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Actions for Arctic Biodiversity

Progress report: 2013-2023

1. Introduction

At the 2015 Arctic Ministerial in Iqaluit, the Arctic Council Working Group, the Conservation of Arctic Flora and Fauna (CAFF) presented the Actions for Arctic Biodiversity 2013-2021: implementing the recommendations of the Arctic Biodiversity Assessment (Actions for Biodiversity). This *Actions for Biodiversity* guides how the Arctic Council addresses biodiversity issues and describes actions to be undertaken in response to the findings of the Arctic Biodiversity Assessment (ABA). At the Arctic Council Ministerial Meeting in 2021, a new *Actions for Biodiversity* was due to be presented along with a final report on the implementation of the Actions for Arctic Biodiversity 2013-2021. However, development of the new *Actions for Biodiversity* has been delayed due to COVID-19 related challenges, including delays in international processes informing this process i.e., the post2020 Global Biodiversity Framework. In response, the lifespan of the current *Actions for Biodiversity* was extended until 2023 and over the next 2-years a new *Actions for Biodiversity* will be developed for delivery to the 2023 Arctic Council Ministerial. To inform this process this report provides an overview of work on biodiversity in the Arctic Council and in particular in CAFF and how this work can influence change. The report also includes a status on progress towards implementation of the current *Actions for Biodiversity.*

2. The Arctic Council and Biodiversity

While aspects of biodiversity are touched upon across several of the Council's subsidiary bodies, the CAFF Working Group is the primary instrument through which the Council addresses biodiversity with a mandate to address the conservation of Arctic biodiversity, and to communicate its findings to the governments and residents of the Arctic, helping to promote practices which ensure the sustainability of the Arctic's living resources. It does so through monitoring what is happening to Arctic biodiversity, assessing changes detected and based on the outcomes from these activities, developing policy recommendations and advice designed to contribute towards informed decision making. CAFF also reports on Arctic biodiversity through a framework of agreements with global conventions and initiatives relevant for Arctic biodiversity e.g., the Convention on Biological Diversity (CBD) (CAFF 2009), Convention on Migratory Species (CAFF 2013), Ramsar Convention on Wetlands (2013), Global Biodiversity Information Facility (CAFF 2016), and the Polar Bear Agreement (CAFF 2020). One example

of how an Arctic Council report can directly inform and support decisions relating to global biodiversity frameworks is demonstrated by the release of the first component of the ABA, the Arctic Biodiversity Trends 2010: Selected Indicators of Change report (CAFF 2010) which led to recognition by the CBD of Arctic biodiversity as an emerging issue (CBD 2010) and an invitation to the Arctic Council to provide information and assessments on Arctic biodiversity (CBD 2012).

The ability to develop effective advice and policy recommendations on Arctic biodiversity requires a baseline to provide an understanding of status, trends, and gaps in knowledge. In 2001 CAFF provided the first circumpolar overview of Arctic biodiversity, identifying key conservation issues and relationships, and the actions needed to achieve an assessment of the overall state of the Arctic environment. However, it was not until 2006 that the Foreign Ministers of the Arctic States approved a proposal to develop a comprehensive assessment, agreeing that it would be a major contribution to international conventions and agreements in regard to biodiversity conservation; providing policymakers with comprehensive information on the status and trends of Arctic biodiversity (Arctic Council 2006). In 2013, the Arctic Council released the ABA, highlighting the dramatic consequences of climate change and other factors adversely affecting Arctic species and their habitats, and providing critical information and recommendations to policymakers. The ABA consisted of five components:

- Arctic Biodiversity Trends 2010: selected indicators of change (CAFF 2010);
- Arctic Biodiversity Assessment: status and trends in Arctic biodiversity (CAFF 2013a);
- Arctic Biodiversity Assessment: synthesis (CAFF 2013b);
- Arctic Biodiversity Assessment: report for policy makers (CAFF 2013c); and
- Life Linked to Ice: a guide to sea-ice-associated biodiversity in this time of rapid change (CAFF 2013d).

In order to keep the baseline created by the ABA up to date, CAFF's Circumpolar Biodiversity Monitoring Programme (CBMP) is implementing a series of ecosystem-based monitoring plans (Jones *et al* 2019, Christensen *et al* 2013, Culp *et al* 2012, Gill *et al* 2011) to compile, harmonize and compare results from existing Arctic biodiversity and ecosystem monitoring efforts. Each plan identifies key elements, Focal Ecosystem Components, where changes in their status likely indicate changes in the overall environment (CAFF 2021). The first outcomes from the implementation of these plans are a series of State of Arctic Biodiversity Reports: Marine (CAFF 2017), Freshwater (CAFF 2019), and Terrestrial (CAFF 2021) which respond to ABA recommendations on the need to fill gaps in knowledge and detect trends (CAFF 2013). These reports reflect a move towards more coordinated and integrated reporting on biodiversity by the Council.

