

Filling an Iceberg-Sized Gap in the Law of the Sea

Addressing an Emerging Demand on Oceans

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9.1 INTRODUCTION

The United Nations Environment Programme has stated that water scarcity is fast becoming one of the most prominent challenges of the twenty-first century. Population growth and economic development coupled with climate change are reducing the per capita availability of freshwater around the world, which will likely lead to increasing droughts and famines.¹ The intensification of problems means that as States search for innovative solutions, the oceans and seas are increasingly being looked at to address water scarcity, for instance with the proliferation of large-scale water desalination.² It is in this context that there have been recent proposals to tow icebergs from Antarctica to alleviate the water shortages of cities in South Africa and the United Arab Emirates. These plans claim to be cheaper and allegedly more environmentally friendly alternatives to water desalination.³ This chapter seeks to examine whether international law is able to adequately regulate – that is balancing

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¹ Paul Ekins, Joyeeta Gupta and Pierre Boileau (eds.), *Global Environmental Outlook GEO-6: Healthy Planet, Healthy People* (Cambridge: Cambridge University Press, 2019).

² Jeannie Sowers, Ayner Vengosh and Erika Weinthal, 'Climate Change, Water Resources, and the Politics of Adaptation in the Middle East and North Africa' (2011) 104 *Climate Change* 599.

³ See Robbie Gramer, 'This country wants to tow icebergs from Antarctica to the Middle East' *Foreign Policy*, 5 May 2017, <www.foreignpolicy.com>; 'UAE firm planning to tow icebergs from Antarctica to start testing this year' *Arabian Business*, 7 July 2019, <www.arabianbusiness.com>; Caroline Winter, 'Towing an iceberg: One captain's plan to bring drinking water to 4 million people' *Bloomberg Businessweek*, 6 June 2019, <www.bloomberg.com>.

exploitation and preservation – support and limit such operations. Such questions remain underexplored in the literature.⁴

The use of icebergs for freshwater is not a novel idea. Arctic inhabitants, for instance the Greenlandic Inuit, have traditionally relied on icebergs for their freshwater needs, and icebergs continue to be used in Greenland, albeit on a relatively small scale.⁵ Additionally, icebergs are used in producing luxury goods such as exotic bottled water or liquor in Canada, Norway and Denmark.⁶ However, these are relatively small-scale demands on icebergs that would not merit questions on how to balance exploitation of icebergs with preservation of marine resources and environment. What prompted the writing of this chapter was the prospect of this ‘cold rush’ expanding, with proposals to use icebergs on industrial levels to supply freshwater for entire cities. This also is not an entirely new plan. As early as 1973 it was estimated that use of a mere 10 per cent of the icebergs calving off annually could supply freshwater to more than 500 million people annually.⁷ Icebergs represent a substantial reserve of freshwater. In fact, some estimates indicate that the 16,000 icebergs formed annually roughly represent the same amount of freshwater as the annual water flow of all rivers on Earth.⁸

As around 70 per cent of all freshwater in the world is locked in the polar regions as ice,⁹ the obvious locations from where icebergs could be towed are Antarctica and the Arctic regions. This means that the Antarctic Treaty System (ATS) and the UN Convention on the Law of the Sea (UNCLOS) are of relevance. Putting aside questions of technical feasibility,¹⁰ this chapter engages with the rules and principles of the law of the sea that would regulate such activities. The aim is to examine how the current law of the sea may need to evolve to respond to a possible new demand on the oceans. As will be demonstrated, the legality of the use of icebergs for freshwater can be somewhat blurry. In fact, there has already been a dispute arising from this legal ambiguity when Denmark disputed the right of Canada to utilise icebergs found in Canadian waters, as they originated from Greenland’s ice sheet.¹¹

⁴ For valuable contributions see for instance Christopher Joyner, ‘Ice-Covered Regions in International Law’ (1991) 31 *Natural Resources Journal* 213; Jorge E. Viñuales, ‘Iced Freshwater Resources: A Legal Exploration’ (2009) 20 *Yearbook of International Environmental Law* 188.

⁵ Mathew H. Birkhold, ‘\$166 water could dictate international iceberg law’ *The Atlantic*, 31 October 2019, <www.theatlantic.com>.

