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Policy networks in global environmental governance: connecting the Blue Amazon to Antarctica and the Biodiversity Beyond National Jurisdiction (BBNJ) agendas

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Abstract

Focusing on the domestic policy network around the Blue Amazon paradigm, this article challenges the frequently presented argument of Brazil as a key player in global environmental governance. In doing so, it applies a policy network approach to study the institutional framework that structures the country's engagement in relation to the Antarctica and the Biodiversity Beyond National Jurisdiction (BBNJ) negotiation agendas.

Keywords: Policy Networks; Blue Amazon; BBNJ; Antarctica.

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Introduction

The Antarctica Treaty System (ATS) and Biodiversity Beyond National Jurisdiction (BBNJ) cases are very different from one another, but they are deeply interconnected and complex (Jacquet and Jackson 2018; Naish 2017; Mcgee et al. 2018; Popova et al. 2019, United Nations Environment 2019). While Antarctica has its own regime, based on the 1959 treaty, the BBNJ is managed through ongoing negotiations that shall lead to an international, legally binding instrument in 2020¹. These cases are highly important, as they constitute strategic frontiers for extractive activities that are still poorly regulated (Young 2017; Bähr 2017; Cunningham-Hales 2017; Wright et al. 2018; Liu et al. 2019). Also, multilateral negotiations concerning bioprospecting regulation

¹ The Second session of the Intergovernmental Conference (IGC) on an international, legally binding instrument under the UN Convention on the Law of the Sea (UNCLOS), on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (BBNJ) took place between March and April, 2019. <<https://sdg.iisd.org/events/second-session-of-the-intergovernmental-conference-on-bbnj/>>. Access April 4, 2019.

remain unconcluded in Antarctica and in the high seas (Tiller et al. 2018; Beckman et al. 2018; Dodds et al. 2017; United Nations Environment 2019). Furthermore, each environmental regime may be linked to several other regimes, and even form a “regime complex” (Alter and Raustiala 2018), but each still has its own particular dynamics.

In 2004, the Brazilian Navy established the notion of “Blue Amazon,” which referred to an ocean area of 5,7 million km², within the Brazilian exclusive economic zone (EEZ), as shown in map 1 below. The Blue Amazon is important for geopolitical, diplomatic, environmental and economic reasons. Around 85% of Brazilian oil, 75% of natural gas, and 45% of fisheries production come from the ocean². Furthermore, the Blue Amazon area is also deeply interconnected with Antarctica and the high seas from a biological, climatic and meteorological perspective. Therefore, studying Brazil’s role in global environmental governance through the lens of the Blue Amazon sheds light on the intricate relationships between domestic actors and the Brazilian diplomacy concerning the Antarctica Treaty System and the Biodiversity Beyond National Jurisdiction cases.

Megadiverse countries like Brazil have to adapt to new agendas and challenges, including climate change, bioeconomics, and scientific/technological and innovation issues (STI according to OECD 2019). These issues cannot be studied through separate levels of analysis – domestic, regional, global – but need to be examined in a holistic way, from an integrated systems perspective. The policy processes evolving at different – but interconnected – levels of social organization need to be contrasted and compared (Young 2008); their mutual effects – be it direct or indirect – need to be understood. We therefore apply a “policy network” approach to assess the Brazilian foreign policy, based on the Blue Amazon paradigm. Following Rhodes (2008, 426), we understand such networks as “sets of formal institutional and informal linkages between governmental and other actors structured around shared if endlessly negotiated beliefs and interests in public policy making and implementation.”

The policy network approach allows us to transcend separate levels of analysis and to study multiple, overlapping, and dynamic relationships, which display a high degree of interdependence. At the same time, policy networks allow us to study the decentralization and fragmentation of governance arrangements, with power and authority widely diffused amongst governments and their sub-units, private businesses, and NGOs. In addition, it corroborates Ostrom’s (2010, 9) polycentric governance model when she concludes that:

humans have a more complex motivational structure and more capability to solve social dilemmas than posited in earlier rational-choice theory. Designing institutions to force (or nudge) entirely self-interested individuals to achieve better outcomes has been the major goal posited by policy analysts for governments to accomplish for much of the past half-century.

² <https://www.mar.mil.br/hotsites/amazonia_azul/>. Access February 8, 2019.

The main question this article ponders is: *how has the Blue Amazon policy network engaged with the Antarctica and the Biodiversity Beyond National Jurisdiction negotiations?* In both cases, we seek to answer three more specific questions: Has Brazil been a leader, a follower, a reluctant participant, or a blocker in multilateral arenas? How have the polar and ocean policies evolved in relation to the broader Brazilian foreign policy? To what extent has the Brazilian scientific community influenced the Brazilian environmental foreign policies within these fields?

We initially illustrate how Brazil in the recent past wielded the potential to play a key role in different regimes, notably regarding biodiversity, based on the Convention on Biological Diversity signed in the 1992 Earth Summit in Rio de Janeiro. We then challenge the myth that Brazil is a global environmental player, as the country's foreign policy achievements vary considerably in different regimes over time (Paula 2018), mainly due to conflictive domestic policy networks (Barros-Platiau et al. 2012). Finally, we focus on two different cases, - Antarctica and BBNJ - to discuss how Brazilian authorities responded to them from 2011 to 2018, including presidents Rousseff's and Temer's terms.

Throughout the analysis, we draw upon public policy documents, related literature, as well as empirical data from fieldwork, collected by one of the authors in Brasilia, between 2013 and 2019. In this period, the author participated in a range of public and restricted meetings and deliberations concerning the Antarctica and BBNJ agendas. Informal conversations were held with actors from agencies and institutions charged with the management of these issue areas, and budgetary data presented in following sections was accessed at these meetings. For the purpose of this study, observations of deliberations and decision-making processes have provided an overview of the patterns of interactions between central agents, access to more sensitive information, and also contributed with a firsthand understanding of the institutional contexts within which the processes of interest have unfolded (Kawulich 2005). These primary data thereby supplement empirical material from the aforementioned sources as the basis for the analysis.