To help fulfil its mandate, also CAFF produces a range of strategies that provide evidence-based and conservation recommendations on how to implement plans intended to directly conserve species e.g., the Black-legged Kittiwake Conservation (CAFF 2020); and the Ivory Gull conservation Strategy and Action Plan (Gilchrist *et al* 2008). These strategies provide a framework to ensure the most effective management response and are developed via international cooperation between countries and scientists across the Arctic. The completion of the ABA has initiated development of a range of new range of strategies with a focus on supporting on the ground conservation change e.g., the Arctic Migratory Bird Initiative (AMBI) (CAFF 2019) and addressing mainstreaming of biodiversity into industry and development in the Arctic e.g., Mining (CAFF 2019).

3. Actions for Biodiversity

In order to develop the *Actions for Biodiversity* each ABA recommendation was analysed to identify gaps and implementation options, with all Arctic Council subsidiary bodies reviewing their activities and indicating how they have or would respond to the recommendations. A broader realm of stakeholders were engaged through the first Arctic Biodiversity Congress (CAFF 2015), where participants had opportunities to advise on the development of the Actions for Biodiversity. For each

recommendation, a series of actions were then defined that needed to be accomplished in order for a recommendation to have an impact upon the issue it was designed to address. Some of these were to be implemented through CAFF, others to be led in full, or in part, by other Arctic Council Working Groups and others require action by national authorities, stakeholders, and international organizations.

For the first time through the *Actions for Biodiversity* the Arctic Council had an overarching framework to guide and inform its actions on biodiversity, and to align these actions within broader global biodiversity frameworks. Furthermore, the structure of the *Actions for Biodiversity* provided a means of tracing the path between a Council recommendation and an effective response, thus increasing the visibility of Council effectiveness, and better connecting disparate actions into an overall strategic direction. The *Actions for Biodiversity* was not meant to be exhaustive, or to replace Working Groups' work plans but rather to provide a reporting mechanism and a framework to facilitate evaluation of the impacts of the Council's biodiversity activities. It has resulted in a more coordinated approach by the Council on how it follows up on its biodiversity recommendations and has been effective in focusing attention on the importance of implementation and follow-up reporting.

4.   Reporting on implementation

In order to understand if a recommendation has had a positive impact on the issues it was created to address, certain minimum criteria need to be met: (1) an activity needs to be initiated in response to the recommendation; (2) the design of the activity should include a means to evaluate outcomes; and (3) these outcomes and evaluation should be reported within the Council. The *Actions for Biodiversity* goes some way towards meeting these criteria in that it provides the means to track what actions are being taken in response to each ABA recommendation and contains a reporting and evaluation component. However, the current *Actions for Biodiversity* only provides an overview of initiatives taken by the Council itself and, except for isolated examples, does not capture how or if of Arctic Council states, Permanent Participants and/or Observers might have acted in response to recommendations.

The *Actions for Biodiversity* is organized into two-year implementation periods, corresponding to the cycle of rotation of the Arctic Council and Working Group chairmanships, with each period finishing at a Ministerial Meeting where the focus and deliverables for the next phase are reviewed. The reporting framework for the *Actions for Biodiversity* comprises annual reports on progress towards implementation; biennial reports providing a more in-depth evaluation to review progress and make revisions as needed; and a final report, which was due to be completed in 2021 but due to COVID-19 - related delays in international biodiversity work has been deferred until 2023.

Thus far two progress reports have been delivered to the Foreign Ministers of the Arctic Council (Barry 2017, 2019) and regular reports delivered to the CAFF Board providing a status on implementation of tasks described in the Actions for Biodiversity. In addition, progress reports have been developed for three CAFF programmes which are key to the implementation of the Actions for Biodiversity, i.e., the CBMP (Barry & Christensen 2019), Arctic Migratory Birds Initiative (AMBI) (Provencher *et al* 2017, Courtney *et al* 2021), and Arctic Biodiversity Data Service (ABDS) (Barry *et al* 2017, 2019).

Given CAFF's role as a mechanism to develop common responses on issues of importance for Arctic biodiversity and ecosystems, the implementation of the Actions for Biodiversity could serve an important function in reporting on progress in the Arctic towards achieving global biodiversity targets, e.g., Aichi Targets, the Sustainable Development Goals (SDG), and the new Post-2020 Global Biodiversity Framework currently under development. To explore this potential, the ABA recommendations were mapped by CAFF against the Aichi Targets and the SDGs, which found that CAFF activities relate most directly to SDGs 14, 15 and 17 as well as several targets within SDGs 6, 11–13 and most Aichi Targets (Annex 1).

