cover marine genetic resources and the Convention on Biological Diversity (CBD) does not apply to areas beyond national jurisdiction, so this is a gap that all sides recognize needs to be filled (Gjerden, 2008).

As shown in Table 3, the above system is accepted by both gap-fillers and system-fixers for living marine resources but they differ somewhat on non-living resources and substantially on marine genetic resources. Agreement on commercial exploitation of living resources is relatively easy because fishing capacity increased substantially in developing countries from the 1960s onwards and developing countries see RFMOs as the appropriate context for establishing rights of access to international fisheries. Indeed, benefits sharing was never seriously considered for fisheries, even though it was raised briefly in UNCLOS negotiations.

Table 3 Issue-Specific Sub-Narratives in the Distributional Dimension of BBNJ

	Living and Non-Living Resources	Marine Genetic Resources
Neoliberal/ Freedom of the Seas (Fill in Gaps)	<b>Problem = Tragedy of the Commons</b> Capacity/sharing is fine for living resources (RFMOs) and non-living resources under UNCLOS w/ 1994 implementation agreement	<b>Problem = Public Goods</b> Establish clear property rights with limited or no benefits sharing in order to encourage growth and innovation
Critical/ Common Heritage of Humankind (Fix the System)	<b>Problem = 1994 Implementation Agreement</b> Capacity/sharing is fine for living resources (RFMOs) Increase capacity building for mining by developing states, institute sharing arrangements as prescribed in UNCLOS <i>Pragmatic variant: Not in these negotiations</i>	<b>Problem = Sustainable Development/Environmental Justice</b> Apply common heritage of humankind to allow benefits sharing and capacity building for developing countries

Benefits sharing and capacity building were very important in UNCLOS negotiations regarding non-living resources of the seabed, ultimately resulting in the establishment of the common heritage of mankind principle and related benefits sharing/capacity building measures as described above. Since then, exploitation of deep sea minerals has been in a kind of limbo, mainly because the enormous economic benefits that were predicted when UNCLOS was being negotiated in the 1960s never materialized. Economic and technological limits are primarily responsible for the delayed launch of commercial exploitation of marine non-living resources, though exploration for such resources increased substantially in the last decade. Gap fillers also blame UNCLOS requirements for benefit sharing because they believe this dampened investors' willingness to enter the already risky industry. This perspective draws on the much broader neoliberal problem narrative, with its emphasis on property rights and innovation. We see similar arguments in favor strong intellectual property rights with limited or no benefits sharing for marine genetic resources.

Indeed, the majority of the conflict around fairness in oceans governance can be traced back to two competing problem narratives regarding distribution of benefits from marine genetic resources. On the one hand, gap-fillers believe in the founding UNCLOS principle of freedom of the seas and want to encourage as much genetic exploration as possible through the establishment of clear intellectual property rights with minimal benefits sharing. As with the other issue-specific gap-filling problem narratives, this story is shaped by neoliberal perceptions that a lack of property rights is the most important problem for governance of marine genetic resources. There is also an argument that it is not fair to ask companies to share benefits from genetic resources because the risk that they take and the amount of investment required is so high. This is often combined with claims regarding the dampening effects of distributional arrangements on deep sea mining as described above.

On the other hand, distributional system fixers—largely from developing countries—see historical injustice and the need for sustainable development as the primary problem. They therefore demand the extension of the common heritage of humankind principle to genetic resources, including both benefits sharing and capacity building. While there are some “pragmatic” interest groups that are willing to accept general language on the latter that could extend to mining capacity as well, they are adamant that some degree of binding language regarding benefits sharing is needed for marine genetic resources. Here again, fairness is a key concept. Developing countries note that developed countries gained much of their wealth from the appropriation of resources during colonial and imperial periods, including shared resources in the global commons. They argue that benefits sharing and capacity building are the only acceptable way to ensure that everyone gets their fair share of the global pie.

Indeed, there are very few interest groups that occupy the middle ground on distributional issues. Like common but differentiated responsibilities in the climate negotiations, benefits sharing and capacity building are areas of entrenched difference between parties in the realm of oceans governance. Each side believes that their position is “fair and just” based on their own problem narrative. Thus, in an area where there might easily be overlapping win-sets from a purely rational-choice perspective ideological differences may prevent agreement. Of course, both sides might argue that they are considering the broader and longer-term effects of establishing precedent in international law. Nevertheless, each side adheres to its own definition of the problem and respective set of potential solutions.

## Domestic Power Disconnects

Problem narratives are not the only factor that is contributing to the panacea mindset in BBNJ negotiations. Negotiated outcomes depend on the relative power of states that ascribe to different problem narratives. As per Putnam (1998), states engage in two-level games when they negotiate, seeking to at once satisfy domestic constituencies and international peer groups. Thus, we can expect that the problem narratives adopted by different states will largely reflect their dominant domestic interests (with some variation depending on domestic politics) in BBNJ. Of course, there are feedbacks between problem narratives and the states’ definition of their vested interests, but we expect the two to align over time. In a system like this, where states negotiated the current oceans regime over at least a century, there should be strong conformity between the two that is difficult to dislodge without significant changes in domestic politics. In this section, we use data on production, certification, and other economic indicators to predict where states fall in the problem narrative matrix described above and then test those expectations against actual state behavior in BBNJ negotiations.

## Vested Interests

First, we examine domestic influences on state problem narratives. BBNJ is a special case because it is far removed from most people’s minds; though when defined broadly is integral to the health of the entire planet, is generally important only to a small set of interest groups. These include international environmental NGOs and corporations that seek to exploit BBNJ resources, as well as government agencies that have some interest in BBNJ (e.g. oceans/environment ministries, commerce/development, transportation, defense (naval), etc.).

Table 4 summarizes our predictions for state-level problem narratives based on the mix of domestic interest groups. "Fill gaps and fix all" states are likely to have strong industry interests, especially in the realms of fisheries, mining, and genetic resources but limited influence from environmental NGOs, whether domestic or international. These are also likely to be mostly developed states, because the technologies needed for deep sea mining and use of genetic resources are concentrated in the developed world. We'll discuss the links between these domestic predictions and international power structures in the next section. For now, it is important to recognize that states that already have strong industries that benefits from existing international law and/or the extension of intellectual property rights to BBNJ are more likely to prefer an agreement that only fills in gaps.

