

Anthropocentric Ocean Connectivity: A Pluralistic Legal-Regulatory Model

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Abstract

This article proposes a model of anthropocentric ocean connectivity based on the concept of human perspective as location. Within this location, anthropocentrism can be, but is not necessarily, an exclusive or dominant valuation of the human. In fact, conceptions of both anthropocentrism and of ocean connectivity are pluralistic. These and other pluralisms are borne out in this article's content and structure, which takes the form of explorations of anthropocentric connectivity in relation to four specific ocean-related human activities. First, Jan Solski applies understandings of connectivity as “flow” in the context of strategic ocean geopolitics. Second, Iva Parlov analyzes current doctrinal issues and interactions at the international level with respect to the legal regime for places of refuge for ships in need of assistance. Third, Maria Madalena das Neves examines ocean connectivity in the context of transboundary energy trade and market integration, with particular attention to geopolitical and ecological connectivity. Finally, Julia Gaunce proposes that the making and application of transnational rules and standards for ships in polar waters enhances certain connections and disrupts others, to the detriment of oceans and people, and that broadening connectivity especially in respect of Arctic Indigenous people(s) could help address challenges faced by oceans and ocean governance.

Keywords: *ocean connectivity, ocean governance, anthropocentrism(s), human activity, plurality*

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1 Model's characteristics

It could be said that every human understanding – including every understanding of law and ocean connectivity – is both anthropogenic, by definition, and anthropocentric, i.e. from a human perspective, for better or for worse.¹ At the same time, human

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perspectives are not limited to valuing the human and exploiting nature.² In this spirit, and for the purpose of this article, anthropocentrism is considered to be not so much a valuation as a general location, a perspective that can and often does, but does not necessarily, prioritize the human at the expense of all else.

A plurality of ocean connectivity concepts resides here, concepts which are arguably as varied as humans, cultures, or expertise. However, this article focuses on anthropocentric ocean connectivity concepts manifested in four broad areas of human activity – human activity being the other defining aspect of “anthropocentric” in this article. These areas of human activity are: strategic ocean geopolitics, international legal approaches to places of refuge for ships in need of assistance, ocean energy-transfer, and the making and applying of rules and standards for ships.

Two parts follow this introduction. The first part takes the form of four different considerations of anthropocentric ocean connectivity. Each consideration focusses on one of the four areas of human activity noted above, touching on concepts, problems and promises of anthropocentric connectivity. This part is followed by a concluding reflection on how anthropocentric ocean connectivity might address systemic challenges faced by oceans and ocean governance.

2 Anthropocentric ocean connectivity in four areas of human activity

This section contemplates different aspects of anthropocentric ocean connectivity, and its problems and promises with respect to systemic material, epistemic and geopolitical challenges to oceans and ocean governance, in the context of four different areas of human activity.

2.1 Anthropocentric connectivity in strategic ocean geopolitics

Although the practice of connectivity itself is as old as human interactions, the emergence of connectivity as a strategy with geopolitical implications is a novel approach.³ In fact, connectivity has been described as one of the “key issues and policy trends of our century”.⁴ Nadine Godehardt and Karoline Postel-Vinay stress the strategic dimension of connectivity, which differentiates it from connections built randomly or opportunistically.⁵ The very notion of a ‘strategy’ implies the existence of an actor(s) with the willingness to dedicate a set of actions (use of resources at their disposal) to obtain the desired outcome(s).⁶ The desired outcome would usually entail a solution to a specific problem, where identification of the latter, synonymous with the ‘clarification of the situation’, is a starting point.⁷

The ‘geopolitical’ implications of connectivity strategies arise from the way the logic of connectivity perceives space and “flow”. The inspiration for this approach traces back to a “constructal” model of connectivity and nature in terms of the law of physics, in which: “For a finite-size flow system to persist in time (to live), it must evolve such that it provides greater and greater access to the currents that flow through it”.⁸ This powerful concept models how “flow”, in animate (biological) and

inanimate (geophysical) systems, follows universal patterns of generation.⁹ Control over flows, rather than territories, forms the essence of the competition for connectivity in a new hyper-connected multipolar world, where the strategic goal is leverage, not domination.¹⁰

This perspective has prompted different actors to devise connectivity strategies to advance influence and gain leverage in the global space. So far, the most prominent and ambitious example has been the Chinese Belt and Road Initiative (BRI)¹¹ with its two components, the Belt and the Maritime Silk Road Initiative (MSRI).¹² Several other connectivity strategies have arisen, namely the Master Plan on ASEAN Connectivity 2025,¹³ the EU-China Connectivity Platform,¹⁴ and the Partnership on Sustainable Connectivity and Quality Infrastructure Between Japan and the European Union. It is interesting to note that even though the language used in all these strategic documents emphasizes cooperation and partnership, the EU does not shy away from referring to China as a “systemic rival promoting alternative models of governance”.¹⁵

To the extent that the globe consists primarily of the oceans, which often serve as the most efficient space for transportation and communication, it is not surprising that much of the connectivity occurs by sea. The term ‘maritime connectivity’ might be used to encapsulate these practices.¹⁶ According to Zhang and Long, maritime connectivity has two meanings, one referred to as the established international maritime cargo transport channel, connecting the coastal ports, which is akin to physical connectivity; and the other the maritime collaborative network, which contains elements such as free navigation and safe waterways,¹⁷ clearly underlying the institutional aspect of connectivity. Moreover, according to the description given by Blanchard and Flint,¹⁸ it is evident that much of the ‘maritime connectivity’ occurs on land, thus challenging the division into land-based and maritime connectivity. At the same time, it is difficult to ignore that maritime connectivity relies on, challenges, and develops the law of the sea and ocean governance.