Brazil in multilateral environmental regimes

Despite its varying performance, since the 1992 Earth Summit, Brazil has often been considered a key player from the Global South in relation to environmental issues (Lago 2006). Within the regimes encompassing forests and biodiversity, taken as a regime complex, Brazil traditionally promoted the principles of "sovereignty" and the "right to development" (Lago 2006; Carvalho 2012), thus hardly accepting international obligations concerning resources under Brazilian jurisdiction. Consequently, although the domestic agenda has been rather dissonant with the diplomatic agenda (Barros-Platiau et al. 2012), Brazil has played an important role in both regimes, sometimes as a promoter, and sometimes as a blocker (Lago 2006; Carvalho 2012; Viola and Franchini 2017). It is highly likely that the divergent interests of the Ministry of Environment (MMA), and the Ministry of Agriculture and Cattle Farming (MAPA) contribute

to understanding why Brazil has changed position within different UN negotiations. The most emblematic case was probably the Cartagena Protocol negotiations, when Brazil hesitated to join the Miami Group. Indeed, Itamaraty (the Ministry of Foreign Affairs or MRE) was not fully in control of the decision-making process, because no clear “national position” had been established (Varella and Barros-Platiau 2000; Guimarães 2002). This seems to have been the case up until 2018, because the *rappports de force* among the ministries did not change much over time.

Within climate change talks under the United Nations auspices, however, the Brazilian foreign policy is much more complex. Departing from the domestic arrangements perspective, Viola and Franchini (2017) identify a strong correlation between Brazilian deforestation rates and the country’s assertiveness in the multilateral climate negotiations, thereby highlighting that when deforestation rates were under control, Brasilia had a more active participation in climate talks. Thus, from a diplomatic perspective, in 2009 Brazil had the ambition to become a game changer in the COP 15 process that led to the Copenhagen Accord. Brazil played a much more important role within the BASIC group in 2009 than afterwards, when the country hesitated to join the “high ambition coalition” and to promote the Paris Agreement at the COP 21.

The aforementioned cases show that Brazil lacks a clear environmental diplomacy. Hence, diplomatic principles, domestic inter-bureaucratic arrangements, and national resources do not suffice to explain the changing Brazilian positions within multilateral environmental agendas. The Brazilian diplomacy adopted principles that correspond to the military view of national sovereignty over natural resources and non-intervention. Therefore, the main challenge for Itamaraty is to cope with domestic policy networks of public and private actors that shape the so-called national interest, in a fashion which is often relatively disconnected from the global governance agendas.

Seen through a broader analytical perspective, Brasilia had the ambition to gain recognition from the international community in 2009, notably with Minister Celso Amorim’s “active and autonomous” diplomacy (Amorim 2014; 2018). After that, there was a diplomatic watershed, since Brasilia abandoned these ambitions under President Dilma Rousseff and President Temer (Desiderá Neto et al. 2018; Cervo and Lessa 2014). Brazil was thereby an international “status seeker” until President Dilma Rousseff took office, whereafter the country’s relevance within sustainable development, environmental, and climate talks gradually decreased. In sum, we consider that the Brazilian authorities adopted the sustainable development agenda for its international power projection between 1992 and 2010 (Lago 2006; Lima 2017), but that the strategy was subsequently abandoned³.

Brazil’s relevance as a player when negotiating in multilateral or regional arenas and different environmental regimes has undoubtedly oscillated since 1992. Thus, when it comes to ocean governance, Antarctica or BBNJ, the Brazilian performance in multilateral negotiations has been much more limited. We defend that the “national interest” promoted abroad results from the operational definitions which were reached within the policy networks that were

³ Belli and Nasser (2018, 85-120) do not mention the SDGs or the environmental agenda when they describe the Brazilian diplomatic planning in “Coupling Multipolarity with Multilateralism.”

charged with these issue areas. We also claim that oceans (Castro et al. 2007), Antarctica (Câmara 2017) and fisheries (Organização dos Estados Ibero-Americanos 2018; Cesetti 2019) have not been a priority for Brazilian authorities, in spite of successful programs like the ReviZEE⁴ on coastal management.

Because the domestic policy network is based on the Blue Amazon paradigm, it is strongly limited with respect to multilateral negotiation agendas concerning global commons. To assess the Brazilian foreign policy on Antarctica and the BBNJ, we map the “Blue Amazon” policy network, focusing on Brazilian public actors from the executive branch. Nonetheless, we recognize that public and private interest groups might also become relevant regarding other issues, such as offshore drilling, mining, navigation, bioprospecting, and fishing.

A conceptual outline of the policy-network approach

A critical analysis of the Brazilian policies for the Antarctic and the BBNJ must reach beyond interstate relations, and address the causes of policy inefficiency at the domestic level. We focus on the policy arrangements of institutions involved in decision-making within these fields, and on the patterns of their interactions. For this purpose, we draw on the policy-network literature as a useful approach in order to scrutinize the ‘interorganizational logic’ at the meso level of policy-making (Atkinson and Coleman 1989, 49). Policy-network analysis has been applied to highly different cases and issues, spanning over foreign policy decisions (Serdult and Hirschi 2004) and marine environment policy (Bainbridge et al. 2011). Policy networks have been defined as “sets of formal institutional and informal linkages between governmental and other societal actors structured around shared, if endlessly negotiated, beliefs and interests in public policy-making and implementation” (Rhodes 2017, 74-75). A more extensive definition of what Thorfinn refers to as ‘governance networks,’ has been formulated as:

- (1) relatively stable horizontal articulations of interdependent, but operationally autonomous actors who
- (2) interact with one another through negotiations which
- (3) take place within a regulative, normative, cognitive and imaginary framework that is
- (4) self-regulating within limits set by external forces and which
- (5) contributes to the production of public purpose (Torfinn 2005, 307).

We analyze the network of Brazilian public actors involved in the policy-making process around the Antarctic and the BBNJ through an interorganizational perspective that emphasizes “the system of relations amongst actors” and the “structured social relationships” (Thatcher 1998, 400) as the explanatory point of departure. As analysis of the internal dynamics and

⁴ Program on the Evaluation of Living Resources’ Sustainable Potential in the Exclusive Economic Zone (*Programa de Avaliação do Potencial Sustentável de Recursos Vivos na Zona Econômica Exclusiva*). <<https://www.mma.gov.br/biodiversidade/biodiversidade-aquatica/zona-costeira-e-marinha/programa-revizee>>. Access February 8, 2019.

changes of policy-networks is often used to explain policy-outcomes (Marsh and Smith 2000; Van Bortel 2009) we apply this approach to make sense of the relative efficiency of the two policy networks examined, with attention to the interactions between their central participants.

