

Chapter 1

Introduction to the Arctic

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Abstract Climate change is occurring rapidly in the Arctic, bringing new economic opportunities alongside challenges for environmental governance in the region. Evaluating these changes, and options for effectively addressing them, requires an understanding of existing institutions and frameworks. This chapter provides a foundation for the book and an introduction to Arctic marine governance and transatlantic cooperation, setting the scene with sections on the spatial scope of the Arctic marine area, the law of the sea in the Arctic marine area, the Arctic Council, and the respective Arctic and marine policies of the European Union and the United States.

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1.1 Arctic Marine Area

As there is no generally accepted definition of either the ‘Arctic’ or the ‘marine Arctic’, the spatial scope of this book has been determined as the marine areas included within the area agreed by the Arctic Monitoring and Assessment Programme (AMAP) working group of the Arctic Council. These are the marine areas north of the Arctic Circle ($66^{\circ}32'N$), and north of $62^{\circ}N$ in Asia and $60^{\circ}N$ in North America, modified to include the marine areas north of the Aleutian chain, Hudson Bay, and parts of the North Atlantic Ocean, including the Labrador Sea. For the purpose of this book, these marine areas are referred to as the ‘Arctic marine area’ or ‘marine Arctic’.

Figure 1.1 shows the AMAP area, as well as the borders of the Arctic according to the Arctic Circle (the parallel of latitude that runs approximately 66.56083° north of the Equator), and to certain scientific parameters (10 °C July isotherm, treeline, marine, and vegetation).

Similarly, there is no universally accepted definition for the ‘Arctic Ocean’. However, it is generally accepted that the five coastal states to the Arctic Ocean are Canada, Denmark (in relation to Greenland and the Faroe Islands), Norway, the Russian Federation, and the United States (US).

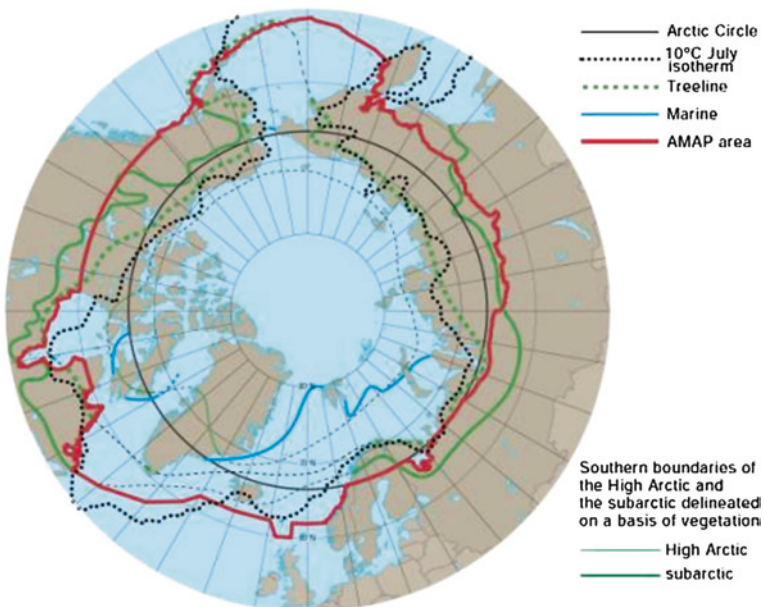


Fig. 1.1 Arctic monitoring and assessment programme (AMAP) boundary (*Source* AMAP (1997))

1.2 Law of the Sea in the Arctic Marine Area

The international law of the sea is made up of a multitude of global, regional, and bilateral instruments, decisions by international (intergovernmental) organizations, and international rules from other sources, including customary international law. The cornerstones of the current international law of the sea are the United Nations (UN) Law of the Sea (LOS) Convention (1982) and its two implementation agreements, the Part XI Deep-Sea Mining Agreement (1994) and the Fish Stocks Agreement (1995). The LOS Convention's overarching objective is to establish a universally accepted, just, and equitable legal order—or 'Constitution'—for the oceans that lessens the risk of international conflict and enhances stability and peace in the international community. As of January 2013, the LOS Convention has 165 parties, the Part XI Deep-Sea Mining Agreement 144 parties, and the Fish Stocks Agreement 80 parties.