5. Status of Implementation

In reporting on the *Actions for Biodiversity*, each action was assigned a status (initiated; Planned but not started; completed; and unknown) indicating if implementation was underway, which might result in steps towards the achievement of a recommendation. In order to assign a status to them, Arctic Council reports were reviewed, and experts queried. Outcomes underwent a review by Arctic Council Working Groups and representatives of Arctic states and permanent participants. There are 124 implementation actions defined in the Actions for Biodiversity, and of these:

- Sixty-two have been initiated and are ongoing;
- Twenty planned but not started;
- Thirty-nine have been completed
- Three are unknown

Failure to initiate a task(s) was determined to be due to one or more of the following factors: no leads, a lack of funding and/or changing priorities. Annex 2 contains details on the status of implementation for each task.
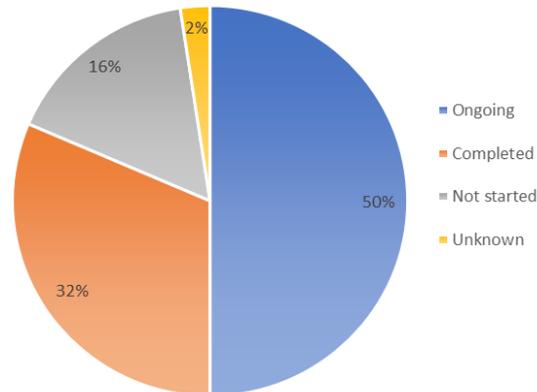
6. Influencing change

Delivering policy recommendations and advice is key to how the Arctic Council draws attention to issues of concern. Through the identification of actions needed in response, e.g., as in the *Actions for Biodiversity*, the Council can provide approaches to support changes in behaviour. However, reporting on the *Actions for Biodiversity* in terms of whether tasks have been initiated only reflects those issues and actions that states are willing to address collectively. It does not capture changes in behaviour by individual states, for example, in state policy or regulations in response to a recommendation. The progress reports on implementation of the ABA (Barry 2017, 2019) highlight how, despite its lack of formal authority and resources to directly engage in implementation, the Council can influence behaviour towards desired actions through knowledge building, facilitating dialogue, enhancing capacity, making data accessible, supporting regional and global frameworks, and providing advice to decision makers.

Building knowledge through monitoring and assessment is a core activity of the Council where it has received widespread recognition as a credible and legitimate source on the challenges being faced in the Arctic (Prip 2016). This mechanism can sometimes trigger political action, with the Arctic Climate Impact Assessment (AMAP CAFF IASC 2006) being a strong example of the potential a Council assessment has to influence change. A more recent example is the facilitated cooperation between states engaged in the implementation of CAFF's Arctic Marine Biodiversity Monitoring Plan (Gill *et al* 2011) led, which has led to the identification of time and cost-effective approaches for marine benthos monitoring. This resulted in a benthic biodiversity monitoring component being added to the existing annual monitoring process for commercial fish-stocks in several Arctic countries (Greenland, Iceland, and Norway), thus improving the coverage of overall biodiversity monitoring with relatively little extra cost (Barry 2017). This synergy might seem simple but may not have occurred without the Council's recognition of a gap in knowledge and subsequent investment by Arctic states to facilitate the gathering and exchange of knowledge (Barry *et al* 2020).

Other important influence mechanisms are the efforts to facilitate and increase engagement with Arctic biodiversity among diverse stakeholders on different scales. This can be seen in how the Council is responding to a key challenge, i.e., accommodating the desires of observer states and organisations for greater involvement. Its ability to do so will have consequences in terms of access to resources,

knowledge, and how states and bodies outside the Council respond to and act upon its products (Barry *et al* 2020). Migratory species are an obvious issue in which to engage with non-Arctic states and AMBI has become a test case through which the Council is exploring a model for how to do so. Under AMBI, for the first time, the Council is recommending specific actions to be taken outside of the Arctic in order to help conserve Arctic species (CAFF 2021a). This allows Arctic Council observer states to directly contribute to the Council's work within their own jurisdictions, thus fulfilling ABA recommendations as well as the requirement for observer states to engage with the Council at the Working Group level (Barry *et al* 2020).

