

Welcome to the Arctic Biodiversity Congress 2018!

As co-chairs of the Arctic Biodiversity Congress 2018, we are thrilled to welcome over 450 participants from 26 countries to Rovaniemi, Finland. We received an overwhelming response from the Arctic science and policy communities during the organization of this event, the popularity of which is reflected in the diversity of voices, perspectives, and backgrounds present with us today.

This year's Arctic Biodiversity Congress, hosted by the Conservation of Arctic Flora and Fauna (CAFF), the biodiversity working group of the Arctic Council, and the Ministry of the Environment, Finland, provides an important space for all who wish to make specific and significant contributions to the conservation of Arctic biodiversity through dialogue among scientists, Indigenous peoples, policy-makers, government officials, industry, academia, and civil society.

The Congress program is organized along six main themes that are critical to meet our common challenges in the Arctic and reflect the policy recommendations of the 2013 Arctic Biodiversity Assessment: climate change, ecosystem-based management, mainstreaming biodiversity, addressing stressors, identifying and safeguarding important areas, and improving knowledge and public awareness. We have been as inclusive as possible when developing this program from the several hundred submissions received. This makes the program diverse in subject matter and brimming with interesting meetings, presentations, and discussions.

We greatly look forward to the Congress's interdisciplinary proceedings and hope to have an engaging and thought-provoking event that inspires and motivates participants to share their knowledge, learn from each other's experiences, and work together on issues of common concern. We also hope the conversations continue beyond the meeting room walls, and back to your offices and communities, to resonate further into the region. We hope that participants continue to work together to address common challenges and find common solutions to ensure Arctic biodiversity, and all that depend on it, continue to thrive amidst some of the most dramatic environmental changes this world is undergoing.

This event builds on the success of the first Arctic Biodiversity Congress, held in December 2014 in Trondheim, Norway. We will do our utmost to ensure we surpass the successes of 2014 and look forward to your feedback from this event to continue to deliver a Congress that meets the needs of those who work in Arctic biodiversity conservation.

As co-chairs we will do our best to capture the sentiments of the Congress and provide a summary of key findings in a co-chairs report, which will supplement the many other outputs from the Congress.

We would like to thank all institutions and individuals involved in the organization and hosting of the Arctic Biodiversity Congress, including the Arctic Environment Ministers, the Senior Arctic Officials of the Arctic Council, our Multilateral Environmental Agreement partners, the CAFF Board, the Program Advisory and Industry Advisory Committees. We also wish to thank our local hosts in Rovaniemi, including Rovaniemi City, Lappia Hall, and the many local organizations who helped create a diverse and exciting program. We also wish to thank the Ministry of the Environment, Finland and the CAFF Secretariat for their efforts to prepare and host the Congress. Lastly, we wish to thank all participants for their interests and expertise.

We look forward to three and a half days of dialogue, discussion, and events and hope you will continue to contribute to make this a fruitful and memorable event.



Cynthia Jacobsson
CAFF Chair, Congress co-chair
US Fish and Wildlife Service



Aulikki Alanen
Congress co-chair
Ministry of the Environment Finland



Tom Barry
Congress co-chair
CAFF International Secretariat

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1. Purpose and context

Purpose

The Conservation of Arctic Flora and Fauna (CAFF), the biodiversity working group of the Arctic Council, in partnership with the Ministry of the Environment, Finland, is organizing the Arctic Biodiversity Congress, 2018 to promote the conservation and sustainable use of Arctic biodiversity. The Congress is relevant to all who wish to make specific and significant contributions to the conservation of Arctic biodiversity through dialogue among scientists, Indigenous peoples, policy-makers, government officials, industry, students, and civil society

Goals

- To advise the CAFF on national and international implementation of the *Arctic Biodiversity Assessment (ABA)* policy recommendations and on any changes to future phases of the Actions for Biodiversity 2013-2021.
- To consider and report on how the Arctic has fared in relation to the Convention on Biological Diversity (CBD)'s *Strategic Plan for Biodiversity 2011-2020*, the Aichi Targets and the Sustainable Development Goals.
- To relate the work of CAFF and the Arctic Council to other global processes.
- To facilitate inter-disciplinary discussion, action and status updates on implementation of ABA policy recommendations among scientists, government officials, policy makers, Indigenous people and industry representatives.
- To provide scientific, policy, NGO, academia and industry audiences the opportunity to collaborate around the themes of the ABA policy recommendations.
- To highlight the work of CAFF and the Arctic Council in circumpolar biodiversity conservation and sustainable development.
- To mainstream biodiversity and ecosystem services ensuring that the ABA policy recommendations are implemented by not just governments, but many organizations and people across various disciplines.
- Increase the visibility of Arctic biodiversity in global settings, and raise CAFF and the Arctic Council's profile amongst target audiences as a credible, reliable and authoritative voice in Arctic biodiversity research and policy.

