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Biodiversity governance under the Arctic Council: The role of science, business and NGOs

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Research Article

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Abstract

Since its inception, the Arctic Council (AC) has focused on biodiversity, under its working group on the Conservation of Arctic Flora and Fauna. By adopting a holistic, cross-sectoral approach to biodiversity governance, the AC has acknowledged that biodiversity is not only a matter for the Council and its governments: also non-state actors must be involved. This article analyses whether and how three essential non-state actors – science, business and NGOs – influence AC processes on Arctic biodiversity, comparing the roles of these actors on biodiversity governance in the wider international context. AC work on biodiversity has remained largely scientific, with fewer political commitments for states and the Council as such: science has had a significant influence, whereas there has been limited space for the involvement of the business sector. NGOs have served mainly as contributors and partners in scientific work, increasingly also assuming policy advocacy roles. This article notes the need for closer *political* cooperation on biodiversity in the AC, with firmer commitments for states and the AC, inspired by work in other AC focal areas.

Introduction

Until recently, most Arctic biodiversity did not appear to be heavily affected by human activities and was thus not subject to much attention, from within the Arctic or outside. This has now changed dramatically, with the growing demand for shipping and large-scale exploitation of Arctic oil and gas and other mineral resources, together with the increasing recognition of the adverse effects of climate change on Arctic ecosystems. There is far greater awareness of the significant contributions to the physical, chemical and biological balance of our planet provided by the vast Arctic wilderness areas where ecosystem processes continue to function in a largely natural state. The Arctic with its highly adapted biodiversity has become a matter of global concern.

Arctic biodiversity is a focal area of the Arctic Council (AC), and the working group on Conservation of Arctic Flora and Fauna (CAFF) was one of its original working groups. With the entry into force of the UN Convention on Biological Diversity (CBD) in 1993, and in line with the accelerated application of this concept, the AC and CAFF have increasingly based their work on the broad biodiversity concept defined in the CBD as the diversity of ecosystems, species and genetic diversity.

The growing international attention to Arctic biodiversity has led to the active involvement of CAFF in the CBD and other global biodiversity-related forums. CAFF has provided important scientific inputs on Arctic biodiversity to these forums; with the AC as a whole, it has applied the internationally recognised ecosystem approach as a tool for biodiversity management. The approach was adopted by the CBD COP 5 in 2000 as "a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way" (CBD, 2016). The approach has been endorsed by many other international forums, using varying terminology. In the AC context, it is often referred to as "an integrated ecosystem-based management approach". According to the Arctic Council (2015b), "an integrated ecosystem-based management approach requires that development activities be coordinated in a way that minimizes their impact on the environment and integrates thinking across environmental, socioeconomic, political and sectoral realms. The management of resource activities needs to be focused on realistic, practical steps that are directed toward reducing environmental damage, protecting biodiversity and promoting the health and prosperity of local communities. For such an approach to be successful, the relevant ecosystems need to be better understood, monitored and reported on. Actions must be based on clear objectives and a sound management structure, employing best available knowledge and practices, integrated decision-making and, where appropriate, a coordinated, regional approach".

By adopting a holistic, cross-sectoral approach to biodiversity, the AC has acknowledged that biodiversity is not only a matter for the AC and its governments: also non-state actors must be involved. This article assesses whether and how three essential non-state actors – science, business and NGOs – influence AC processes on Arctic biodiversity. Here, the main focus will be on

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involving these actors in the Council's biodiversity flagship, the *Arctic Biodiversity Assessment (ABA)* and its follow-up. Further, the analysis will assess whether the involvement of science affects the involvement of business and NGOs, examining and comparing with the role of these actors on biodiversity governance also in the wider international context.

Biodiversity governance in the Arctic

Arctic Council

The AC, established in 1996 with the eight Arctic states as members, is the pre-eminent international forum for addressing Arctic issues. Six organisations representing Arctic indigenous peoples have status as Permanent Participants, and several non-Arctic states and organisations have been granted observer status. The work of the Council proceeds on three levels: ministerial, senior civil servant (Senior Arctic Officials (SAOs)) and working groups.

The Council was established as a forum for sustainable development and environmental protection and addressed in its early days mainly issues, such as transboundary pollution, environmental degradation and Arctic flora and fauna. Later, climate change became an important focus area. More recently, its agenda has expanded to better reflect the human presence in the region and included issues, such as health, education, and support for indigenous languages and cultures – thereby comprising a more complete coverage of the concept of sustainable development (Nord, 2017).

Also, more recently, the Arctic region has moved from the margins of international affairs to become a focus of global concern mainly as a result of the clear effects of global warming in the region like retreating sea ice together with new possibilities to exploit the region's vast natural resources. Thirteen non-Arctic states have now been approved as observers to the AC. Unlike before, the Arctic states are now represented by foreign ministers at the AC meetings, which receive much media attention. Most lately, geopolitical tensions and tensions over global matters have spilled over into the Council (Rottem, 2017; Koivurova, 2019).

With the increased focus on the AC within and beyond the region, came also discussions among policymakers, scholars and others on Arctic governance and which form and function it should have. Nord (2013) has identified the following six intertwined questions from which divisions on opinion radiate: 1) Who is to govern? 2) What is to be governed? 3) Where is governance to take place? 4) When is governance to operate? 5) How is governance to function? 6) Why is regional governance necessary? This article will have a specific emphasis on "who" (the role of non-state actors in Arctic governance) and "how" (whether the AC should expand its role beyond scientific cooperation to policymaking).