The impact of these efforts is reflected in the significant increase in the numbers of organizations and non-Arctic states involved in AMBI. Over 70 organizations, including governments, academia, industry, and NGOs from 20 non-Arctic states have been engaged, ranging from attending or hosting meetings, membership on flyway committees and providing resources. Prior to this, observer state engagement in CAFF was limited, and this increased cooperation reflects a growing understanding that the implementation of some ABA recommendations requires action by and partnership between Arctic and non-Arctic states, stakeholders, and international organizations, thereby strengthening the role of the Arctic Council and fulfilling various Arctic Council priorities.

Facilitating engagement within the Council itself is also an important task and a perceived lack of cooperation across its subsidiary bodies is often cited in the literature on the Council (e.g., Environment Canada 2012, Supreme Audit Institutions of Denmark/Norway/The Russian Federation, Sweden/USA 2015). The reporting and evaluation component built into the *Actions for Biodiversity* is an example of how cooperation across Arctic Council subsidiary bodies can be encouraged, with all subsidiary bodies involved in the design of the plan and reporting on its implementation. Increasing engagement can also be seen in the growing number of cross-cutting initiatives between subsidiary bodies working on tasks identified in the *Actions for Biodiversity*. Cross-cutting tasks focused initially on technical issues, e.g., as in the pooling of expertise to identify areas of heightened sensitivity to shipping (AMAP/CAFF/SDWG 2013), but have begun to evolve to include co-led policy-orientated activities, such as the development of the Arctic Invasive Alien Species Strategy and Action Plan (ARIAS) (CAFF & PAME 2017); cooperation on the Arctic Marine Protected Areas Framework (PAME 2015); and more recently a scoping process by AMAP and CAFF to develop joint activities focused on climate change impacts on Arctic ecosystems and associated climate feedbacks.

Enhancing the capacity of the Council is challenging to achieve, given the limited resources available. However, opportunities are provided for relevant stakeholders to join Council activities, learn how the system operates, and to take these skills back to inform their organisations. Examples include the science–policy fellowship developed by CAFF and the International Arctic Science Committee (IASC), supported by the Association of Polar Early Career Scientists (APECS), where early career scientists are recruited to join a CAFF initiative and become involved in the process of conducting research and developing a product to inform decision making (CAFF & IASC 2018). Furthermore, reflecting an urgency to include youth in the Council's work, CAFF and WWF organised the first Arctic Youth Summit, engaging youth from around the world to raise awareness about the Arctic environment, share knowledge, promote conservation and sustainable development, and empower young people (Arctic Youth Summit 2018). CAFF's youth exchange programme also provides opportunities for young people to spend time in different parts of the Arctic and contributed to the establishment of the global Arctic Youth Network (2020) which has become a presence at Arctic Council meetings, engaging both with SAOs and ministers.

CAFF has a longstanding recognition of the importance of Indigenous Knowledge (IK), and has endeavoured to utilize IK and find ways to include of IK holders in its work (CAFF 2019). However, this has been challenging to achieve and CAFF is undertaking several initiatives designed to find ways to enhance meaningful engagement of Permanent Participants (PP) and utilization of IK in its activities. For example, through the Salmon Peoples of Arctic Rivers, a PP lead initiative, is designing a process

for assessing freshwater river systems from an Indigenous perspective and utilizing a co-production of knowledge approach; and implementation of the Coastal Biodiversity Monitoring Plan (Tahzay *et al* 2019) which puts forward the first platform that will support bringing together IK and science through a co-production of knowledge approach. To encourage the utilization of IK work, the CAFF project proposal template requires each new initiative to explain if and how IK will be used and how its use may lead to better project outcomes, and/or provide an explanation as to why IK is not applicable or feasible for the project in question.

Making information on Arctic biodiversity accessible is an important mechanism in contributing to increased awareness of Arctic biodiversity. It is clear from the growth in visits to CAFF websites, social media followers and numbers of events that the overall trend is one of increasing traffic and dissemination, with peaks occurring around the Arctic Biodiversity Congresses in 2014 and 2018 (CAFF), demonstrating the utility of such events in Arctic Council communication efforts (Figure 3). The Biodiversity Congresses held in conjunction with meetings of the Environment Ministers of the Arctic States have come to play a key role in Arctic Council outreach and are an important tool in both increasing engagement and facilitating dialogue with scientists, Indigenous Peoples, policymakers, government officials, industry, students, and civil society (Smith *et al* 2015). Other examples can be seen in efforts to facilitate the mainstreaming of biodiversity, through strengthening and developing the incorporation of biodiversity provisions into the mining industry (CAFF 2019), and how CAFF, through its framework of agreements, supports global biodiversity frameworks, a role that can influence how these fora act on Arctic biodiversity issues. The dramatic increase in numbers of biodiversity data records available from 2015 (Figure 3) reflects the growing capacity of the ABDS to facilitate archiving and access to biodiversity information. The recognition of the ABDS as an Arctic node within the United Nations Educational, Scientific and Cultural Organizations (UNESCO) Ocean Biogeographic Information System (OBIS) and GBIF reflects an increasing awareness of CAFF as a provider of data and knowledge on Arctic biodiversity.