⁶ *Ibid.*

⁷ J. L. Hult and N. C. Ostrander, *Antarctic Icebergs as a Global Freshwater Resource: Prepared for the National Science Foundation* (Santa Monica: Rand Corporation, 1973), v.

⁸ Laurence Boisson de Chazoumes, *Freshwater in International Law* (Oxford: Oxford University Press, 2013), 41.

⁹ Pierre-Marie Dupuy and Jorge E. Viñuales, *International Environmental Law* (Cambridge: Cambridge University Press, 2018), 128.

¹⁰ For a brief study of technical feasibility see Evan Lubofsky, ‘Can icebergs be towed to water-starved cities’ Woods Hole Oceanographic Institution, 6 January 2021, <www.whoi.edu>.

¹¹ Dupuy and Viñuales (n 9), 140.

Therefore, the discussions in this chapter are relevant for the debate on sustaining a fit-for-purpose rule of law for oceans for decades to come.

Section 9.2 lays out the current legal framework within which the proposed operations would take place. The section highlights the shortcomings of the regulatory capacities of international law to balance the exploitation and preservation of marine resources in the context of the proposed operations. Section 9.3 deals with the question of how international law could be adapted to deal with this possible new pressure on the natural resources of the oceans. Specifically, the section considers whether the ongoing negotiations on biodiversity beyond national jurisdiction (BBNJ) could be a suitable avenue for addressing gaps in the current legal framework.

9.2 REGULATING THE USE OF ICEBERGS WITHIN THE CURRENT FRAMEWORK OF INTERNATIONAL LAW

This part briefly lays out the general status of different types of ice under international law to contextualise the question how international law views icebergs. It then moves onto the more concrete legal questions that may arise if/when the proposed activities occur.

9.2.1 *Status of Ice under International Law*

Broadly speaking, there are three different categories of ice that may be regulated in different manners by international law: alpine glaciers, pack-ice (or sea ice) and continental glaciers.¹²

Alpine glaciers fall firmly within the confines of national State sovereignty. However, if glaciers are part of an international watercourse, their use may be subject to the UN Watercourses Convention with rules such as equitable and reasonable use and the duty to prevent significant harm to other States.¹³ This may prove to be an increasingly accepted view as a watercourse has evolved from being narrowly defined as rivers and lakes to a broader concept of a drainage basin and its ecosystem.¹⁴

Pack-ice is relatively thin (normally only a few meters in comparison with the hundreds of meters of depth icebergs can reach), and forms over the seas, expanding

¹² Boisson de Chazourmes (n 8), 39.

¹³ Convention on the Law of the Non-Navigational Uses of International Watercourses, New York, 21 May 1997, in force 17 August 2014, 2999 UNTS, Doc. A/51/869, Arts. 5–7 [Watercourses Convention]. For further details on the law of international watercourses see Stephen C. McCaffrey, *The Law of International Watercourses* (3rd ed., Oxford: Oxford University Press, 2019).

¹⁴ Dupuy and Viñuales (n 9), 129.

and contracting seasonally.¹⁵ The only time UNCLOS mentions ice is in reference to pack-ice. Article 234 holds that States have the right to adopt laws and regulations to deal with the danger that navigation through ice-covered waters poses.¹⁶ Apart from this, treatment of pack-ice is no different to the waters it is found in. Joyner argues that there is a consensus that pack-ice falls under the coastal State's jurisdictional zones due to its relatively short life-span.¹⁷ Furthermore, pack-ice does not affect the delimitation of States' maritime zones,¹⁸ and beyond the 200 nautical mile limit of the exclusive economic zone (EEZ), the principle of the freedom of the high seas will be applicable, meaning that States cannot claim sovereignty rights over pack-ice.¹⁹ This principle will be discussed further in relation to icebergs found in the high seas.

Continental glaciers or ice sheets are very large ice formations that have been formed atop land, most importantly the Antarctic and Greenland ice sheets. Continental glaciers are of interest in this chapter as icebergs are calved off into the seas from their fringes (ice shelves). As continental glaciers are found atop land, States may claim sovereignty over them. Greenland is under Danish sovereignty, while Argentina, Australia, Chile, France, New Zealand, Norway and the United Kingdom all claim sovereignty over parts of Antarctica. It must be mentioned that their sovereignty claims are frozen by virtue of Article IV of the Antarctic Treaty,²⁰ the implications of which will be further discussed.