As discussed above, connectivity is far from being exclusively about building physical infrastructure. An important part of connectivity as a strategy is governance (institutional connectivity): giving influence to certain values through development, promotion, and the export of norms, rules, standards, and practices. In other words, the actor behind the strategy would normally have a vested interest in promoting its vision of ‘good governance’ to facilitate connectivity as it suits its interests and reflects its values. Needless to say, the ability to set and promote standards of good governance equals control, power projection, and leverage.

This perspective appears to be underpinning the vision of connectivity as promoted by the EU.¹⁹ The latter commits to engage with China to uphold the rules-based international order, and at the same time, reproaches China for its selective engagement with multilateralism and its different understanding of the rules-based international order.²⁰ Competition between different visions of connectivity provides ample room for the proactive promotion of alternative governance models. Notably,

in the documents that set out the EU's vision of connectivity, much emphasis is placed on fighting climate change, promoting sustainable development, and the 2030 Agenda.²¹ Notably, the EU's normative vision of connectivity and emphasis on sustainability may have already affected other visions – an example of a positive effect of connectivity competition.²²

As such, connectivity as a strategy has transformative potential.²³ The role of State practice has been acknowledged for its potential to develop international law, but comprehensive connectivity strategies, such as the one promoted by the EU,²⁴ have much larger leverage to impose such change.²⁵ Thinking in terms of traditionally defined levels of governance, connectivity strategies that have transformative potential can be situated at the sub-global level. Comprehensive visions may be successful when operating within a certain scale, but this does not preclude the agency of multiple other actors or the effect of practices at the regional level.

Connectivity strategies rely on values and principles, and, as such, they can contribute to the development of law. For example, they may facilitate an endorsement of more specific definitions to contested terms of human socio-economic interaction, which are often imperfectly defined in law. As noted by To Anh Tuan, all connectivity strategies refer to 'maritime security', without identifying its precise scope.²⁶ Given the inherent vagueness of the term,²⁷ one might appreciate the opportunity connectivity brings to increase maritime security, for example, by providing a better understanding of piracy, freedom of navigation, or places of refuge. Although comprehensive connectivity strategies are relatively new, and the linkages between them and the agencies involved in the practice of international law at the national, regional, and global levels may sometimes be underdeveloped, invisible, or simply absent, the narrative, logic, or lens of connectivity may help re-imagine the way we address pressing issues.

However, one may imagine that the values underpinning different strategies may push for more radical change than merely eliminating frictions to the flows. The EU's vision emphasizes sustainability, human rights, and fighting climate change, venturing far beyond the promotion of economic interests and seamless flows of commerce.

2.2 Anthropocentric connectivity in the context of places of refuge for ships in need of assistance

One area where the EU's promotion of a comprehensive connectivity strategy and its potential to influence global governance can be observed is the context of places of refuge,²⁸ where the EU clearly puts significant emphasis on a robust due diligence regime and regional cooperation and coordination to achieve a desired outcome: maritime safety and protection of the marine environment.

A place of refuge may facilitate maritime transport and trade, as it provides a shelter where a ship can stabilize its conditions to be able to continue with a planned

voyage. At the same time, depending on the conditions of the ship and circumstances such as weather and sea conditions, a ship in need of refuge may pose a risk of pollution, which may negatively affect the economy and natural environment of the coastal State. There are many examples in the past where refuge to ships in need of assistance was granted only after considerable delay,²⁹ or where States, acting as sovereigns in their territories, refused to bring these ships to sheltered areas, sometimes without even investigating the seriousness of the situation.³⁰ Whereas the refusal of refuge in the case of the *Castor* (2000) fortunately went without any major incident,³¹ in the case of the *Prestige* (2002), an environmental catastrophe occurred and the reports revealed that the disaster could have been minimized had refuge been granted.³²

LOSC does not address the problem of places of refuge, but it does impose an obligation on all States to protect and preserve the marine environment (Article 192), allowing states to exercise discretion regarding solutions to the problem.³³ In 2003, States adopted the IMO Guidelines,³⁴ a key aspect of which is merely a soft-law recommendation for States to establish procedures to receive and act on individual requests with a view to ‘authorizing, where appropriate, the use of a suitable place of refuge’.³⁵ In this respect, the IMO Guidelines offer a set of risks and factors for further consideration. However, the IMO Guidelines essentially operate as if the request for a place of refuge is of concern to only one coastal State, whereas regional cooperation and coordination, as illustrated by the MSC Flaminia incident,³⁶ is of critical importance. Moreover, in the absence of concrete, legally binding norms, States may bend to political pressure and resort to their sovereignty to act – or not – as they see fit without explaining the grounds for their decision,³⁷ creating unnecessary delays.³⁸ Global interests in environmental protection may thus be compromised; and more *Castor*-like scenarios (rejection without inspection) with *Prestige*-like outcomes may play out.