Context: The Arctic Biodiversity Assessment (ABA)

The Arctic Biodiversity Congress is a key response to the ABA, a report containing the best available science informed by traditional knowledge on the status and trends of Arctic biodiversity and accompanying policy recommendations for biodiversity conservation. Over 260 experts from around the world worked on this milestone report, which was released by CAFF in May 2013.

The Arctic Biodiversity Congress 2018 is the second Arctic Biodiversity Congress and builds on the success of the Arctic Biodiversity Congress 2014, held in Trondheim, Norway, which brought 450+ leaders, experts, practitioners, from 26 countries together to discuss and advance major conservation issues facing the Arctic and the world. This event received overwhelming positive feedback; a post Congress survey found that respondents rated the event as 4.3/5, or "excellent". For more information on the Arctic Biodiversity Congress 2014, please visit: www.arcticbiodiversity.is/congress2014

For more information, including downloads of the Arctic Biodiversity Assessment, please visit: www.arcticbiodiversity.is

Actions for Biodiversity: Implementing the recommendations of the ABA 2013-2021

Actions for Biodiversity 2013-2021: implementing the recommendations of the Arctic Biodiversity Assessment, is the implementation plan for the ABA's 17 recommendations. It is a living document that is reviewed and updated every two years. The plan is not meant to be exhaustive or to replace working group work plans; rather it is complementary, emphasizing specific actions that address the ABA recommendations.

The Arctic Council Ministers agreed to implement 17 recommendations articulated in the *Arctic Biodiversity Assessment: Report for Policy Makers*. Implementing the ABA recommendations requires a combination of building on existing efforts and embarking in new directions. Actions are organized across the six main themes of the recommendations.

For more information: www.caff.is/actions-for-arctic-biodiversity-2013-2021

2. Practical information

App

Please download the Arctic Biodiversity Congress App to stay informed of the latest Congress news, information and program updates.

To download, please visit the App store on your iPhone or Android device and search for "Arctic Biodiversity Congress".

Submission of presentations

All presenters are asked to drop off a copy of their PowerPoint presentation file to the Congress registration desk by 17:00 local time the day before they present. If you are presenting on the first day, please drop off your presentation at the registration desk first thing in the morning.

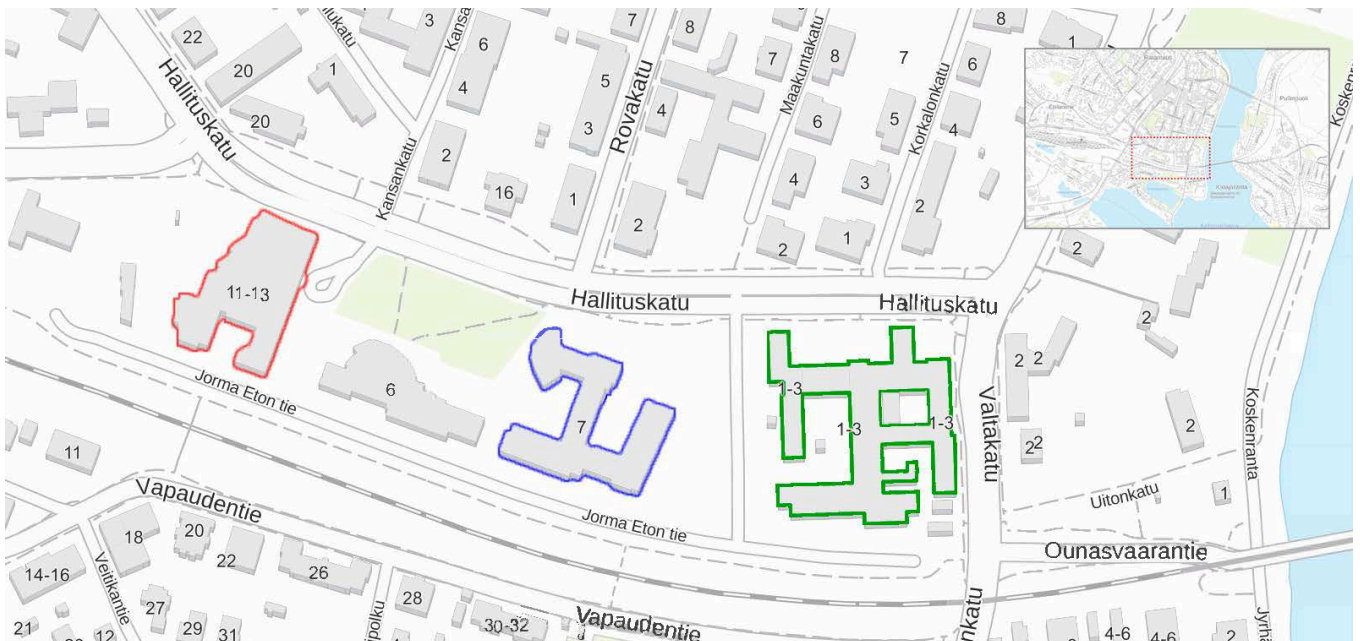
If a presenter wishes to use some additional form of multimedia (e.g., films) please inform the Congress Secretariat (caff@caff.is) before October 8th so we can ensure the correct software is available on the computer in the room. We recommend embedding any videos/multimedia into your presentation rather than relying on internet connection.