With regard to the latter, the main outputs of the AC have been scientific monitoring and assessments, technical recommendations and guidelines via its working groups. As the Council is not a treaty-based organisation, it has formally no regulatory power. The policy recommendations accompanying scientific assessments for long represented the closest that the Council got to such power (Koivurova, 2010). Such assessments – for example, on climate change and biodiversity as further discussed below – have been pointing to a region undergoing a rapid and intense transformation. This, in combination with the increasing attention to Arctic matters outside the region – manifested through the increased number of external observers in the AC – has led to arguments for a stronger governance arrangement (Graczyk & Koivurova, 2015). Against this, it has been argued that a shift towards more politicisation could also politicise the contributions of the working groups thereby jeopardising the credibility of their highly praised scientific outputs (Kankaanpää & Young, 2012).

In the last decade, the AC has to some extent moved beyond being a knowledge generator towards more policymaking and norm-setting. In 2013, the Council adopted its "Vision for the Arctic" expressing, among other things, a wish for the Council to expand its roles "from policy-shaping into policy-making" (Arctic Council, 2013). The Council has served as the forum for conclusion of three legally binding agreements: on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic (2011), on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic (2013) and on Enhancing International Arctic Scientific Cooperation (2017). Since the Council is not an intergovernmental organisation, the agreements were formally adopted between the eight Arctic states.

However, these developments have happened in relatively small, demarcated areas. In the bigger picture of the AC, the development in governance towards policymaking and norm-setting has been quite cautious. The Council has largely remained within the more limited scope of seeking to generate more knowledge and awareness about Arctic concerns, and for the moment, there seems to be no consensus for bigger changes. A recent attempt by the Council to get more policy oriented through the establishment of a subsidiary body for marine cooperation has so far failed due to disagreement on its mandate (Prip, 2019).

Also, the Council's work om biodiversity has remained within a field of knowledge generation and dissemination – and even more so than for the other work areas of the AC as will be further discussed below.

AC and biodiversity

Within the AC, biodiversity is dealt with mainly by the working group on Conservation of Flora and Fauna (CAFF). It was established in 1991 under the Council's precursor, the Arctic Environmental Protection Strategy (AEPS) and inaugurated in 1992 as a "distinct forum for scientists, indigenous peoples and conservation managers ... to exchange data and information on issues such as shared species and habitats and to collaborate, as appropriate, for more effective research, sustainable utilization and conservation" (CAFF, 1991).

With the evolution of the international biodiversity agenda and the application of an ecosystem approach focused on mainstreaming biodiversity considerations beyond sectors, biodiversity has increasingly become a cross-cutting issue in the AC. CAFF therefore works in close collaboration with most of the other AC working groups.

CAFF was originally conceived not only as a forum for knowledge building, but also for administrative and regulatory cooperation between the eight Arctic states (Prip, 2016). One early CAFF priority was to create a pan-Arctic network of protected areas. (Circumpolar Protected Areas Network) (CAFF, 1991). However, this work was *de facto* terminated in 2004, as states were apparently unwilling to engage in an issue with such political connotations involving transboundary and thereby sovereignty matters (Koivurova, 2009; Prip, 2016).

From then on, CAFF became a forum for mainly scientific cooperation, generating extensive knowledge on Arctic biodiversity for the benefit of the region itself and the wider international community. In cooperation with the working group for the Arctic Monitoring and Assessment Program (AMAP) and the Arctic Science

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Committee, CAFF was co-publisher of the 2005 *Arctic Climate Impact Assessment (ACIA),* which has formed an important basis for much of the Council's work. ACIA was the first to identify climate change as the most serious threat to Arctic biodiversity. ACIA also drew attention to the lack of knowledge about Arctic ecosystems and their functions. This paved the way for CAFF to develop the Circumpolar Biodiversity Monitoring Program (CBMP), an international network of researchers, governments, indigenous peoples' organisations and nature conservation groups, working together to harmonise and integrate the monitoring of the Arctic's living resources (CAFF, CBMP). A marine biodiversity status report was issued in 2017 (CAFF, 2017a), and freshwater report in 2019 (Lento et al., 2019).

The culmination of CAFF as a forum for scientific cooperation and knowledge generation came with the release of the *ABA* at the May 2013 Arctic Council Ministerial Meeting in Kiruna, Sweden (CAFF, 2013). ABA is an ambitious exercise covering all life forms in the Arctic – from microorganisms, plants and insects to birds and mammals, at sea and on land. It provides a comprehensive description of the status and trends of Arctic biodiversity and describes stressors, knowledge gaps and conservation and research priorities. The presentation is divided into five components: 1) Arctic Biodiversity Trends 2010 – selected indicators of change; 2) scientific assessment; 3) scientific synthesis; 4) report for policymakers and 5) Life Linked to Ice: a guide to sea-ice-associated biodiversity in a time of rapid change.

ABA concludes that Arctic biological diversity is deteriorating, but that timely and targeted efforts can contribute to the conservation of large, relatively undisturbed ecosystems and the valuable services these ecosystems deliver. The main reason for the deterioration is climate change, which also reinforces the other threats. Other threats include habitat disturbance and deterioration, as well as pollution from long-distance transport and local sources. By contrast, human overexploitation of living resources – formerly the greatest threat – has been limited. The challenges facing Arctic biodiversity are interrelated and require holistic solutions and international cooperation (CAFF, 2013).

The report for policymakers offers 17 recommendations, grouped under three cross-cutting themes: climate change as the major underlying driver of overall change in biodiversity; the necessity of taking an ecosystem-based approach to management; and the importance of mainstreaming biodiversity by making it integral to other policy fields, for instance by ensuring that biodiversity objectives are considered in development standards' plans and operations. The recommendations differ considerably in concreteness and precision.