Table 4 Domestic Interests associated with Different Problem Narratives at the State Level

	Fill gaps (conservation)	Fix the system (conservation)
Fill gaps (distribution)	<p><b>Fill gaps and fix all</b></p> <p>Current system works fine, just need to fill gaps for areas beyond national jurisdiction</p> <p><i>Dominated by fisheries, mining, and other extractive industries, limited pressure from environmental NGOs or for economic development</i></p>	<p><b>Fix and fill for the environment</b></p> <p>Stronger environmental protection required through a strong ILBI, but no special distributive rule required</p> <p><i>Weak: Dominated by fisheries, mining, and other extractive industries, strong pressure from environmental NGOs</i></p> <p><i>Strong: Dominated by environmental NGOs, little pressure from industry</i></p>
Fix the system (distribution)	<p><b>Fix and fill for fairness</b></p> <p>No stricter environmental protection necessary, but more equitable benefit sharing from marine genetic resources</p> <p><i>Dominated by sustainable development agencies/demands for development from the public, little pressure from environmental NGOs</i></p> <p><i>Pragmatic variant: Developing states that already have some capacity/benefit from fisheries and deep sea mining will want to limit discussions to genetic resources</i></p>	<p><b>Overhaul the system</b></p> <p>Complete system overhaul is required through a strong ILBI and the expansion of the common heritage of mankind principle</p> <p><i>Dominated by sustainable development agencies/demands for development from the public</i></p> <p><i>Weak: Dominated by fisheries, mining, and other extractive industries, strong pressure from environmental NGOs</i></p> <p><i>Strong: substantial pressure from environmental NGOs</i></p>

In contrast, we would expect that states in the "Fix and fill for fairness" category have minimal ability to exploit BBNJ, particularly marine genetic resources, and high incentives to favor sharing and capacity building. The latter can be approximated by their level of economic development, reliance on foreign aid, or similar indicators. The former is more



difficult. Emerging economies like China and India have substantial domestic capacity in fisheries and even deep sea mining, as do a number of small island developing states, which may create some internal conflicts. These states will prefer to restrict discussions of distributional issues to marine genetic resources, as described in the previous section. Other developing states may prefer to discuss all types of benefits sharing States in this category are also characterized by the absence of strong domestic environmental NGOs and either lack of pressure from or strong resistance to international environmental NGOs.

We can identify countries that fit into each category using data on their development status juxtaposed with their domestic economic interests in ABNJ resources. Unfortunately, there is not much data available that directly measures the influence of different domestic interests, so we are forced to use proxies or to rely on the peer reviewed literature. In some cases, expert opinion was used (see Appendix A for more detailed information). Fisheries data were examined to identify top producers (capture) and other major players in regional fisheries management organizations (RFMOs; we should check for the WCPFC and IOTC). Mining interests were identified by examining contracts for exploration of the deep seabed in the Area under the International Seabed Authority as well as what little information is available on investment and ownership in contracted corporations. Information on current profusion of genetic technology comes from Blasiak et al. (2018), but we also looked at total patent activity from 2010-2017 as indication of potential interest with and without additional capacity building. Developing was approximated based on well-known negotiating blocks of states that identify as developing (Group of 77 and Small Island Developing States). NGO pressure was approximated by examining the delegation composition for Preparatory Committee (PrepCom 1 and 4), and the first formal International Negotiation Committee (INC, hereinafter). Only two countries, the EU and Australia had any NGO representation in both the first and final Preparatory Committee (PrepCom, hereinafter), while no member state had any NGO membership at the first ILBI.

*Table 5 Top Countries in Each Interest Category*

Fisheries	Mining	Gen Tech	Development	NGO Pressure
Top 10	ISA Contracts	Current	General	Strong
China	China	Germany (EU)	G77	None
European Union	EU (8)	Japan	SIDS	
Indonesia	India	US		Weak
Peru	Brazil	Israel	Pragmatic	EU
United States	Russia		China	Australia
India	Japan	Potential	India	
Russian Federation	Korea	Korea	Brazil	
Japan	SIDS	Russia	Mining SIDS	
Chile	Kiribati	Canada	Fisheries SIDS	
	Cuba	Spain		
Active in RFMOs	Nauru	Australia		
Vietnam	Singapore			
Norway	Tonga	w/Capacity		
Philippines	Cook Islands	China		
Thailand		India		
Korea, Rep.	Investment	Turkey		

Mexico	US	Brazil		
Morocco	Australia			
Canada	New Zealand			
Brazil	Canada			
South Africa	Oman			
Ecuador				
South Pacific SIDS (Kiribati, etc.)				

From this analysis, we propose the following groupings for predicting national policy positions (Table 6). Perhaps the most striking aspect of the table is the lack of states in either the strong fix and fill for the environment category or the overhaul the system category.<sup>1</sup> The lack of states in these system-fixing categories will have major implications for the predicted outcomes of negotiations in the section on international power disconnects. For now, we note that most developed countries and a few emerging/emerged economies can be squarely placed in the fill gaps and fix all category because they have strong interests in one or more of the exploitative uses of BBNJ. While all developing states are considered to fit in the fix and fill for fairness category, we expect that those who already benefit from fisheries and mining will be more pragmatic, focusing on capacity building and benefits sharing arrangements only for marine genetic resources.

Table 6 Expected Problem Narratives based on Domestic Interests

	Fill gaps (conservation)	Fix the system (conservation)
Fill gaps (distribution)	<p><b>Fill gaps and fix all</b> US, Russia, Japan, Korea, Israel, Thailand, Vietnam, Canada, and other developed states not in the fix and fill for the environment category.</p>	<p><b>Fix and fill for the environment</b> <i>Weak: EU, Australia, New Zealand, Norway, and Monaco</i> <i>Strong: No states, some possible NGOs</i></p>
Fix the system (distribution)	<p><b>Fix and fill for fairness</b> G77, SIDS, Latin America and African Group and CARICOM</p> <p>Pragmatic: China, India, Brazil, Mining SIDS, Fishing SIDS, etc.</p>	<p><b>Overhaul the system</b> No states, some possible NGOs</p>

Only the EU and Australia show any direct evidence of NGO activity in their delegations, but these also have substantial vested interests in the exploitation of BBNJ resources/restricting benefits sharing, so they are expected to take a stance that fits with weak fix the system. In fact, this is a conservative assumption, as NGOs are active in other states as well (e.g. New Zealand, Norway), so there may be some variation there. Monaco is an interesting case. The

<sup>1</sup> Some NGOs and academics may fit into these categories (see, e.g., Barkin and DeSombre 2013), but

Prince of Monaco is an ardent environmental activist, with his own foundation that supports ocean conservation efforts in many areas. We therefore considered putting Monaco in the strong fix and fill for the environment category, but the organization generally exhibits weak fix and fill behaviors, notably claiming that, with the oceans in crisis we need to embrace options like MPAs as quickly as possible. They do have a more nuanced perspective on MPAs than others, however, and have long advocated for a well designed and enforced global network of MPAs, so this categorization could be debated.