The Congress Secretariat will make these presentations available online in PDF format after the Congress is over unless instructed otherwise. If there are any concerns a presenter has about this action, please mention this when you deliver your presentation. Presentations can be edited after they have been delivered to remove sensitive materials before posting online.

A computer and a projector will be available in all session rooms.

Venue

The Congress will be held across three venues all within walking distance of each other:



Lappia Hall

Hallituskatu 11
Tieva (~400):
- Plenary and session room
Kero (70):
- Plenary overflow and session room
Saivo (120):
- Session room
Plenary speaker ready room
Congress Secretariat room
IISD Reporting Services room

City Hall

Hallituskatu 7
Valtuustosali (223):
- Plenary overflow and session room
Kiiruna (25):
- Media room
Murmansk (25):
- Side meeting room

ELY

Hallituskatu 3 B
Erottaja (35):
- Session room

Plenaries and streaming services

The Tieva plenary room in Lappia Hall seats just under 400 people. There will be over 450 Congress participants in attendance. Therefore, plenary sessions will be streamed live in Kero in Lappia Hall (capacity of 70), and in Valtuustosali in City Hall (capacity 223). You may be directed to an overflow room.

Please note that Tieva's doors will close early on October 9 for security purposes. Congress participants should arrive early to ensure proceedings can start promptly.

WiFi

The Congress venue is equipped with free WiFi for all participants in Lappia Hall (network name: ABC2018_Lappia) and City Hall (ABC2018_CityHall). There are no passwords.

Getting around Rovaniemi

Rovaniemi is the provincial centre of Lapland, located right on the Arctic Circle. The town lies at the confluence of the rivers Ounasjoki and Kemijoki, and is a historical meeting point for trade, people and cultures of the north. Today, Rovaniemi is a lively university town and a popular travel destination, as well as the regional, commercial, administrative, educational, cultural and sports capital of Finnish Lapland. With approximately 60,000 inhabitants, it is the 15th biggest town in Finland.

Buses are the only form of public transport in Rovaniemi. Please note that it is a 10-minute walk from downtown to the Congress venue and there is no bus that takes this route. For routes, timetable and tickets, please see:

<http://international.rovaniemi.fi/en/Services/Transportation>

Taxi service is readily available in Rovaniemi. We recommend using the following:

- Taxi Lähitaksi Rovaniemi, +358 200 88 000; info@lahitaksirovaniemi.fi
- Rovaniemi Taxi Service, +358 60 030 030 / +358 29 009 1090; info@rovaniementaksipalvelu.fi

Lunches and coffee

Self-serve buffet lunches will be provided during the lunch break in Lappia Hall's restaurant (sit down) and downstairs lobby (standing tables). Coffee will be served throughout the Congress at designated stations in Lappia Hall and City Hall.

Reception

There will be a reception for Congress participants that indicated they would attend during the Congress registration process at 19:30 on October 10 at the Pilke Science Centre (Ounasjoentie 6, Rovaniemi). Light food, refreshments and entertainment will be on offer. The reception is organized together with the Arctic Environment Ministers' Meeting, held the same week.

Buses will begin to leave Lappia Hall shortly after the Congress proceedings end (approximately 18:45). Congress participants are requested to please check the time tables at Lappia Hall.

Film night

Location: Arktikum Science Centre and Museum (Pohjoisranta 4, Rovaniemi)

Date: Tuesday October 9, 19:30

On Tuesday October 9 there will be a public film screening at Polarium Hall in the Arktikum Science Centre and Museum (Pohjoisranta 4, Rovaniemi). The cafeteria will be open for light refreshments before the film starts.

Buses will begin to leave Lappia Hall shortly after the Congress proceedings end (approximately 18:45). Congress participants are requested to please check the bus schedule time tables at Lappia Hall.

Featured films:

Our Shared Heritage: Arctic Breeding Birds in the Yellow Sea

10 minutes

CAFF and the Cornell Lab of Ornithology have developed a short film that features the work of the Arctic Migratory Birds Initiative to highlight the plight of Arctic-breeding migratory birds in the East Asian Australasian Flyway, and the international cooperation to reverse declining trends.

Eatnanvuloš lotit – Maan sisällä linnut – Birds in the Earth

11 minutes

Marja Helander's short film, based on dance, tells its story through the performance by two young Sámi ballet students. It's about the nature in Sápmi, the youth and the dance. It also looks at deeper questions about the ownership of Sámi land and the Sámi's right in today's Finland, where the contradiction between nature and the modern lifestyle is blurred with humour.