Proposals for an international treaty on places of refuge which would impose explicit obligations on States to grant refuge as a matter of principle have already been made on several occasions. However, thus far States have been unwilling to surrender their sovereignty, and there seems to be nothing to suggest that such a proposal will ever be met with success in the future.³⁹ Understandably, bringing a stricken ship near the coast of one State may produce for that particular State greater environmental and economic damage than for the environment in general. If a ship becomes a maritime casualty and starts to leak oil, the coastal State may have reasonable grounds to deny entry to a place of refuge to such a ship. However, not all scenarios deserve equal treatment (or in fact no treatment). Depending on the circumstances of a given situation (e.g. the stability of the ship, the engagement of professional salvors, prevailing weather and sea conditions), the coastal State may reasonably be expected to honor a place of refuge. Reacting to a situation early and seriously enough could lead to environmental damage being prevented altogether.

Through the development and promotion of a comprehensive set of norms, values, practices, and procedures, the EU strategy could help reimagine the way we go about the problem of places of refuge globally.⁴⁰ EU Directive 2002/59/EC, as amended (VTMIS Directive),⁴¹ which is largely influenced by the IMO Guidelines,⁴² transforms some of the IMO recommendations into obligations for EU Member States. For example, the coastal State is obliged to provide a formal decision for denying refuge,⁴³ and make various preparations in advance, such as predesignating one or more specific competent authorities with expertise and power to take independent decisions,⁴⁴ predesignating places of refuge, and drawing up plans for the accommodation of ships in need of assistance.⁴⁵ If a given State cannot provide a suitable place of refuge, it is expected to communicate this to other parties involved. In this respect, the EU clearly puts strong emphasis on institutional connectivity through regional cooperation and coordination,⁴⁶ and on the principle of no rejection without inspection and explanation.⁴⁷

There is an ongoing proposal from the EU Member States and relevant industry stakeholders for a revision of the IMO Guidelines on Places of Refuge.⁴⁸ While the EU proposal merely concerns amendments to the IMO operational guidelines of a non-mandatory nature, it is worthwhile reflecting upon the overall set of actions that the EU has taken to achieve the desired outcome, i.e. an effective response to the problem of places of refuge. Some developing States cannot afford a robust due diligence regime like the EU's. While imposing an obligation to be prepared in advance does seem to be a laudable solution, it could nevertheless require more to be done in alleviating financial and technical burdens (infrastructure and capacity building). Moreover, certain weaknesses of the current IMO liability and compensation regime (which is not tailored for issues related to places of refuge) would need to be rectified.⁴⁹

2.3 Anthropocentric connectivity in the context of energy

Anthropocentric connectivity in the context of energy can be understood in multiple ways and creates connections with other models, especially ecological connectivity. One of these understandings envisages the ocean as a space that enables, through maritime transportation, international trade of energy goods and the concomitant interconnection of global and regional energy markets. The deployment of energy installations at sea also allows the interface between ocean and land energy uses and users via another layer of the physical interconnection of energy markets through submarine cables and pipelines. Developing and maintaining (ocean) connectivity that continues to enable trade in energy goods and integration of transboundary energy markets is vital to attain the United Nations Sustainable Development Goals 7 and 13.⁵⁰

Given that energy is a critical component to countries' socio-economic development and security, it is nearly impossible to dissociate it from political considerations.

In effect, energy connectivity strategies via the oceans inherently entail geopolitical implications. The linkage between maritime chocking points (such as the Suez Canal and the Strait of Hormuz) and the facilitation of energy trade between energy producing and energy importing countries, perfectly illustrates how energy connectivity via the oceans triggers geopolitical tensions and alliances. On a regional or more local basis, concrete energy projects, such as Nord Stream 2,⁵¹ equally exemplify this. Ocean-based energy connectivity, geopolitical strategies, and different epistemological views influence ocean governance, but such influence does not necessarily have to be negative. Arguably, the anthropocentric concern with enhancing energy connectivity (particularly regarding offshore renewable energy) can be a catalyst for inter-State cooperation, for increased stakeholder involvement, and for the promotion of better ocean governance.

Another perspective interlinks energy with ecological connectivity. The increase of offshore energy installations and submarine cables, also known as ocean sprawl, may have an impact on marine ecological connectivity – both in terms of functional and structural connectivity. Such impacts may occur to different extents across the entire life cycle of these installations, spanning the installation, operation, and decommissioning periods. These impacts could be prejudicial or beneficial. According to Bishop et al., ocean sprawl may: “(1) creat[e] barriers to the movement of some organisms and resources – by adding physical barriers or by modifying and fragmenting habitats; (2) introduc[e] new structural material that acts as a conduit for the movement of other organisms or resources across the landscape; and (3) [alter] trophic connectivity.”⁵² Moreover, Bishop et. al. also note that, in the event of such impacts to connectivity, the implications can be even wider, affecting “the genetic structure and size of populations, the distribution of species, community structure and ecological functioning”.⁵³ Tidal and wave energy are two key examples of energy generation that affect hydrodynamics, morphodynamics and ecosystems, and hence have an impact on ecological connectivity.⁵⁴ According to ICES, the deployment of large-scale offshore renewable energy installations can “result in far-field changes up to 100 km away”.⁵⁵ On the other hand, some studies have sustained that anthropogenic infrastructures and installations can have a potentially beneficial role in enhancing the connectivity of marine species.⁵⁶ Still, it is noteworthy that there is a lack of scientific evidence on the actual nature (positive/negative), extent, and significance of the impacts of energy installations and infrastructures on ecological connectivity. This entails that it is necessary to use an ecosystem approach and implement the strategic monitoring of the different offshore energy activities to understand more clearly their effects on ecological connectivity. Based on such monitoring, and through ecosystem-based marine spatial planning, the placement of these installations/infrastructures offshore can be done in a way that preserves ecological sustainability in line with United Nations Sustainable Development Goal 14.⁵⁷ It also remains to be seen what the impact of the BBNJ negotiations and the final instrument (if one is indeed

reached) on energy activities on the high seas and protection of marine biodiversity for which ecological connectivity is so important, will be.