## Negotiating Positions

We tested these hypothesized relationships between domestic interests and problem narratives shown in Table 6 by examining the negotiating positions of states in the PrepCom and INC, as well as the peer reviewed literature on the negotiations. From this, it appears that all states behave as expected based on their confluence of domestic and international interests. There is little evidence of any shifts in problem narrative over time. States certainly show a willingness to compromise, but not on their fundamental positions. In particular, states from all categories evinced a willingness to accept issue-specific panaceas like marine protected areas (known as Area Based Management Tools) and environmental impact assessments, though to different degrees and with different understandings of whether or not these measures should supersede regulations already in place via existing regimes. We discuss the resulting outcomes from negotiations in the next section.

As expected, states in the fill gaps and fix all category (US, Japan, Russia, other OECD, etc.) consistently defended the jurisdictions of the existing international oceans regime complex throughout negotiations so far, though most were willing to accept certain issue-specific panaceas as long as they did not interfere with the current system. There was little or no willingness for such compromise regarding the distribution of benefits, with states in this category clearly arguing to extend the freedom of the seas principle rather than CHM to marine genetic resources. For instance, at the 2<sup>nd</sup> PrepCom, the US issued a letter clearly expressing its view that marine genetic resources fall under the auspices of freedom of the seas under UNCLOS, rather than common heritage of mankind (USA, 2016).

Furthermore, during the four PrepCom, regarding the marine genetic resources access and benefit sharing, Japan opposed reference to specific UNCLOS provisions, and argued, with the US, that UNCLOS provides for open access and there is no need for additional rules. They were supported by the Russian Federation, Iceland and the Republic of Korea. With the support of Japan and the Russian Federation The US further suggested eliminating references to access in the ILBI draft elements, emphasizing open access to ABNJ for marine scientific research, that should not be linked to benefit-sharing. The Russian Federation opined that the high seas freedoms apply to MGRs, as well as derivatives. These positions soften only slightly during the INC, when the US, the Republic of Korea, Japan, the Russian Federation, and Switzerland changed to support the sharing of non-monetary benefits, such as sharing R&D results, collaborative scientific endeavors, and strengthening capacities for technology transfer (IISD, 2019).

States in this category also worked throughout negotiations to ensure that the new BBNJ agreement will not supersede the authority of existing regimes or diminish the principle of freedom of the seas found in UNCLOS. This was most clear in fisheries, where Japan and Russia strenuously opposed extending common heritage of mankind principles to fisheries. These states do accept that area based management tools (ABMT) might be included in the

agreement, but only if they do not conflict with regulations already in place under the ISA or RFMOs. Russia went further, arguing that any protected areas should only be temporary. Their positions are similar with regards to environmental impact assessments (EIAs). They argue that EIAs should not be required for fisheries and that the ISA already has EIA protocols in place for exploration and exploitation of deep sea minerals, so the only remaining "gap" is MGR. To date, states in this category accept EIAs for MGR, which fits our expectation that this panacea can provide a palatable compromise.

We also found that states in the fix and fill for fairness category (China, India, others in the G77, least developing countries (LDCs) and the small island developing states (SIDS), etc.) behaved as expected based on the alignment of their interests and problem narratives. These states consistently stressed the need for fairness in the new BBNJ agreement. For instance, in the last INC, Algeria, on behalf of Africa countries, stated "The new instrument should not only help better preserve and protect BBNJ, but should also benefit such diversity by ensuring that no one is left behind". Similarly, Pacific SIDS reiterated their wishes to 'fair and equitable', balanced, universal and practical International Legally Binding Instrument that helps address the 'tragedy of the commons'. In their proposals, states in this category advocated for equitable benefit sharing and mandatory capacity building via additional financial and technical assistance. The G-77/China also stressed the importance of access and distribution of benefits (IISD, 2016).

In another example, states in the African Group, Brazil, Iran, the Cook Islands and Costa Rica, opposed the idea that UNCLOS provides for open access and there is no need for additional rules on MGR. They instead stressed the importance of equity of access and distribution of benefits when. This position was also highlighted during the last INC when discussing the benefits to be shared, the African Group, CARICOM, SIDS, LDCs, and the Like-Minded Latin American Countries preferred both monetary and non-monetary benefits, contrary to the position of fill gaps and fix all states. Although demands for specific numbers have changed over time, fix and fill for fairness states will not accept an agreement that does not guarantee the right to their fair share of the "pie".

Like fill gaps and fix all states, fix and fill for fairness states eventually expressed acceptance of ABMT and EIAs, with the condition that developing states should have a say over how these measures are used. Pragmatic fix and fill for fairness states went further, supporting fill gaps and fix all states in their position that these measures should not be used in any way that might interfere with the activities of existing regimes. In fisheries, some fix and fill for fairness states that are not included in the pragmatic category continue to push for benefits sharing on commercial harvest, but they are strenuously opposed by pragmatic states in their own category and fix and fill all states. Ecuador is an interesting exception here, since they are a major player in the Inter-American Tropical Tuna Commission and should be pragmatic but still advocate benefits sharing for fisheries. We cannot explain this difference now, but note that they are only active in this one RFMO, where they do consistently defend developing country rights to benefit from the fishery.

The weak fix and fill for the environment states (EU, Australia, New Zealand and Norway) worked to maintain the *status quo* in terms of fragmentation and distributional issues but, as expected, they advocated for the issue-specific panaceas describe above. On fragmentation, Norway and Australia cautioned against prejudicing the relationship between the ILBI and competent international organizations (IISD, 2017). They also fell in

line with the other OECD member states described above on the topic of freedom of the seas and benefits sharing MGR.

On the environment, however, these states were the primary advocates for area based management tools in ABNJ. For instance, the EU stated, after the first PrepCom that, "The IA should create a mechanism to enable the establishment and management of a global network of ecologically representative and effectively managed MPAs in areas beyond national jurisdiction with the aim of achieving the conservation and sustainable use of marine biological diversity" (EU, 2016). Monaco went further, calling on states to create and agreement that would prioritize areas for protection, adopt standards on permanence and conservation goals, as well as a framework and criteria for MPA establishment, monitoring and control, and stakeholder participation (IISD, 2016), in a way very aligned with the ENGOS statements (high seas alliance, 2016).