7. Making a Difference?

Through development of the ABA and the *Action Plan for Biodiversity*, the Arctic Council has created a means to, more effectively guide its activities and, decision-making concerning biodiversity. While it is easy to map progress on developing outputs such as the ABA (Barry 2017, 2019), CBMP (Barry & Christensen 2019) and AMBI (Provencher *et al* 2017, Price 2021), detecting changes in behaviour in response is more challenging. However, examples can be found, which illustrate how some states are taking steps towards behavioural change in response to calls for action on biodiversity issues. For example, the US, in response to the State of the Arctic Marine Biodiversity Report (CAFF 2017), are engaged in a process to improve coordination and planning between state agencies on how they act upon the report's findings and advice. This is an encouraging sign of Council outputs helping nudge movements by a state towards desired actions.

The mechanisms described in section 6, through which the Council and CAFF can exert influence, can seem nebulous and it is often difficult to draw clear lines between efforts to build knowledge and facilitate dialogue and on the ground change, where clear benefits to biodiversity can be confirmed. However, it is possible to identify examples which illustrate the importance of recording such impacts, helping to highlight the relevance of the Council. For example, during the 1980s and 1990s, declines in eider populations were reported in Canada, Russia, Greenland, and Alaska, e.g., in west Greenland an 80% reduction in breeding numbers was recorded between 1960 and 2000 (Merkel 2004). In response, CAFF's Circumpolar Seabird Expert group (CBird) facilitated the development of a population model, demonstrating that harvest levels were unsustainable and should be reduced to halt declines (Merkel 2010). These findings, supported by actions defined in the Circumpolar Eider Conservation Strategy and Actions for Biodiversity (CAFF 1997), provided arguments in Greenland that led to modified harvest regulations to restrict the hunting season and the establishment of a community-

based monitoring program. As a result, some eider populations began to recover and human disturbance and egging in breeding colonies was reduced (Merkel 2010). More recent work facilitated by CBird entailed the development of a harvest model for thick-billed murre, quantifying the impacts of hunting and oil pollution in one country on the breeding population in other countries (Fredrikson *et al* 2019). As a result, Canada, Greenland, Iceland, and Norway have begun to discuss an international management plan for the thick-billed murre. Such examples demonstrate how the Arctic Council can contribute towards direct changes in conservation and management practices for Arctic biodiversity.

Another example can be found in the East Asian-Australasian Flyway, where states along the flyway had not managed to find a way to address illegal hunting and unsustainable harvest, one of the key challenges in the conservation of Arctic migratory birds along the Flyway (CAFF 2019). CAFF's AMBI facilitated the creation of a Task Force on the Illegal Hunting, Taking and Trade of Migratory Waterbirds under the auspices of the East Asian–Australasian Flyway Partnership (EAAFP). Prior to AMBI's role in facilitation, states did not systematically address this issue under this cooperative mechanism, despite recognition that illegal hunting was a key threat. It remains to be seen how effective this taskforce may be, but there now exists a means to address this issue, one which would not have existed without the intervention of the Council. Again, this demonstrates the potential for change that the Council can exert. Equally, there are examples where actions in response to ABA recommendations have, following the same recipe, not yielded comparable success, e.g., ARIAS (CAFF & PAME 2017), where, three years after its approval no joint action has yet been taken to implement its goals and objectives. This may be reflective of the inability of states to collectively agree on how to implement the ARIAS Strategy and *Actions for Biodiversity* or it may just be that implementation is mostly a matter of national concern and a lack of reporting is making it difficult to link relevant actions inside national jurisdictions to ARIAS.

8. Action Plan for Biodiversity 2023-2030

Over the next 2-years a new *Actions for Biodiversity* will be developed for delivery to the 2023 Arctic Council Ministerial. This will be a key CAFF activity under the Finnish Chairmanship of CAFF in 2021-2023 and steps being taken to inform this process include:

- **Progress report on implementation 2013-2021:** this report prepared for delivery to the 2021 Arctic Council Ministerial will provide an overview of work on biodiversity in the Arctic Council and in particular in CAFF and how this work can influence change. It also includes a status on progress towards implementation of the current *Actions for Biodiversity.*