All eight Arctic states (Canada, Denmark, Finland, Iceland, Norway, the Russian Federation, Sweden, and the US) are parties to these three treaties, except the US is not a party to either the LOS Convention or the Part XI Deep-Sea Mining Agreement (Division for Ocean Affairs and Law of the Sea 2013). The US is therefore, among other things, not subject to the LOS Convention's Part XV on dispute settlement.¹ The European Union (EU) is party to all three treaties. This is important in view of the fact that Denmark, Finland, and Sweden are Member States of the EU and Iceland and Norway are parties to the EEA Agreement (1993).

All of the global instruments that are part of the law of the sea apply to the marine environment of the entire globe, including therefore the entire marine Arctic, however defined. The mandate of the global bodies associated with these instruments has the same geographical scope. The perception that there is an international law vacuum in the Arctic, which only became a matter of attention following the melting of Arctic ice and the planting of a Russian flag on the seabed of the North Pole in August 2007, is therefore incorrect.

The most basic distinction between marine areas made by the LOS Convention is between the maritime zones of coastal states—also referred to as 'areas within national jurisdiction'—and the commons seaward thereof—also referred to as 'areas beyond national jurisdiction'. The maritime zones of coastal states can consist of: internal waters, archipelagic waters, territorial sea, contiguous zone, exclusive economic zone (EEZ), and the continental shelf. As clarified below, the EEZ includes the continental shelf, but in some cases, there is also an 'outer' continental shelf that extends seaward of the EEZ. The two marine commons are the high seas—usually seaward of the EEZ (where established)—and the so-called 'Area'—seaward of the EEZ or outer continental shelf. The Area is defined as "the sea-bed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction" (LOS Convention 1982, art. 1(1)(1)).

¹ In the domain of straddling and highly migratory fish stocks, however, the US is subject to Part XV of the LOS Convention due to its being a party to the Fish Stocks Agreement. See also Reagan (1983).

Except for archipelagic waters,² all of the maritime zones recognized in the LOS Convention also exist in the marine Arctic: internal (marine) waters, territorial seas, contiguous zones, EEZs, (outer) continental shelves, the so-called 'Area' (the deep sea-bed beyond continental shelves) and the high seas. There are four high seas pockets (or enclaves) in the marine Arctic, namely the so-called 'Banana Hole' in the Norwegian Sea, the so-called 'Loop Hole' in the Barents Sea, the so-called 'Donut Hole' in the central Bering Sea, and the so-called 'Central Arctic Ocean'. There may be two or more pockets of the Area that could remain in the Arctic Ocean. Some region-specific maritime zones exist as well, as Norway has—instead of a regular EEZ—established a Fishery Zone around Jan Mayen and a Fisheries Protection Zone around Svalbard.

The outer limits of the maritime zones of coastal states are measured from baselines drawn in accordance with several provisions of the LOS Convention. The normal baseline is the low-water line along the coast (*inter alia* LOS Convention 1982, arts. 5–7, 9–14). It should be noted here that sea level rise, a consequence of climate change, could in many situations mean that new baselines may have to be drawn landward of the older ones and, as a consequence, the high seas and the Area will increase in size. In certain situations, the LOS Convention also allows coastal states to draw straight baselines. The straight baselines drawn by Canada around its Arctic Archipelago are regarded by the US and certain EU Member States as inconsistent with international law (Roach and Smith 1996) (Fig. 1.2).

Internal waters lie landward of the baselines. The maximum breadth of the territorial sea is 12 nautical miles (nm; 1 nm = 1,852 m) measured from the baselines, 24 nm is the maximum breadth for the contiguous zone, and 200 nm for the EEZ. Article 76 of the LOS Convention also recognizes that in certain circumstances, the continental shelf extends beyond 200 nm from the baselines. This is the so-called 'outer continental shelf'. Coastal states that take the view that they have an outer continental shelf must submit information on its outer limits on the basis of the criteria in Article 76 to the Commission on the Limits of the Continental Shelf (CLCS). The planting of a Russian flag on the seabed of the North Pole in August 2007 actually took place during the gathering of scientific data for this process. In 2002, the CLCS recommended that the Russian Federation gather and submit new data to complement the data submitted in 2001, which the Russian Federation is still expected to do.

The limits of the outer continental shelf established by the coastal state "on the basis of" the recommendations of the CLCS "shall be final and binding" (LOS Convention 1982, art. 76(8)). So far, only the Russian Federation and Norway have made submissions to the CLCS in relation to their outer continental shelves that lie within the marine Arctic. The CLCS has issued recommendations in relation to both submissions. Canada, Denmark (in relation to Greenland), and the

² Terms such as the 'Canadian Arctic Archipelago' and the 'Spitsbergen Archipelago', even if used consistently by Canada and Norway, do not imply that these states qualify—or claim to qualify—as archipelagic states in the domain of the international law of the sea.