In addition to mapping out the status and trends of ecosystems and species, ABA analyses the underlying as well as the direct causes of biodiversity loss. It discusses what this means for the functioning of ecosystems as such and for the services the ecosystems provide to the peoples of the Arctic. It also discusses what actions are necessary to reverse the negative development.

ABA in many ways reflects the international discourse on biodiversity – not least in relation to global warming as both a direct threat and as a factor compounding the other threats. This factor is reinforced in the Arctic because global warming is occurring faster and more severely there, and because Arctic indigenous livelihoods are highly dependent on biodiversity.

ABA, like ACIA, has attracted considerable international attention. Its findings were included in the report "Global Biodiversity Outlook 4", the latest evaluation of global biodiversity status and trends, presented at the 12th meeting of the Conference of the Parties (COP) to the CBD in 2014 (CBD Secretariat, 2014). Attention was also evident at the 2014 and 2018 Arctic Biodiversity Congresses – in 2018, the largest assembly in AC history, with nearly 500 participants.

Non-state actor involvement in Arctic biodiversity governance: science, business and NGOs

Environmental governance, of which biodiversity governance is a subset, refers to the set of regulatory processes, mechanisms and organisations through which political actors influence environmental actions and outcomes (Lemos & Agrawal, 2009). Governance is not the same as government. It includes the actions of the state and, in addition, encompasses actors such as the science community, businesses and NGOs.

Non-state actors have been central in developing international environmental governance and law in many ways. They identify issues that require international action, they participate as observers in international organisations and treaty organisations, and they take part in the implementation of the principles and rules adopted at global or regional level (Sands & Peel 2018).

The 1992 UN Conference on Environment and Development (UNCED) laid the foundations for international environmental governance as we know it today, with widespread involvement of multiple non-state actors (Haas, Andresen, & Kanie, 2014). UNCED also paved the way for international biodiversity governance, with its endorsement of the UN CBD. With its broad scope in terms of defining biodiversity (the diversity of ecosystems, species and genes, CBD Art. 2) and application (conservation, sustainable use of biodiversity components and equitable benefit-sharing from the use of genetic resources, CBD Art. 1), CBD has attracted considerable attention from a wide range of interest groups.

This interest and relevance is unmistakable at the biennial COP gatherings, with high attendance of non-state actors (Stevens, 2014). The termination of the current CBD Strategic Plan 2011–2020 with its 20 "Aichi Biodiversity Targets" (CBD decision X/2) and the launch of a participatory process to develop a post-2020 global biodiversity framework provide new opportunities for non-state actors to influence the global biodiversity agenda (CBD, 2019).

Adopted in 1991, the AEPS, the precursor for the AC, was influenced by the global developments in environmental governance taking place simultaneously. It included non-state actors as observers (Koivurova, 2010).

Science

Science is often a driving force for international environmental cooperation. For international cooperation on biodiversity, the scientific component has been further strengthened by the establishment of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). This is an independent intergovernmental body that provides policymakers with scientific assessments of the state of knowledge on biodiversity, ecosystems and ecosystem services. (IPBES website). To some extent, IPBES can be seen as the IPCC for nature.

Arctic cooperation on biodiversity aims more at generating up-to-date knowledge than policymaking and norm-setting (further discussed below), making the importance of the scientific community even more obvious. The 2013 ABA is the result of contributions from 252 scientists together with holders of traditional knowledge. More than 110 scientists have peer-reviewed the main ABA report

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(CAFF, 2013). CBMP, another CAFF flagship, also includes a large scientific network (CAFF, 2017a).

The role of science in international environmental governance has attracted extensive academic attention, especially on the relationship between science and policymaking. As a starting point, for knowledge to influence international decision-making arenas and in national administration, there must be broad scientific consensus on the nature of the problem and to some extent how it can be solved (Andresen, Rosendal, & Skjærseth, 2017). Also crucial is the degree of economic and political controversy around a given topic (Andresen, Skodvin, Underdal, & Wettestad, 2000).

A third parameter often mentioned is whether and how a given challenge features on the public and political agenda, as the degree of public and political attention will affect whether scientific knowledge is used. A fourth significant dimension concerns the precision of such information (or related recommendations) (Rottem, Prip, & Soltvedt, 2018). A defined area where the relationship between goal and means is clear will be more easily captured by policies.

A final factor is how the relationship between management and research communities is organised and what actors are involved. Is the relationship randomly organised? Are there formalised routines for researcher access to relevant governance bodies? Are these characterised by a hierarchical structure, or are communication lines basically equal? (Andresen et al., 2000).

We now turn to science on Arctic biodiversity in light of the above indicators, and its impact on governance and policymaking: scientific consensus, economic/political controversy, public/political attention, precision and organisation, with a specific focus on the latter.

Scientific outputs on Arctic biodiversity are independent and carry heavy scientific weight. There seem to have been no noteworthy disagreements as to the findings. As noted, they have attracted international attention and have fed in as Arctic contributions to global biodiversity assessments. There appears to be broad consensus on the extent and the character of the challenges, and their complexity, dependent on factors generally beyond the control of Arctic states. They require action from Arctic and non-Arctic states as well as intergovernmental action within the Arctic on, for example, protected areas across borders. The Arctic states have lacked political will to enter into agreements that could affect states' sovereign rights to land and sea territory.

Arctic biodiversity is increasingly in the public and political focus. As mentioned, the Arctic Biodiversity Congresses, held in 2014 shortly after the release of the ABA, and again in 2018, attracted more participants than any other AC event.