- *Arctic Council Actions on Biodiversity:* An online tool is under development to track biodiversity relevant outcomes from products by CAFF and other Arctic Council working groups released since the approval of the current *Action for Biodiversity*. The first version of this tool (available here[caff.is/caff-tracking-tool-2013-2021](caff.is/caff-tracking-tool-2013-2021)) captures Key Findings; Advice; Goals; Recommendations; and Actions from reports delivered by CAFF during 2013-2020. These data can be sorted based upon keywords; the type of outcome; or the programme through which the outcomes were developed; and the results downloaded. See here:

- *Actions for Biodiversity tracking tool:* to facilitate final reporting during 2013-2021; and to help identify gaps where action is needed in the new Action plan an excel database has been compiled which:
    - Provides an overview of the implementation actions for each recommendation;
    - Notes the status of each action i.e., initiated; not started; planned; completed;
    - Identifies where Arctic Council working groups were engaged;
    - Notes the outcomes/products from each action;
    - Identifies challenges found in addressing an action;

- Highlights any cross-cutting roles of actions;
- Maps actions to other CAFF strategies i.e., CBMP and AMBI;
- Maps actions to the Arctic Marine Strategic Plan; and
- Maps recommendations to the SDGs and Aichi Targets.

Similar databases have been created to track progress on implementation of the CBMP Strategic Plan and AMBI Workplan, both key tools in implementation of the *Actions for Biodiversity*.

Consultations: to provide guidance and input to the content and structure of the new *Actions for Biodiversity* a series of online workshops and interviews have been initiated with Arctic council Member States, Permanent Participants and Observers. These consist of interviews with CAFF Board member and Observers; online workshops with stakeholders; and a series of thematic teleconferences.

9. Conclusions

The mechanisms used to influence change described in this report play important roles in how CAFF works to influence change. We must keep in mind that, as multiple causal factors are often involved in shaping outcomes, it can be difficult to trace the role a CAFF activity might have played in ensuring a specific outcome. The *Actions for Biodiversity* provide a means to evaluate and guide the Council's work on biodiversity and help focus the Council's efforts to influence change. It has resulted in a more coordinated approach by the Council on how it follows up on its biodiversity recommendations. While the absence of obligated reporting makes it difficult to pinpoint where the ABA has had a direct impact, the examples provided, e.g., the role played by the CBMP in filling knowledge gaps and raising awareness, illustrate how the implementation of Council recommendations in tandem with the influence mechanisms described above can play an important role in conserving Arctic biodiversity.

While the *Actions for Biodiversity* has been effective in focusing attention on the importance of implementation and follow-up reporting, it is also clear that, when it comes to taking the jump from knowledge to action, the tools or willingness to translate this into action at the national level are often missing. The Council can also suffer from a lack of forward planning, in that attention can be focused on a product itself, without enough thought given to structure and planning to ensure follow ups on its findings in order to facilitate clear reporting and an evaluation of responses. A more thorough understanding of how the Council's activities have been used and acted upon in global, national, and more local contexts will require more comprehensive reporting by member states and organisations.

As the Arctic Council approaches its 25th anniversary, establishing a robust means of reporting on the outcomes of its activities and evaluating their effectiveness through the *Actions for Biodiversity* for Biodiversity is an important contribution towards demonstrating the relevance of the Council, facilitating the setting of priorities for its work, and shedding light on potential roles the Council might play in the increasingly complex framework of Arctic governance.

10. Annex 1: ABA recommendations mapped against the Aichi Targets and SDGs

The SDGs include 17 goals and 169 targets to be achieved by 2030. CAFF activities relate most directly to Goals 14, 15 and 17 as well as several targets within goals 6, 11, 12, and 13. The ABA contains 17 recommendations, which are in this annex mapped against the relevant Aichi Targets and the SDGs 14, 15 and 17. CAFF has a number of activities that may contribute to implementation of these in the Arctic and could help track progress through, for example:

- Facilitating partnerships between Arctic states, indigenous organisations, the private sector, and civil society to address the conservation of Arctic biodiversity, thereby helping to promote practices that promote the sustainable use of the Arctic's living resources;
- Providing a means to inform evaluations of progress towards achieving SDGs in the Arctic; and
- Providing access to biodiversity data through the ABDS to ensure collaboration and cooperation.

