



Summary Report

Prepared for the
Devising Seminar on Arctic Fisheries

Hosted by the
Program on Negotiation at Harvard Law School

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Introduction

Conditions in and around the Arctic Ocean are changing rapidly due to climate change and other forces, most originating from outside the region. The Arctic is seeing increasingly less ice cover during the summer months and warmer waters on average. These trends point to potential challenges and opportunities in various areas, including fisheries. But, there are important open questions, including: How fish stocks and other marine species will respond to changing conditions; whether or not a commercially-viable fishery will emerge in the central Arctic Ocean; how scientific research should be done, and by whom, to increase our understanding of this relatively little-researched part of the world; and how fisheries and larger ecosystems in the Arctic should be managed.

The Arctic Fisheries Devising Seminar brought together 23 people from a wide variety of stakeholder groups to wrestle with these questions. Participants included high-level government policy-makers from various states, regions, and territories, namely Canada, the European Union (EU), the Faroe Islands, Finland, Greenland, Iceland, Norway, Russia, Sweden, and the United States; experienced government scientists; key representatives from non-governmental organizations, scientific organizations, and industry; distinguished representatives from Arctic indigenous peoples; and highly regarded scholars and Arctic experts. Participants came with an extremely impressive set of credentials and affiliations. They were asked to engage on equal footing as individuals rather than in their official capacity, and to help generate ideas that would be acceptable to their own constituencies while concurrently addressing the concerns of other stakeholder groups. That is, they were invited to participate in an informal, off-the-record problem-solving exercise. To this end, no comments are attributed to individual participants, nor is anyone identified by name. Instead, this summary reports on the topics introduced, the good ideas that emerged, and points of convergence and divergence among the group.

The Devising Seminar was informed by a *Stakeholder Assessment* prepared by the Program on Negotiation at Harvard Law School. This written document was shared with participants in advance of the Devising Seminar. The assessment was developed based on off-the-record interviews with almost 50 key stakeholders, including almost all seminar participants. The topics addressed in the interviews, which mirrored the themes covered at the Devising Seminar and this summary, included: (1) new risks to Arctic fisheries; (2) strategies for conserving Arctic fish stocks; (3) gaps in scientific knowledge related to Arctic fisheries; (4) the possible need for new monitoring systems for Arctic fisheries; (5) concerns of indigenous peoples related to Arctic fisheries; (6) ways of reducing the impact of oil spills that might occur in the Arctic; and (7) the possible need for new treaties or new institutional arrangements to manage Arctic fisheries. The topic of reducing the impact of oil spills in the Arctic was not sufficiently discussed at the Devising Seminar and therefore is not addressed in this Summary.

A recurring theme throughout the Devising Seminar was the need to differentiate among the various regions of the maritime Arctic as they pertain to fisheries and other issues. For example, participants distinguished between the central Arctic Ocean (CAO) beyond the 200-mile exclusive economic zones of bordering states, and waters within those territorial boundaries. They also distinguished between the areas that are currently undeveloped from a fisheries perspective, including most of the CAO, and those that have viable fisheries and established

management organizations already in place, including in the Barents and Greenland Seas. It was noted that the North East Atlantic Fisheries Commission’s regulatory area does extend up to the North Pole in the CAO, north of the Barents and Norwegian Seas. Additionally, participants distinguished continental shelf areas from international waters. A map of the Arctic Ocean is provided in *Figure 1*.

Stakeholder Assessment interviewees commonly referred to the “Arctic Five states” and the “five Arctic coastal states;” therefore, this terminology was used in the Stakeholder Assessment document. However, Devising Seminar participants indicated it is not appropriate to use these categorizations when discussing fisheries in the CAO. They argued that when dealing with fisheries in the high seas of the CAO, Iceland and the Faroe Islands – as well as potentially the EU, Japan, China, and the Republic of Korea – should be included.

Figure 1: Map of the Arctic Ocean



Source: L.W. Brigham, University of Alaska Fairbanks (2014)

Risks to Arctic Fisheries

Risks to Arctic fisheries identified by Devising Seminar participants were similar to those identified through the Stakeholder Assessment (see attached document). These generally included risks associated with: climate change and related ecosystem changes (e.g., ocean acidification, warming waters, and fish migration); oil and gas development (e.g., oil spills and seismic activity); expanded navigation (e.g., direct impacts on fisheries and risk of small oil spills from vessels); lack of knowledge about Arctic fisheries and Arctic ecosystems, particularly in the CAO; illegal, unreported, and unregulated (IUU) fishing and overfishing, within and outside of EEZs; pollution; and lack of management arrangements in most of the CAO.