Concerning precision, the public and political attention accorded to the scientific findings indicates that that they have been precise in terms of the state and current trends in Arctic biodiversity, while also noting the remaining knowledge gaps, as acknowledged by ABA Key Finding 8: "Current knowledge of many Arctic species, ecosystems and their stressors is fragmentary, making detection and assessment of trends and their implications difficult for many aspects of Arctic biodiversity". The same applies to drivers of biodiversity loss, as made clear in the ABA. Further, an integral part of ABA is a report for policymakers with 17 policy recommendations, which have been followed up by a 2013–2021 Action Plan for Arctic Biodiversity (CAFF, 2015a).

These recommendations and actions, aimed at making knowledge generation policy relevant, could be seen as a move towards the declared ambition of the AC to expand its role from policy-shaping into policymaking (Arctic Council, 2013). They could also be seen as confirming the general conception that the Council is a forum for soft law (Soltvedt, 2017). However, it is noteworthy that the Council's recommendations and actions on biodiversity are generally less prescriptive and broader than in its other fields of cooperation. They are often directed towards future AC scientific work rather than specific action by Arctic states in collaboration or individually (Rottem et al., 2018).

The main concepts in this context – biodiversity, ecosystems, ecosystem services and mainstreaming – are in themselves so broad as to be less suited for targeted, tangible and measurable recommendations and provisions than other areas of Arctic cooperation, like short-lived climate pollutants, oil-spill preparedness, and response and search-and-rescue, where soft or hard law instruments have been concluded among the Arctic states. The most targeted CAFF recommendations have concerned the most demarcated areas of the biodiversity agenda, like the management of sea birds and the prevention of alien invasive species (Rottem et al., 2018).

Closely related to the lack of precision on how to follow up on the generation of scientific knowledge is lack of precision in the Council's organisational structure and practices. First and foremost, the AC is not a treaty-based intergovernmental institution, so it has limited authority to conclude legally binding agreements. Recent years' legally binding agreements for the Arctic states have been formally adopted by the eight individual Arctic states. Broadly, the AC can be seen as a forum for knowledge production conducted under its six working groups. These are the backbone of the Council, aimed at mapping and analysing Arctic challenges, but they have developed organically. To varying degrees, their work is directed by their superior bodies, the Ministerial Meetings and the SAOs. Further, the outputs of the working groups include specific recommendation for follow-up activities by the AC, its member states or both, with varying degrees of political weight.

CAFF, with its biodiversity portfolio, has not come as far as in other fields of Arctic cooperation in developing specific, policy-relevant recommendations and conclusions. Those that have been developed are typically not directed towards state or interstate actions and thus have no accompanying monitoring/reporting obligations, as for example, the biennial reports on the status on implementation of the recommendations of the Arctic Marine Shipping Assessment (AMSA).

In conclusion, the comprehensive and credible scientific work on Arctic biodiversity has been important in itself, by expanding knowledge about conditions and factors. This is a prerequisite for taking necessary action at the international, Arctic and state levels. However, as the recommendations for following up new biodiversity knowledge are neither formulated nor perceived as binding upon states, their effect on Arctic state and interstate policy is difficult to measure, as discussed below in relation to the WWF Arctic Council Conservation Scorecard.

Could this characteristic of CAFF/AC as a forum for scientific research and not policymaking have bearings on the degree of business and NGO involvement in AC work on biodiversity? This will be further addressed below.

Business

The role of business in international environmental governance is highly varied. Businesses are producers, providers and investors of environmental technology; they are often the causes of environmental harm through their industrial activities. In addition, and particularly relevant to biodiversity, businesses are affected by ecosystem services and rely on them and their underlying

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biodiversity – examples include forestry, fishing, agriculture and ecotourism. Finally, as a key factor in the development of a Green Economy, the business sector is part of the solution for creating market-based instruments for biodiversity conservation and sustainable use. In that context, biodiversity is seen as a component of "natural capital" (Natural Capital Coalition, 2016). Services provided by nature are estimated to be worth some US$125 trillion a year: in comparison, global GDP in 2017 amounted to US$75 trillion (International Chamber of Commerce, 2018).

Since the late 1980s and early 1990s, business – often in collaboration with intergovernmental and non-governmental forums – has taken several voluntary initiatives in the form of codes of conduct, publication of environmental reports, design of environmental management systems and establishment of environmental standards. Some of these are mentioned below.

The need for business involvement in safeguarding biodiversity follows indirectly from Article 6 (b) of the CBD, which calls for the integration of biodiversity concerns into sectoral and cross-sectoral plans, programmes and policies – later labelled "mainstreaming". It also follows from the 2005 UN Millennium Ecosystem Assessment, which introduced the concept of "ecosystem services" as the benefits we obtain from what nature can provide, highlighting biodiversity as underpinning ecosystem services (Millennium Ecosystem Assessment, 2005). This was followed up by the 2007 "Economics of Ecosystems and Biodiversity" (TEEB), drawing attention to the economic benefits of ecosystem services and biodiversity and the consequent costs of ecosystem degradation and biodiversity loss (TEEB website). Among other outputs, the TEEB issued a report specifically addressing business (TEEB, 2010).

"Business and biodiversity" has been a buzz term in the international biodiversity context since it first features on the agenda at CBD COP 8 in 2006 (CBD decision, VIII/17). *The Global Partnership for Business and Biodiversity,* established as a loose "network of networks", currently comprises 21 national and regional initiatives working towards greater business engagement on biodiversity-related issues. The partnership is facilitated by the CBD Secretariat, which also issues a newsletter for the partnership (Global Partnership for Business and Biodiversity website).