Icebergs, however, are not mentioned in UNCLOS. As discussed, ice is only mentioned in the context of Article 234. Icebergs are not mentioned in the Antarctic Treaty either. Therefore, the main question for this chapter is where international law places icebergs in the spectrum outlined earlier. This chapter supports the approach of treating ice as part of territory subject to the territorial sovereignty of a State.²¹ If the ice is found at sea, it must be governed by the regime applicable to the maritime zone it is surrounded by. With pack-ice the provisions of UNCLOS are applicable just the same way as if the sea was not frozen, without the ice affecting the delimitation of States' maritime zones.²²

Bearing the foregoing in mind, we can turn to the other two categories of ice analysed earlier to determine, or rather approximate, how international law views

¹⁵ Joyner (n 4), 224.

¹⁶ United Nations Convention on the Law of the Sea, Montego Bay, 10 December 1982, in force 16 November 1994, 1833 UNTS 3. For more information on Art. 234 see Jan Jakub Solski, 'The Genesis of Article 234 of the UNCLOS' (2021) 52 *Ocean Development & International Law* 1.

¹⁷ Joyner (n 4), 224.

¹⁸ UNCLOS, Art. 5; Joyner (n 4), 224.

¹⁹ UNCLOS, Art. 88.

²⁰ Antarctic Treaty, Washington, 1 December 1959, in force 23 June 1961, 402 UNTS 71.

²¹ M. Bedjaoui, 'Le status de la glace en droit international' in Eduardo Jiménez de Aréchaga and Manuel Rama-Montaldo (eds.), *Le droit international dans un monde en mutation, International Law in an evolving world, Liber Amicorum Eduardo Jimenez de Arechaga* (Montevideo: Fundacion de Cultura Universitaria, 1994), 715.

²² UNCLOS, Art. 5; Joyner (n 4), 224.

icebergs. Although icebergs can be kilometres wide and long,²³ they are no longer capable of being claimed sovereignty over after they break off from the continental glaciers. Icebergs are also clearly not seen in the same light as alpine glaciers as they are not found attached to land under the sovereignty of States. However, an analogy can be drawn between how icebergs are to be treated and how the UN Watercourses Convention deals with international watercourses. Icebergs can be thought to be akin to the water flowing between States. In the context of international watercourses, an upstream State cannot claim sovereignty over water once it leaves its territory,²⁴ and downstream countries may use the water so long as they comply with principles such as reasonable utilisation,²⁵ no harm,²⁶ environmental protection and cooperation.²⁷ Similarly, the State where an iceberg originates cannot claim sovereign rights over it when it is found and used in another's territory. Therefore, the way in which international law views icebergs is mostly akin to pack-ice, though there are important nuances that will be discussed further.

9.2.2 *Rules and Principles Regulating Operations to Tow Icebergs*

This section deals with the application of current rules and principles to operations to tow icebergs in light of the findings of the previous section. The fundamental questions around such operations are: who can take icebergs, where can icebergs be taken from, is there a limit to the quantity of icebergs that can be exploited and are there any standards to be met in carrying out a towing operation? As icebergs would be taken from the Arctic or Antarctic area, the two legal regimes to analyse are UNCLOS and the ATS.

This section begins with UNCLOS. As discussed in the foregoing, UNCLOS only mentions ice in Article 234, which does not discuss ice as a resource, rather a risk factor to be managed. Although the operations in question were not foreseen by UNCLOS, there are still relevant provisions.

Regarding the questions of who can take icebergs and where they can be taken from, it is useful to think of the Denmark and Canada example mentioned in Section 9.1. If icebergs are found in the territorial waters of Canada, then they are under the sovereignty of Canada according to Article 2 of UNCLOS, despite originating in Denmark. As discussed, icebergs are not capable of being claimed sovereignty over, unlike continental glaciers but like pack-ice. If icebergs are found

²³ Jonathan Amos, '315 billion-tonne iceberg breaks off Antarctica' BBC News, 30 September 2019, <www.bbc.com>.