The structure of a policy network, and the degree to which its internal relations are configured around one or more central members, may constitute a decisive factor in explaining its performance. ‘Centralization’ has been defined as the situation in which a few actors mediate relations within a network (Morrisey et al. 199, 61-62). The relative position of network participants on a scale from centric to peripheral also determines the significance of actors, as well as the nature of exchange relationships between them (Wang 2013, 317). Another important aspect of centralization concerns authority, and the distribution of decision-making power amongst network participants, as well as their ability to make autonomous decisions (Atkinson and Coleman 1989, 51). Centrally positioned agents with considerable authority have thus been characterized as “meta-governors,” as they assume responsibility for managing the network, and possess both hard and soft control instruments (Palm and Backman 2017, 145). A centralized mode of network integration can thereby provide a higher degree of effectiveness (Provan and Milward 1995, 25). As formulated in hypothesis 1 below, we therefore expect centralization/decentralization to explain variation in network efficiency:

Hypothesis 1: Decision-making centralization and relations management within a policy network increase its efficiency.

Another central factor which may determine network efficiency concerns the interorganizational process of resource distribution and exchange within a policy network. Because different network members possess a variegated array of resources, a mutual dependency relationship arises. As a corollary of this dependency, a resource-seeking behavior has been found to spur cooperation between network members (Sun and Cao 2018, 601), with more resource-endowed agents making use of this circumstance to pursue a leading position (Wang 2013, 318). The relative distribution of resources between participants thereby also shapes the relationships between its constituents (Marsh and Smith 2000, 10). A fluent and unhampered process of resource exchange is thereby critical to facilitate the network’s policy development and performance (Lu et al. 2018, 137). Finally, the general availability of resources within the network’s environment also constitutes a factor which may enhance its efficiency (Provan and Milward 1995, 27). Upon these considerations, we therefore presume that the process of resource exchange and resource availability influences the network’s efficiency, as formulated in hypothesis 2:

Hypothesis 2: Fluency of resource exchange and resource availability within a policy network increase its efficiency.

In the remainder of this article, we assess these hypotheses with regards to the performance of the Blue Amazon policy network in relation to the Antarctica and the BBNJ agenda.

The Blue Amazon paradigm has many implications. First, the Navy can be considered as a meta-governor for the Blue Amazon Policy network, with strong priorities related to the protection of the natural resources under Brazilian jurisdiction (Ministério de Defesa 2016) and to the provision of the necessary logistics for the strategic projects and programs. For example, the extensions of the Continental Shelf Program (LEPLAC) or the Pre-Salt are two main concerns for the Navy. As a result, the Navy has a clear mandate of authority over the other ministerial representatives that compose the CIRM.

Second, regarding policies for the sustainable management of biological or mineral marine resources, the Navy plays a limited role, although officers usually participate in multilateral meetings for Antarctica, BBNJ, the International Seabed Authority (ISA) and International Maritime Organization (IMO) meetings. While the CIRM's Executive Secretariat (SECIRM) chaired the meetings related to coastal management with GIGERCO (the coastal management group from the Ministry of Environment), the military authorities cannot be expected to adopt environmentally- or socially-oriented measures related to the oceans in multilateral meetings.

Third, the 1995 Maritime National Policy is outdated, so a new text, based on more sophisticated concepts like OECD's (2016; 2019) blue economy, bioeconomy and blue strategy is still lacking. In spite of the IX Plan for the Sea Resources (PSRM, 2016-2019), there are no clear political connections between the green and the blue Amazon yet, except for logistics and the scientific research related to ecosystem-based management. Thus, according to the 2019 Presidential Act 870, the Ministry of Agriculture and Cattle Farming (MAPA) is responsible for the fisheries and aquaculture national policies. Similarly, policies linking the Blue Amazon to the Antarctica remain to be designed. Again, the Brazilian scientific community has a key role to communicate to decision-makers how climate change and the Ecologically or Biologically Significant Marine Areas (EBSAs) issues are interconnected with the oceans governance agenda⁷.

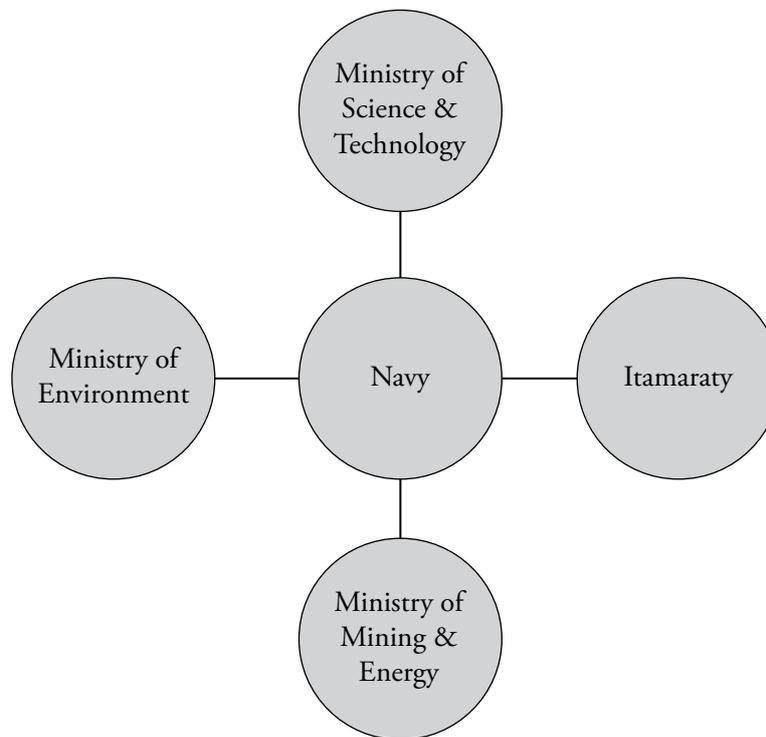
Fourth, if the green-blue paradigm makes sense for the Navy, it does not really make sense from a biological viewpoint, because the paradigm only takes into account resources under national jurisdiction, but not beyond it. Therefore, the Blue Amazon paradigm is a geopolitical tool that is limited for diplomatic purposes, and even more so for sustainable governance debates. In other words, Brazilian authorities still need to account for complex environmental connections between Antarctica, the high seas and the EEZ.