Lastly, in our review of state's position statements, we found that none proposed major changes to the system, either **strong fix or fill for the environment or major overhaul**. We expected that there might be some NGOs at least advocating for positions in alignment with these problem narratives, but if these groups were involved it was only in early, informal stages of negotiations. The only remaining ENGOS are working together in a group called the high seas alliance<sup>2</sup>. Their position matches the weak fix and fill for the environment category, insofar as they supported use of ABMTs and EIAs to fill in gaps but not system level change, so these can be considered pragmatic NGOs. Additional data collection will be needed to identify any NGOs that espouse greater systemic change for the environment—or for distributional fairness.

## International Power Disconnects

Power disconnects are also important at the international level. We can expect that outcomes of the negotiations will reflect the relative power distribution of states with different interests/problem narratives. If states that accept complex problem narratives such as "Strong Fix and Fill for the Environment" or "Overhaul the System," are able to dominate negotiations, then we would not expect to see reliance on panaceas in the negotiated text. If states that accept simpler narratives such as "Fill and Fix All" or "Weak Fix and Fill for the Environment," are powerful then panaceas will prevail. If states espousing different positions are evenly matched, however, results are more difficult to predict. They could simply agree to a weak instrument that is non-binding on controversial issues or, where positions are entrenched, negotiations could break down and no agreement would be possible. In the case of BBNJ, because of the interactions between the different levels of problem narratives, states are particularly likely to dig in their heels on distributional issues, so conflict over benefits sharing and capacity building may still derail or at least prolong negotiations indefinitely.

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<sup>2</sup> High seas alliance is formed by 40 non-governmental member organizations including Greenpeace, NRDC, the Pew Charitable Trusts, Turkish Marine Research Institute, OceanCare, Icelandic Nature Conservation Association, Mission Blue, the Marine Conservation Institute, Global Fishing Watch, Int'l Fund for Animal Welfare, IPSO, The Nature Conservancy and Global Ocean Trust. See more information on the website: <http://highseasalliance.org/>

## Power in Negotiations

Before moving on, it is useful to consider the types of power wielded in international negotiations. This is a long-standing topic of great interest to scholars of international relations. Realists/neorealists tend to focus on hard power—economic or military might that can be used to either threaten or persuade others to agree. They expect that states will only engage in diplomacy when it unequivocally suits their domestic interest. Neoinstitutionalists also consider states to be instrumentally rational, but they see institutions like international regimes as systems of rules that make mutually beneficial cooperation easier. In this way, there are a number of parallels to work on local level common pool resource governance (Ostrom and Keohane, 1994). Finally, constructivists believe that states are complex entities whose policy positions are shaped by ideas (and ideals) that are mutually constructed across levels of analysis (Haas, 2015). They give the greatest credence to the power of transnational and non-governmental actors (Keck and Sikkink, 1999).

We are heterodox in our understanding of international power. Hard power matters, and so we certainly expect that states/entities like the US, the EU, Russia, China, and Japan will have considerable influence on the outcomes of BBNJ negotiations. On the other hand, the institutional setting for negotiations also gives power to developing states through their large numbers and through the leadership of emerging economics like the BRICS block, which can wield hard power as well. To date, there is still considerable contestation over the ideas that shape negotiations in settings like this, of which the problem narratives described above are important elements. Indeed, what we find here is that the outcome of negotiations depends on the juxtaposition of all three types of power. Indeed, one of the most interesting aspects of this analysis is how states and other actors wield problem narratives to justify their negotiating positions and to try to convince others to join them.

Returning, then to Table 6, we can develop expectations regarding negotiation outcomes. The first and most notable power disconnect is that there are no states that espouse major reforms for environmental protection. This reflects domestic power disconnects, as described above, but it also suggests that transnational actors such as international NGOs or others who are most sensitive to the loss of BBNJ (e.g. natural scientists) do not have much power of their own in these negotiations. This is not entirely surprising, given the systemic (level 1) protections for the power of states as the only parties able to vote on any eventual agreement, but it is worthy of note. For one thing, these actors have been vocal throughout negotiations and were instrumental in setting the initial agenda for the PrepComs, but their influence rapidly eroded as states took over negotiations. What is more interesting to us is the process of co-optation; that is, how the issue-specific panaceas discussed in the section on problem narratives arose as a means to placate these interests as well as those of the relatively (hard) powerful states in the weak fix and fill for the environment category.

The other major international power disconnect that can be identified in Table 6 is the classic divide between “developed” and “developing” states, particularly around the issues of capacity building and benefits sharing. Here, the two sides are increasingly balanced, as developing countries expand both their hard power and their institutional power. Moreover, as shown in Figure 1, there are no convenient issue-specific panaceas to help bridge the divide between these competing groups and, while certain strong states like China and India may be pragmatic when it comes to fisheries and deep sea mining, they clearly are not willing to compromise on marine genetic resources. As a result, each side is entrenched in its

own problem narrative and agreement is unlikely unless some common ground can be cultivated. This point is particularly interesting given that states in the fill gaps and fix all and weak fix and fill for the environment categories actually have the upper hand, insofar as without any agreement they are still free to exploit marine genetic resources without actually sharing any benefits or helping developing countries increase capacity. This is where we find the greatest evidence that ideas—especially problem narratives—can really matter in negotiations, but not in ways that are conducive to successful institutional design.

Thus, there are two major power disconnects in BBNJ negotiations. The first is between those who prioritize the environment and those who prioritize economic and distributional goals. The second, much narrower disconnect, is between developed states that generally prefer to minimize distributional impacts of the new agreement and developing states that would like an agreement strong enough to shift both resources and political power in their direction. From these, we predict that early negotiations will be driven by states or other actors that want systemic change, for the environment or for distribution or both, but this agenda will rapidly be coopted once gap-filling states step in. For the environment, we expect that gap fillers will ensure that the new agreement does not interfere with existing regimes and only contains relatively toothless panaceas like ABMTs and EIAs. For distribution, we expect that conflict will delay and may even derail the negotiations unless something changes in the interests of states and their related problem narratives.