The global *Aichi Biodiversity Targets* adopted at COP 10 in 2010 had a strong focus on biodiversity mainstreaming and on addressing the underlying causes of biodiversity loss, thereby creating further impetus to business and biodiversity (CBD Decision X/2). Also, at COP 10, a first comprehensive business acknowledgement of its significant role in achieving biodiversity conservation and sustainable use was delivered through a report by the World Business Council for Sustainable Development (World Business Council, 2010).

At CBD COPs 13 and 14 in 2016 and 2018, biodiversity mainstreaming topped the agenda, with representation of ministers from the agriculture, forestry, fishery and tourist sectors at its high-level segment. The *Business and Biodiversity Pledge* put forward for signature at COP13 has now been signed by some 130 businesses. Here, businesses commit to measuring and valuing impact and dependencies on biodiversity, to minimise the impacts, and to report on actions and achievements in this regard (CBD, 2016).

At regional level, the EU Business and Biodiversity Platform website has been established as a forum for dialogue and policy interface, aimed at working with and helping businesses to integrate natural capital and biodiversity considerations into business practices. It has more than 300 members including businesses from a wide range of sectors and countries, EU trade associations, NGOs, public authorities, governments and international organisations.

As to business involvement in Arctic governance, it has been expressed as "a source of concern that Arctic businesses and the private sector are generally major drivers of the changes occurring in the Arctic but are seen to have almost no influence on the work of the AC" (Kankaanpää and Young, 2012). This was sought to be changed by the establishment of the Arctic Economic Council (AEC) as "an independent organization that facilitates Arctic business-to-business activities and responsible economic development through the sharing of best practices, technological solutions, standards, and other information" (AEC website). Membership is open to corporations, partnerships and indigenous groups that have an economic interest in the Arctic. The Arctic has encouraged close cooperation with the AEC; and in 2019, a Memorandum of Understanding was signed between the two (Ibid.).

Although the term "sustainable Arctic economic and business development" is included in the AEC mission statement, and the AEC has established a working group on "Responsible Resource Development", biodiversity and environmental concerns as such have so far been weakly reflected in AEC documents and activities. Only in October 2019, the first meeting between the Arctic Council SAOs and the AEC was held and only then biodiversity was addressed by the AEC. Among other subject areas of common interest, "mainstreaming biodiversity" was on the meeting agenda (AEC news release, 2019).

In terms of biodiversity, it should be recalled that the main threats to Arctic biodiversity are not habitat loss, degradation and overexploitation of natural resources, although these are main factors on a global scale and can often be attributed to business activities. As highlighted by the ABA, it is human-induced global warming, caused by activities that may be undertaken away from the Arctic, that is by far the most serious stressor. This may indicate that business activities and business involvement in biodiversity governance may be less important in the Arctic, although contamination from persistent organic pollutants and heavy metals in the Arctic from distant sources through ocean currents, rivers and the atmosphere can be seen as an indirect influence on biodiversity from business activities. Further, with improved access to previously inaccessible areas and rising global demand for resources, business activity is likely to increase – with resultant increases in the business footprint on the fragile Arctic ecosystems (Barry and Price, 2018).

As noted, international biodiversity commitments, stemming mainly from the CBD, have guided the biodiversity work of the AC. This includes the broad ecosystem approach to biodiversity management, the idea of biodiversity as underpinning ecosystem services, and recognition of the need to mainstream concerns for biodiversity across society – including the business sector. With its more traditional approach to nature conservation and believing that business activities could not seriously affect Arctic biodiversity, CAFF did not have a particular focus on business engagement in its first 15 years. An opening came with the ABA, not least its Policy Recommendation 4 (CAFF, 2013):

> Require the incorporation of biodiversity objectives and provisions into all Arctic Council work and encourage the same for on-going and future international standards, agreements, plans, operations and/or other tools specific to development in the Arctic. This should include, but not be restricted to, oil and gas development, shipping, fishing, tourism and mining.

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Also relevant is Recommendation 13:

> Evaluate the range of services provided by Arctic biodiversity in order to determine the costs associated with biodiversity loss and the value of effective conservation in order to assess change and support improved decision-making.

The Action Plan for following up the ABA recommendations includes several implementation actions related to business. There are calls for strengthened cooperation with industry in biodiversity monitoring, binding and/or voluntary agreements/standards for industry and strengthened or new strategic partnerships, particularly with industry, to seek innovative solutions and expand responsibility for taking care of biodiversity. Moreover, there is a request to develop a set of biodiversity principles for the AC, observers and stakeholders on incorporating biodiversity objectives and safeguards into their work (CAFF, 2015a).

As a follow-up to the ABA recommendations and actions on biodiversity mainstreaming, meetings were held between business and AC representatives in the margins of the first Arctic Biodiversity Congress in 2014 on how to engage business in Arctic biodiversity conservation (CAFF, 2017b). Here, a clear message was sent from industry representatives: producing guidelines for industry would be overly restrictive, given the broad range of such tools available. Business stakeholders felt that a more productive option would be a set of biodiversity principles for incorporating biodiversity objectives and safeguards into ongoing activities. (Ibid).

An initial step towards implementing the ABA recommendations relevant to mainstreaming and business involvement was taken with the initiation of a scoping study on valuation of Arctic biodiversity and ecosystem services, based partly on the approach and methodology set out in the global TEEB project mentioned above (CAFF, 2015b). The study, led by Sweden, was conducted by CAFF, the United Nations Environment Programme TEEB, World Wide Fund for Nature (WWF), and the GRID Arendal Centre in Norway – thus, with no representation from business.