Given the centrality of the Navy, and the fact that the Blue Amazon paradigm will most likely be reinforced in the future National Maritime Policy, we chose to refer to the policy network under analysis as the "Blue Amazon policy network," represented in Figure 2 below. The policy network is the same for both cases, that is, the main actors are the same, but their performance in the ATS case is much superior to the BBNJ case. The Navy is the main actor and the Ministry

⁷ Brazilian scientists agreed on that during the I Brazilian Ocean Forum on Science, Technology and Innovation (*I Fórum Brasileiro de Ciência, Tecnologia e Inovação para os Oceanos*). It was organized by CGOA/Ministry of Science, Technology Information and Communication, on 21-23 May, 2019. The final document, entitled "*Carta de Todos os Santos*" mentions this communication challenge. Some Navy officers participated, but diplomats and representatives from the Ministry of Environment did not.

of Science and Technology seems to be the second most important actor. Surprisingly, Itamaraty and the Ministry of Environment played very limited roles, whereas the Ministry of Mining and Energy retained an important function related to mining activities and the expansion of the continental shelf (LEPLAC Program).

Figure 2. The main public actors within the Blue Amazon policy network.



Source: Authors' elaboration.

In Antarctica's case, the policy network is structured around the CIRM, which is the maritime authority, and part of the Navy/Ministry of Defense (MD). In fact, the Brazilian Antarctic program (PROANTAR) directly contributed to the consolidation of the CIRM as the policy network authority. The Commission was composed of fifteen other ministries, the Presidential cabinet representative, and the Harbor Secretariat. Besides the Navy, we identified three other main actors within the network: the Ministry of Science, Technology, Information and Communication (MCTIC), Itamaraty (MRE) and the Ministry of Environment (MMA). Although not formally recognized as members, scientists play an important role within the debates. Because they participate in domestic and international meetings with ministries and congressional representatives, they come close to the concept of an epistemic community in the sense of Haas (2008)⁸.

⁸ Professor Paulo Eduardo Câmara from the Institute of Biology participated in the 2018 and 2019 Antarctica Treaty Meetings of the Parties (ATCM). Professor Carina Costa de Oliveira from the Law Faculty participated in the III session of the Intergovernmental Conference on an international, legally binding instrument under the United Nations Convention on the Law of the Sea, on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction in 2019. They are both from the University of Brasilia and were invited to participate with the Brazilian official delegation.

The main initiatives related to Antarctica are submitted to CIRM, such as the PROANTAR program and the construction of the 2019 scientific research station (Escobar 2016), logistics, regional meetings (RAPAL), and the planned acquisition of an icebreaker. Interministerial meetings take place in the CIRM and other stakeholders can be invited, notably from the scientific community. Civil society representatives may also participate, depending on the agenda. However, congressional representatives from the Antarctica Caucus⁹ rarely participate in the meetings. Furthermore, with the 2019 ministerial reform under President Bolsonaro, the Ministry of Defense will continue to be the focal point for the Antarctica agenda.

Concerning the BBNJ negotiations, the policy network is not well-structured around the CIRM, as mentioned above. Itamaraty, the Ministry for Science & Technology, and to a lesser extent, the Ministry of Environment, jointly manage the marine biodiversity agenda. In this case, the Navy has less authority, since biodiversity is a typically environmental issue, although it does comprise an environmental department, and sends an officer to take part in the multilateral meetings mentioned above. Even though the four ministerial representatives meet frequently before multilateral meetings, they do not necessarily share the same priorities. Our observations indicate that the Oceans, Antarctica and Geosciences Office (CGOA, subordinated to the Department on Science Policies and Programs in MCTIC) considers ocean biodiversity to be a higher priority than the other network participants. CGOA was the key Brazilian actor for the signature and implementation of the 2017 Belém Statement on cooperation for research and innovation in the Atlantic Ocean, signed with the European Union and South Africa, as well as the AANChOR project¹⁰, and the creation of the National Institute for Ocean Research, in July 2019.

The MMA focuses more on land/water biodiversity and coastal management, and the ocean and fisheries secretariat was recently closed down. Ocean-related projects are either in the Biodiversity Secretariat (SBIO) or the Water Resources Secretariat (SRH), and Itamaraty clearly appears to have shifted its priorities. After the 2019 ministerial reform, the Environmental Department (DMA) and the Seas, Antarctica and Space Division (DMAE) were placed under the Citizenship and Sovereignty Secretariat¹¹. Despite the fact that the three ministries recently underwent structural reforms, there is no clear sign that this situation will change dramatically in the near future. In other words, the Ministry of Sciences & Technology was empowered, while the two others saw their BBNJ agendas considerably reduced. Namely, Itamaraty will likely deal less with climate and environmental issues, while the MMA will be less engaged with planetary politics. In order to account for the variation in the Blue Amazon policy-network's efficiency with regards to the ATS and the BBNJ respectively, we focus on centralization and resource distribution in the following section.

⁹ The *Frente Parlamentar Mista de Apoio ao Programa Antártico Brasileiro* is composed of senators and Lower House representatives who support the Antarctica agenda. They can propose parliamentary amendments and ensure complementary funding. In 2017, they provided around one million dollars to PROANTAR. <<http://www.cristovam.org.br/portal2017/2017/06/21/frente-parlamentar-mista-de-apoio-ao-programa-antartico-brasileiro-anuncia-nova-estacao-brasileira/>>. Access January 3, 2019.

¹⁰ All Atlantic Cooperation for Ocean Research and innovation

¹¹ *Secretaria de Assuntos de Cidadania e Soberania Nacional* (SASN) <www.itamaraty.gov.br> Access February 8, 2019.

Centralization and resource distribution within the Blue Amazon policy network

The Brazilian policy network for Antarctica has been relatively centralized since the creation of the CIRM, which is also reflected in the decision-making process. The management of relations proved to be much more efficient than we expected prior to this research in early 2014. In fact, the Navy officials and other CIRM members maintain close contact within Congress, in the ministries, national research centers, and universities. Navy officers also organize public scientific events around Brazil to debate and raise awareness on issues such as scientific research and geopolitics (Gandra and Simões 2013; Andrade et al. 2018). Therefore, the network is centralized and rather well managed. In terms of interaction patterns, the Antarctica stakeholders are a small group of old partners that could be considered an “elite,” - except for diplomats, who change frequently. With respect to the Antarctic Treaty Consultative Meetings, the network actors meet in the CIRM to prepare the agenda and the position papers. They also deliberate regarding the national funding calls for research projects, as it was the case for the 2018 PROANTAR call, worth 5,1 million USD¹². Furthermore, these institutions share strong, long-lasting links. The network’s efficiency therefore appears to be enhanced by the centralized institutional arrangement in Brasilia, and by the priority that the Navy and the Ministry of Science, Technology, Information and Communication give the agenda, with the support of Brazilian polar scientists. Finally, the main limitations are not political disagreements, but rather stem from uncertainties about logistics and funding every year.