SDGs	Sustainable Development Targets	Relevant Aichi Targets	Relevant ABA Recommendations
14. Conserve and sustainably use the oceans, seas, and marine resources for sustainable development			
	14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution	8	2,3,4,11.-c
	14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans	6, 11, 15	2,3,4,5,6,7,8
	14.3 Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels	10, 19	16
	14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported, and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics	5, 11	2,3,4,10
	14.5 By 2020, conserve at least 10% of coastal and marine areas, consistent with national and international law and based on the best available scientific information	5,11	5-7
	14.6 By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported, and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation	3,4	------------------------

	14.7 By 2030, increase the economic benefits to small island developing states and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture, and tourism	2, 4, 6, 7, 14, 17	----------------------------
15. Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation and halt biodiversity loss			
	15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	4,5,7,11,14,15	2,5,6,7
	15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally	4,5,7,14,15	2,3
	15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought, and floods, and strive to achieve a land degradation-neutral world	4,5,15	----------------------------
	15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development	11,14,15	7a
	15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	5,12	5,6,7
	15.6 Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed	16	----------------------------
	15.7 Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products	12	----------------------------
	15.8 By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species	9	9
	15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts	2	3,4,12
17. Strengthen the means of implementation and revitalise the global partnership for sustainable development			
	17.3 Mobilize additional financial resources for developing countries from multiple sources	20	----------------------------
	17.6 Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism when agreed upon	19	8 a-b
	17.7 Promote the development, transfer, dissemination, and diffusion of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed	19	----------------------------

	17.9 Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals, including through North-South, South-South and triangular cooperation	17	14,15
	17.14 Enhance policy coherence for sustainable development	2,17	2-3
	17.18 By 2020, enhance capacity-building support to developing countries, including for least developed countries and small island developing states, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location, and other characteristics relevant in national contexts	19	14,15

11. Annex 2: Status on implementation of ABA Actions

There has been significant progress towards implementation of ABA recommendations. Progress achieved reflects how the ABA and the *Actions Plan* has provided clarity on issues affecting Arctic biodiversity and sharpened focus on how the Arctic Council should respond. Text within task item boxes refers to task item number in the Actions for Arctic Biodiversity 2013-2021 [Note: This table to be finalized upon updating of Amarok Tracking tool in March 2021]

Ongoing	Completed	Not started	Unknown

Recommendations	Implementation actions
#A: Implementation plan for ABA recommendations (Actions for Arctic Biodiversity)	A.a A.b A.c A.d
#B: Convene Arctic Biodiversity Congress.	B.a B.b B.c
#C: Continue to improve and make available information and data.	C.a C.b C.c C.d
#1: Actively support international efforts addressing climate change; both reducing stressors and implementing adaptation measures, as an urgent matter 5	1.1a 1.1b 1.1c 1.1d 1.1e 1.1f 1.1g 1.2
#2: Incorporate resilience and adaptation of biodiversity to climate change into plans for development in the Arctic.	2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 2.10 211 2.12 2.13
#3: Advance and advocate ecosystem-based management efforts in the Arctic as a framework for cooperation, planning and development.	3.1 3.2 3.3 3.4 3.5 3.6 3.7
#4: Require the incorporation of biodiversity objectives and provisions into all Arctic Council work and encourage the same for ongoing 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.	4.1 4.2 4.3 4.4 4.5 4.6 4.7 4.8 4.9 4.10 4.11 4.12 4.14 4.15

Recommendations	Implementation actions

#5: Advance the protection of large areas of ecologically important marine, terrestrial and freshwater habitats, taking into account ecological resilience in a changing climate.
  a) Build upon existing and ongoing domestic and international processes to complete the identification of ecologically and biologically important marine areas and implement appropriate measures for their conservation; and
  b) Build upon existing networks of terrestrial protected areas, filling geographic gaps, including under-represented areas, rare or unique habitats, particularly productive areas such as large river deltas, biodiversity hotspots, and areas with large aggregations of animals such as bird breeding colonies, seal whelping areas and caribou calving grounds.
  c) Promote the active involvement of indigenous peoples in the management and sustainable use of protected areas.
	`5.1` `5.2` `5.3` `5.4` `5.5` `5.6` `5.7` `5.8`

#6: Develop guidelines and implement appropriate spatial and temporal measures where necessary to reduce human disturbance to areas critical for sensitive life stages of Arctic species that are outside protected areas, for example along transportation corridors. Such areas include calving grounds, den sites, feeding grounds, migration routes and moulting areas. This also means safeguarding important habitats such as wetlands and polynyas.	`6.1` `6.2`

#7. Develop and implement mechanisms that best safeguard Arctic biodiversity under changing environmental conditions, such as loss of sea ice, glaciers, and permafrost.
  a) Safeguard areas in the northern parts of the Arctic where high Arctic species have a relatively greater chance to survive for climatic or geographical reasons, such as certain islands and mountainous areas, which can act as a refuge for unique biodiversity.
  b) Maintain functional connectivity within and between protected areas in order to protect ecosystem resilience and facilitate adaptation to climate change.
	`7.1` `7.2` `7.3`