The TEEB Scoping Study is very general regarding the need for valuating Arctic biodiversity and ecosystem services and offers no specific action recommendations. Instead, it provides overall guidance and examples of policy focus areas that could be further refined and assessed, whether using a TEEB methodology or not. Noticeable is the considerable attention that is paid to obstacles and challenges and even resistance to ecosystem services valuation: "Resistance to, or caution about, approaches to policy that focus on valuation of ecosystem services arose throughout the scoping study period, often related to concern about putting prices on aspects of Arctic nature that cannot or should not be priced". During the preparation of the report, indigenous peoples' representatives raised concerns that "monetary valuation would result in turning nature into a commodity and that this would exacerbate existing imbalances between development interests and local people, and/or between Indigenous Peoples and others when it comes to decisions involving trade-offs" (CAFF, 2015b).

The valuation report highlights business as an important player in ecosystem services management. A short chapter, "Ecosystem services in Arctic oil and gas development: An industry perspective", authored by the Global Oil and Gas Industry Association for Environmental and Social Issues (IPIECA), presents its own biodiversity and ecosystem services guidance (IPIECA, 2011).

However, the TEEB Scoping Study has never been followed up in the AC context.

In response to the ABA Action Plan, a set of biodiversity principles were developed under CAFF auspices to guide the AC, its observers and stakeholders on biodiversity mainstreaming, together with a background and options paper. The seven principles are very broad and do not add new concepts to the ABA policy recommendations. They do not relate directly to business involvement in biodiversity management (Eamer, 2016).

The latest step towards implementing the mainstreaming and business-related ABA recommendations is the development of a mainstreaming case study on the incorporation of biodiversity provisions into the work of a select industry. CAFF chose to engage with the mining industry. Mining and other extracting industries are important economic drivers in the Arctic, but with potential adverse effects on biodiversity and traditional ways of life in the region. A series of CAFF-hosted workshops were held in 2018 and 2019 with representation from the mining industry and related companies, government agencies and indigenous peoples. The workshops were followed up by a CAFF report to the AC on challenges and proposed solutions for mainstreaming biodiversity in Arctic mining. The report concludes by expressing hopes that the mining industry project will pave the way for future work on mainstreaming with other industry sectors that operate in the Arctic (CAFF, 2019).

In conclusion, there is widespread recognition that the involvement of business is needed for the management on Arctic biodiversity, increasingly exposed to impacts from business activities. Additionally, biodiversity is seen through an ecosystem services lens, as a resource for the development of business in its self-interest. Thus far, however, the Arctic business–biodiversity connection has generated aspirations and broad statements, not specific, tangible initiatives.

Non-Governmental Organisations (NGOs)

Among the many NGOs that have influenced the preparation and follow-up of the CBD and other biodiversity-related conventions, two organisations stand out: the International Union for the Conservation of Nature (IUCN) and the World Wildlife Fund (WWF). These are also the leading organisations in relation to the AC and Arctic biodiversity.

The IUCN and the WWF are the only NGOs to have been granted observer status in the AC. Greenpeace, also very active in Arctic environmental affairs with its campaign activities, has applied, but has so far been rejected. AC decisions on observer status do not require a statement of reason, but the AC reluctance could well be due to the activist approach of Greenpeace on marine oil exploitation, including the action against the Russina Prirazlomnaya oil platform in the Pechora Sea in September 2013 (Knecht, 2018). It is also likely that the AC Permanent Participants of Arctic indigenous peoples still feel some animosity towards Greenpeace because of its campaign against commercial seal hunting in the Arctic, which led to an EU ban on the import of commercially harvested seal products – with severe consequences for the livelihoods of many Inuit communities.

The IUCN is actually a hybrid between a governmental and a non-governmental organisation, with a membership of governments, government agencies, scientific and civil society organisations. While it is categorised as an NGO in this context, it is registered under the category "Intergovernmental and Inter-Parliamentary Organizations" and not "non-governmental organizations" in the official AC list of observers (AC website). Founded in 1948, it is the oldest global

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environmental organisation and forms the world's largest professional global conservation network. The IUCN supports scientific research, manages field projects globally, and brings governments, NGOs, UN agencies, companies and local communities together to develop and implement policy. According to the IUCN website, it has some 1400 member organisations, with inputs from of some 15,000 experts. Among its best-known activities is the production and management of the IUCN Red List of Threatened Species.

IUCN's hybrid character has helped it to play a catalytic role in supporting new developments in international biodiversity governance. It has been proactive in developing the CBD and the older biodiversity-related conventions, also by drafting legal texts as the basis for negotiations (Sands & Peel, 2018, p.91). In the follow-up to these conventions, both the IUCN and the WWF have been very active, influential players.

The major IUCN contribution regarding Arctic biodiversity is scientific. The IUCN and CAFF have established cooperation, with the CAFF flora expert group also serving as an IUCN Arctic Plants specialist group.

Moreover, the IUCN plays a special role in the "Agreement on the Conservation of Polar Bears and Their Habitat" signed in 1973, by the five range states: Canada, Denmark (Greenland), Norway (Svalbard), the USA (Alaska) and the USSR. The IUCN Polar Bear Specialist Group, part of the IUCN Species Survival Commission, acts as *de facto* scientific and technical body for the agreement. This group was established in 1968, following the First International Scientific Meeting on the Polar Bear in 1965 (Durner, Laidre, & York, 2018). The latest of the 18 meetings of the Polar Bear Specialist Group was held in 2016, with the next one scheduled for 2020. With recent years' population decline and with the emergence of the polar bear as a communications icon for climate change in the Arctic, the agreement and the work of the Specialist Group have understandably gained more attention.