Angry Inuk

1 hour 22 minutes

In her award-winning documentary, director Alethea Arnaquq-Baril joins a new tech-savvy generation of Inuit as they campaign to challenge long-established perceptions of seal hunting. Armed with social media and their own sense of humour and justice, this group is bringing its own voice into the conversation and presenting themselves to the world as a modern people in dire need of a sustainable economy.

Beyond the Blue Planet: Frozen Worlds, BBC Natural History Unit

Location: Tieva

Date: Wednesday October 10, 12:45-13:15

Following the success of Blue Planet II, the BBC's Natural History Unit is now focussing attention on the frozen parts of our planet. For this landmark BBC1 6x1hr series they are looking for new animal behaviour, anthropology and science stories and hope to form synergies with experts in this field. Join producers from the Frozen Planet as they present and discuss Frozen Planet II and their international cooperation and outreach associated with the series.

Poetry lunch

Location: Tieva

Date: Thursday October 11, 12:45-13:15

Dialogues of Silence: Mia Rönkä

Dialogues of Silence merges poems and performative elements to ponder the relationship between man and Arctic nature and to reflect human relations through the imagery of Arctic nature. The poems have been inspired by Greenland, Spitsbergen, the Faroe Islands and Varanger in northern Norway. The performance will be given with a 50-year old Raven borrowed from the Turku University Zoological Museum.

Mia Rönkä, PhD., is a researcher, science writer and poet. Mia is Chair of the Circumpolar Seabird Expert Group under CAFF, an Adjunct Professor at the University of Turku, and an active birdwatcher and photographer. In her research, Mia has specialized in environmental ecology, ecosystem services and ornithology.

The texts in the performance are based on Rönkä's first poem collection *Maanalaiset linnut* (Underground birds), published by Sammakko in 2016, and on her newer, unpublished material. The poem collection was nominated as a Tiilikivi Literature Prize finalist in 2017.

The Poetics of Arctic Conservation: Jamie Reaser

Jamie K. Reaser's award-winning writing explores the interface of Nature and human nature. The poems shared during this session have been inspired by the Arctic's unique voice and story. They are drawn from her six published poetry collections.

Jamie K. Reaser, PhD., is an executive, ecologist, communication psychologist, farmer, nature photographer, and poet. She currently serves as the Executive Director of the US National Invasive Species Council and Co-chair of the Arctic Invasive Alien Species (ARIAS) Strategy and Action Plan Implementation Coordinating Group.

Jamie's poetry can be found at the Talking Waters blog (www.talkingwaters-poetry.blogspot.com), Talking Waters on Facebook, and through online retailers. She is a member of the International League of Conservation Writers.

Bird nesting boxes and insect hotels

Location: Outside Lappia Hall

Date: Tuesday October 9-Thursday October 11 from 12:00-15:00 while supplies last.

Join staff from Metsähallitus, Metsähallitus Forestry Ltd. and Science Centre Pilke to construct bird boxes and insect hotels. Participants can take their boxes and hotels home with them, or they can donate them local schools, who will take them into the forests and monitor their use.

Sustainable meetings

The Ministry for Foreign Affairs in cooperation with WWF Finland has created guidelines for environmentally sustainable meetings which will be followed throughout the Arctic Council meetings in Finland, including the Arctic Biodiversity Congress.

For more information please visit: www.arcticbiodiversity.is/about-the-congress/sustainable-meetings



TOGETHER WITH
WWF FINLAND
TOWARDS
ENVIRONMENTALLY
SUSTAINABLE
MEETINGS



Ulkoministeriö
Utrikesministeriet
Ministry for Foreign
Affairs of Finland



Ympäristöministeriö
Miljöministeriet
Ministry of the Environment

Swimming halls and saunas

What would a trip to Finland be without a sauna? There are pools and saunas available at the following public swimming halls:

- Uimahalli Vesihäisi, Nuortenkatu 11 (within walking distance from downtown).
Hours: <https://www.rovaniemi.fi/fi/Palvelut/Liikunta-ja-vapaa-aika/Uimahalli>
Prices: <https://www.rovaniemi.fi/fi/Palvelut/Liikunta-ja-vapaa-aika/Uimahalli/Hinnasto--price-list>
- SantaSport Institute, Hiihtomajantie 2, Ounasvaara area (about 3 km from downtown)
Information: <http://santasport.fi/en/services/pool-area>

Contact point

If you encounter any difficulties during the Congress please contact the Congress registration desk or the Congress Secretariat room.

Emergency services can be accessed by dialling 112.

3. Congress reporting

There will be several outputs arising from the Congress, including:

- Co-chairs' report
- Reports on session outcomes provided to CAFF
- Outreach and documentation through CAFF's websites
- Outreach to a global audience, including through IISD's Reporting Services
- Networking opportunities and inspiration

International Institute for Sustainable Development (IISD) Reporting Services

The International Institute for Sustainable Development (IISD) has sent a reporting team to capture the proceedings of the Arctic Biodiversity Congress.