²⁴ For discussions on the now rejected 'absolute sovereignty' approach see Dupuy and Viñuales (n 9), 130. See also Watercourses Convention (n 13), Art. 5.

²⁵ Watercourses Convention (n 13), Arts. 5 and 6.

²⁶ *Ibid.*, Art. 7.

²⁷ *Ibid.*, Art. 20.

in Canada's EEZ, then Canada would enjoy sovereign rights according to Articles 55 and 56 of UNCLOS. Article 56(1) includes:

sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters suprajacent to the seabed and of the seabed and its subsoil, and with regard to other activities for the economic exploitation and exploration of the zone, such as the production of energy from the water, currents and winds

It is true that ice is not mentioned in Article 56 as a specific sort of non-living resource. However, this term is quite wide and is bound to include freshwater that is different in its qualities to the sea water surrounding it. Furthermore, the utilisation of ice would most definitely be covered by the wording 'other activities for the economic exploitation and exploration of the zone'. This also means that Canada would not be able to tow the iceberg if it was still in the Danish EEZ, as Denmark may claim sovereign rights to utilise ice in their waters pursuant to Article 56. In this sense, icebergs are different from the waters they are found in, as they could be characterised as a resource. However, as ice does not fall into a *sui generis* category under UNCLOS, Denmark cannot claim continuous ownership over it even outside its waters.

The next question is the legality of towing icebergs that are found in the high seas. Are icebergs to be used according to the principle of freedom of the high seas?²⁸ Or should they be used in accordance with the concept of common heritage of mankind?²⁹ The essence of Part VII of UNCLOS is one of freedom of the high seas. Therefore, the fact that Article 87 or section 2 of Part VII do not specifically address ice and its utilisation cannot be construed to mean that States lack the right to utilise ice found in the high seas, as the principle of the freedom of the high seas is the fallback position. This is despite the argument that it would be unjust for developed States, who may have contributed more to climate change and indirectly to water scarcity, to be able to use icebergs without much heed to their common nature, while developing States would remain incapable of accessing this alternative freshwater resource.

Regarding the quantity of icebergs and the existence of standards for towing operations, Part XII of UNCLOS concerning protection and preservation of the marine environment is of relevance.³⁰ Article 192 contains a general obligation for States to protect and preserve the marine environment. Among these obligations Article 196 requires States to prevent pollution of the marine environment resulting

²⁸ UNCLOS, Art. 82.

²⁹ UNCLOS, Art. 136.

³⁰ See Catherine Redgwell, 'From Permission to Prohibition: The 1982 Convention on the Law of the Sea and Protection of the Marine Environment' in David Freestone, Richard Barnes and David Ong (eds.), *The Law of the Sea: Progress and Prospects* (Oxford: Oxford University Press, 2006).

from the use of technologies, Article 204(2) requires States to monitor activities that they permit to determine their impact on the environment and Article 206 requires States to communicate information regarding planned activities that have potentially significant harmful effects on the marine environment. These obligations limit the freedom of States in conducting operations for the utilisation of ice. However, this does not necessarily prohibit States from using icebergs as it is not evident that such utilisation is fundamentally against preservation and protection of the environment.

Having these discussions in mind, it is prudent to conclude that the use of icebergs is not prohibited under UNCLOS.³¹ However, this is not due to a well thought-through regulatory approach in the codification of international law, but is arguably an example of the controversial *Lotus* principle in action.³² UNCLOS does not give details as to the requirement or content of environmental impact assessments regarding operations to use icebergs,³³ and the general obligation to protect and preserve the environment seems too vague to have a meaningful impact on operations to use icebergs. These ambiguities and shortcomings in UNCLOS mean that UNCLOS is not capable of supporting, limiting and regulating the use of icebergs appropriately. This is why Section 9.3 discusses how the law of the sea may evolve to deal with this emerging demand on oceans.

This section now turns its attention to the legality of using icebergs under the ATS,³⁴ as both the UAE and South African proposals involved Antarctic icebergs.