As the official advisory body on nature under the UNESCO World Heritage Convention, the IUCN has identified globally significant marine sites in the Arctic that warrant protection and are or might qualify for World Heritage status (Speer et al., 2017). Lastly, IUCN has been involved in a project assessing the amount of micro-plastics and their impact on the Arctic Ocean (IUCN; Microplastics: A global disaster in the Arctic Ocean).

The WWF has had a Global Arctic Programme since 1992 and has offices in all Arctic countries except Iceland. While also providing scientific input to the AC, the WWF has had a more policy-oriented Arctic profile than IUCN and provides recommendations and suggestions for AC chairmanship programmes to strengthen conservation and sustainable development aspects (WWF Global Arctic Programme, 2016). WWF produces *The Circle,* an Arctic magazine published four times a year each covering a theme relevant to the AC agenda. *The Circle* no. 4, 2018 is specially devoted to Arctic biodiversity. (See also WWF Factsheet, Global Arctic Programme, Undated.)

The policy orientation of WWF was emphasised with the comprehensive WWF Arctic Council Conservation Scorecard from 2017 (WWF, 2017) on implementation of AC conservation and biodiversity-related proceedings for the period of 2006–2013. The Scorecard assessed six areas of the AC's work important for the state of conservation in the Arctic: Conservation areas, Biodiversity, Shipping, Cooperation on Oil Spill Prevention, Preparedness and Response, Black Carbon and adaptation and Ecosystem-Based Management. Thus, the Scorecard reflects the broad biodiversity agenda and the many factors affecting biodiversity. For each area, the Scorecard assessed national implementation by Arctic States and by the Council as such.

As there are no standardised types of AC proceedings, the Scorecard was based on "directions" – explained as ministerial decisions, policy recommendations, guidelines, framework plans and binding agreements. The WWF conducted a systematic screening to identify the most measurable AC directions. Remarkably, only about half of AC directions qualified for assessment under the Scorecard. The other half were considered to be unprecise, lacking specification of actions, timelines and specification of the party responsible for action. The Scorecard includes examples of measurable and non-measurable directions.

Based on this general finding, the WWF has recommended that AC directions evolve with more ambition, specificity and measurability, and with deadlines stipulated. A robust national reporting system on implementation to improve accountability is also recommended (WWF, 2017).

The Scorecard generally shows weak levels of national implementation of AC directions relevant for conservation and biodiversity. The scores are considerably highest for the most tangible and measurable areas: Cooperation on Oil Spill and Black Carbon and Adaptation. For both areas, more specific, normative directions than usual for the AC have been set, with a legally binding instrument on oil-spill preparedness and a strong AC framework for action on enhanced black carbon and methane emissions reduction. The latter includes a common vision, national and collective action, and actions by others (Arctic Council, 2015a). This framework can be seen as a soft law instrument, further strengthened by targets set by the AC to reduce black carbon emissions to between 25% and 33% below 2013 levels by 2025.

The lowest scores are on Biodiversity and Ecosystem-Based Management. These are broader and less tangible areas with weaker and more general AC directions on specific national requirements. The Scorecard concludes that Arctic states have been slow in mainstreaming biodiversity concerns into plans for development, legislation and management practices (WWF, 2017). Scores are generally higher concerning the AC itself and its implementation of directions. Also here, the less demarcated areas of Biodiversity and Ecosystem-Based Management are the weak spots.

Summing up, both the IUCN and the WWF have provided considerable technical and scientific support to the AC on Arctic biodiversity. More than the IUCN, the WWF has also exercised policy advocacy, mainly through its Arctic Council Conservation Scorecard on the performance of Arctic states and AC governance arrangements.

Discussion and conclusions

At its 2013 Ministerial Meeting, the AC declared its willingness to expand its role from policy-shaping to policymaking, thereby moving from being a body mainly for scientific cooperation, towards becoming a more "normal" intergovernmental organisation with firmer commitments. The adoption of three legally binding agreements – on oil-spill preparedness and response, search and rescue, and scientific cooperation – together with soft law instruments such as the Framework for Action on Enhanced Black Carbon and Methane Emissions Reduction and the AMSA recommendations indicate that AC is – cautiously – on track with this endeavour. The acceptance of six non-Arctic states as AC observers, while the same AC meeting refused the applications of seven non-state organisations, is also a sign that the Council is becoming more

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of a mainstream intergovernmental organisation (Steinberg & Dodd, 2015).

Such a development is to a lesser extent the case for AC work on biodiversity under the auspices of CAFF, which has largely remained a forum for scientific research, with fewer political commitments for states and the AC as such (Prip, 2016). The recommendations of the AC biodiversity flagship, the ABA, are broader and less measurable than for example those of the Arctic Marines Shipping Assessment; and the ABA follow-up action plan is focused on additional scientific work for CAFF. This may be due to the ever-wider, intangible characteristics of the biodiversity agenda compared to other more demarcated AC work areas – an assumption supported by the findings of the WWF Arctic Council Conservation Scorecard. Notably, such demarcated areas like shipping, mineral extraction and black carbon emission control are also important for biodiversity.

It may also be due to the way the AC working group dealing with biodiversity, CAFF, is composed and operates. Since CAFF was established, the national representatives in CAFF have typically come from the technical/scientific rather than the political part of national environmental management. These are thus well equipped to interact with the scientific environment as "knowledge compilers", the result being demonstrated through the highly acclaimed CAFF knowledge production and dissemination discussed above and below. Conversely, they do not necessarily have prerequisites for formulating policies to follow up the scientific assessments, and they may also be reluctant to do so. This appears to be tacitly accepted by the AC and SAO in the absence of instructions to CAFF on police directions (Rottem, Prip, & Soltvedt, 2020).