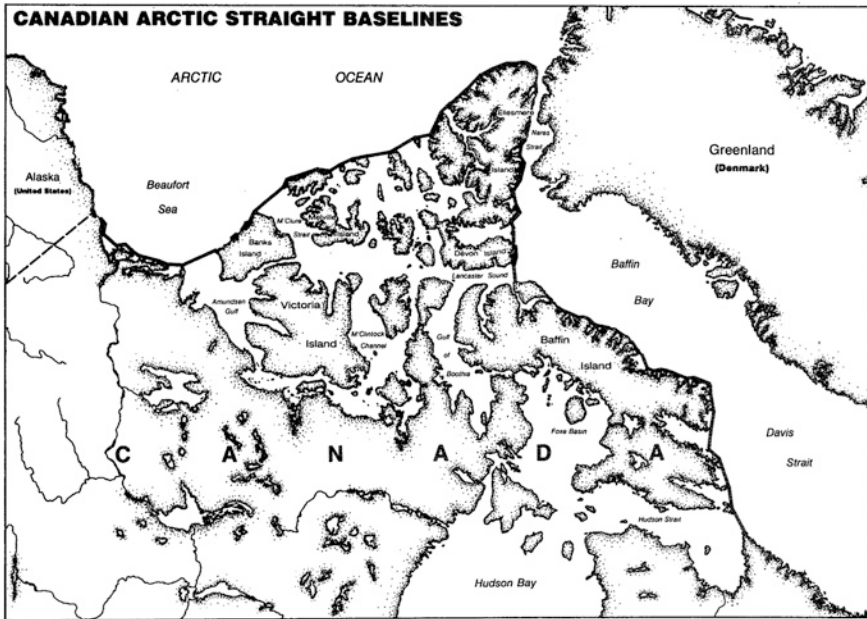


Fig. 1.2 Canadian Arctic straight baselines (Source United States Department of State (1992))

US are all engaged in activities to enable them to make submissions to the CLCS, despite the fact that the US is not yet a party to the LOS Convention. Canada has to make its submission before November 2013 and Denmark before November 2014 (Cf. LOS Convention 192, art. 4, Annex II).

The LOS Convention recognizes the sovereignty of a coastal state over its internal waters, archipelagic waters, and territorial sea, the airspace above, and its bed and subsoil. Sovereignty entails exclusive access to and jurisdiction over all resources (living and non-living; e.g., fish and oil) as well as full jurisdiction over all human activities, unless states have in one way or another consented to restrictions on these. The LOS Convention also recognizes that a coastal state has economic and resource-related sovereign rights and jurisdiction in its EEZ and outer continental shelf (if present). These sovereign rights give coastal states exclusive access to and jurisdiction over all resources in the EEZ and over all non-living and some living resources of the continental shelf. Nevertheless, other states have navigational rights or freedoms within the maritime zones of coastal states and, with respect to their EEZ and—where present—outer continental shelf, also the freedoms of overflight and laying of submarine cables and pipelines.

In the high seas, all states have the freedoms already mentioned above as well as the freedom to construct artificial islands and other installations, the freedom of fishing, and the freedom of scientific research. These freedoms are all subject to certain conditions and obligations. The Area and its resources are considered the common heritage of mankind and the International Seabed Authority (ISA)

is charged with organizing and controlling all activities of exploration for, and exploitation of, the resources of the Area.

Maritime delimitation is always necessary for adjacent coastal states, but opposite coastal states are only required to do this if the maximum widths of their maritime zones cannot be reached. Many maritime boundaries between adjacent and opposite coastal states in the marine Arctic have already been agreed upon, but some are still under negotiation. By means of the bilateral Murmansk Treaty (2010), Norway and the Russian Federation managed to finalize their lengthy negotiations on a maritime boundary in the Barents Sea and the Arctic Ocean. Enhanced access to the marine Arctic caused by climate change is likely to have been an incentive towards finalizing these negotiations.

Even though the Arctic and the Antarctic are both polar regions, they are radically different from the perspective of international law. The Arctic is not subject to a comparably fundamental disagreement on sovereignty over territory that exists in the Antarctic. The only dispute on title to land territory in the Arctic is that between Canada and Denmark/Greenland on the tiny Hans Island in the Nares Strait.³ News reports in April 2012 suggested that the dispute would soon be resolved by means of dividing the island in two (see e.g., Humphreys 2012), but by mid-September 2012 this had not (yet) happened.