The first issue is the moratorium on sovereignty claims pursuant to Article IV of the Antarctic Treaty. This moratorium may be of significance both for the question of from where icebergs can be taken and who can take them. However, as the subject of the moratorium is sovereignty claims, and as already mentioned icebergs cannot be claimed sovereignty over, the moratorium does not render the use of icebergs unlawful in and of itself.

Further instruments under the ATS may be relevant regarding the questions who can take icebergs and from where, such as prohibition of activities relating to mineral resources other than scientific research pursuant to the Protocol on

³¹ Viñuales also concludes similarly. See Viñuales (n 4).

³² See Armin von Bogdandy and Markus Rau, 'The Lotus' in Rüdiger Wolfrum (ed.), *Max Planck Encyclopedia of Public International Law* (Oxford Public International Law 2006), available at opil.oxplaw.com.

³³ UNCLOS, Art. 206; see also E. Barritt and J. E. Viñuales, 'Legal Scan: A Conservation Agenda for Biodiversity beyond National Jurisdiction' (2016) Cambridge Centre for Environment, Energy and Natural Resource Governance, University of Cambridge, 68.

³⁴ When talking about the ATS one includes a number of instruments such as: the Antarctic Treaty; Convention for the Conservation of Marine Living Resources, Canberra, 20 May 1980, in force 7 April 1982, 1329 UNTS 47; Protocol on Environmental Protection to the Antarctic Treaty, Madrid, 4 October 1991, in force 14 January 1998, 30 ILM 1455 [Madrid Protocol]. For a useful analysis see Karen Scott and David Vanderzwaag, 'Polar Oceans and Law of the Sea' in Donald R. Rothwell et al. (eds.), *The Oxford Handbook of the Law of the Sea* (Oxford: Oxford University Press, 2015).

Environmental Protection to the Antarctic Treaty (Madrid Protocol).³⁵ As water and ice are not mineral resources that could be said to be under this prohibition pursuant to Article 7 of the Madrid Protocol, the prohibition does not impede the use of icebergs.

In terms of questions about the quantity of icebergs and the existence of any standards for towing operations, the ATS offers somewhat more concrete answers in comparison to UNCLOS. There is an important limitation to any operation to use icebergs as a freshwater resource in the Antarctic Treaty area. Although icebergs do not fall under the prohibition of the Madrid Protocol, Article 8 and Annex I of the Protocol do require States to carry out an environmental impact assessment if a proposed operation is deemed to involve risks of even minor or transitory impact on the Antarctic environment. As Article 3(2)(a) maintains: ‘activities in the Antarctic Treaty area shall be planned and conducted so as to limit adverse impacts on the Antarctic environment and dependent and associated ecosystems’. This is due to the realisation of State parties that the Antarctic environment is extremely fragile. As the threshold for requiring an environmental impact assessment is quite low, any operation to retrieve and tow icebergs that is carried out in the Antarctic Treaty area will likely need to be subjected to an environmental impact assessment (EIA).

These discussions show that although there are more stringent environmental protection requirements under the ATS, it shares the more general weakness with UNCLOS in not having explicit provisions that address or could anticipate the use of icebergs for freshwater. Furthermore, another shortcoming of the Antarctic Treaty, similar to many other agreements on Marine Protected Areas, is that it does not offer a buffer zone to protect the protected area from activities occurring outside their boundaries.³⁶ In other words, although the environmental standards for activities in the Antarctic area are high, activities that may affect Antarctica but occur outside the area are not dealt with appropriately.³⁷ It is fair to say that there is a rather iceberg-sized gap in international law.

The shortcomings of international law that were identified in this section are of significance for two reasons. First, a legal framework capable of regulating the use of icebergs is advantageous, as it would allow sustainable and careful use of icebergs to meet the dire demand for freshwater in areas struck with water scarcity. Second, an

³⁵ Madrid Protocol (n 34), Art. 7.

³⁶ R. Fletcher and others, *Biodiversity beyond National Jurisdiction: Legal Options for a New International Agreement* (Cambridge: UNEP-WCMC, 2017), 25; see also Barritt and Viñuales (n 33), 54.