## BBNJ Outcomes

Negotiations for the new BBNJ agreement are on-going, but we can examine the outcomes of the four PrepCom meetings and two INC negotiations to evaluate the hypotheses above. Because these issues are so closely intertwined, we provide this evidence via a brief history of negotiation outcomes. Here again, the evidence generally supports our hypotheses. States rapidly converged on issue-specific panaceas for environmental protection of BBNJ outside of the jurisdiction of existing regimes. They have not been able to reach agreement on benefits sharing or capacity building, where ideological differences in their problem narratives prevent compromise.

Early impetus for BBNJ negotiations came largely from critics of the existing system on the environment side, though economic development was important as well. The issue was first mentioned in United Nations realm at Agenda 21<sup>3</sup>. Chapter 17 of the Agenda notes the inadequacy of management measures for high-seas fisheries and calls for an emphasis on multi-species management and other ecosystem approaches. It also underlines the need to protect and preserve vulnerable marine ecosystems on the high seas. Following the process of the United Nations Conference on Environment and Development, in 2002, the World Summit on Social Development followed up on the United Nations Conference on Environment and Development to assess progress in implementing sustainable development. In particular, The Johannesburg Plan of Implementation encourages the application by 2010 of the ecosystem approach and underlines the need to promote the conservation and management of oceans at all levels and to maintain the productivity and biodiversity of important and vulnerable marine and coastal areas, including in areas within and beyond national jurisdiction.

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<sup>3</sup> [https://www.un.org/Depts/los/consultative\\_process/documents/A21-Ch17.htm](https://www.un.org/Depts/los/consultative_process/documents/A21-Ch17.htm)



In more recent years, the United Nations General Assembly (UNGA), including through the Informal Consultative Process established in its resolution 54/33 of 24 November 1999, addressed issues relating to the conservation and sustainable use of marine ecosystems and biodiversity, both within and beyond national jurisdiction, under its agenda item on oceans and the law of the sea. This reflects a general bureaucratic concern with fragmentation in the oceans governance system, rather than environment or distributional concerns per se. It was followed in 2002, on the basis of the recommendations of the third meeting of the Informal Consultative Process (see A/57/80) and of the Johannesburg Plan of Implementation, the UNGA, in its resolution 57/141 of 12 December 2002, called upon States to develop national, regional and international programme for halting the loss of marine biodiversity. The Assembly reiterated its call in resolutions 58/240 of 23 December 2003 and 59/24 of 17 November 2004. Following the UNGA call, formal discussions started in 2004 when the UN General Assembly established the Ad Hoc Open-ended Informal Working Group (hereinafter Working Group) to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction.

Negotiations in the working group were contentious, but by 2011, states decided to limited the scope of the working group's agenda to four issues: (1) marine genetic resources, including questions on the sharing of benefits; (2) measures such as area-based management tools, including marine protected areas; (3) environmental impact assessments; (4) capacity building and the transfer of marine technology, which are currently the main components of the future binding agreement. Items 1 and 4 fit in with distributional issues while 2 and 3 seek to fill gaps in environmental protection, specifically with measures that are widely accepted as issue-specific panaceas (Working group produced a document (A/69/780) <https://documents-dds-ny.un.org/doc/UNDOC/GEN/N15/041/82/PDF/N1504182.pdf?OpenElement>).

In 2015, the Working Group presented its final recommendations to the UNGA, which reiterated the issue-specific limitations described above and also asserted that the new legally binding agreement, "should not undermine existing relevant legal instruments and frameworks and relevant global, regional and sectoral bodies," also reconfirming that states who are not parties to the agreement should not be bound by it, a common sovereignty protecting mechanism (A/69/780). In a victory for gap-fillers, the UNGA accepted these recommendations and established a PrepCom (RES 69/292), to make substantive recommendations to the UNGA for a Legally Binding Instrument (ILBI) on BBNJ, under the auspices of the UN Convention on the Law of the Sea (UNCLOS). This document reinforced the filling gaps narrative, stating that the new ILBI needs to "promote greater coherence with and complement" these instruments, frameworks, and other bodies (A/AC.287/2017/PC.4/2).

Although most of the outcomes around the environment and fragmentation generally fit the fill gaps and fix all and weak fix and fill for the environment category, there remains considerable contestation over the meaning of the term, *not undermine* existing institutions (A/RES/72/249; A/AC.287/2017/PC.4/2). This largely stems from the ongoing debate over benefits sharing and capacity building. SIDS, for instance, in their closing statements, claimed for an interpretation, and/or even for the inclusion of the word "not undermine the effectiveness of existing agreements" (SIDS, 2019). However, this is not yet one of the options at the last Presidential Aid. Canada, on the other hand, noticed and agreed on "not undermine existing relevant global, regional, and sectoral bodies, while promoting great



coherence and complementarity" (ENB, 2019), which is one of the options on the Presidential Aid.

The "2011 package" still stands as the main core of the agreement, and the nuances are now being discussed in greater details in order to fulfill the UNGA mandate by 2020. As mentioned above, the largest sticking point remaining is the conflict over benefits sharing from exploitation of marine genetic resources. Developing countries still demand some level of sharing along with mandatory capacity building measures. Developed countries still argue that there should not be benefits sharing for MGR because it falls within the freedom of the seas under UNCLOS. Neither side appears willing to give ground on this issue, so negotiations may continue or even fail unless there is some change at the domestic level to spur cooperation. For instance, if MGR corporations were sufficiently pressured to change their stance on benefits sharing this could translate into greater willingness to compromise at the international level. For now, however, states are locked into conflicting problem narratives without any "simple solutions" to provide grounds for agreement.

## Conclusion/Institutions

Institutional diagnostics can be useful because it points out the many barriers to effective governance and prescribes methods for reducing or removing those roadblocks. However, as the BBNJ case shows, the elements of the panacea mindset are difficult to overcome because they are so deeply embedded in different action arenas throughout the existing system. The problem here is not that states or negotiators do not understand how the system works, or even that they fail to realize the extensive implications of their positions. Rather, they have different goals/vested interests and therefore construct different causal narratives that lead them to different solutions; ones that are frequently sub-optimal given the stated object of biodiversity conservation.

Indeed, the elements of the panacea mindset described above ensured that the best design principles would not be followed in BBNJ negotiations. On the one hand, people who follow the Fixing the System narrative wanted a strong, binding, rule-based regime that would require high levels of protection for marine biodiversity across the oceans governance complex. As is often the case in international negotiations, they sacrificed a large portion of this goal in order to get one thing: a binding agreement. On the other hand, those who accept the Filling in Loopholes narratives did not want to leave anything to future negotiations, focusing instead on making the binding agreement as narrow as possible and on enshrining their existing "win-win" rule-based options in a binding agreement. We see this particularly in the use of area based management and environmental impact assessments as the primary management measures under consideration.