It is true that there are several unresolved maritime boundaries in the marine Arctic and that most of the outer limits of the continental shelves still have yet to be established. But that is true for most regions in the world. There are nevertheless two international law of the sea disputes that are Arctic-specific. First, the disagreement between Canada and the Russian Federation on the one hand and the US and other states—including several EU Member States—on the other hand, on the legal status of the Northwest Passage and other waters within the Canadian Arctic Archipelago and the waters within the Northern Sea Route, respectively (Bartenstein 2011). As regards Canada, this disagreement is related to Canada's straight baselines around the Canadian Arctic Archipelago (see above). Second is the disagreement between Norway and several other parties to the Spitsbergen Treaty (1920) as to whether or not the treaty also applies seaward of the territorial sea (Molenaar 2012).

Apart from these disputes however, the marine Arctic is not fundamentally different from most other marine areas or oceans; except, of course, the waters adjacent to the Antarctic continent. As all other states have rights under the international law of the sea in all coastal state's maritime zones, the coastal states to the marine Arctic do not have full jurisdiction and control over these areas. In other words: they cannot just do as they please because they have to respect the rights of others.

³ See the Joint Statement by the then Canadian Minister of Foreign Affairs Pettigrew and then Danish Minister of Foreign Affairs Møller made in New York on 19 Sept 2005 and the short article by P.E.D. Kristensen, then Ambassador of Denmark to Canada, published in the *Ottawa Citizen* on 28 July 2005, which place the dispute in the proper perspective of the good and ongoing cooperation between the two states.

1.3 Arctic Council

The first stage of Arctic-wide cooperation started with the 1991 Arctic Environmental Protection Strategy (AEPS), which was adopted in Rovaniemi by the eight Arctic States (AEPS 1991). In the Strategy, six high-priority environmental problems facing the Arctic were first identified (persistent organic contaminants, radioactivity, heavy metals, noise, acidification, and oil pollution) as well as international environmental protection treaties that apply in the region, and specific actions to counter the threats. Interestingly, the AEPS stated that “The implementation of the Strategy will be carried out through national legislation and in accordance with international law, including customary international law as reflected in the [LOS Convention]” (AEPS 1991). As part of the environmental protection action by the eight Arctic States, four environmental protection working groups were established: Conservation of Arctic Flora and Fauna (CAFF), Protection of the Arctic Marine Environment (PAME), Emergency Prevention, Preparedness, and Response (EPPR), and AMAP. Three ministerial meetings (following the signing of the Rovaniemi Declaration (1991) and the AEPS) were held in this first phase of Arctic cooperation, generally referred to as ‘AEPS cooperation’ (Koivurova and VanderZwaag 2007).

The Arctic Council was established between the eight Arctic states through the Ottawa Declaration in 1996 to enhance Arctic cooperation. The establishment of the Arctic Council broadened the mandate of cooperation to all common issues facing the Arctic (excluding matters related to military security), especially those relating to environmental protection and sustainable development. The four environmental protection working groups of the Strategy were integrated into the structure of the Council, and one new working group was established (the Sustainable Development Working Group (SDWG)). In the absence of a permanent secretariat—although by means of the Nuuk Declaration in 2011 the Ministers agreed to establish a permanent secretariat in Tromsø, Norway—the work of the Arctic Council has been heavily influenced by the priorities that the chair-state lays out for its two-year chair period, at the end of which a ministerial meeting is organized. Senior Arctic Officials (SAOs), a group of high-level officials, guide the work of the Council in between the ministerial meetings. The Arctic Council has also adopted new programmes related to environmental protection, such as the Arctic Council Action Plan to Eliminate Pollution in the Arctic (ACAP), which was recently turned into a sixth working group (re-titled the Arctic Contaminants Action Program), and commissioned the Arctic Climate Impact Assessment (ACIA; ACIA 2005).

One unique aspect of the Arctic Council is the role it gives to the region’s indigenous peoples: They are normally accorded the status of non-governmental organizations (NGOs) in different intergovernmental organizations and forums, but the Arctic Council defines them as ‘permanent participants’, a distinct category of membership between members proper and observers, whom the Arctic Council member states must consult prior to any consensus decision making. The group

of observers is large, and consists of intergovernmental and non-governmental organizations as well as states that are active in the Arctic region (Koivurova and VanderZwaag 2007).

