Chapter 5
Summary

The Arctic Region is affected heavily by global warming. In the past 100 years, surface temperatures in the area have increased at almost double the global average rate corresponding with a rise in mean annual temperature by about 2–3 °C and up to 4 °C in winter since the 1950s.

The reasons why the Arctic warms faster than the rest of the world are numerous and involve several feedback processes that create a reinforcing cycle that will likely result in an acceleration of climate change, meaning the Arctic will warm up even more rapidly over the next 100 years.

The most prominent implication of rising temperatures in the Arctic is the retreat of sea ice. During the last 30 years, the annual average sea-ice extent has decreased dramatically, by about 8 % or nearly 1 million km^2. Arctic sea ice is melting at a markedly faster rate than projected by computer models. This underscores how rapidly changes in the Arctic climate are occurring. By 2100, declines of roughly 10–50 % in annual average sea-ice extent are expected, with reduction projected to be considerably greater than the annual average decrease. Due to some model projections, sometime between 2050 and 2100, the Arctic will be completely sea-ice free in summer. According to other studies, the recent retreat of Arctic sea ice is likely to accelerate so rapidly that the Arctic Ocean could become nearly devoid of ice during summertime as early as 2040.

Though being the most obvious consequence of climate change in the Arctic, the retreat of sea ice is just one observation among many. Higher temperatures in the Arctic have also lead to changes in the circulation regimes of air and ocean currents, alterations in wind and precipitation patterns, vegetation and species shifts as well as species extinctions and increasing UV impacts, to name only a few.

The retreat of sea ice will probably open up new shipping routes and increase the use of existing ones, not only for the carriage of goods, allowing shorter shipping routes, and therefore lower costs, but also for tourism activities like cruise shipping. Fishing is likely to extend to new areas outside the EEZ of the Arctic coastal states, following the northward movement of many valuable arctic fish stocks such as herring and cod into the high seas. And of course the melting of the ice whets the

L. Weidemann, *International Governance of the Arctic Marine Environment*, Hamburg Studies on Maritime Affairs 27, DOI 10.1007/978-3-319-04471-2_5,

appetite for the exploitation of the huge oil and gas resources expected to exist in the region.

All these activities will affect the unique and fragile Arctic environment that is already under pressure due to several environmental concerns, among them acidification, POPs, oil pollution, heavy metals and radioactivity.

These factors compound the fact that the severe climate of the Arctic makes it a fragile environment particularly sensitive to human disturbance. For example, low temperatures slow down the decomposition of natural and manmade substances and the breakdown of pollutants. Ecosystems are also especially vulnerable because they generally consist of very few key species, which are also highly specialized and thus limited in their ability to respond to warming.

The unprecedented changes resulting from climate change and the arising economic activities raise the question of whether the current legal regime for the Arctic is sufficient to govern the various activities and to adequately protect the unique environment.

Unlike the Arctic's southern counterpart, the Antarctic, there is currently no single comprehensive legal regime. The region is regulated by a patchwork of international treaties, most importantly UNCLOS, various regional and sub-regional agreements, national laws and soft law agreements.

The regional soft law regime is built on cooperation between Arctic states and has a comparatively short history. Until the so-called 'Murmansk speech' by Mikhael Gorbachev in 1987, in which he called, *inter alia*, for cooperation among the northern countries in the field of environmental protection, no serious attempt for Arctic collaboration had been made. Eventually, the concern about transboundary environmental hazards triggered the first multi-lateral cooperation among the Arctic states. A Finnish diplomatic initiative led to the signing of the 'Declaration on the Protection of the Arctic Environment', including the adoption of the Arctic Environmental Protection Strategy (AEPS).

It identified priority pollution problems in the Arctic and laid the foundation for different Working Groups. After several years of circumpolar Arctic cooperation through these groups, the Arctic Council subsumed the AEPS in 1997, continuing the work of the AEPS and broadening its mandate to include sustainable development.

Today, the Arctic Council is the preeminent body for circumpolar Arctic co-operation. It is a high-level intergovernmental forum that brings representatives of Arctic society together for meetings several times a year. Representatives of the eight Arctic states—Canada, Denmark/Greenland, Finland, Iceland, Norway, Russia, Sweden and the United States of America—assemble with delegates of indigenous peoples' organisations from around the Arctic to address matters of common concern. Observers from other countries and organisations with Arctic interests also attend these meetings.

The major achievements of the AEPS from 1991 to 1997 and the Arctic Council from 1997 onward have been to document threats concerning Arctic marine ecosystems and to address a variety of issues ranging from environmental

protection to climate change and sustainable development in the region holistically, in a manner that transcends the boundaries of national jurisdiction.