Indeed, ABMT and EIAs persist in the agreement because they are panaceas that can be manipulated to benefit specific actors. Again, both of these types of tools can be effective if employed correctly, but they can also be designed to ensure that they do not harm the vested interests of powerful states, usually at the cost of also ensuring that they do not really protect biodiversity. It is this flexibility that made these tools amenable to fix gaps and fill all as well as fix and fill for fairness states. On the other hand, this flexibility also appeals to weak fix and fill for the environment actors because it also means that there is some potential that, upon implementation these measures will be well designed and effective.

However, implementation of ABMT and EIAs will be negotiated by the same states described above, so unless their vested interests and problem narrative change, the treaty is not likely to provide much protection for BBNJ. Furthermore, if filling the gaps states can codify restrictions like only allowing temporary ABMTs now, then this binding agreement will place even greater limits on the future effectiveness of the agreement.

While panaceas like ABMTs and EIAs may be sub-optimal, they at least provide grounds for compromise. In contrast, there is no easy way out of the deep divides over distributional issues in international relations, whether disputes over power in discussions of fragmentation or conflict over benefits sharing and capacity building around global common pool resources. It is interesting that these level 1 and level 2 problem narratives reinforce each other so closely. Similar conflicts are observed in many other environmental arenas, with climate change being a key example. One aspect of these conflicts that should be considered further is the willingness of both sides—gap fillers and system fixers—to abandon negotiations. Neither side is heavily invested in a satisfactory outcome for the sake of BBNJ. For fill gaps and fix all states, no agreement means that they can continue to prospect for MGR without sharing any of the benefits. For states in the fix and fill for fairness category, an agreement without benefit sharing has no value. Thus, both are willing to walk away in defense of their own problem narratives (Tenniswood, 2018).

Achieving sustainable management of the BBNJ is extremely difficult given the complexity of the ecosystems including their great depths and distances from the coasts as well as the large number and wide diversity of all the public and private actors involved. BBNJ poses serious and distinctive governance and conservation challenges, and in cases like that is likely that the panaceas will emerge as a silver bullet. The high-value fisheries and associated biodiversity in the ABNJ are now subject to mounting threats from fisheries such as overcapacity, IUU fishing, increased hardship for fishers, wealth, threatened food supplies, inappropriate fishing practices and inadequate protection of the related ecosystems. Additional environmental problems are mounting on the horizon related to deep-sea mining as well as oil and gas exploitation, as many authors have pointed out.

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## Appendix: Vested Interests Data

Figure 2 summarizes the number of deep seabed exploration contracts approved by the International Seabed Authority (ISA) by country and development status as defined by the World Bank. One can see that the majority of partner states are high income or upper middle income, with only India and Kiribati in the lower middle income category. China and Russia hold the highest number of contracts followed by Korea with 3 and India, Japan, France, Germany, and the UK with 2 each. Several members of the Small Island Developing States (SIDS) negotiating block are also represented, most in the upper middle income

brackets, with Kiribati and the Cook Islands in the lower middle and high income categories respectively. We expect that these states will be pragmatic in their willingness to leave deep sea mining out of the discussions on distributional issues in the BBNJ Negotiations.

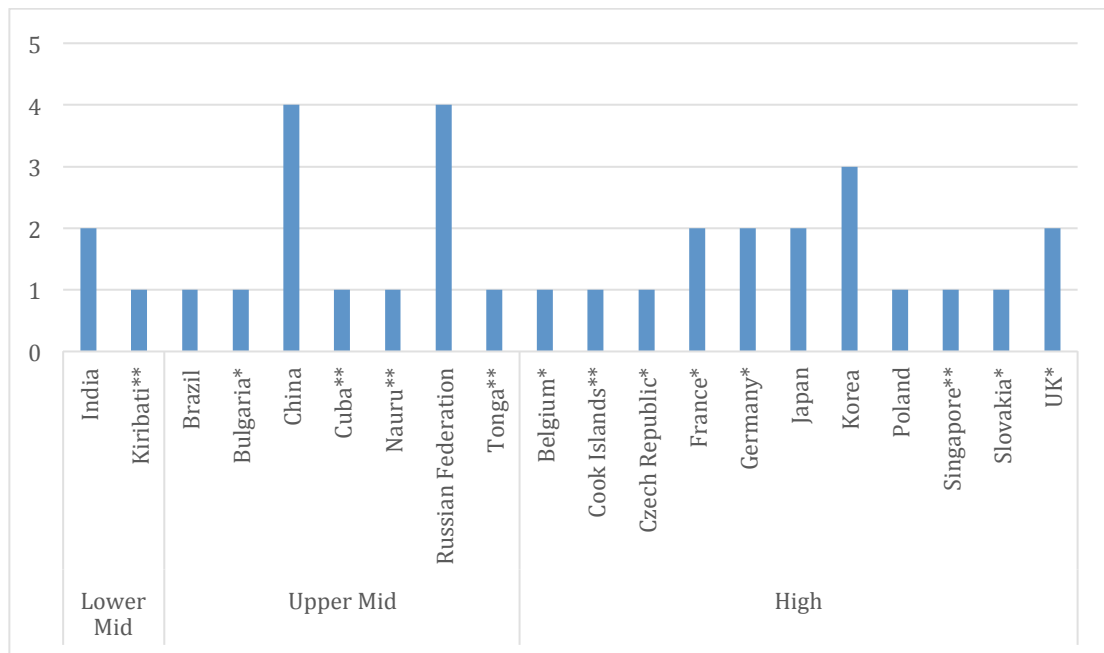


Figure 2 Number of Contracts for Exploration of Deep Seabed Resources Granted by the ISA to Corporations Working with Each Country (\* indicates EU Member State; \*\* indicates Small Island Developing State). Sources: ISA List of Contractors (2018), World Bank (<https://datahelpdesk.worldbank.org/knowledgebase/articles/906519>), UN (<https://sustainabledevelopment.un.org/topics/sids/list>)

While this indicates a strong interest in deep sea mining in these countries, what is not shown is data on the ownership of the mining corporations, or the sources of investment in mining operations. For instance, the first commercially deep sea mining corporation, Nautilus, was originally founded in Australia but is now based in Canada, even though their contracts with the ISA are carried out under the auspices of the government of Nauru. Investors in Nautilus come from several other countries, including the UK (Anglo American, though they just pulled out), Oman, and other states in the Middle East... (find data!)... Furthermore, while they do not have direct interest in mining in the Area, a number of countries have developed deep sea mining technologies or partnered with corporations like Nautilus to mine deep sea resources within their EEZs (i.e. Paupua New Guinea). These states overlap considerably with those listed in Figure 2, though again, the US, Canada, and Australia show up here even if they do not have ISA contracts.<sup>4</sup>

<sup>4</sup> The US never acceded to the UN Law of the Sea and therefore is not eligible for ISA membership. Hypothetically, this means that the use can mine the deep seabed without an ISA contract.