³⁷ One must also think about the *pacta tertiis* rule, which means that international law does not compel adherence to a treaty or force States to become party to a treaty. Therefore, those aspects of the ATS that do not originate from customary law can be circumvented. See Art. 34 Vienna Convention on the Law of Treaties, Vienna, 23 May 1969, in force 27 January 1980, 1155 UNTS 331 [VCLT]; and for a discussion on the customary character of the Antarctic Treaty see Bruno Simma, ‘The Antarctic Treaty as a Treaty Providing for an Objective Regime’ (1986) 19 *Cornell International Law Journal*, 189.

appropriate legal framework would be capable of limiting and at times prohibiting the use of icebergs when there is a risk of environmental harm. This is a very important point in the context of the use of icebergs, as both Antarctica and the Arctic have fragile and vulnerable environments.³⁸ Unfortunately, due to a lack of environmental impact assessment of operations to utilise icebergs, this chapter cannot offer a comprehensive overview of the potential risks involved with the proposed operations. However, even a rather commonplace shipping accident, which will not be unlikely in the conduct of a precarious towing operation, could spell disaster for the fragile environments of the Arctic and Antarctic. This highlights the need for better regulation and gap filling. That is why the next section will discuss how international law could fill this regulatory gap.

9.3 FILLING AN ICEBERG-SIZED GAP IN INTERNATIONAL LAW

This section analyses how to fill gaps in the ATS and UNCLOS, starting with the ATS. Filling a regulatory gap in the ATS may be carried out through Antarctic Consultative Meetings and their ability to issue binding recommendations. There has already been one such recommendation of relevance. Recommendation XV-21 is focused on 'Exploitation of Icebergs'.³⁹ The preamble to the Recommendation acknowledges that technology may make utilisation of icebergs possible at some point in the future.⁴⁰ Concerns about uncontrolled exploitation of Antarctic icebergs that could adversely affect the Antarctic environment were envisaged at the Consultative Meeting.⁴¹ However, the Recommendation merely maintains that it would not be desirable for the exploitation of ice to occur without prior examination by the Contracting Parties to the Antarctic Treaty.⁴² Therefore, despite the fact that the Recommendation is binding generally and entered into force in 2004, the language does not render operations for towing icebergs to use for freshwater illegal under the Antarctic System, or introduce much of a regulatory framework for that matter. At this stage there does not seem to be any follow-up action regarding this issue in subsequent Consultative Meetings. However, the road to address the inadequacies of the ATS regulatory capacities seems clear.

Filling the regulatory gap in UNCLOS regarding the use of icebergs can be achieved in two ways. First, there is the possibility of subsequent practice and interpretation of UNCLOS provisions to better regulate the use of icebergs.

³⁸ See the stringent environmental provisions in the Madrid Protocol (n 34); see also Vito De Lucia, 'The Arctic Environment and the BBNJ Negotiations: Special Rules for Special Circumstances?' (2017) 86 *Marine Policy*, 235.

³⁹ Recommendation Antarctic Treaty Consultative Meeting XV-21, available at www.ats.aq/devAS/Meetings/Measure/190.

⁴⁰ *Ibid.*, Preamble, recital 2.

⁴¹ *Ibid.*, Preamble, recital 2.

⁴² *Ibid.*, Preamble, recital 9.

However, as discussed, many of the relevant UNCLOS provisions are quite broad and vague.⁴³ Therefore, one must be aware of the limitations of stretching the meaning of broad provisions to regulate highly specific operations. One could argue that such subsequent interpretation may even be tantamount to all but modifying the treaty, which is arguably not wholly consistent with the law of treaties.⁴⁴ If, on the other hand, no action is taken, then the practice of the few countries capable of using icebergs may lead to the emergence of customary rules regarding the issue. However, this is not desirable for two reasons. First, there are fairness and equity issues in allowing a few States to overwhelmingly use a resource and influence the development of international law regulating a resource that may be found beyond the national jurisdiction of any country.⁴⁵ Furthermore, this approach would run into the problem of a lack of careful deliberation to regulate the optimal use of icebergs.