Participants noted that some trends, such as climate change, are more certain than others, such as the potential for expanded shipping and oil and gas development in the Arctic in the near future. Some participants also saw particular risks, such as those associated with oil and gas, as more acute than did other participants.

Participants generally agreed that there is considerable uncertainty about if and when there will be a commercially viable fishery in the CAO. Many participants argued that new commercial fisheries are likely in at least some areas at some point in time. They said the biggest management gap is in international waters of the CAO, most of which is not covered by a regional fisheries management organization (RFMO) and where very little is known about fish stocks and ecosystems. Some expressed less concern about emerging fisheries in this region, either because they do not see fisheries in this area becoming commercially viable anytime soon or because, as some people emphasized, this area is not a complete legal vacuum. Beyond the central Arctic, other fisheries face various challenges, including the movement of fish stocks into new waters, potentially altering ecosystems and disrupting existing management regimes. Participants generally agreed that climate change presents risks to fisheries throughout the broader Arctic region.

A key outcome of the Devising Seminar discussion is that, when talking about Arctic fisheries, risks need to be carefully differentiated in terms of:

- Risks affecting different geographic zones (e.g., central Arctic Ocean as compared to peripheral/sub-Arctic seas);
- Risks to existing fisheries as compared to potential/future fisheries; and
- Risks specific to Arctic fisheries and those that are much broader than or external to Arctic fisheries.

A diagram showing examples of differentiated risks is provided in *Figure 2*. Devising Seminar participants generally agreed that this device for understanding risks to Arctic fisheries can help inform decisions about which forums can and should take action to begin working on each kind of risk. For example, national forums may be able to address certain types of risks. Other risks will require international forums. Similarly, existing forums may be able to address current risks, whereas new forums and collaborations may be necessary to address future risks.

Figure 2: Examples of differentiation and categorization of risks to Arctic fisheries

	Central Arctic	Peripheral/Sub Arctic
Risks to Existing Fisheries	<p>Specific to:</p> <ul style="list-style-type: none"> • Uncertainty about whether fish stocks exist in central Arctic + uncertainty about central Arctic ecosystems • Changes in the central Arctic disturbing food chains that current species rely on <p>External to:</p> <ul style="list-style-type: none"> • Climate change • Emerging other uses, such as oil and gas development 	<p>Specific to:</p> <ul style="list-style-type: none"> • Fish migration due to changing conditions, movement of stocks into new waters • Pressure on existing fisheries management regimes • IUU fishing <p>External to:</p> <ul style="list-style-type: none"> • Climate change • IUU fishing right outside of EEZs • Impacts on subsistence livelihoods
Risks to Future/Potential Fisheries	<p>Specific to:</p> <ul style="list-style-type: none"> • Vulnerability of new fish stocks due to environmental changes, such as increased salinity • Overfishing of fragile populations <p>External to:</p> <ul style="list-style-type: none"> • Climate change • Competition from other uses • Large scale commercial fishing moving in before management put in place 	<p>Specific to:</p> <ul style="list-style-type: none"> • Fish stocks moving into new areas, creating new unmanaged fisheries • IUU fishing <p>External to:</p> <ul style="list-style-type: none"> • Climate change

Conserving Fish Stocks

Devising Seminar participants broadly supported a precautionary approach to the central Arctic Ocean, specifically with regard to fisheries. Many ideas were put forward as to how a precautionary approach should be implemented. Participants generally agreed that a non-binding “Declaration” that builds on existing agreements would be desirable, at least as a first step. This Declaration would involve participants from more than just the Arctic Ocean coastal countries that have already been meeting to discuss fisheries in the CAO, and it could possibly be a precursor to a binding instrument. The goal of such a Declaration would be to establish temporary restrictions (or “interim measures”) until:

1. Scientific assessments provide a better inventory of fish stocks in the CAO, as well as the characteristics and behaviors of these stocks, and their interactions across multiple ecosystems. This would require ongoing documentation with the goal of adaptive management. How this science should be synthesized and adjudicated still needs to be agreed upon.
2. Mechanisms are put in place to manage any new fisheries that emerge in international Arctic (i.e., CAO) waters.

In other words, the Devising Seminar participants felt that a precautionary approach requires a commitment to doing the necessary scientific research first, and then developing appropriate management regimes if and when it becomes apparent that new fisheries are commercially viable. Participants emphasized that human behavior, not the fish themselves, needs to be managed.