The Arctic Council is engaged in various kinds of activities related to the Arctic marine area, especially through its AMAP and PAME working groups, but to some extent also through CAFF, which has marine projects. The Council has produced many important scientific assessments following the dramatic findings of the ACIA, which have played important roles in governing the Arctic marine area. It conducted a comprehensive assessment of Arctic marine shipping, which led to the Arctic Marine Shipping Assessment (AMSA) that was adopted in the 2009 Ministerial Meeting and contains policy recommendations. One of these recommendations urged the Council members to act in concert to push for comprehensive, stringent, and mandatory rules on shipping in extreme polar conditions. The work to convert the non-binding Polar Shipping Guidelines (2009) into mandatory measures is now in progress under the aegis of the International Maritime Organization (IMO).⁴ The Council has also sponsored the making of an Oil and Gas Assessment and is in the process of completing the Arctic Biodiversity Assessment, which will play a role in evaluating the effectiveness of conservation policies. Moreover, an instrument that was adopted during the AEPS, the Arctic Council's Offshore Oil & Gas Guidelines (PAME 2009), has been updated already two times and the most recent version endorsed at the 2009 Ministerial Meeting. Currently, the Arctic Ocean Review process is examining gaps in Arctic marine governance and will make recommendations on routes to be followed by member states and other stakeholders in their future Arctic marine policy and law.

Until recently, Arctic cooperation functioned for over fifteen years in a fairly similar and consistent mode of operation. Yet in response to alarming climate change, the Council has recently strengthened the way it functions. In May 2011, the ministers decided to establish a permanent secretariat and adopted the first ever legally binding instrument, the Arctic Search and Rescue (SAR) Agreement (2011), which marks a change in the Council, using treaties as ways of reaching policy goals in marine areas. The agreement is meant to strengthen search and rescue coordination and cooperation efforts in the Arctic by allocating responsibilities to each Arctic state and by establishing procedures for states to cooperate in cases of emergency. There is also an ongoing process to conclude an Agreement on Cooperation on Marine Oil Pollution Preparedness and Response (MOPPR), which is scheduled to be signed during the May 2013 Ministerial Meeting. Like the SAR Agreement, the special scope of the agreement goes beyond the Arctic

⁴ To be more specific, AMSA's recommendation was for "updating and mandatory application of relevant parts of the Guidelines for Ships Operating in Arctic Ice-covered Waters (Arctic Shipping Guidelines)". Those were adopted in 2002, and since then the AMSA report was published in April 2009 and the 'Guidelines for ships operating in polar waters' were adopted by the 26th IMO Assembly in November–December 2009); the AMSA recommendation referred to the earlier 2002 Guidelines.

Ocean; the MOPPR Agreement will likely apply not only in Arctic Ocean waters, but also in the Baltic Sea (Gulf of Bothnia), and may also have a few legally non-binding appendices (e.g., a manual on emergency response). Both treaties are firmly anchored in broader agreements already in existence.

Although the Arctic Council is not a treaty-based organization, it seems to have gradually strengthened its ways of conducting policy, which many describe as move from a policy *shaping* body to policy *making* one. The Council continues to do important scientific work also in relation to marine areas, but is getting stronger in terms of its institutional structure and ways of doing policy via legally binding agreements, all adding to the Council's capacity to respond effectively to the challenges of climate change in the region.

1.4 Arctic Policies of the EU and US

1.4.1 EU Arctic Policy and Competences

As global attention has turned towards the environmental and geopolitical changes in the Arctic, the EU has taken an increasing interest and more active role in developing its own Arctic policy. Beginning in 2007 with its Integrated Maritime Policy (European Commission 2007a) and Action Plan for Integrated Marine Policy (European Commission 2007b), the European Commission drew attention to Arctic issues and called for preparation of a report on Arctic Ocean strategic issues. In March 2008, a paper from the European Commission and the High Representative called for the development of an EU Arctic policy, highlighting the increasing geopolitical importance of the Arctic resulting from the melting of the Arctic sea ice and increased accessibility of Arctic waters (High Representative and European Commission 2008).