Therefore, the second avenue, that is, negotiations in the context of a new international legally binding instrument, would be preferable. As it happens, the negotiations on BBNJ are currently ongoing to address gaps in UNCLOS.⁴⁶ Although the issue of the use of icebergs is not directly related to biodiversity, there are indirect connections regarding protection of the marine environment in areas beyond national jurisdiction (ABNJ), where many of the icebergs ripe for the taking are located (i.e., the high seas adjacent to the Antarctic Treaty Area and the Arctic). Therefore, the rest of the section discusses how the BBNJ negotiations could address some of the gaps in answering the questions of who can take the icebergs, from where, limits on the quantity of icebergs and the existence of standards to be met in carrying out a towing operation. This analysis is possible in light of the BBNJ negotiations and the current draft text.⁴⁷

The first issue relates to the question of whether the use of icebergs should be according to the principle of freedom of the high seas or the concept of the common

⁴³ See for instance UNCLOS, Arts. 192 and 206 on environmental protection and environmental impact assessment.

⁴⁴ See Art. 31(3) VCLT; see also Marcelo Kohén, 'Keeping Subsequent Agreements and Practice in Their Right Limits' in G. Nolte (ed.), *Treaties and Subsequent Practice* (Oxford: Oxford University Press, 2013), 35–36. Kohén mentions that the International Law Commission's proposal for the modification of treaties by subsequent practice was rejected in the VCLT in favour of the stability of treaties.

⁴⁵ The same point is raised in the BBNJ context, see Rachel Tiller and others, 'The Once and Future Treaty: Towards a New Regime for Biodiversity in Areas beyond National Jurisdiction' (2019) 99 *Marine Policy*, 241.

⁴⁶ Resolution on Development of 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, GA Res 69/292 (2015); also see Tiller et al. (n 45), 240.

⁴⁷ Revised draft text of an agreement under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, A/CONF.232/2020/3 (2019) [BBNJ Draft Text].

heritage of mankind, where there is benefit sharing for the use of common resources. In this regard, the BBNJ negotiations do not have a directly relevant contribution. However, the same question regarding benefit sharing is also relevant regarding marine genetic resources (MGR). The position of the developing nations is that the provisions of UNCLOS must not be seen as limiting benefit sharing only to seabed minerals, as the only reason MGRs were not included was ignorance regarding their value.⁴⁸ This issue is hotly contested. The current revised draft, at the time of writing this chapter, clearly shows that there is no agreement on whether benefit sharing is encouraged or mandated.⁴⁹ However, the principle of the common heritage of mankind, which underpins benefit sharing, has re-entered, albeit bracketed, the most recent draft.⁵⁰ If the arguments of the developing States carry the day, it would have positive consequences in terms of arguing for benefit sharing in the context of using icebergs. First, it gives weight to the benefit sharing camp in the debate against the principle of freedom of the high seas. Furthermore, the argument goes that exclusion of and silence on a common resource due to ignorance regarding its value should not mean that benefit sharing for that resource could not be required.

The second issue relates to from where icebergs would be taken and the possible limits to the quantity of icebergs to be used. The areas from where icebergs would be taken may have fragile and vulnerable environments. Icebergs located outside the Antarctic Treaty Area and in the Arctic, and outside national jurisdictions, fall directly under the BBNJ negotiations. Part III of the BBNJ Draft Text in particular provides for area-based management tools in ABNJ, where there is no relevant legal instrument or framework.⁵¹ Apart from provision of an area-based management tool for ABNJ, there is an added benefit by way of proposals to have buffer zones outside protected areas (relevant in the context of icebergs outside the Antarctic Treaty Area) so that direct and indirect pressures on protected areas can be mitigated more effectively and prevent environmental harm.⁵² This proposal would add to the protections for the fragile Antarctic environment. In this way, there are protections against dangerous activities that occur just outside the Antarctic Area. However, towing icebergs cannot be classified as a risky or dangerous activity unless a rigorous EIA is conducted.

This brings us to the third and final issue, the requirement of conducting EIAs. The challenge of the current rules is that the EIA requirement is vague both in terms of the threshold for mandating it and its content.⁵³ The current Draft Text shows some promising signs on this front, although there are many crucial points of contention. In terms of the threshold for conducting EIAs, along with the typical

⁴⁸ Tiller (n 45), 241.

⁴⁹ BBNJ Draft Text, Arts. 10–11.

⁵⁰ BBNJ Draft Text, Art. 5.

⁵¹ BBNJ Draft Text, Art. 15.