The IISD will write short daily updates from the Congress and a more comprehensive final summary report upon Congress completion. The IISD will also post daily digital photos from the event. All coverage will be distributed on the IISD's Reporting Services website (www.iisd.ca), the Arctic Biodiversity Congress website (www.arcticbiodiversity.is/congress) as well as on IISD and CAFF's social media and email channels.

Congress reporting team

Each session organizer and assigned rapporteur will complete an online reporting tool to gather information from the proceedings of each session. Information will be used to inform the Congress outcomes.

Co-chairs report

After the event our co-chairs will work to deliver a report that provides an overview of Congress content and a summary of main findings. This report will be published on the Congress website: www.arcticbiodiversity.is/congress

4. Congress program

Please download the Arctic Biodiversity Congress App to stay informed of the latest Congress news, information and program updates.

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Overview schedule

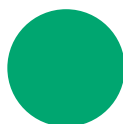
Six main themes guide the flow and organization of the Congress. These overarching themes will run concurrently throughout the Congress and will form the backbone for the Congress. These themes were identified in the *Arctic Biodiversity Assessment : Recommendations for Policy Makers*.



CLIMATE CHANGE



ECOSYSTEM BASED
MANAGEMENT



MAINSTREAMING
BIODIVERSITY



ADDRESSING
STRESSORS



IDENTIFYING AND
SAFEGUARDING
IMPORTANT AREAS



IMPROVING
KNOWLEDGE AND
PUBLIC AWARENESS

TUESDAY OCTOBER 9

8:00 - 9:00	Registration / Coffee								
9:15	Tieva plenary doors close: all to be seated inside Tieva plenary hall or overflow rooms (Kero and Valtuustosali)								
9:30 - 9:35	Welcome: Congress co-chairs								
9:35 - 9:45	Livde in the landscape: Anna Morottaja, performing artist								
9:45 - 10:00	Opening words: Sauli Niinistö, President of the Republic of Finland								
10:00 - 10:10	Keynote speech: Tiina Samila-Aikio, President of the Sámi Parliament of Finland								
10:10 - 10:20	Keynote speech: Aleksi Härkönen, Chair of the Senior Arctic Officials of the Arctic Council								
10:20 - 10:40	Tundra pasture ecosystems: past and future: Sergei Zimov, North-East Scientific Station of Pacific Institute of Geography, Russian Academy of Sciences								
10:40 - 11:00	Indigenous peoples, biodiversity, and their interrelated nature: Dalee Sambo Dorrough, Chair of the Inuit Circumpolar Council								
	Plenary panel 1: Our knowledge, our actions: Addressing biodiversity conservation in a changing Arctic								
	Moderator: Martin Breum, Denmark Panelists: Vladimir Kattsov, World Climate Research Program, Russian Federation Mike Gill, Group on Earth Observations - Biodiversity Observation Network (GEO BON), Canada Gunn-Britt Retter, Saami Council, Norway Tasha Elizarde, Arctic Youth Ambassador <i>Room: Tieva and overflow (Kero and Valtuustosali)</i>								
11:00 - 12:00									
12:00 - 13:00	LUNCH								
13:00 - 14:30	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; background-color: #e0f0ff; vertical-align: top;"> CC1: Impact of reduced ice cover in the Arctic marine environment Chairs: Allen Pope, IASC; Rolf Rødven, AMAP <i>Room: Valtuustosali</i> </td> <td style="width: 25%; background-color: #ffe0e0; vertical-align: top;"> EBM6: Large herbivores as agents of ecosystem based management in the circumpolar Arctic Chairs: Sergei Zimov, Northeast Science Station, RAS; Bruce C. Forbes, Arctic Centre, University of Lapland <i>Room: Saivo</i> </td> <td style="width: 25%; background-color: #ffe0b0; vertical-align: top;"> EBM2: The CBMP Freshwater: Coordinated monitoring and assessment to improve knowledge on status and trends in circumpolar Arctic freshwaters Chairs: Willem Goedkoop, Swedish University of Agricultural Sciences and Joseph Culp, Environment and Climate Change Canada on behalf of the CBMP Freshwater Steering Group <i>Room: Tieva</i> </td> <td style="width: 25%; background-color: #e0ffe0; vertical-align: top;"> MB4: Contributions through responsible mining to biodiversity conservation in the Arctic Chair: Warwick Mostert, Anglo American <i>Room: Kero</i> </td> </tr> <tr> <td style="background-color: #e0e0ff; vertical-align: top;"> IAB4: Biodiversity, cultural heritage and land-use planning Chair: Erica Oberndorfer, Labrador Institute, CAFF-IASC Fellow <i>Room: Erottaja</i> </td> <td colspan="3"></td> </tr> </table>	CC1: Impact of reduced ice cover in the Arctic marine environment Chairs: Allen Pope, IASC; Rolf Rødven, AMAP <i>Room: Valtuustosali</i>	EBM6: Large herbivores as agents of ecosystem based management in the circumpolar Arctic Chairs: Sergei Zimov, Northeast Science Station, RAS; Bruce C. Forbes, Arctic Centre, University of Lapland <i>Room: Saivo</i>	EBM2: The CBMP Freshwater: Coordinated monitoring and assessment to improve knowledge on status and trends in circumpolar Arctic freshwaters Chairs: Willem Goedkoop, Swedish University of Agricultural Sciences and Joseph Culp, Environment and Climate Change Canada on behalf of the CBMP Freshwater Steering Group <i>Room: Tieva</i>	MB4: Contributions through responsible mining to biodiversity conservation in the Arctic Chair: Warwick Mostert, Anglo American <i>Room: Kero</i>	IAB4: Biodiversity, cultural heritage and land-use planning Chair: Erica Oberndorfer, Labrador Institute, CAFF-IASC Fellow <i>Room: Erottaja</i>			
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14:30 - 15:00	BREAK								