More concrete Arctic policy development was initiated with the European Parliament's resolution in October 2008 on Arctic governance (European Parliament 2008) and the November 2008 European Commission Communication on 'The European Union and the Arctic Region', which set out proposals for a coordinated Arctic approach for the EU (European Commission 2008). In 2009, the Council of the European Union adopted 'Council conclusions on Arctic issues' which welcomed the gradual formulation of an EU Arctic policy based upon effective mitigation of climate change, multilateral governance, the LOS Convention, maintaining the Arctic as an area of peace and stability, and formulating EU actions and policies that respect the sensitivities of Arctic ecosystems and biodiversity and the rights of indigenous peoples (Council of the European Union 2009). The January 2011 European Parliament's resolution on 'Sustainable EU policy for the High North' affirmed the EU's Arctic interests and commitment to developing policies based on best scientific knowledge, and stressed a need for a coordinated EU policy (European Parliament 2011).

Most recently, in June 2012, the EU Commission and the High Representative for Foreign Affairs and Security Policy adopted a Joint Communication on ‘Developing a European Union Policy towards the Arctic Region: progress since 2008 and next steps’ (European Commission and High Representative 2012). The Joint Communication sets out the case for a refined policy and increased EU engagement in Arctic issues based on knowledge, responsibility to achieve sustainable development, and engagement with Arctic states, indigenous peoples, and other partners. The Communication provides a continuation of the 2008 Communication, emphasizing the importance of combating climate change, funding research, supporting indigenous peoples, maritime safety, sustainable economic development, and multilateral cooperation. The EU considers the Arctic Council to be the region’s primary forum for international cooperation and considers the LOS Convention to be a basis for the management of the marine Arctic.

As the development of an Arctic EU policy has gradually unfolded, certain areas have been consistently highlighted:

- Promoting sustainable development and resource use,
- Protecting and preserving the Arctic in unison with its population,
- Contributing to enhanced Arctic multilateral governance and international cooperation,
- Supporting research and knowledge, and
- Commitment to combating climate change

In December 2008, the European Commission applied to become a permanent observer to the Arctic Council. The decision was postponed in 2009—a move attributed to Canada in response to the EU’s ban on seal products, as well as reluctance by Russia. Following the adoption of new criteria for the admission of observers in May 2011, updated information was submitted by the Commission in December 2011 and a decision will be made regarding the EU’s status as an observer at the 2013 Ministerial Meeting in Kiruna.

The fact that none of the current EU Member States are coastal states with respect to the Arctic marine area, as defined in this book, is clearly a major feature and constraint of EU policy regarding the Arctic marine area. Currently, three Arctic states—Denmark, Finland, and Sweden—are members of the EU. Iceland applied to become a member of the EU in June 2009 and is now a candidate country. Greenland and the Faroe Islands are not a part of the EU, although Greenland is a member of the Overseas Countries and Territories Association (Koivurova et al. 2010). It should nevertheless be noted that EU law has considerable impact on contracting parties to the EEA Agreement (1993), which includes Iceland and Norway and requires implementation of certain EU legislation related to the common market. Up until now, Norway has decided not to extend the applicability of the EEA Agreement to Svalbard (Koivurova et al. 2010).

While neither the EU nor its Member States can act as coastal states with respect to the Arctic marine area, they can still act in a wide range of other capacities: for instance as flag states, port states, market states, or with respect to their natural and legal persons. In a flag state capacity, EU Member States are able to exercise their rights and discharge their obligations with respect to the Arctic

marine area, most notably the freedoms of the high seas in the high seas pockets in the Arctic marine area, the navigational rights and freedoms in the maritime zones of coastal states to the Arctic marine area, and obligations relating to marine living resources and the marine environment connected to these rights and freedoms.

The competence of the EU and its Member States regarding the Arctic marine area is determined by general international law as well as by EU law. It goes without saying that EU Member States cannot confer more extensive competence to the EU than they themselves possess in accordance with international law. Competence between the EU and its Member States is distributed based upon first the Treaty on the Functioning of the European Union (TFEU 2008), the EU Treaty (2010), and other treaties concluded within the framework of the EU.

Most of the EU's sectoral competences that are relevant to the marine Arctic fall under the shared competence between the EU and its Member States. 'Transport' and 'environment' are among the areas listed in Article 4(2) of the TFEU where the EU and its Member States share competence. One of the clearest changes brought by the TFEU is that energy is now also explicitly listed as a shared competence between the EU and Member States. The main exception to these shared competences is the conservation of marine biological resources under the common fisheries policy, an exclusive competence for the EU under Article 3(1) of the TFEU.