Although participants generally supported this approach, some questioned whether a non-binding Declaration would be strong enough. They also expressed a need to clarify what kind of triggers would stimulate the move from interim measures to a next phase in fisheries management.

Several participants noted that a binding international agreement, as compared to a non-binding Declaration, would offer important advantages, mainly that it would carry greater weight and would be more likely to be followed. However, most participants agreed that, at least at this time, a “soft law” approach is much more likely to gain traction in the short term than an effort to formulate new “hard law.” Some participants suggested thinking of “interim measures” rather than a “moratorium” would be the most productive way of advancing a precautionary approach. There was some fear that temporary protective measures (i.e. a moratorium) would become permanent and forestall appropriately managed new fisheries.

Science and Monitoring

Participants agreed that there are considerable gaps in our scientific understanding of Arctic fisheries and relevant ecosystems, particularly in the CAO. Scientific and monitoring gaps identified by participants were similar to those identified in the Stakeholder Assessment (see attached).

In light of the magnitude of these gaps and the challenges associated with undertaking the necessary scientific studies and gathering the necessary time series data, participants agreed that substantial amounts of money, professional time, and research resources will be required. Better collaboration and coordination among existing scientific bodies such as ICES and PICES will be critical. Additionally, most Devising Seminar participants felt that a new research organization specifically devoted to the Arctic might be an option worth considering. Better data and information sharing among countries, including those that are not Arctic coastal states, is also important. Participants also noted that there are a number of potential partners for Arctic research, such as the International Arctic Science Committee, which could potentially organize new subcommittees to look specifically at the CAO.

Participants noted that, given the magnitude of the scientific and monitoring challenges, partnerships of various kinds—including those that go beyond government agencies to include a range of other stakeholders, such as indigenous peoples, the fishing industry, the oil and gas industry, and non-governmental organizations—may be required. Effective engagement of stakeholders in the monitoring and scientific process can, in addition to expanding resources and capacity, improve the uptake of monitoring and research-based information.

According to participants, supporting effective coordination among diverse partners on monitoring efforts will require protocols about what is to be done, who owns the data produced, and how various kinds of technical information should be stored and analyzed. It will also require strategies for enforcing protocols. There needs to be transparency about who was involved in data collection and what methods were used. This will help to ensure that there are clear expectations around when data and related information will or will not be entirely accessible to everyone. Ensuring consistency in data collection over time and across space is key. An early issue in establishing and expanding monitoring efforts should be to examine what needs to be monitored and why, rather than simply extending past efforts. Monitoring should look not only at existing conditions, but also at changes that are underway.

Concerns of Indigenous Peoples

Participants indicated that indigenous peoples have always managed to adapt to change, but that the rate of change is accelerating. They agreed that there are constantly new players arriving in the Arctic who are not always aware of or concerned about indigenous peoples' concerns and interests. It is important to be mindful of this and ensure that the voices of indigenous peoples are always heard. However, according to participants, this is not enough. There is a need to enhance consultation processes to ensure that indigenous peoples actually influence decisions.

Additionally, it is important to ensure that more effective two-way knowledge transfer occurs between indigenous peoples and decision-makers.

Participants argued that science needs to be understandable to a range of communities. It should also be presented in practical terms. They noted that co-management boards might be a vehicle for engaging indigenous peoples in conducting research, reviewing data, and helping to make management decisions. In some places, effectively communicating with indigenous peoples and garnering their support are pre-conditions to raising the necessary funds and getting permission to proceed. Some participants noted there are challenges associated with integrating indigenous or traditional knowledge and "western" science, raising question about how best to integrate different forms of knowledge.

Some participants said it is critical to provide sufficient resources to allow indigenous peoples to effectively inform and engage in decision-making. This, they noted, goes beyond simply inviting indigenous peoples representatives to meetings, which take them away from their communities and their everyday lives. Offering to cover costs misses the point, as many indigenous peoples representatives cannot afford to take time off of work to participate in conferences or meetings, even if their travel costs are covered. Instead, effective communication may require going to these communities and engaging them directly. Participants noted that this kind of direct collaboration can and does go beyond what government does, to include industries as well.

Participants noted that, since indigenous peoples often rely on fisheries for their subsistence and livelihood needs, policy-makers must address their anxieties related to possible impacts on the resources they depend on. How these goals should be achieved will likely vary within countries and contexts. This raises questions around who should benefit from any new Arctic fisheries: commercial fleets from Arctic states? Other states like China and Japan? Indigenous peoples?