#8: Reduce stressors on migratory species range-wide, including habitat degradation and overharvesting on wintering and staging areas and along flyways and other migration routes.
  a) Pursue or strengthen formal migratory bird cooperation agreements and other specific actions on a flyway level between Arctic and non-Arctic states with first priority given to the East Asian flyway.
  b) Collaborate with relevant international commissions, conventions, networks, and other organizations sharing an interest in the conservation of Arctic migratory species to identify and implement appropriate conservation actions.
  c) Develop and implement joint management and recovery plans for threatened species with relevant non-Arctic states and entities
  d) Identify and advance the conservation of key wintering and staging habitats for migratory birds,
	`8.1` `8.2` `8.3` `8.4` `8.5` `8.6`

Recommendations	Implementation actions
particularly wetlands.	
#9: Reduce the threat of invasive alien/non-native species to the Arctic by developing and implementing common measures for early detection and reporting, identifying, and blocking pathways of introduction, and sharing best practices and techniques for monitoring, eradication, and control. This includes supporting international efforts currently underway, for example those of the International Maritime Organization to effectively treat ballast water to clean and treat ship hulls and drilling rigs.	9.1 9.2 9.3
#10: Promote the sustainable management of the Arctic's living resources and their habitat. a) Improve circumpolar cooperation in data gathering and assessment of populations and harvest and in the development of improved harvest methods, planning, and management. This includes improving the use and integration of traditional ecological knowledge and science in managing harvests and in improving the development and use of community-based monitoring as an important information source. b) Develop pan-Arctic conservation and management plans for shared species that are, or will potentially be, harvested or commercially exploited that incorporate common monitoring objectives, population assessments, harvesting regimes, guidelines for best practices in harvest methodology and consider maintenance of genetic viability and adaptation to climate change as guiding principles. c) Support efforts to plan and manage commercial fisheries in international waters under common international objectives that ensure long-term sustainability of species and ecosystems. Encourage precautionary, science-based management of fisheries in areas beyond national jurisdiction in accordance with international law to ensure the long-term sustainability of species and ecosystems. d) Support efforts to develop, improve and employ fishing technologies and practices that reduce by-catch of marine mammals, seabirds and non-target fish and avoid significant adverse impact to the seabed. e) Develop and implement, in cooperation with reindeer herders, management plans that ensure the sustainability of reindeer herding and the quality of habitat for grazing and calving.	10.1 10.2 10.3 10.4 10.5 10.6 10.7
#11: Reduce the threat of pollutants to Arctic biodiversity. a) Support and enhance international efforts and cooperation to identify, assess and reduce existing and emerging harmful contaminants. b) Support the development of appropriate prevention and clean up measures and technologies that are responsive to oil spills in the Arctic, especially in ice-filled waters, such that they are ready for implementation in advance of major oil and gas developments. c) Encourage local and national action to implement best practices for local wastes, enhance efforts to clean up legacy contaminated sites and include contaminant reduction and reclamation plans in	11.1 11.2 11.3 11.4 11.5 11.6 11.7 11.8 11.8

Recommendations	Implementation actions
development projects.	
#12: 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.	`12.1` `12.2` `12.3`
#13: Increase and focus inventory, long-term monitoring, and research efforts to address key gaps in scientific knowledge identified in this assessment to better facilitate the development and implementation of conservation and management strategies. Areas of particular concern identified through the ABA include components critical to ecosystem functions including important characteristics of invertebrates, microbes, parasites, and pathogens.	`13.1` `13.2` `13.3` `13.4` `13.5` `13.6` `13.7` `13.8` `13.9`
#14: Recognize the value of traditional ecological knowledge and work to further integrate it into the assessment, planning and management of Arctic biodiversity. This includes involving Arctic peoples and their knowledge in the survey, monitoring and analysis of Arctic biodiversity.	`14.1` `14.2` `14.3` `14.4` `14.5` `14.6` `14.7`
#15: Promote public training, education, and community-based monitoring, where appropriate, as integral elements in conservation and management.	`15.1` `15.2`
#16: Research and monitor individual and cumulative effects of stressors and drivers of relevance to biodiversity, with a focus on stressors that are expected to have rapid and significant impacts and issues where knowledge is lacking. This should include, but not be limited to; modelling potential future species range changes as a result of these stressors; developing knowledge of and identifying tipping points, thresholds, and cumulative effects for Arctic biodiversity; and developing robust quantitative indicators for stressors through the CBMP.	`16.1` `16.2` `16.3` `16.4` `16.5` `16.6` `16.7` `16.8`
#17: Develop communication and outreach tools and methodologies to better convey the importance and value of Arctic biodiversity and the changes it is undergoing.	`17.1` `17.2` `17.3` `17.4` `17.5`

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