1.4.2 US Arctic Policy

For the US, like the EU, the loss of sea ice and prospects of increased activity in the Arctic have heightened interest in the region's future. Unlike the EU, however, the US, by virtue of the state of Alaska, is an Arctic Ocean coastal state.

The US's current Arctic policy was adopted in January 2009 (NSPD-66 2009). The 2009 Presidential Directive, under President George W. Bush, was the US's first official statement on the Arctic since 1994. The 2009 Arctic Policy highlights the national and homeland security interests of the US foremost, but also awards significant attention to protection of the Arctic environment, sustainable development, and regional cooperation. It sets forth the interests of the US in the region and a six-point policy to:

- Meet national security and homeland security needs relevant to the Arctic,
- Protect the Arctic environment and biological resources,
- Ensure sustainable natural resource and economic development,
- Strengthen institutions for cooperating among the Arctic nations,
- Involve indigenous communities in decision making, and
- Enhance scientific monitoring and research into local, regional, and global environmental issues.

Other issues such as international governance, extended continental shelf and boundary issues, scientific cooperation, maritime transportation, and economic and energy issues are also covered. In its Arctic Policy, the US articulates

a commitment to cooperation with other Arctic actors through bilateral and other institutional mechanisms. The Arctic Council is viewed as an important institution for Arctic governance, albeit with the intention that the Council remain largely within its current mandate rather than be transformed into an international organization.

The US is not a party to the LOS Convention, thus limiting its participation under the treaty. The 2009 Arctic Policy recommends Senate ratification of the LOS Convention to serve US security and environmental interests. Despite not being a party to the LOS Convention, in a May 2008 meeting of the ‘Arctic five’ coastal states (Canada, Denmark/Greenland, Norway, the Russian Federation, and the US) in Ilulissat, Greenland, the US, along with the other states, affirmed a commitment to the law of the sea framework for determining continental shelf claims (Ilulissat Declaration 2008). The US has also taken steps to determine the outer limits of its extended continental shelf in accordance with the LOS Convention in preparation for future accession.

Although the US has not formally updated its Arctic policy since 2009, it is currently developing an implementation plan for the National Ocean Policy that pays special attention to the Arctic as a priority region (see Sect. 1.5.2).

1.5 EU and US Marine Policy

1.5.1 *EU Maritime Policy*

Ocean and coastal management is an active area of EU policy development. While the economic, social, and cultural importance of marine waters to the EU is well established, there is also an understanding that the intensity and scope of its maritime activities is expanding due to advances in technology and increased demand. In recent years, the EU has clearly identified that it is “at a crossroads in our relationship with the ocean” (European Commission 2007a). Simultaneously, the last several decades have witnessed a growing recognition of the limitations of sector-based maritime policies, owing to the strong interlinkages of matters related to the marine environment. In this context, the EU is implementing a new system of integrated and holistic maritime policies, most notably through the Integrated Maritime Policy (IMP; European Commission 2007a) and its associated environmental pillar, the Marine Strategy Framework Directive (MSFD 2008).

Adopted in 2007, the IMP aims to improve coordination of marine policies among EU Member States so as to overcome the compartmentalization and incoherence that occur across sector-based policies. Its objective is to produce a more integrated and holistic approach to governing EU marine waters that will “enhance Europe’s capacity to face the challenges of globalization and competitiveness, climate change, degradation of the marine environment, maritime safety and security, and energy security and sustainability” (European Commission 2007a). As

the IMP encompasses a broad spectrum of policy areas, it has been called “the most comprehensive policy ever adopted by the EU” (Koivurova 2009). The IMP has a dual focus on economic development while maintaining environmental sustainability.

Perhaps the most significant instrument implemented under the IMP is the MSFD. The MSFD, adopted in 2008, is a legally binding instrument designed to establish a policy framework within which EU Member States will maintain or achieve “good environmental status” of their marine environment by 2020. The MSFD states that marine policies will use an ecosystem-based approach to the management of human activities, with Member States formulating their own national marine strategies with regards to distinct geographic regions, such as the Baltic Sea. It is important to note that the MSFD is not a harmonizing measure intended to produce a uniform set of standards across all Member States with regards to what constitutes good environmental status. Rather, Member States are required to establish their own marine strategies for their own marine waters. Member States determine what constitutes good environmental status, as well as the optimal methods for achieving that target.