The biodiversity network is much broader than the BBNJ, which is underfunded, and decentralized. Fernandes et al. (2017) accentuate the negative impacts of Brazilian funding gaps for effective biodiversity management. There is no clear leadership, and each ministry has its own mandate and agendas. Their interests generally converge, but there is polarization between the Navy and Itamaraty on one side, and the MMA on the other. The best example are the EBSA talks, in which the former adopted a more nationalist approach, which diverged from the MMA’s perspective. They struggled to build a fragile domestic consensus with the support of MCTIC. In the specific case of marine biodiversity, we found that the link between Itamaraty and the Ministry of Science, Technology, Information and Communication is the strongest in the network, because these are the most frequent participants in multilateral meetings and international projects. The Navy’s participation is limited, which is also the case for the Ministry of Environment. In sum, the lack of centralization seems to be a key factor in limiting the network’s efficiency in the BBNJ case. Concerning the 2018-2019 negotiations, no clear diplomatic strategy was identified, although Brazil has some strong lines of action,

¹² That is R\$ 18 million, converted at 3.5 exchange rate. <http://www.mctic.gov.br/mctic/opencms/salaImprensa/noticias/arquivos/2018/08/Novas_pesquisas_na_Antarticaterao_mais_R_18_milhoes.html>. Access March 10, 2019.

notably within the G77/China group and the Like-Minded Latin American Countries¹³, around the principle of the right to development¹⁴.

In both cases, we consider that there were quite distinct processes of resource exchange, Antarctica being better structured than the BBNJ. The resource availability, considering personnel, information, and funding capacity, also varies considerably between them. In the Antarctica case, the mutual dependency relationship is based mainly on the distribution of personnel and funding capacity. The CIRM and the Ministry of Science, Technology, Information and Communication - through the CGOA - have stable and well-prepared staff. Both of them, along with the scientific community, produce valuable information that is shared frequently. An example is the Working Paper 27 “An enhanced definition on Bioprospection in Antarctica,” which Brazil presented in the XLI ATCM in Buenos Aires, in 2018, in collaboration with members of the scientific community. The funding comes from the MD, MCTIC, National Fund for Scientific and Technological Development (FNDCT) and Congress, but the budget is limited and uncertain. While the Navy has the strongest funding capacity, its budget covers logistics and security, such as the new research station, equipments and ships. Table 1 below illustrates the funding for Antarctica from two different sources, the Navy and Congress:

Table 1. Budget for Antarctica in US\$

Year	Navy	Congressional funding
2012	2.340.000	450.000
2013	1.940.000	-
2014	1.680.000	220.000
2015	1.280.000	-
2016	1.280.000	770.000
2017	920.000	200.000
2018	400.000	650.000

Source: Brazilian Navy. Meeting “*A Reconstrução da Estação Antártica Comandante Ferraz*”. Câmara dos Deputados, 6/21/2017. Exchange rate: 3.5

For 2019, the planned PROANTAR funding is shown in Table 2 below. Although the Navy needs the airplanes and a vessel with operational capacities in the Antarctic to assure logistics to the new scientific station, the acquisitions may take longer than expected.

¹³ <http://enb.iisd.org/download/pdf/enb25186e.pdf>. Access April 4, 2019.

¹⁴ Second and Third sessions of the Intergovernmental Conference (IGC) on an international, legally binding instrument under the UN Convention on the Law of the Sea (UNCLOS), on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (BBNJ). <https://sdg.iisd.org/events/second-session-of-the-intergovernmental-conference-on-bbnj/>. Access April 4, 2019. And the International meeting “*Biodiversidade em Áreas além das Jurisdições Nacionais*”. Itamaraty/DMAE, Brasília, 2017.

Table 2. 2019 PROANTAR Federal Funding in US\$

Label	Amount
Discretionary expenses	10.800.000
Acquisition of three airplanes	11.400.000
Research station expenses	17.100.000
Air Force operations	2.850.000
Acquisition of a polar ship	60.500.000

Source: The Brazilian Navy. Meeting “*A Reconstrução da Estação Antártica Comandante Ferraz*”. Câmara dos Deputados, 6/21/2017. Exchange rate: 3.5

In 2018, the funding agencies from the Ministries of Education (CAPES) and Sciences & Technology (CNPq) underwrote a USD 5,1 million call for research, after three years of expectations, as the previous call was launched in 2015. However, the Division within Itamaraty (DMAE) has a very limited staff and almost nonexistent funding capacity. The scientific community¹⁵ is small and lacks funding as well. Congress, in turn, lacks information, participation in CIRM or other interministerial meetings and trained staff, but the Antarctica Caucus members have the means to propose financing research through congressional funding, as shown in Table 1 above, especially in 2018. Consequently, the scarce availability of resources within the network’s environment shapes the relationship, because the military, the MCTIC staff and scientists have to convince congressional representatives to help finance Antarctica research every year. This is a clear sign of lack of political commitment and diplomatic strategy, and the relative scarcity of funding appears to somewhat limit the network efficiency.

Concerning the BBNJ agenda, the network is much larger, but there are only three ministries involved in leading positions: the Ministry of Science, Technology, Information and Communication (CGOA), Itamaraty, and the Ministry of Environment. The two first Ministries had their funding capacity reduced during the period analyzed. Considering Brazil’s extensive territory and the national sustainable development agenda, the Ministry of Environment has been chronically underfunded, so it has sought international funding. Even though the Ministry of Environment has traditionally engaged in strong international cooperation projects, allowing for a more active participation in multilateral and national projects, this is not the case with the BBNJ debates. So, the network’s inefficiency is strongly related to the dysfunctional distribution and low availability of resources, and the lack of priority given to the ongoing negotiations. Finally, the Ministry of Defense was not considered as relevant as the others in the BBNJ case, but it holds a strong position in terms of opposing international obligations that could be considered compromising to national sovereignty.