		Capture fisheries production (% global)	Patent applications, residents	High-technology exports (% of manufactured exports)
Afghanistan	Low income	0.00	..	..
Albania	Upper middle income	0.01	9.00	0.59
Algeria	Upper middle income	0.11	105.63	0.27
American Samoa	Upper middle income	0.00	..	..
Andorra	High income	..	..	19.69
Angola	Lower middle income	0.45	..	..
Antigua and Barbuda	High income	0.00	..	0.38
Argentina	High income	0.88	618.75	7.72
Armenia	Upper middle income	0.00	123.13	3.84
Aruba	High income	0.00	..	5.22
Australia	High income	0.19	2,485.25	13.16
Austria	High income	0.00	2,180.75	12.51
Azerbaijan	Upper middle income	0.00	177.57	4.59
Bahamas, The	High income	0.02	2.33	0.00
Bahrain	High income	0.02	5.00	0.67
Bangladesh	Lower middle income	1.78	56.63	0.27
Barbados	High income	0.00	2.00	16.87
Belarus	Upper middle income	0.00	1,092.25	3.70
Belgium	High income	0.03	827.38	11.40
Belize	Upper middle income	0.18	..	2.42
Benin	Low income	0.05	..	1.99
Bermuda	High income	0.00	..	23.92
Bhutan	Lower middle income	0.00	2.75	0.05
Bolivia	Lower middle income	0.01	26.67	8.14
Bosnia and Herzegovina	Upper middle income	0.00	42.29	2.64
Botswana	Upper middle income	0.00	3.57	0.62
Brazil	Upper middle income	0.84	4,832.50	11.22
British Virgin Islands	High income	0.00	..	..
Brunei Darussalam	High income	0.00	18.50	17.16
Bulgaria	Upper middle income	0.01	245.25	7.68
Burkina Faso	Low income	0.02	2.00	7.60
Burundi	Low income	0.02	..	2.70
Cabo Verde	Lower middle income	0.03	..	0.30
Cambodia	Lower middle income	0.65	1.50	0.32
Cameroon	Lower middle income	0.23	..	4.34
Canada	High income	0.97	4,398.25	13.56
Cayman Islands	High income	0.00	..	..
Central African Republic	Low income	0.03	..	3.12
Chad	Low income	0.12	..	..
Channel Islands	High income	0.00	..	..
Chile	High income	2.89	381.13	5.89
China	Upper middle income	18.54	771,152.63	25.83



Colombia	Upper middle income	0.09	312.63	7.21
Comoros	Low income	0.03	..	1.47
Congo, Dem. Rep.	Low income	0.25	..	..
Congo, Rep.	Lower middle income	0.08	..	2.44
Costa Rica	Upper middle income	0.02	14.25	30.29
Cote d'Ivoire	Lower middle income	0.07	26.00	5.62
Croatia	High income	0.08	199.50	9.16
Cuba	Upper middle income	0.03	35.33	..
Curacao	High income	0.03	..	..
Cyprus	High income	0.00	4.43	14.59
Czech Republic	High income	0.00	859.75	14.88
Denmark	High income	0.79	1,478.50	14.20
Djibouti	Lower middle income	0.00	1.00	..
Dominica	Upper middle income	0.00	..	4.42
Dominican Republic	Upper middle income	0.02	16.50	3.84
Ecuador	Upper middle income	0.62	19.33	5.76
Egypt, Arab Rep.	Lower middle income	0.39	705.00	0.76
El Salvador	Lower middle income	0.06	5.00	4.89
Equatorial Guinea	Upper middle income	0.01	..	..
Eritrea	Low income	0.00	..	..
Estonia	High income	0.08	41.38	11.63
Ethiopia	Low income	0.04	..	5.56
European Union		8.77	304,935.42	12.60
Faroe Islands	High income	0.52	..	..
Fiji	Upper middle income	0.05	..	2.62
Finland	High income	0.19	1,504.13	8.59
France	High income	0.56	14,507.50	25.38
French Polynesia	High income	0.02	..	9.48
Gabon	Upper middle income	0.04	..	..
Gambia, The	Low income	0.05	..	1.72
Georgia	Lower middle income	0.02	119.25	2.92
Germany	High income	0.27	47,476.13	15.72
Ghana	Lower middle income	0.37	14.50	3.61
Gibraltar	High income	0.00	..	..
Greece	High income	0.07	635.00	9.95
Greenland	High income	0.28	..	18.04
Grenada	Upper middle income	0.00	..	..
Guam	High income	0.00	..	..
Guatemala	Upper middle income	0.02	5.63	5.00
Guinea	Low income	0.14	..	2.66
Guinea-Bissau	Low income	0.01	..	..
Guyana	Upper middle income	0.05	1.00	0.17
Haiti	Low income	0.02	1.67	..
Honduras	Lower middle income	0.01	5.67	2.22
Hong Kong SAR, China	High income	0.18	212.38	15.07
Hungary	High income	0.01	609.00	17.54
Iceland	High income	1.34	42.38	18.19