TUESDAY OCTOBER 9

15:00 - 16:30	<p>CC4: Early warnings: approaches to assessing and measuring change in biodiversity</p> <p>Chairs: Deb Cooper, USNPS; Erpur Hansen, South Iceland Nature Research Centre</p> <p><i>Room: Valtuustosali</i></p>	<p>EBM7: The CBMP as an international player and a regional Biodiversity Observation Network of GEO BON: Exploring Synergies</p> <p>Chairs: Mike Gill, GEOBON; Tom Christensen, Aarhus University</p> <p><i>Room: Tieva</i></p>	<p>AS4: Reducing the effects of commercial fishing on biodiversity</p> <p>Chair: Signe Christensen-Dalsgaard, Norwegian Institute for Nature Research</p> <p><i>Room: Erottaja</i></p>	<p>KNO9: Herbivory in the Arctic – understanding large-scale patterns and processes of a key ecological interaction</p> <p>Chairs: Isabel C. Barrio, Agricultural University of Iceland; Eeva Soininen, UiT – The Arctic University of Norway</p> <p><i>Room: Kero</i></p>	<p>KNO8: The problem of the polar bear: Does the symbol of the Arctic prevent us from fixing the Arctic?</p> <p>Chairs: Leanne Clare and Michael Alexander, WWF</p> <p><i>Room: Saivo</i></p>
16:30 - 17:00	BREAK				
17:00 - 18:30	<p>KNO1: Arctic biodiversity education and outreach</p> <p>Chairs: Shailyn Drukis, Canadian Committee for IUCN</p> <p><i>Room: Saivo</i></p>	<p>EBM4: The State of the Arctic Marine Biodiversity Report</p> <p>Chairs: Alain Dupuis, DFO Canada; John Bengtson, NOAA; Tom Christensen, Aarhus University; Sara Longan, NSSI, on behalf of the CBMP Marine Steering Group</p> <p><i>Room: Tieva</i></p>	<p>MB1: Promoting of ecosystem services of Arctic wetlands for sustainable development</p> <p>Chair: Tatiana Minayeva, Wetlands International; Igor Semenov, EthnoExpert</p> <p><i>Room: Erottaja</i></p>	<p>AS6: Understanding cumulative effects on Arctic biodiversity and landscapes</p> <p>Chairs: Kathrine Johnsen, GRID-Arendal; Ole-Anders Turi, Saami Council</p> <p><i>Room: Kero</i></p>	<p>IAB1: Hot spots, connectivity and sensitive areas for biodiversity conservation benefit</p> <p>Chairs: Reidar Hindrum, Norwegian Environment Agency, Deb Cooper, USNPS</p> <p><i>Room: Valtuustosali</i></p>
18:45	Buses from Lappia Hall to film night				
19:30 - 21:30	<p>Film night</p> <p>Our Shared Heritage: Arctic Breeding Birds in the Yellow Sea</p> <p>Eatnanvuloš lotit – Maan sisällä linnut – Birds in the Earth</p> <p>Angry Inuk</p> <p><i>Location: Polarium Hall in the Arktikum Science Centre and Museum</i></p>				