The double-thread that energy law has with both anthropocentric connectivity and ecological connectivity is also reflected in the way the law of the sea (dis)regards ocean connectivity in this context. LOSC, as a framework convention, does not provide significant guidance on (ocean) connectivity, at least not in terms of ecological connectivity, and certainly not in terms of energy. Notwithstanding, it is possible to read into Article 192 a duty to consider ecological connectivity as a paramount factor affecting the health of marine biodiversity. Against this backdrop, it is important to consider Article 193 in the context of energy, which compels States to exercise the sovereign right to exploit their natural resources following the general duty to protect and preserve the marine environment expressed by Article 192. From an anthropocentric connectivity point of view, the LOSC does provide a regime that enables the deployment of energy infrastructures (including submarine cables and pipelines) in the different maritime zones,⁵⁸ a regime that amply enables connectivity via navigation, and a regime that attempts to balance the different interests and rights of States. Moreover, the regime of the LOSC is further complemented by other international agreements, such as the CBD, which is also relevant in this context. Specific regulation of these matters will ultimately fall on each State or other forms of regional integration. In the case of the European Union, for example, member States developing offshore energy activities must comply with the EU law of relevance as well as follow EU's integrated maritime policy.⁵⁹ Ensuring anthropogenic connectivity and connectivity across the EU's internal energy market is a key objective enshrined in multiple EU secondary legislation and Article 194 of the TFEU. As already highlighted in section 2.1 above, the EU's vision of connectivity in tandem with its strategies for energy production and trade, sustainable development, and climate change mitigation can trigger positive effects of promoting governance.

2.4 Anthropocentric connectivity and the making and applying of rules and standards for ships in polar waters

Ships certainly signify ocean connectivity – for example, in terms of shipping and sea-borne tourism. Regulation is certainly anthropocentric, insofar as it sets out legal parameters for human activities, and because the making and application of those rules and standards is itself a human activity. Ships in polar waters and their regulation manifest several other anthropocentric connectivities as well. First, transnational rules and standards for ships are made and applied in a highly inter-connected regulatory landscape. In the case of the Polar Code, such rules and standards are made and applied by the International Maritime Organization (IMO), an inter-governmental UN specialized agency, and the private-sector; they apply to ships, crews, and ship owners, and make reference to “vulnerable” Arctic ecosystems and Arctic coastal and Indigenous people(s).⁶⁰ Second, such rules and

standards – including, potentially, those originating from nonbinding instruments⁶¹ – may be incorporated into the public international law framework under the LOSC, thus contributing to the parameters of international legal jurisdiction, rights and obligations, making them “relevant” even to non-parties to the making of those rules and standards.⁶² Third, ships in polar waters contribute to and sometimes amplify global effects, both socio-economic and socio-ecological.⁶³ Human activity drives eco-degradation and climate change, changes which are occurring most rapidly in polar environments. Such changes facilitate increased polar traffic and resource exploitation, with global socio-economic ramifications. They also feed into global socio-ecological dynamics, including the impacts of climate change on low-lying and developing states.⁶⁴

All of the above is basis for the perspective that ocean law and regulation needs meaningfully to recognize and reflect all of these anthropocentric relationships. However, this is not entirely the case. For example, traditionally, the law of the sea has conceived anthropocentric ocean connectivity primarily in terms of sovereign interests, rights, and obligations relating to military security and “freedoms” of navigation, resource exploitation and trade, rather than the now urgent matter of eco- and climate-related security.⁶⁵ Furthermore, in the regulatory landscape described above, institutional and related normative processes enhance certain anthropocentric connections – for instance, those that figure traditionally in the law of the sea – and disconnect others.⁶⁶ The latter effect is perhaps most obvious in, though not exclusive to, the partitioning of Arctic Indigenous people(s)’s interests, values, norms, rights and expertise – and not exclusively in terms of Indigenous cosmovisions⁶⁷ – from the making and application of the Polar Code.⁶⁸

Short of radical transformation, a broader understanding and actualization of anthropocentric connectivity in ocean law and regulation, for the better, could contribute to its (re)orientation toward the material, epistemic and geopolitical challenges conceived in this project. (Re)thinking would require multiple approaches: conceptual frameworks both internal to law – such as global administrative law on procedural openness, participation, transparency, and review⁶⁹ – and external, socio-cultural perspectives; historical attention to normative practices and effects; critical attention to power, hegemony, distribution, plurality and substantive justice. Actualization, in the case of the regulation of ships in polar waters, would mean reconfiguring the normative landscape in such a way as to connect what is disconnected – most obviously, but not exclusively, with respect to Arctic Indigenous people(s) and ecosystems referenced by the Polar Code, and the making and applying of such rules and standards from the first instance.