India	Lower middle income	5.28	11,336.88	7.38
Indonesia	Lower middle income	6.77	976.57	7.16
Iran, Islamic Rep.	Upper middle income	0.63	12,634.43	2.39
Iraq	Upper middle income	0.04	474.00	0.08
Ireland	High income	0.32	368.75	24.15
Isle of Man	High income	0.01	..	..
Israel	High income	0.00	1,309.50	15.90
Italy	High income	0.22	8,644.14	7.21
Jamaica	Upper middle income	0.02	18.88	0.50
Japan	High income	4.11	272,717.13	16.64
Jordan	Upper middle income	0.00	37.13	2.04
Kazakhstan	Upper middle income	0.04	1,427.29	32.12
Kenya	Lower middle income	0.18	126.25	4.20
Kiribati	Lower middle income	0.11	..	15.01
Korea, Dem. People's Rep.	Low income	0.24	8,109.33	..
Korea, Rep.	High income	1.82	153,976.13	25.37
Kosovo	Lower middle income	..	..	..
Kuwait	High income	0.01	..	2.31
Kyrgyz Republic	Lower middle income	0.00	119.25	8.83
Lao PDR	Lower middle income	0.05	..	18.08
Latvia	High income	0.13	149.13	12.32
Lebanon	Upper middle income	0.00	98.33	3.34
Lesotho	Lower middle income	0.00	..	0.19
Liberia	Low income	0.02	..	..
Libya	Upper middle income	0.04	..	..
Liechtenstein	High income	..	..	..
Lithuania	High income	0.12	103.38	10.88
Luxembourg	High income	..	117.63	7.38
Macao SAR, China	High income	0.00	3.57	0.03
Madagascar	Low income	0.13	5.38	1.70
Malawi	Low income	0.13	4.50	5.97
Malaysia	Upper middle income	1.63	1,190.00	41.62
Maldives	Upper middle income	0.14	..	0.03
Mali	Low income	0.10	..	2.45
Malta	High income	0.00	8.86	37.81
Marshall Islands	Upper middle income	0.09	..	..
Mauritania	Lower middle income	0.45	..	0.00
Mauritius	Upper middle income	0.01	2.00	0.67
Mexico	Upper middle income	1.71	1,221.75	15.86
Micronesia, Fed. Sts.	Lower middle income	0.06	..	..
Moldova	Lower middle income	0.00	86.38	4.85
Monaco	High income	0.00	7.13	..
Mongolia	Lower middle income	0.00	121.17	11.78
Montenegro	Upper middle income	0.00	21.29	6.10
Morocco	Lower middle income	1.37	231.00	5.35
Mozambique	Low income	0.26	14.71	12.04
Myanmar	Lower middle income	2.18	..	2.03

Namibia	Upper middle income	0.50	13.67	2.04
Nauru	Upper middle income	0.00	..	..
Nepal	Low income	0.02	11.71	0.50
Netherlands	High income	0.41	2,354.25	19.48
New Caledonia	High income	0.00	..	9.76
New Zealand	High income	0.48	1,379.25	9.47
Nicaragua	Lower middle income	0.04	2.50	1.61
Niger	Low income	0.05	..	20.64
Nigeria	Lower middle income	0.76	52.00	1.84
North Macedonia	Upper middle income	0.00	39.00	3.28
Northern Mariana Islands	High income	0.00	..	..
Norway	High income	2.66	1,123.38	18.94
Oman	High income	0.23	4.00	2.80
Pakistan	Lower middle income	0.53	150.63	1.75
Palau	High income	0.00	..	33.39
Panama	High income	0.19	26.33	11.15
Papua New Guinea	Lower middle income	0.27	1.00	8.82
Paraguay	Upper middle income	0.02	18.00	6.71
Peru	Upper middle income	5.59	65.88	4.67
Philippines	Lower middle income	2.45	262.13	51.82
Poland	High income	0.22	4,066.38	7.62
Portugal	High income	0.22	669.13	4.33
Puerto Rico	High income	0.00	..	..
Qatar	High income	0.02	10.40	0.45
Romania	Upper middle income	0.01	1,106.38	8.09
Russian Federation	Upper middle income	4.81	26,949.50	10.36
Rwanda	Low income	0.02	11.00	8.24
Samoa	Upper middle income	0.01	1.00	0.64
San Marino	High income	..	6.50	..
Sao Tome and Principe	Lower middle income	0.01	..	22.73
Saudi Arabia	High income	0.07	638.86	0.97
Senegal	Low income	0.49	..	1.46
Serbia	Upper middle income	0.00	200.75	..
Seychelles	High income	0.10	..	17.49
Sierra Leone	Low income	0.22	..	0.13
Singapore	High income	0.00	1,269.63	47.73
Sint Maarten (Dutch part)	High income	0.00	..	..
Slovak Republic	High income	0.00	206.50	9.34
Slovenia	High income	0.00	456.00	6.13
Solomon Islands	Lower middle income	0.06	..	2.93
Somalia	Low income	0.03	..	..
South Africa	Upper middle income	0.65	730.75	5.31
South Sudan	Low income	0.04	..	..
Spain	High income	1.08	2,994.00	6.96
Sri Lanka	Lower middle income	0.53	253.67	0.93
St. Kitts and Nevis	High income	0.05	..	23.39

St. Lucia	Upper middle income	0.00	..	8.31
St. Martin (French part)	High income	0.00	..	..
St. Vincent and the Grenadines	Upper middle income	0.05	..	0.99
Sudan	Lower middle income	0.05	267.00	..
Suriname	Upper middle income	0.04	..	14.13
Sweden	High income	0.21	2,108.25	13.77
Switzerland	High income	0.00	1,497.50	24.27
Syrian Arab Republic	Low income	0.01	159.00	1.34
Taiwan, China	High income			
Tajikistan	Low income	0.00	4.00	..
Tanzania	Low income	0.40	1.00	4.04
Thailand	Upper middle income	1.87	1,105.63	21.25
Timor-Leste	Lower middle income	0.00	..	8.58
Togo	Low income	0.03	..	0.17
Tonga	Upper middle income	0.00	..	2.97
Trinidad and Tobago	High income	0.01	3.00	0.23
Tunisia	Lower middle income	0.12	155.13	5.41
Turkey	Upper middle income	0.45	5,051.75	2.02
Turkmenistan	Upper middle income	0.02	..	..
Turks and Caicos Islands	High income	0.00	..	1.99
Tuvalu	Upper middle income	0.01	..	..
Uganda	Low income	0.46	10.00	6.84
Ukraine	Lower middle income	0.17	2,474.50	5.68
United Arab Emirates	High income	0.08	26.67	4.42
United Kingdom	High income	0.73	14,801.88	21.30
United States	High income	5.47	276,125.25	18.09
Uruguay	High income	0.07	25.17	8.70
Uzbekistan	Lower middle income	0.02	318.88	..
Vanuatu	Lower middle income	0.08	..	33.88
Venezuela, RB	Upper middle income	0.25	62.88	2.25
Vietnam	Lower middle income	2.82	456.50	22.58
Virgin Islands (U.S.)	High income	0.00	..	..
West Bank and Gaza	Lower middle income	0.00	..	0.35
Yemen, Rep.	Low income	0.21	21.38	1.19
Zambia	Lower middle income	0.09	11.13	6.36
Zimbabwe	Low income	0.01	8.50	2.99