However, neither the AEPS nor the Arctic Council was ever intended to create legally binding obligations for the Arctic states. They were designed to support a common policy development for implementation ultimately via the state's environmental laws and policies. Emphasis is put on scientific research and singling out of priority areas of concern, but not on cooperative remedy. This is partly owed to the fact that the Council does not control resources to launch substantial programs of its own. In short, the Arctic Council, as the most important body for circumpolar cooperation, suffers from severe limitations.

In addition, the number of organisations becoming involved in Arctic matters is increasing at rapid pace. Therefore, the Arctic Council needs to clarify the division of labour between its own activities and those of other, formally unrelated cooperative arrangements dealing with Arctic issues [e.g. the Barents Euro-Arctic Council (BEAR), the Nordic Council of Ministers, the Northern Forum or the International Arctic Science Committee (IASC)]. Due to the need for increased coordination and the confusion that prevails in its absence, there is a real threat of exhausting the scarce resources that can actually be dedicated to Arctic cooperation. In addition, this institutional fragmentation constitutes a considerable impediment for an ecosystem-based approach for environmental protection, because environmental hazards are dealt with at different levels by different bodies. This is particularly significant, as the competing uses of the ever more accessible Arctic Ocean include multiple, interactive, and cumulative stressors.

The frequently used assertion, that there is no necessity for a new legal regime for the Arctic because UNCLOS already provides a legal framework to govern the region is misleading. Besides the fact that the United States, as one of the main players within the eight Arctic states is not yet a party to UNCLOS, it has to be kept in mind that UNCLOS is merely putting up a framework. Additionally, UNCLOS provisions are quite general, meaning it does not provide for the challenges of protecting an environment as unique and sensitive as the Arctic region. Leaving aside the important exception of Article 234 on ice-covered waters, UNCLOS makes no specific reference to environmental management of polar oceans and seas.

In their common declaration adopted during a meeting in Ilulissat, Greenland, on 28 May 2008, the five states bordering the Arctic Ocean (Canada, Denmark/Greenland, Norway, the Russian Federation and the United States) asserted that they see no necessity for the development of a comprehensive Arctic Treaty because there is already an adequate legal framework in place.

However, apart from the indicated weaknesses of UNCLOS, there are considerable deficits in the legal framework applicable to the Arctic marine environment. The relevant agreements can be grouped into three different categories: treaties regulating certain areas of the marine Arctic, such as OSPAR, species-specific treaties, such as the Polar Bear Agreement, and sector-specific treaties, such as the Polar Code on ships operating in polar waters. This categorisation indicates one of the major deficits of the current legal regime: it lacks an overarching perspective

that would ensure integrated, cross-sectoral and ecosystem-based management. Individual environmental issues are dealt with on a piecemeal-basis, thus widely ignoring cumulative impacts from various economic activities as well as interactions and interdependencies between different natural systems. Especially with regard to ABNJ, the current legal and institutional framework furthermore suffers from its fragmentation, from unregulated or not sufficiently regulated activities, or from the lack of a mechanism for transboundary environmental impact assessment.

Notably, the above-mentioned 'Ilulissat Declaration' does not refer to fisheries management or the requirement of integrated and cross-sectoral governance. Yet, the example of high seas fisheries makes the considerable gaps and weaknesses of the international framework apparent, if not their potentially serious consequences for the Arctic.

The most important regulatory gap with regard to fisheries refers to insufficient protection of fish stocks in the waters beyond national sovereignty and jurisdiction. The regime UNCLOS offers for the high seas emphasises the freedom of the high seas, especially with respect to marine living resources management and surface navigation. With regard to fisheries, it relies on the effectiveness of Regional Fisheries Management Organisations (RFMOs) and the voluntary compliance of States to ensure conservation and management of high seas living resources. UNCLOS obliges the states concerned to cooperate with respect to trans-boundary fish stocks and discrete high seas fish stocks but does not stipulate the form of cooperation. The implementing Fish Stocks Agreement (FSA), however, requires that fisheries for straddling and highly migratory fish stocks have to be managed at the regional level through RFMOs or Arrangements. Where there are no RFMOs or Arrangements, these must be established.

However, the limited scope of the FSA leaves a serious regulatory lacuna: it does not apply to discrete high seas fish stocks. This means a lack of protection in particular for deep-sea fish species that are endangered through bottom fishing.