3 Concluding reflections on values of anthropocentric ocean connectivity

Anthropocentrism is sometimes criticized as prioritizing the human at all cost. However, anthropocentric perspectives are various, and can be beneficial in ocean

governance. Indeed, it could be said that an anthropocentric perspective cannot be transcended in human thought and culture in any case. This article assumes that there are circumstances in which anthropocentrism *per se* can be instrumentally positive and potentially can serve both human and non-human interests in ocean governance. The LOSC, for example, was a result and expression of anthropocentric interests, including equity with respect to the world's oceans, while at the same time also providing for the evolution of and connection to more ecologically-centered perspectives. This article, therefore, explores anthropocentric ocean connectivity as a matter of perspective. This perspective is pluralistic, recognizing varieties of anthropocentric connectivity.

Each exploration of anthropocentric ocean connectivity in this article points both to connectivity's role in material, epistemic and geopolitical challenges to oceans and their governance and to its current and potential virtues for addressing those systemic challenges. These cases foreground anthropocentric values, including economic development and values that link to other models of connectivity, for example, the marine bio-centric and Indigenous cosmo-vision centred models explored in this issue. In other words, the anthropocentric ocean connectivities conceived here collectively strive to take into account a variety of societal goals and values: economic growth, sustainable infrastructure, environmental sustainability, ecology, and individual and collective human rights and well-being.

In the context of strategic ocean geopolitics, anthropocentric connectivity can be characterized as a governance strategy that relies on institutional connectivity, and that gives effect to certain values through the development, promotion, and export of norms, rules, standards, and practices, as a form of control, power projection, and leverage. A comprehensive, strategic anthropocentric connectivity, such as the one promoted by the EU, may have much larger leverage to impose change and influence in the development of international law, e.g. by providing definitions of contested terms of human socio-economic interaction embraced by law. One may also imagine that the values underpinning different strategies may push for a more radical change than merely eliminating frictions to the flows. The EU's vision emphasizes sustainability, human rights, and fighting climate change ventures far beyond promoting economic interests and seamless flows of commerce.

In the context of places of refuge for ships (distinct from assistance to human lives), anthropocentric connectivity may have positive results in bringing States together to promote and maintain: institutional connections, infrastructure and values connected to maritime safety, protection of the marine environment, and maritime transport. Inevitably, in the absence of clear rules to the contrary, the decision to grant or not to grant refuge to a ship in need of assistance is left to sovereign discretion on a case-by-case basis, which means refuge can be refused and the aforementioned values compromised.⁷⁰ The EU could influence the development of international law in this area by exporting the decision-making principle of 'no rejection without inspection and explanation' to other regions as a source of best

practice. Improvements in and assistance with capacity building and infrastructure investment, combined with a robust regime of due diligence, improved liability and compensation regime, should be key to a strategy to produce an effective response to the problem globally, or more specifically in developing regions.

In the context of energy, developing and maintaining ocean connectivity that continues to enable trade in energy goods and integration of transboundary energy markets is vital to attain United Nations Sustainable Development Goals 7 and 13. One positive example of anthropocentric connectivity in terms of the energy market, which, in fact, is harvested by humans for humans, is the creation of innovative clean energy solutions (Goal 7) to ensure the prosperity of countries while fighting climate change (Goal 13). In this regard, anthropocentrism may be an essential catalyst in beneficial ocean connectivity.

In the context of making and applying rules and standards for ships in polar waters, anthropocentric ocean connectivities contribute both to the challenges faced by oceans and their governance and to potential values and mechanisms of change. Some characteristics of ocean law and regulation exclude or disconnect certain anthropocentric connectivities in decision-making, to the detriment of both oceans and people. However, a broadening of the concept and practice of anthropocentric connectivity has the potential to help address systemic challenges. Such a broadening would incorporate, for example: (a) an understanding of how power and law in this context contributes to the challenges in a problematic way, (b) an understanding of how human activity in polar waters is connected to global social dynamics and planetary boundaries, and (c) the actualization of plurality in ocean governance, including governance by Arctic Indigenous people(s).

NOTES

1. Epistemic anthropocentrism: the view that the human perspective is constitutive of human judgment and cannot be transcended. See Angelika Krebs, *Ethics of Nature: A Map* (De Gruyter 1999), 23.
2. *Ibid.*, 123.
3. Nadine Godehardt and Karoline Postel-Vinay, "Connectivity and Geopolitics: Beware the 'New Wine in Old Bottles' Approach," SWP Comment 2020/C 35, (July 2020).
4. Romana Vlahutin, "Connectivity as the New Geopolitics," a speech at the Institute of International and European Affairs, (28 January 2020), <https://www.iiea.com/past-events/connectivity-as-the-new-geopolitics/>.
5. *Supra* note 3.
6. Eugene B. Lieb, On the General Theory of Strategy and Strategic Frameworks, An Exploratory Study Notes, <http://www.lieb.com/Documents/StrategyNotes.pdf>, p. 8.
7. The European Commission, Joint Communication to the European Parliament, the Council, the European Economic and Social Committee, the Committee of the Regions and the European Investment Bank, "Connecting Europe and Asia – Building blocks for an EU Strategy," (19 September 2018), 1, refers to the definition of connectivity in the Chairs' Statement of the 13th ASEM Foreign ministers meeting in Na Pyi Taw, Myanmar, 20–21