⁵² Fletcher (n 36), 25.

⁵³ Barritt and Viñuales (n 33), 79.

requirement of the risk of substantial or significant harm there is a proposal to lower the threshold to minor or transitory harm. In this debate, a very interesting proposal is to mandate a preliminary or simple EIA when the risk is minor or transitory, and mandate a full EIA when there is a risk of significant harm.⁵⁴ Even more relevant in terms of taking icebergs from the fragile environments of the Arctic and Antarctic is the proposal to lower the threshold for mandating EIAs in those areas.⁵⁵ In this context, it would be useful if future BBNJ drafts refer to the Madrid Protocol, which only requires minor or even transitory effects.⁵⁶

Beyond the threshold, it has been pointed out that in the past activities that were not clearly identified would fall through the cracks of the fragmented regime as they were not predicted by pre-existing instruments.⁵⁷ Therefore, the academic suggestion has been that the new agreement should contemplate how to deal with unidentified activities yet to develop.⁵⁸ The Draft Text is contemplating an indicative list of activities that would require an EIA.⁵⁹ This list has not been drawn up at the time of writing this chapter. Therefore, there is an opportunity here to explicitly name use of icebergs as an activity requiring EIAs, to avoid questions of whether using icebergs as unidentified and unexpected activities do require EIAs or not. Lastly, it is noteworthy that the Draft Text also offers detailed suggestions in terms of the requirements for the content of the EIA. Namely, describing measures to avoid impacts, explaining uncertainties and gaps in knowledge, identifying sources of information, explicitly indicating predictive methods and underlying assumptions and the environmental record of the proponents of an activity.⁶⁰ These detailed suggestions certainly attempt to address problems with the current international rules, which are too vague and offer little assistance regarding the content of EIAs in ABNJ.⁶¹ It remains to be seen how the final Agreement text mandates specific content.

9.4 CONCLUSION

This chapter has been one manifestation of the debates on the need for adequate legal frameworks to ensure that continuing and new demands on the oceans and the marine environment are checked by an adequate rule of law. It has discussed multiple angles to determine the legality of proposed plans to utilise icebergs as an alternative source of freshwater. The conclusions of this analysis are that, first,

⁵⁴ BBNJ Draft Text, Art. 24.

⁵⁵ BBNJ Draft Text, Art. 27.

⁵⁶ Art. 3(2)(a); Art. 8 and Annex I Madrid Protocol (n 34).

⁵⁷ Barritt and Viñuales (n 33), 67 and 79.

⁵⁸ Barritt and Viñuales (n 33), 79–84.

⁵⁹ BBNJ Draft Text, Art. 29.

⁶⁰ BBNJ Draft Text, Art. 35.

⁶¹ Barritt and Viñuales (n 33), 66.

UNCLOS does not prohibit the use of icebergs for freshwater resources. Ice can be seen as yet another form of non-living resources that may be found in maritime zones under the national jurisdiction of States. The only limitations are that States cannot utilise ice that they find in the maritime zones of other States, and the obligations under Part XII of UNCLOS to protect the marine environment. Second, the chapter discussed the issue of the legality of using ice found in Antarctica. None of the instruments within the ATS indicate a prohibition against the use of icebergs found in Antarctica. The only limitation is one of EIA to ensure that the proposed operation does not harm the fragile Antarctic environment.

Although the ATS represents more stringent environmental standards, it also presents a vague and unclear general structure to deal with the question of utilisation of icebergs as it was not a foreseen demand on the Antarctic environment. Therefore, the chapter argued that there is a gap in the regulatory capacities of international law, which could become problematic for the rule of law if/when the use of icebergs for freshwater were to proliferate, leading to an imbalance between the need for exploitation of this potential new resource with preservation of the marine Antarctic environments. Thus, the chapter also discussed some of the ways in which international law could be adapted to fill the identified gaps, to ensure it is fit for purpose and that the rules that would regulate new demands are equitable. In particular, it has been shown that although the BBNJ negotiations may not at first sight seem relevant for filling this gap, there is interesting potential in the negotiations to flesh out many important rules and principles that are needed to adequately regulate the use of icebergs for freshwater when icebergs are taken from ABNJ.