In sum, the Brazilian role in the BBNJ multilateral negotiations has been deeply affected by domestic mismanagements and a lack of resource allocation since 1992. Furthermore, the Blue Amazon policy network has not yet encouraged domestic actors to adequately discuss

¹⁵ There are currently 48 research groups with the keyword “Antarctica” on the CNPq/Ministry of Science and Technology website <<http://lattes.cnpq.br/web/dgp>>. Access March 9, 2019 . For “biodiversity,” there are 1264 groups on the same website.

the ocean agenda. What is more, fisheries are not considered a priority in Brazil (Castro et al. 2007; Organização dos Estados Ibero-Americanos 2018; Cesetti 2019). The last dataset about fisheries was published in 2007 by IBAMA (Brazilian Environmental Institute), although there is a satellite system which is supposed to be monitoring fishing boats (PREPS). It can thereby be concluded that the lack of commitment and priority means that the Blue Amazon policy network is very superficially engaged within the BBNJ multilateral negotiations, although the name suggests the opposite.

Another central question relates to the manner in which the ATS and BBNJ agendas are internally connected within public official documents. Throughout the 186-page long 2016 White Book on Defense, only three paragraphs are devoted to Antarctica, two to the Blue Amazon, within the section entitled “International Sea Regimes, Antarctica and Space,” and none to BBNJ. Within Itamaraty, these agendas are not clearly linked, except in relation to promoting scientific research. The White Book on Defense (Ministério de Defesa 2016, 41) states that scientific research in Antarctica is paramount for Brazil. It recognizes the role of Antarctica related to atmospheric and ocean regulation, to the climate regime in Brazil, and the influence of the Austral Ocean for fisheries and aquaculture on the Brazilian coast. Naturally, there are international projects and scientific initiatives connecting Antarctica to BBNJ, and the new maritime policy is expected to catch up with recent debates.

Conclusion

The fact that Brazil is a megadiverse country, and at times has been a global environmental player, does not help to fully understand Brazilian diplomacy related to the oceans and Antarctica, even though the four selected ministries are the same in most negotiations and meetings. One important reason for that is the fact that ocean governance and the sustainable management of marine living resources are not a political, military or diplomatic priority.

The Blue Amazon is Brazil’s main foreign policy paradigm for ocean governance, and it empowers the Navy as the meta-governor of a domestic network that involves other ministries, scientists and NGOs. Although the Blue Amazon paradigm is useful from a military perspective to “protect” natural resources under national jurisdiction from threats like illegal fishing and bioprospecting, its usefulness is limited for ocean governance negotiations that are broader than the security scope.

We analyzed the relative efficiency of the Blue Amazon policy network in its engagement with the ATS and BBNJ negotiations, explaining its performance according to this network’s 1) centralization, and 2) resource distribution. Regarding the degree of network centralization, we found noticeable differences between the ATS and the BBNJ agendas. While the Navy is the main authority in Brazil concerning Antarctica, there is no designated authority for BBNJ. Three ministries share the marine biodiversity agenda: Itamaraty, Environment and Science, Technology,

Information and Communication, but BBNJ is not a priority for them. None of them can be considered the leader in the policy network, although the latter plays a key role in international cooperation projects. While centralization contributes to the relative effectiveness of the policy network for Antarctica, the absence of this condition appears to determine its ineffectiveness concerning BBNJ, which seems to support hypothesis 1. Future research may unveil whether centralization is a good option for managing the sustainable use of marine biodiversity resources, or whether Ostrom's polycentric governance model might constitute a more fruitful approach to advance Brazilian stakeholders' interests related to BBNJ.

In general, resource availability is higher in the case of Antarctica compared to the BBNJ, and its distribution is more balanced, notably concerning staff, funding and information. The Navy has maintained its role of assuring training and logistics to the continent, but it does not provide funding for scientific research. Information circulates well, and the polar scientific community participates in the decision-making processes within the policy network. While distribution of variegated resources between network participants has been efficient in the ATS case, their general availability has nonetheless been restricted. The 2018 PROANTAR call to fund research and the WP27 presented in the 2018 Antarctica Treaty Meeting resulted from proactive joint efforts from public authorities and scientists. With regard to the policy network's engagement with the BBNJ agenda, resources such as funding and information are scattered in the public and private sectors, including international entities. Staff is more numerous but less prepared, and the scientific community does not hold the same importance in the decision-making process as in the Antarctica case. The differences in terms of resource distribution thereby help to explain the relatively more efficient performance of the policy network in relation to the Antarctica compared to BBNJ, thereby lending some weight to hypothesis 2, - although both have faced funding problems. As a result, the lack of means allocated to the Blue Amazon policy network appears to have moderately limited Brazilian foreign policy concerning the Antarctica, and significantly curtailed efforts in relation to the BBNJ agenda.

With regard to the question of how the Blue Amazon policy network's performance has positioned Brazil within multilateral arenas concerned with these agendas, we can conclude that in the case of the BBNJ, it has been insufficient to provide Brazil with domestic consensus. The Navy focused more on expanding the continental shelf, security and defense issues than on planetary politics. Itamaraty does not have a strong negotiating position within the ongoing UN talks, and has been acting within the G77/China and the Like-Minded Latin American Countries. Within the incipient BBNJ regime, multilateral decisions made so far show how difficult it is to build consensus with several economic sectors and pre-existing regimes, notably in relation to bioprospecting and fisheries. In this context, Brazil failed to build a domestic consensus and promote biodiversity in the high seas as a diplomatic priority. Consequently, Brazil has been a distant follower of the most pressing issues in the ongoing multilateral negotiations, and it is clearly an underachiever.

Concerning the ATS agenda, the relatively better-organized policy network appears to have had some modest effect on Brazil's engagement within multilateral arenas, though the country might still be classified as a distant follower. In this case, Brazil's limited achievements in the ATS seem to stem from the fact that only the Navy, the CGOA and a small polar scientific community consider Antarctica a priority. Public authorities from the executive and legislative branches still have to be convinced how Antarctica, the high seas and the Blue Amazon area are interconnected in terms of climate, weather and ecology.

In broad terms, considering the policy network performance, the Brazilian foreign policy related to ATS and BBNJ was relatively constant during the period analyzed. As scarce attention has been devoted to these issue areas, results appear to have been contingent on the initiative and commitment of specific network actors. The 2019 ministerial reforms might imply significant changes in the future, as it is likely that only Antarctica will be considered a priority. The scientific community appears to have played a significant role in relation to the ATS and BBNJ agendas, which nonetheless has been constrained by limited funding. Future research on the Brazilian scientific community's role in the decision-making process is necessary, notably after the creation of the National Institute for Ocean Research (INPO). The Institute shall contribute to bridge the BBNJ case with the Blue Amazon policy network, since only Antarctica is connected to the Blue Amazon paradigm through the Navy's efforts. Because Antarctica and the BBNJ are two new strategic frontiers, the forthcoming Brazilian maritime policy has many complex challenges to tackle, starting with the implementation of a robust "blue strategy" within the policy network.