In addition to the central Arctic Ocean, there are three pockets of high seas in the seas bordering the Arctic Ocean: the "Banana" hole in the Norwegian Sea, the "Loophole" in the Barents Sea and the "Doughnut" hole in the Bering Sea. All three areas are managed by a RFMO and/or a regional arrangement with competence over certain species. In the currently ice-covered high seas area in the central Arctic Ocean, the Northeast Atlantic Fisheries Commission (NEAFC) has a mandate over the "European" wedge, while other sectors in the central Arctic Ocean do not have any RFMO or other arrangement. The Arctic Council does not address fisheries issues at all. Thus, there is currently no single body responsible for the management and protection of Arctic fish stocks. Besides, the existing RFMOs often fall short of providing satisfactory mechanisms for conservation and management of high seas fish stocks: many set the total allowable catch (TAC) inconsistent with scientific advice at unsustainable levels, and additionally provide for opt-out procedures so that members not even have to comply with the undue TACs. Enforcement and compliance instruments are frequently inadequate and IUU fishing further undermines conservation efforts. In short: the present legal and institutional framework for governance of high seas fisheries in the Arctic leaves much to be desired.

However, as many valuable arctic fish stocks such as herring and cod, migrate northward and move into high seas areas or into the national waters of bordering states, it is clear that an appropriate management regime will be needed to govern and protect Arctic fish stocks in the foreseeable future.

This provides a potentially unique opportunity to employ an anticipatory approach and adopt a comprehensive governance system for sustainable management before serious damage occurs. Since almost all other oceans worldwide are overfished, there is naturally great interest in the exploitation of valuable fish stocks in the Arctic. The melting of the ice is the starting signal for fisheries. For once, these activities could be managed from the beginning, before overexploitation becomes a problem.

A first step in this direction was taken by the US through Senate Joint Resolution 17 calling for the creation of a new international fisheries management organization for the Arctic, and seeking a halt in the expansion of Arctic commercial fishing activities until this is achieved.

Yet, as soon as the Arctic Ocean high seas areas open up, care has to be taken of multiple stressors to the marine environment; other human activities will compete spatially with fishing and affect it by contamination or other repercussions. As all these activities and potential dangers to the environment are interconnected, the best option would be not to create isolated regimes governing sectoral activities such as fishing, shipping, exploitation of non-living resources etc. but to adopt a comprehensive treaty on an ecosystem-based approach.

The idea for a legal framework dedicated to the Arctic is not new. In light of the economic development fuelled by climate change, various suggestions have been made as to what sort of treaty should be adopted. On the other hand, the necessity of a comprehensive Arctic Treaty has been denied by political leaders as well as legal scholars for various reasons. The approach of creating a binding legal regime has been rejected by some because of the alleged disadvantages of a binding treaty, which are viewed as involving lengthy negotiations, the avoidance of contentious issues and therefore agreement on the "lowest common denominator" and inflexibility due to difficulties to adapt to changing circumstances.

However, the advantages of a binding legal agreement outweigh the disadvantages. The attractiveness of legally binding agreements derives particularly from the fact that they generate enforceable obligations and can provide for sanctions in case of non-adherence.

The creation of an "Arctic Treaty" would not imply that the Arctic Council is to play no significant role for the Arctic in the future. It is, and continues to be very valuable in formulating the Arctic's interest in international fora as it had done in the context of POPs under the Stockholm Convention. Reinforcing the influence of the Arctic in global forums could emerge as one of the most significant roles of the Arctic Council during the foreseeable future. This also shows that it is no argument against a binding agreement that many threats to the Arctic environment stem from outside the region. On the contrary, a comprehensive treaty with many participants could increase attention for issues affecting the region, in particular climate change, on the international stage.

As for the structure of a potential Arctic Treaty, it is tempting to orient towards the Arctic's southern counterpart, the Antarctic. However, due to substantial differences between the two poles it is highly unlikely that the adoption of a treaty based on the model of the Antarctic Treaty System (ATS) can be achieved for the Arctic. On the other hand, the ATS might very well provide valuable inspiration for the development of an Arctic Treaty.

However, the Arctic states will most probably remain very reluctant to concede power to other interested states. In fact, they have articulated their opposition to a new legally binding regime dedicated to the Arctic at various occasions. Unfortunately, prospects of the conclusion of an "Arctic Treaty" are consequently very low. However, non-Arctic states also have rights and responsibilities with regard to the Arctic marine environment, particularly as regards areas beyond national jurisdiction (ABNJ). If a balance is struck between voicing these rights and interests and respecting the rights of the coastal states, the international community will hopefully persuade the Arctic states to realise the necessary improvements.

These will most probably take place within the current legal and institutional framework. Most importantly, enhancements have to be realised regarding coordination and cooperation of responsible bodies; the safeguarding of coverage of the whole marine Arctic by competent institutions; the streamlining of environmental standards that are adapted to the special needs of the Arctic marine environment; the spatial protection of especially vulnerable ecosystems and habitats through MPAs; and a mechanism for (transboundary) environmental impact assessments.

Hopefully, action to enhance protection of the fragile Arctic marine environment will be taken before it is too late.