- November 2017. This in turn, points to the objective of connectivity being “bringing countries, people and societies closer together,” and distinguishes among its hard and soft aspects, including the physical and institutional social-cultural linkages that are the fundamental supportive means to enhance the economic, political-security, and socio-cultural ties between Asia and Europe, which also contributes to a narrowing of the varying levels of development and capacities.
8. Adrian Bejan and Sylvie Lorente, “The constructal law of design and evolution in nature,” *Philosophical transactions of the Royal Society of London. Series B, Biological sciences* 365 (1545) (2010): 1335.
 9. Ibid.
 10. Parag Khanna, *Connectography: Mapping the Future of Global Civilization* (New York: Random House, 2016) in the prologue, “the nature of geopolitical competition is evolving from war over territory to war over connectivity. Competing over connectivity plays out as a tug-of-war over global supply chains, energy markets, industrial production, and the valuable flows of finance, technology, knowledge, and talent. Tug-of-war represents the shift from a war between systems (capitalism versus communism) to a war within one collective supply chain system. While military warfare is a regular threat, tug-of-war is a perpetual reality – to be won by economic master planning rather than military doctrine.”
 11. The State Council of The People’s Republic of China, Action Plan on the Belt and Road Initiative, (30 March 2015).
 12. China, Vision for Maritime Cooperation under the Belt and Road Initiative, Xinhua, (20 June 2017).
 13. See the Association of Southeast Asian Nations (ASEAN), Master Plan on ASEAN Connectivity 2025, September 2016, available at <https://asean.org/storage/2016/09/Master-Plan-on-ASEAN-Connectivity-20251.pdf>, which defines connectivity as “physical (e.g., transport, ICT, and energy), institutional (e.g., trade, investment, and services liberalisation), and people-to-people linkages (e.g., education, culture, and tourism) that are the foundational supportive means to achieving the economic, political-security, and socio-cultural pillars of an integrated ASEAN Community”.
 14. More information about this is available at https://ec.europa.eu/transport/themes/international/eu-china-connectivity-platform_en.
 15. The European Commission, Joint Communication to the European Parliament, the European Council and the Council, “Eu-China – A Strategic Outlook,” (12 March 2019).
 16. G. Zhang and Y. Long. “Connectivity and International Law in the 21st Century Maritime Silk Road,” in M. Mayered. *Rethinking the Silk Road* (Singapore: Palgrave Macmillan 2018).
 17. Ibid.
 18. According to Jean-Marc F. Blanchard and Colin Flint, “The Geopolitics of China’s Maritime Silk Road Initiative,” *Geopolitics* 22(2) (2018), 227–228, the Maritime Silk Road Initiative will entail building hard infrastructure (high-speed railways, highways and truck roads, air and sea ports, utility stations and power grids, oil and natural gas pipelines and telecommunication networks, industrial parks, special economic zones; investments in shipping, construction, energy, commerce, tourism, information technology, bio technology and alternative energy). Soft infrastructure: conclude or build upon existing free trade agreements in order to remove barriers to the exchange of goods, negotiate aid accords for projects and conclude bilateral investment treaties that create the right ecosystem for infrastructure deals, construction initiatives, as well as liberalise market sectors for foreign investment and come to terms on agreements that allow greater cargo, passenger flights and establish or bolster financial institutions.
 19. Maaïke Okano-Heijmans, “The EU’s Value Proposition for Connectivity: Time to Choose and Focus,” in *Responding to the Geopolitics of Connectivity*, (Singapore: Konrad-Adenauer-Stiftung, 2020).

20. The European Commission, Joint Communication to the European Parliament, the European Council and the Council, “Eu-China – A Strategic Outlook,” (12 March 2019).
21. Ibid.
22. Maaïke Okano-Heijmans, “The EU’s Value Proposition for Connectivity: Time to Choose and Focus”, in *Responding to the Geopolitics of Connectivity*, (Singapore: Konrad-Adenauer-Stiftung, 2020), 14, notes that the Chinese government recently started speaking of high quality and sustainable connectivity itself, although such terminology did not appear in early statements on the BRI.
23. Colin Flint and Cuiping Zhu, “The geopolitics of connectivity, cooperation, and hegemonic competition:

The Belt and Road Initiative,” *Geoforum* 99 (2019) assert in the abstract that “We conclude that the BRI is not either an economic or political project, but one that transforms politics at multiple scales and has the potential to be transformative and will simultaneously create possibilities for global cooperation and conflict.”
24. To quote the EU: “Sustainable, comprehensive and rules-based connectivity will contribute to the enhanced prosperity, safety and resilience of people and societies in Europe and Asia”.
25. The EU, the US, China, as well as regional clusters, such as ASEAN have the leverage to change the behavior of others in a much more comprehensive way than individual States.
26. To Anh Tuan, “Maritime Security in the Indo-Pacific: Mixed Opportunities and Challenges from Connectivity Strategies,” in *Responding to the Geopolitics of Connectivity*, (Singapore: Konrad-Adenauer-Stiftung, 2020), 129.
27. Christian Bueger, “What is maritime security?” *Marine Policy*, 53, (2015).
28. A ‘place of refuge’ is commonly defined as a place where ‘a ship in need of assistance can take action to enable it to stabilize its condition and reduce the hazards to navigation, and to protect human life and the environment’. A ‘ship in need of assistance’ is further defined as ‘a ship in a situation, apart from one requiring rescue of persons on board, that could give rise to loss of the vessel or an environmental or navigational hazard’. See IMO Doc, A.949(23) of 5 December 2003, *Guidelines on Places of Refuge for Ships in Need of Assistance* (IMO Guidelines), paras. 1.18 and 1.19.
29. In the case of the *Maritime Maisie* (2012), for example, the ship was drifting in the Sea of Japan for almost 100 days before it was brought to the port of Ulsan, South Korea. See IMO Doc, III 1/INF.33 of 14 May 2014, 1–2.
30. Anthony Morrison, *Places of Refuge for Ships in Distress* (Leiden: Martinus Nijhoff Publishers, 2012), 33–38.
31. Ibid.
32. Richard Shaw, “Places of Refuge – International Law in the Making?” in *CMIT Yearbook 2003* (Antwerp: Comité Maritime International, 2003), 333–334.
33. Note that States’ obligation to assist human lives at sea has been firmly rooted in customary international law and has been codified in many international treaties, including in Article 98(1) of the LOSC. This obligation, however, does not imply that ships in need of assistance automatically enjoy the right to access a place of refuge. Human lives can be assisted in various other ways, e.g. by helicopters. See Veronica Frank, “Consequences of the Prestige Sinking for European and International Law,” *The International Journal of Marine and Coastal Law* 20 (2005): 1, 55–56. For more on maritime tradition associated with places of refuge for ships see Aldo Chircop and Olof Linden (eds), *Places of Refuge for Ships* (Leiden: Martinus Nijhoff Publishers, 2006); Erik van Hooydonk, *Places of Refuge* (Abingdon: Informa, 2014).
34. IMO Doc, A.949(23) of 5 December 2003, *Guidelines on Places of Refuge for Ships in Need of Assistance* (IMO Guidelines).

35. IMO Guidelines, para. 3.4.
36. Information available online: <https://ec.europa.eu/transport/modes/maritime/digital-services/places-of-refuge_en>.
37. Provided that human lives at sea are assisted.
38. Van Hooydonk, *Places of Refuge*, 431.
39. Following the adoption of the IMO Guidelines, the Comité Maritime International (CMI) proposed a places of refuge treaty that would impose clear obligations and responsibilities on coastal States. The proposal essentially tried to shift the burden of proof suggesting that coastal States should have a firm obligation to grant refuge by way of a rebuttable presumption. See IMO Doc, LEG 89/16 of 4 November 2004, and the CMI Summary, available online: <<https://comitemaritime.org/wp-content/uploads/2018/05/Refugee.pdf>>. The CMI proposal was rejected at the IMO on two occasions. See IMO Doc, LEG 91/6 of 2006 of 24 March 2006 and LEG 95/10 of 22 April 2009.
40. There are also other agreements (not tailored specifically for places of refuge, but nevertheless relevant in some parts) such as the 1983 Bonn Agreement for Cooperation in Dealing With Pollution of the North Sea by Oil and Other Harmful Substances, and the 1974 Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea Area.
41. Directive 2002/59/EC of the European Parliament and of the Council of 27 June 2002, as amended, available online: <<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02002L0059-20141118>>.
42. EU Directive 2009/17/EC, Preamble, Recital 11.
43. VTMS Directive, Art. 20b. Emphasis added.
44. VTMS Directive, Art. 20.
45. VTMS Directive, Art. 21(a)(1).
46. See the EU Operational Guidelines, available online: <<https://ec.europa.eu/transport/sites/transport/files/por-operational-guidelines.pdf>>. As part of the Table Top Exercises (TTE) program, the EU Guidelines have been tested in 4 different scenarios resembling real situations to the maximum extent possible. The host countries were the Netherlands in 2013, Malta in 2015, Norway in 2017 and Spain in 2019.
47. The EU approach shows that the mindset is changing in a way that: “rejection” no longer is the end of the process at national level, but a hand-over to a neighboring state, in the interests of overall safety and in mitigation of any type of pollution whether at sea or in the air”. In the view of the salvors, “a negative response to a PoR [place of refuge] request is far preferable to no response at all”. See EU – EEA Table Top Exercise, NCA CHEM, 19 and 28, available online: <<http://www.emsa.europa.eu/publications/reports/item/3217-eu-member-states-eea-places-of-refuge-table-top-exercise-nca-chem-2017.html>>.
48. IMO Doc, MSC 100/17/1 of 3 August 2018.
49. See Morrison, *Places of Refuge for Ships in Distress*, 329–330. See also EMSA, Liability and Compensation in Relation to Accommodation of Ships in Places of Refuge, Technical Report of 9 February 2011, 11, available online: <<http://www.emsa.europa.eu/implementation-tasks/places-of-refuge/items.html?cid=316&id=2643>>.
50. UNGA Resolution 70/1, Transforming Our World: the 2030 Agenda for Sustainable Development A/RES/70/1. Goal 7 calls for States to “ensure access to affordable, reliable, sustainable and modern energy for all” and Goal 7 calls for States to “ensure access to affordable, reliable, sustainable and modern energy for all”.
51. The Nord Stream 2 is a project envisioning the construction of twin natural gas pipelines between Russia and Germany through the Baltic Sea. More information on this project is available at <https://www.nord-stream2.com/>, accessed 18 May 2021.
52. Melanie J. Bishop et al., “Effects of ocean sprawl on ecological connectivity: impacts and solutions”, *Journal of Experimental Marine Biology and Ecology*, 492 (2017), 7.