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References

- Alter, K., and K. Raustiala. "The rise of international regime complexity." *Annual Review of Law and Social Sciences* 14, (2018): 329-348.
doi: <https://doi.org/10.1146/annurev-lawsocsci-101317-030830>
- Amorim, C. *O Brasil na Antártida: discurso do Ministro da Defesa, Celso Amorim, na sessão solene de abertura da 37ª Reunião Consultiva do Tratado da Antártida*. Brasília, DF: Ministério da Defesa, 2014.
- Amorim, C. *Teerã, Ramalá e Doha: memórias da política externa ativa e altiva*. 2nd edition. São Paulo, SP: Benvirá, 2018.

- Andrade, I., L. Mattos, A. Cruz-Kaled, and G. Hillebrand. *O Brasil na Antártica: a importância científica e geopolítica do PROANTAR no entorno estratégico brasileiro*. Textos para Discussão 2425. Brasília, DF: IPEA, 2018.
- Atkinson, M., and W. Coleman. “Strong states and weak states: sectoral policy networks in advanced capitalist economies.” *British Journal of Political Science* 19, no. 1 (1989): 47-67. doi: <https://doi.org/10.1017/S0007123400005317>
- Bainbridge, J., T. Potts, and T. O’Higgins. “Rapid policy network mapping: A new method for understanding governance structures for implementation of marine environmental policy.” *PLoS ONE* 6, no. 10 (2011). doi: <https://doi.org/10.1371/journal.pone.0026149>
- Bähr, U. *Ocean atlas: facts and figures on the threats to our marine ecosystems*. Berlin: Heinrich Böll Foundation Schleswig-Holstein, the Heinrich Böll Foundation (national foundation), and the University of Kiel’s Future Ocean Cluster of Excellence, 2017.
- Barros-Platiau, A. F., C. H. Tomé Silva, and F. Carvalho. “A dissonância do quadro institucional brasileiro e os desafios para a RIO+20.” *Revista de Direito Internacional* 9, no. 3, (2012): 159-170. doi: <https://doi.org/10.5102/rdi.v9i3.1889>
- Beckman, R. C., M. McCreath, J. A. Roach, and Z. Sun. *High seas governance: gaps and challenges*. Leiden: Brill/Nijhoff, 2018.
- Câmara, P. *Brasil na Antártica, os próximos 30 Anos: curso superior de política e estratégia*. Brasília, DF: Ministério da Defesa, 2017.
- Carvalho, F. “The brazilian position on forests and climate change from 1997 to 2012: from veto to proposition.” *Revista Brasileira de Política Internacional* 55, no. spe (2012): 144-169. doi: <https://doi.org/10.1590/S0034-73292012000300009>
- Castro, B., F. Hazin, and K. Souza. *Mar e ambientes costeiros*. Brasília, DF: Centro de Gestão e Estudos Estratégicos, 2007.
- Cesetti, C. “Os limites e as possibilidades jurídicas do controle pesqueiro no contexto do programa nacional de rastreamento de embarcações pesqueiras por satélite.” Master diss. Faculdade de Direito, Universidade de Brasília, 2019.
- Cervo, A., and A. C. Lessa. “The fall: the international insertion of Brazil (2011-2014).” *Revista Brasileira de Política Internacional* 57, no. 2 (2014): 133-151. doi: <https://doi.org/10.1590/0034-7329201400308>.
- Cunningham-Hales, P. “Why is the regulation of bioprospecting in Antarctica lacking and what could the future hold?” Postgraduate certificate in antarctic studies. University of Canterbury, New Zealand, 2017.
- Desiderá Neto, W., S. Florêncio, H. Ramazini Jr., and E. Silva Filho. *Política externa brasileira*. Brasília, DF: IPEA, 2018.
- Dodds, K., A. Hemmings, and P. Roberts, eds. *Handbook on the politics of Antarctica*. Cheltenham: Edward Elgar, 2017.
- Escobar, H. “Brazil starts building snazzy new research station in Antarctica.” *Science*, March 21, 2016.

- Fernandes, G., M. Vale, G. Overbeck, M. M. C. Bustamante, C. E. V. Grelle, H. G. Bergallo et al. "Dismantling Brazil's science threatens global biodiversity heritage." *Perspectives in Ecology and Conservation* 15, no. 3 (2017): 239-243. doi: <https://doi.org/10.1016/j.pecon.2017.07.004>
- Gandra, R., and J. Simões. "Dialética científico-ambiental na geopolítica Antártida: repercussão no programa antártico brasileiro (PROANTAR)." *Revista Geonorte* 7, no. 1 (2013): 434-447.
- Guimarães, G. "O Pluralismo na formação do interesse brasileiro em biosegurança." Master diss. Universidade de Brasília, Brasília, DF, 2002.
- Haas, P. "Epistemic communities." In *The Oxford Handbook of International Environmental Law*, edited by D. Bodansky, J. Brunnée, and E. Hey. Oxford: University of Oxford, 2008.
- Jacquet, J., and J. Jackson. "High stakes on the high seas." *Science Advances* 4, no. 8 (2018). doi: <https://doi.org/10.1126/sciadv.aau8235>
- Kawulich, B. "Participant observation as a data collection method." *Forum: Qualitative Social Research* 6, no. 2 (2005).
- Lago, A. *Estocolmo, Rio, Joanesburgo: o Brasil e as três conferências ambientais das Nações Unidas*. Brasília, DF: FUNAG, 2006.
- Lima, R. "Em defesa do desenvolvimento sustentável: por um paradigma: a diplomacia brasileira para o desenvolvimento sustentável." In *Novos olhares sobre a política externa brasileira*, organized by G. Westmann, 199-224. São Paulo, SP: Contexto, 2017.
- Liu, N., C. Brooks, and Q. Tianbao, eds. *Governing marine living resources in the polar regions*. Cheltenham: Edward Elgar, 2019.
- Lu, H., M. Jong, and E. Heuvelhof. "Explaining the variety in smart eco city development in China: what policy network theory can teach us about overcoming barriers in implementation?" *Journal of Cleaner Production* 196, (2018): 135-149. <https://doi.org/10.1016/j.jclepro.2018.05.266>
- Marsh, D., and M. Smith. "Understanding policy networks: towards a dialectical approach." *Political Studies* 48, no. 1 (2000): 4-21. <https://doi.org/10.1111/1467-9248.00247>
- Mattos, L. "A inclusão da antártica no conceito de entorno estratégico brasileiro." *Revista da Escola de Guerra Naval* 20, no. 1 (2014): 165-192.
- Mcgee, J., K. Brent, and W. Burns. "Geoengineering the oceans: an emerging frontier in international climate change governance." *Australian Journal of Maritime & Ocean Affairs* 10, no 1 (2018): 67-80. doi: <https://doi.org/10.1080/18366503.2017.1400899>
- Ministério de Defesa. *Livro branco de defesa*. Brasília, DF: Ministério de Defesa, 2016.
- Naish, T. "What does the United Nations Paris climate agreement mean for Antarctica?" *Antarctic* 35, no. 4 (2017): 46-51.
- Organização dos Estados Ibero-Americanos - OEI. *Subsídio ao ordenamento pesqueiro nacional*. Brasília, DF: OEI, 2018.