One concern raised by participants is how to effectively factor indigenous peoples' voices into any new fisheries management regimes that emerge. Many see the Arctic Council's unique structure with direct representation from indigenous peoples as an excellent model, although some worry that their voices will be increasingly drowned out as the Council expands to include new observer states. Nonetheless, this model for integrating indigenous peoples' perspectives is highly regarded. It is unclear, though, whether and how this approach to representation could be extended or replicated in new organizations working on fisheries in the Arctic. It was noted that during recent meetings of the Arctic coastal states, national delegations represented their indigenous peoples, but that indigenous peoples would generally prefer that federal and state governments not speak for them. Questions of indigenous peoples sovereignty were raised, with some participants noting that indigenous peoples would rather engage in the equivalent of government-to-government negotiations.

New Arrangements

The question of what kinds of treaty or other management arrangements may be needed in light of potentially emerging fisheries in the CAO ran throughout the Devising Seminar. The group broadly agreed that some sort of interim arrangement (or multiple arrangements) is probably necessary to coordinate science and prevent unregulated fishing until the area is better understood and formal management regimes are put in place. There was general support for taking a more precautionary approach and proactively tackling potential challenges before they emerge in their most difficult form. However, there were differing opinions on what shape such an interim instrument should take. There were also differing opinions on whether any new arrangements should consider the CAO as a single area, or if it should be segmented into different areas, given different interpretations of "real interests," the migratory patterns of shared/straddling fish stocks and other factors. Participants generally agreed that it is premature to create an actual RFMO or multiple RFMOs, for the CAO. Everyone agreed this would make sense if new fisheries became viable. The general sentiment was that at this stage, rather than putting an RFMO (or RFMOs) in place, it makes more sense to create a simpler instrument, or instruments, enshrining the precautionary approach, coordinating research and monitoring, and ensuring two-way communication with indigenous peoples.

As mentioned above, various arrangements, including both "hard" and "soft" law options, were put on the table. Participants generally acknowledged that each approach offers advantages and disadvantages. Soft law is easier to negotiate, less threatening and more likely to be approved quickly. Thus, in the case of Arctic fisheries, a non-binding Declaration would be a useful first step. Such a Declaration is actually under active consideration among Arctic Ocean coastal States, which met most recently to discuss this issue in Nuuk, Greenland, in February 2014. On the other hand, governments generally respect the binding commitments of hard law more than they do soft law measures. Formal agreements command greater attention and garner more resources for implementation. Some participants suggested that a middle-way approach - somewhere between hard and soft law - might be most appropriate for fisheries in the CAO. This might take the form of formal commitments to which each state binds itself through its own laws.

An important question is who should be a party to such arrangements. Arctic Ocean coastal states have been meeting to coordinate a strategy to "protect the central Arctic Ocean from

unregulated fisheries.” Many think that this group should expand to include others with “real interest” in the Arctic, including the EU, Iceland, China, Japan, and Korea, given that the CAO is international waters. They assert that, particularly given the uncertainties regarding if and when commercially viable fisheries might emerge in the CAO, the process should be more open now. Most but not all agreed with this sentiment; the counterargument that Arctic Ocean coastal States have unique rights and responsibilities was also presented quite strongly.

While expressing general support for an immediate arrangement, some participants wanted to be certain that any interim measures put in place would be subject to renegotiation upon the emergence of a viable fishery. That is, they agree that countries should be called upon to refrain from fishing until there is sufficient evidence of a viable commercial fishery and an RFMO is put in place (or multiple RFMOs are put in place). But, when adequate scientific information is in hand and a management system is in place, commercial fisheries must be able to start.

The group discussed whether a new arrangement for the CAO should link to existing international organizations or initiatives and, if so, which ones. Potential options mentioned included: the Arctic Council and its ancillary organizations, such as the Sustaining Arctic Observing Networks; and existing RFMOs, including the North East Atlantic Fisheries Commission. There were varying degrees of support for connecting any new treaty or Declaration to existing institutions. In particular, many were quite wary of the suggestion that the Arctic Council is the most appropriate venue for a new arrangement. However, there was general understanding that conservation and management of fish stocks in the CAO in the future would be based on UNCLOS, to which seven of the eight Arctic Council states are parties, and the UN Fish Stocks Agreement, to which all of them are parties.

Some participants underscored the need to think beyond the CAO when considering threats to Arctic fisheries. They agreed that a new arrangement or agreement may be necessary to conserve Arctic fisheries, but indicated some concerns, such as black carbon and pollution, may require additional efforts. They thought that some of these concerns are addressable through existing global treaties and agreements.

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