WEDNESDAY OCTOBER 10

8:30 - 10:00	<p>MBS: Worldwide partnerships to conserve migratory birds: The Arctic Migratory Bird Initiative</p> <p>Chairs: Evgeny Syroechkovskiy, Ministry of Natural Resources and Ecology, Russian Federation; Jennifer Provencher, AMBI</p> <p><i>Room: Valtuustosali</i></p>	<p>EBM10: Building long-term ecosystem monitoring programs to feed Arctic and international biodiversity assessments</p> <p>Chairs: Torben R. Christensen and Elmer Topp-Jørgensen, Aarhus University</p> <p><i>Room: Erottaja</i></p>	<p>KNO2: Traditional knowledge and science under a co-production of knowledge</p> <p>Chairs: Carolina Behe, ICC; Victoria Buschman, University of Washington</p> <p><i>Room: Tieva</i></p>	<p>AS7: Arctic Ocean Acidification: Pan-Arctic Processes and Regional Ecosystem Impacts</p> <p>Chairs: Emily Osborne, NOAA; Richard Bellerby, NIVA; Claudia Gelfond, University of Alaska, Fairbanks</p> <p><i>Room: Kero</i></p>	<p>IAB2: Safeguarding habitats for Arctic species under changing environmental conditions</p> <p>Chairs: Mark Marissink, Swedish Environmental Protection Agency; Marina von Weissenberg, Ministry of the Environment, Finland</p> <p><i>Room: Saivo</i></p>
10:00 - 10:30	BREAK				
10:30 - 12:00	<p>KNO3: Make Arctic data accessible and reusable – roadmap to open and cost effective data management policy</p> <p>Chair: Peter Pouplier, Arctic SDI</p> <p><i>Room: Kero</i></p>	<p>EBM3: The State of the Arctic Biodiversity Terrestrial Report: the Circumpolar Biodiversity Monitoring Program, Terrestrial</p> <p>Chairs: Mora Aronsson, Swedish Species Information Centre; Starri Heiðmarsson, Icelandic Institute of Natural History on behalf of the CBMP Terrestrial Steering Group</p> <p><i>Room: Tieva</i></p>	<p>AS9: Biodiversity in the high seas of the Central Arctic Ocean- Advancements in management and improved understanding for the future</p> <p>Chairs: Maya Gold, DFO Canada; Alf Hakon Hoel, University of Tromsø and Norwegian Institute of Marine Research; Lisa Speer, Natural Resources Defense Council</p> <p><i>Room: Valtuustosali</i></p>	<p>IAB7: Bowhead whale conservation and future research cooperation</p> <p>Chairs: Gert Polet, WWF; Erik van de Linde, Ice Whale Foundation</p> <p><i>Room: Saivo</i></p>	<p>KNO10: Arctic terrestrial invertebrate diversity</p> <p>Chairs: Toke T. Høye, Aarhus University; Lauren Culler, Dartmouth College</p> <p><i>Room: Erottaja</i></p>
12:00 - 13:30	LUNCH				
12:45 - 13:15	Beyond the Blue Planet: Frozen Worlds, BBC Natural History Unit				
	<p>Following the success of Blue Planet II, the BBC's Natural History Unit is now focussing attention on the frozen parts of our planet. For this landmark BBC1 6x1 hr series they are looking for new animal behaviour, anthropology and science stories with experts in this field. Join producers from the Frozen Planet as they present and discuss Frozen Planet II and their international cooperation and outreach associated with the series.</p> <p style="text-align: right;"><i>Room: Tieva and overflow (Kero and Valtuustosali)</i></p>				
13:30 - 14:30	<p>Plenary panel 2: The Arctic in a global context: biodiversity targets, Sustainable Development Goals and a post-2020 agenda</p> <p style="text-align: center;">Moderator: Martin Breum, Denmark</p> <p style="text-align: center;">Panelists:</p> <p style="text-align: center;">Melanie Virtue, Head of CMS Aquatic Species Team, Convention on Migratory Species Alexander Shestakov, Head of Division, Scientific and Policy Support, Convention on Biological Diversity Martha Rojas Urrego, Secretary General, Ramsar Convention on Wetlands Dalee Sambo Dorough, Chair, Inuit Circumpolar Council Hannele Pokka, Permanent Secretary, Ministry of the Environment, Finland</p> <p style="text-align: right;"><i>Room: Tieva and overflow (Kero and Valtuustosali)</i></p>				

WEDNESDAY OCTOBER 10

14:30 - 14:45	Parameters for responsible investments in the Arctic Tero Kiviniemi, the Chair of the Arctic Economic Council Investments and Infrastructure Working Group <i>Room: Tieva and overflow (Kero and Valtuustosali)</i>			
14:45 - 15:15	BREAK			
15:15 - 17:15	CC2: Biodiversity and climate change: impacts on non-marine ecosystems Chairs: Arkady Tishkov, Institute of Geography, RAS; Leigh Welling, USNPS <i>Room: Salvo</i>	KNO13: Technologies and techniques to advance biodiversity monitoring Chairs: Liza Jenkins, Michigan Tech Research Institute; Catherine Coon, BOEM <i>Room: Erottaja</i>	AS2: Oil spill prevention, preparedness and response in the Arctic Chairs: Patti Bruns, EPPP; Liisa Rohweder, WWF Finland; Melanie Lancaster, WWF <i>Room: Valtuustosali</i>	AS8: Arctic Invasive Alien Species Action Plan: National implementation and empowering decision making by mobilizing, sharing, and analyzing Arctic invasive alien species data Chair: Jamie Reaser, US National Invasive Species Council <i>Room: Kero</i>
17:15 - 18:30	Poster Session <i>Room: Lappia Hall Lobby</i>			
19:00	Buses from Lappia Hall to reception			
19:30 - 21:20	Reception <i>Location: Pilke Science Center</i>			
	IAB3: Arctic marine protected areas: identification, effectiveness, co-management and cooperation Chair: Lisa Speer, Natural Resources Defense Council <i>Room: Tieva</i>			