53. Ibid.
54. International Council for the Exploration of the Sea, *ICES Special Request Advice Ecoregions in the Northeast Atlantic*, April (2019): 2, 2.
55. Ibid.
56. See, for example, Lea-Anne Henry et al., “Ocean sprawl facilitates dispersal and connectivity of protected species”, *Scientific Reports* (8)1 August (2018).
57. Goal 14 calls for States to “conserve and sustainably use the oceans, seas and marine resources for sustainable development”.
58. See specifically in relation to offshore energy installations, Maria Madalena das Neves, “Offshore Renewable Energy and the Law of the Sea” in Elise Johansen, Signe Veierud Busch and Ingvild Ulrikke Jakobsen (eds.), *The Law of the Sea and Climate Change: Solutions and Constraints*, (Cambridge University Press, 2020), 206–233.
59. Examples of these include the Marine Strategy Framework, the Maritime Spatial Planning Directive, the Habitats and Birds Directives, the Biodiversity Strategy, etc.
60. International Maritime Organization, International Code for Ships Operating in Polar Waters (the Polar Code) in force 1 January 2017 (adopted in part by the Maritime Safety Committee in MSC.385(94) and amending the International Convention for Safety of life at Sea (SOLAS) in MSC.386(94); adopted in part by the Marine Environment Protection Committee in MEPC.264(68) and amending International Convention for the Prevention of Pollution from Ships (MARPOL) in MEPC.265(68)).
61. James Harrison, *Making the Law of the Sea: A Study in the Development of International Law* (Cambridge: Cambridge University Press, 2011), 174.
62. Ibid., 165.
63. See Ellen Hey, “International law, planetary boundaries and teleconnections”, in Duncan French & Louis J Kotzé, eds., *Research Handbook on Law, Governance and Planetary Boundaries* (Cheltenham: Edward Elgar Publishing, 2021), 167.
64. See Anna Grear, “Towards new legal futures? In search of renewing foundations”, in Anna Grear & Evadne Grant, eds, *Thought, Law, Rights and Action in the Age of Environmental Crisis* (Cheltenham: Edward Elgar Publishing, 2015); Davor Vidas, David Freestone & Jane McAdam, “International Law and Sea Level Rise: The New ILA Committee”, *ILSA Journal of International & Comparative Law* 21 (2015), 397.
65. See H.N. Nicol and L. Heininen, “Human security, the Arctic Council and climate change: Competition or co-existence?”, *Polar Record* 50:1 (2014): 80 at 80 (“No longer does security mean military security, that is protection from potential enemy troops, airpower and missiles massing on polar fronts, as was the popular image of the Arctic in the cold war. Now, if current discourses on climate change are reflective, there is equal, or even greater concern about the survival of polar bears and other Arctic fauna and resulting (due to climate change) food shortages for both Canada’s and Greenland’s Inuit and the potential environmental impact of oil rigs drilling for this valuable resource in coastal shelves of the Arctic Ocean, or leaky hulls and petroleum spills in fragile icy northern waters.”). See also the ICJ in *Pulp Mills on the River Uruguay (Argentina v Uruguay)*, Judgment, ICJ Reports 2010, p. 14, paras 77–79, finding on those facts a “functional link” between procedural and substantive obligations to prevent environmental damage.
66. An effect by accident, path dependency, and/or design: see Surabhi Ranganathan, “The Value of Narratives: The India-USA Nuclear Deal in terms of Fragmentation, Pluralism, Constitutionalisation and Global Administrative Law”, *Erasmus Law Review* 1 (2013), on state strategic fragmentation or “cabining” of international processes by way of (a) splitting processes into multiple, differently or more narrowly focussed/populated, or non-treaty, or informal fora, with the effect of fragmenting or reducing participation and/or wider coalition-building, (b) engaging in exceptional or “one-time” lawmaking processes that reduce or

- foreclose further opportunity for participation /interaction, (c) lacking accountability mechanisms and/or judicial fora. See also on the utility of potential fragmentation, in Henrik Ringbom, “The European Union and Arctic Shipping”, in Nengye Liu, Elizabeth A Kirk, & Tore Henriksen, eds., *The European Union and the Arctic* (Leiden: Brill Nijhoff, 2017), 239.
67. See John Borrows & Risa Schwartz, eds., *Indigenous Peoples and International Trade: Building Equitable and Inclusive International Trade and Investment Agreements* (Cambridge: Cambridge University Press, 2020).
 68. In terms of the “cabining” described by Ranganathan, in the case of the development of the Polar Code, arguably: the partitioning of issues and participants among the IMO, the Arctic Council, the global climate change regime; the exceptional process from which emerged the first iteration of the eventual Polar Code. See also, in different but resonant terms, on biopolitics and the subjugation of the “vulnerable” by way of an “encaring” that “cares” and “enframes”, in Vito De Lucia, “Rethinking the Encounter Between Law and Nature in the Anthropocene: from Biopolitical Sovereignty to Wonder”, *Law and Critique* 31 (2020), 329.
 69. And see Ellen Hey, “The interaction between human rights and the environment in the European ‘Aarhus space’” in Anna Grear & Louis J Kotzé, eds., *Research Handbook on Human Rights and the Environment* (Cheltenham: Edward Elgar, 2015), 353 at 375, on “interplay” between procedural and substantive environmental rights.
 70. Save for human lives that may at any point be airlifted from ships by helicopters.