- Organisation for Economic Co-Operation and Development – OECD. *The ocean economy in 2030 report*. Paris: OECD, 2016. Accessed on April 4, 2019. <http://www.oecd.org/sti/the-ocean-economy-in-2030-9789264251724-en.htm>
- Organisation for Economic Co-Operation and Development – OECD. *Rethinking innovation for a sustainable ocean economy report*. Paris: OECD, 2019. Accessed on April 4, 2019. <http://www.oecd.org/publications/rethinking-innovation-for-a-sustainable-ocean-economy-9789264311053-en.htm>
- Ostrom, E. “Beyond markets and states: polycentric governance of complex economic systems.” *The American Economic Review* 100, no. 3 (2010): 641-672.
- Palm, J., and F. Backman. “Policy network creation as a driver of energy-efficient industry.” *International Journal of Energy Sector Management* 11, no. 1 (2017): 143-157.
- Paula, F. *The emergence of Brazil to the global stage: ascending and falling in the international order of competition*. Abingdon: Routledge, 2018.
- Popova, E., D. Vousden, W. H. H. Sauer, E. Y. Mohammed, V. Allain, N. Downey-Breedt et al. “Ecological connectivity between the areas beyond national jurisdiction and coastal waters: safeguarding interests of coastal communities in developing countries.” *Marine Policy* 104 (2019): 90-102. doi: <https://doi.org/10.1016/j.marpol.2019.02.050>
- Provan, K., and H. Milward. “A preliminary theory of interorganizational network effectiveness: a comparative study of four community mental health systems.” *Administrative Science Quarterly* 40, no. 1 (1995): 1-33. doi: <https://doi.org/10.2307/2393698>
- Rhodes, R. “Policy network analysis.” *The Oxford Handbook of Public Policy*, edited by R. E. Goodin, M. Moran, and M. Rein. Oxford: Oxford University Press, 2008.
- Rhodes, R. *Network governance and the differentiated polity: selected essays, volume I*. Oxford: Oxford Scholarship Online, 2017.
- Serdult, U., and C. Hirschi. “From process to structure: developing a reliable and valid tool for policy network comparison.” *Swiss Political Science Review* 10, no. 2 (2004): 137-155. doi: <https://doi.org/10.1002/j.1662-6370.2004.tb00026.x>
- Silva, A. “Brazil’s recent agenda on the sea and the South Atlantic contemporary scenario.” *Marine Policy* 85, (2017): 25-32. doi: <https://doi.org/10.1016/j.marpol.2017.08.010>
- Sun, Y., and C. Cao. “The evolving relations between government agencies of innovation policy-making in emerging economies: a policy network approach and its application to the Chinese case.” *Research Policy* 47, no. 3 (2018): 592-605. doi: <https://doi.org/10.1016/j.respol.2018.01.003>
- Tiller, R., E. Santo, E. Mendehall, and E. Nyman. “The once and future treaty: towards a new regime for biodiversity in areas beyond national jurisdiction.” *Marine Policy* 99, (2019): 239-242. doi: <https://doi.org/10.1016/j.marpol.2018.10.046>

- Torring, J. “Governance network theory: towards a second generation.” *European Political Science* 4, no. 3 (2005): 305–315. doi: <https://doi.org/10.1057/palgrave.eps.2210031>
- Thatcher, M. “The development of policy network analyses.” *Journal of Theoretical Politics* 10, no. 4 (1998): 389–416. doi: <https://doi.org/10.1177/0951692898010004002>
- United Nations Environment - UNE. *Global environmental outlook (GEO) 6*. Nairobi: United Nations Environment, 2019.
- Van Bortel, G. “Network governance in action: the case of Groningen complex decision-making in urban regeneration.” *Journal of Housing and the Built Environment* 24, no. 2 (2009): 167–183. doi: <https://doi.org/10.1007/s10901-009-9138-0>.
- Varella, M., and A. F. Barros-Plataiu. “Biotecnologias e biossegurança: fatores agravantes da desigualdade internacional?” *Revista de Informação Legislativa* 37, no. 145 (2000): 119–133.
- Viola, E., and M. Franchini. *Brazil and climate change: beyond the Amazon*. Abingdon: Routledge, 2017.
- Young, O. “Building regimes for socioecological systems: institutional diagnostics.” In *Institutions and environmental change: Principal findings, applications, and research frontiers*, edited by O. Young, L. A. King, and H. Schroeder. Cambridge, MA: MIT, 2008.
- Young, O. “Foreword.” In *Handbook on the politics of Antarctica*, edited by K. Dodds, A. Hemmings, and P. Roberts. Cheltenham: Edward Elgar, 2017.
- Wang, G. “Policy network mapping of the universal health care reform in Taiwan: an application of social network analysis.” *Journal of Asian Public Policy* 6, no. 3 (2013): 313–334. doi: <https://doi.org/10.1080/17516234.2013.850229>.
- Wright, G., J. Rochette, K. Gjerde, and L. Levin. “Protect the neglected half of our blue planet: maintaining momentum is crucial as nations build a treaty to safeguard the high seas.” *Nature* 554 (2018): 163–165.