1.5.2 US Ocean Policy

Oceans and coasts play a critical role for the US economy and the quality of life of its citizens. Increased attention is being paid to the need for ocean and coastal management to be integrated and scientifically-based, including using an ecosystem approach, and with the involvement of stakeholders at all stages of development and implementation. In light of this, the US has recently adopted a new National Ocean Policy, an initiative aiming to implement an integrated and holistic approach to maritime policy (Exec. Order No. 13547 2000).

Many of the challenges the US faces in sustainably developing ocean and coastal ecosystems and economies stem from mismatches between the way natural systems work and the way the activities affecting them are managed. Management has been fragmented by an outdated and disjointed collection of laws, institutions, and jurisdictions: At the federal level alone, oceans and coasts are managed under more than 140 different federal laws implemented by a wide range of agencies.

Federal law generally applies to areas of the ocean beyond the 3 nm jurisdiction from shore that most states and territories hold within the 200 nm US EEZ. Coastal lands generally fall under the jurisdiction of states. An important foundation for federal management of oceans and coasts in the US is the public trust doctrine. Under the public trust doctrine, the bottom and water column resources seaward of the land are held in trust by the government, which has a duty to ensure that public interests in those lands are protected.

Attempts to improve US ocean governance coordinating structures have met with varying successes. Both President George W. Bush and President Barack Obama have made concerted efforts to address the need for an overarching

national ocean policy. Those efforts recently culminated on July 2010 when the Interagency Ocean Policy Task Force released its final recommendations on a new ocean policy (Council on Environmental Quality 2010). On the same day, President Obama signed Executive Order 13547 establishing a National Policy for the Stewardship of the Ocean, Our Coasts, and the Great Lakes (Exec. Order No. 13547 2010). The Executive Order adopts most of the final recommendations in the Interagency Task Force report and directs executive agencies to implement those recommendations under the guidance of a National Ocean Council. It establishes a national policy to ensure the protection, management, and conservation of US ocean and coastal ecosystems and resources, to respond to climate change and ocean acidification through adaptive management, and to coordinate with national security and foreign policy interests. The Order also provides for the development of coastal and marine spatial plans that build upon existing federal, state, tribal, local, and regional decision making and planning processes, which are intended to pave the way for a more integrated, ecosystem-based, flexible, and proactive approach to managing sustainable multiple use of the oceans and coasts.

Subsequently, in 2012, a draft implementation plan for the National Ocean Policy was released and opened to public comment (National Ocean Council 2012). The implementation plan lays out initial steps required to achieve the Policy's objectives, focusing on specific actions and nine priority objectives. One of these priority areas is on "Changing Conditions in the Arctic" and "addressing environmental stewardship needs in the Arctic Ocean and adjacent coastal areas in the face of climate-induced and other environmental changes". The draft plan focuses on the impacts of climate change in the Arctic region, highlighting opportunities and challenges presented by rapidly diminishing sea ice and resulting human and environmental changes and needs. The plan outlines potential actions and outcomes for improving Arctic environmental response management, observing and forecasting sea ice changes, establishing a network of biological observatories, improving Arctic communication networks and architecture, advancing Arctic marine mapping and charting, and improving (national and international) coordination on Arctic issues.

Submerged lands extending beyond three miles from the US coast are subject to federal government jurisdiction, led by the US Department of the Interior (DOI). DOI develops five-year framework leasing programmes for the outer continental shelf (Outer Continental Shelf Lands Act 1975, sec. 18). Marine resources and oceans are governed by a variety of other laws including the Coastal Zone Management Act (CZMA 1972), the Marine Protection, Research, and Sanctuaries Act (1972), and the Clean Water Act (1972). The Alaska Coastal Management Act (ACMA 1977) was passed pursuant to the federal Coastal Zone Management Act and created the Alaska Coastal Management Program. Prior to the passage of ACMA, more than 60 % of Alaska's coastal area was controlled by federal agencies.

Compared to many other countries, state governments in the US play prominent roles. State and regional governance are critical elements in managing sectors like marine fisheries and areas such as coastal zones. Localized efforts to improve ocean and coastal management and coordination have developed in a number of

US coastal states as well as multi-state initiatives in regions that share important ocean and coastal ecosystems.⁵

1.6 Conclusion

Climate change is occurring rapidly in the Arctic region, bringing new economic opportunities alongside challenges for environmental governance in the region. Evaluating these changes, and options for effectively addressing them, requires an understanding of existing institutions and frameworks. From the foundation established here, this book further explores the Arctic policy landscape, changing governance needs, and ways to promote a sustainable future.

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