This special feature of the biodiversity portfolio has implications for non-state actors as well.

Science has a very significant influence. CAFF-initiated cooperation on monitoring and assessments has improved the knowledge base on Arctic biodiversity considerably. Further, CAFF has delivered consistent high-quality communication of the knowledge to international processes. This has put Arctic biodiversity in a global context – an achievement comparable to the catalytic achievements of AMAP in informing and influencing global processes on the severe effects on the Arctic environment of climate change and heavy metals/chemicals contamination. The importance of this scientific component is not to be underestimated and should continue to be the backbone of AC cooperation on biodiversity. However, strictly science-based, non-politisised assessments and monitoring of the state of Arctic biodiversity do not preclude the formulation of policies and norm-setting for joint Arctic action. On the contrary, it could form the basis of such policies – as is increasingly the case in other of AC's areas of cooperation.

Unlike science, the business sector has not been much involved. Often, the involvement of the business sector in intergovernmental environmental cooperation has been through demonstrating best practices, standards and guidelines to feed into the setting of legally binding or soft law norms by governments. However, government reluctance to norm-setting regarding Arctic biodiversity protection has left limited space for such involvement. CAFF has recently taken a cautious step by working with and using the mining industry as a case study on integration of biodiversity concerns.

One means of underscoring the need for more business involvement in the work of the AC could be through granting observer status for representatives of business, on a par with the observer status of other non-state actors. In fact, the Association of Oil and Gas Producers did apply for such status but was rejected by the AC at its 2013 meeting together with six other non-state organisations, including Greenpeace. At the same meeting, six non-Arctic states were approved as observers (whereas the EU application was deferred and has still not been approved). No official justifications have been issued regarding the seven organisations, but it has been suggested that denial emerged as the politically "safest" way to deal with applications from certain "problematic" applicants (Steinberg & Dodds, 2015): it would have been politically difficult to refuse Greenpeace but approve the Association of Oil and Gas Producers.

Another step towards greater involvement of business could be for the authoritative body for Arctic business development – the AEC – to become more engaged in the responsibility and role of business in ensuring environmental sustainability, also for biodiversity.

Strengthened cooperation with industry in biodiversity monitoring is mentioned in the action plan for implementing the ABA recommendations. It remains to be seen how this will be implemented. Another action would involve developing, as needed, binding and/or voluntary agreements/standards towards the harmonisation of industry-specific and cross-industry standards (CAFF, 2015a). This could be seen as an invitation to the business community to partner in defining sustainable business standards for biodiversity in the Arctic, and in exercising environmental stewardship. The industry representatives that responded to this suggestion apparently did not see the need, and such standards are now off the CAFF agenda – further confirmation of the CAFF and AC reluctance to develop policies and norms on Arctic biodiversity governance. CAFF and industry representatives were satisfied with a less prescriptive action: a set of principles on incorporating biodiversity objectives and safeguards into AC work. These principles are very general in nature: reflecting global principles set by the CBD, with limited adaptation to specific Arctic needs, they have scant relevance to the Arctic business–biodiversity case.

Globally, the need for identifying clear reference points for business involvement has been highlighted (CBD, 2018). What are the reference points for business to get involved in Arctic biodiversity governance if the AC agenda on biodiversity is solely scientific and does not include rules and standards? Perhaps the best entry point would not be through the general broad and multi-faceted biodiversity agenda as such, but – in the spirit of mainstreaming – through a sectoral approach focused on individual business sectors that affect biodiversity. This corresponds well with the current CAFF project of developing a case for incorporating biodiversity concerns into the work of the mining industry. This work could lead to identification of best management practices, in turn leading to the development of sector-specific guidelines and standards for this and other business sectors.

The special features of biodiversity in the AC also have implications for the roles of NGOs, not least the two environmental organisations with AC observer status, the IUCN and the WWF, both of which have been partners in and contributors to scientific work. Little attention has been given by NGOs to the AC governance structure. Increasingly, however, the WWF has taken a policy advocacy role in the field of biodiversity, culminating with the Arctic Council Conservation Scorecard which included criticism of AC governance in this field – among other things, the lack of precision and reporting requirements as to decision-making. More of this type of NGO advocacy could provide an important push for a stronger AC governance framework.

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This review of the role of non-state actors indicates the need for a closer political cooperation on biodiversity in the AC, with firmer commitments for states as well as the Council. High-quality scientific work has been generated, documenting with ever-greater strength that action on the ground is needed to reduce the loss of Arctic biodiversity. However, the cooperative mechanisms for translating these scientific findings into coordinated, joint action by the Arctic states are not in place – thus, there is no governance platform for proper influence of business and NGO actors. To create such a stronger governance platform, the willingness and the ability of the rotating national chairmanships of the AC will be an important factor. North 2013 has demonstrated how critical the performance of the Swedish chairmanship was for the adoption of landmark AC decisions in 2013.

The AC has been criticised for lack of legal status and regulatory powers, as indicating its weakness as a governance framework (Durfee & Johnstone, 2019). However, legal bindingness may not be a prerequisite for a stronger framework and effective implementation of commitments by Arctic states and the AC (Koivurova, Kankaanpaa, & Stępien, 2015). Legally binding instruments may have weak and poorly implementable commitments, whereas the soft law recommendations commonly adopted by the AC outside the biodiversity realm may be well suited for implementation (Smieszek, 2019; Soltvedt, 2017). Essential features of commitment as drivers of implementation are precision in formulation, monitoring of implementation and – particularly important – that relevant stakeholders are involved.

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