THURSDAY OCTOBER 11

8:30 - 10:00	<p>KNO6: Pan-arctic assessment and data management of plant diversity and community</p> <p>Chairs: Gabriela Schaeppman-Strub, University of Zurich</p> <p>Room: <i>Erottaja</i></p>	<p>KNO11: Community-based monitoring of Arctic biodiversity</p> <p>Chairs: Paul MacDonald, Canadian Wildlife Service; Bruce Wright, Aleut International Association</p> <p>Room: <i>Kero</i></p>	<p>EBM1: The CBMP Coastal Monitoring Plan: monitoring and reporting important changes in the biodiversity of Arctic coastal ecosystems – plan development and evaluation</p> <p>Chairs: Donald McLennan, Polar Knowledge Canada - Canadian High Arctic Research Station; Tahzay Jones, USNPS on behalf of the CBMP Coastal Expert Monitoring Group</p> <p>Room: <i>Tieva</i></p>	<p>AS1: Effects of POPs and Hg on Arctic wildlife: AMAP assessment</p> <p>Chairs: Robert Letcher, Environment and Climate Change Canada; Rune Dietz, Aarhus University</p> <p>Room: <i>Valtuustosali</i></p>	<p>IAB5: Transboundary management of Arctic biodiversity</p> <p>Chairs: Kristiina Nikkonen, Ministry of the Environment, Finland; Trish Hayes, DFO Canada</p> <p>Room: <i>Saivo</i></p>
10:00 - 10:30	BREAK				
10:30 - 12:00	<p>KNO12: Ideas for Enhancing Effective Communication and Outreach for Subsistence Based Households in Western Alaska: What We Learned from Alaska Native Women</p> <p>Chairs: Elizabeth Kersey and Natasia Levi, The Alaska Climate Resiliency Project</p> <p>Room: <i>Erottaja</i></p>	<p>MB3: Green financing, blue economy: Investments in the Arctic</p> <p>Chair: Husamuddin Ahmadzai, NEFCO</p> <p>Room: <i>Saivo</i></p>	<p>EBM5: Species specific conservation actions in the time of ecosystem-based management</p> <p>Chairs: Dorothee Ehrlich, UiT - The Arctic University of Norway; Nina Elisabeth Eide, NINA</p> <p>Room: <i>Tieva</i></p>	<p>KNO4: Enhanced assessment of marine biodiversity and anthropogenic stressors through integration of research and monitoring under CAFF-CBMP and AMAP</p> <p>Chairs: Jason Stow, Indigenous and Northern Affairs Canada; Tom Christensen, Aarhus University, Alain Dupuis, DFO Canada</p> <p>Room: <i>Valtuustosali</i></p>	<p>EBM9: Biodiversity as a fundamental component of environmental impact assessments and land use planning</p> <p>Chair: Peter Convey, British Antarctic Survey</p> <p>Room: <i>Kero</i></p>
12:00 - 13:30	LUNCH				
12:45 - 13:15	<p>Poetry lunch: <i>Dialogues of Silence</i>: by Mia Rönkä <i>The Poetics of Arctic Conservation</i>: by Jamie Reaser Room: <i>Tieva</i></p>				
13:30 - 15:00	<p>CC5: Resilience and management of Arctic wetlands: a social-ecological systems approach</p> <p>Chairs: David Schönberg Alm, Swedish EPA; and Marcus Carson and Magnus Land, Stockholm and Environmental Institute</p> <p>Room: <i>Erottaja</i></p>	<p>EBM11: Conservation and sustainable harvest</p> <p>Chair: Alexander Shestakov, CBD; Gregor Gilbert, Makivik Corporation</p> <p>Room: <i>Valtuustosali</i></p>	<p>KNO5: Intraspecific diversity in Arctic freshwater systems and its relevance in biodiversity and conservation: from pattern to process</p> <p>Chairs: Camille Leblanc and Skúli Skúlason, Hólar University College</p> <p>Room: <i>Kero</i></p>	<p>AS3: Reducing the effects of shipping on biodiversity</p> <p>Chair: William Halliday, WCS Canada</p> <p>Room: <i>Saivo</i></p>	<p>MB2: Inspiring Arctic voices through youth</p> <p>Chair: Sanna Koskinen, WWF Finland</p> <p>Room: <i>Tieva</i></p>

THURSDAY OCTOBER 11	
15:00 - 15:30	BREAK
15:30 - 15:45	Arctic Youth Summit report back Speaker TBC by Arctic Youth Summit <i>Room: Tieva and overflow (Kero and Valtuustosali)</i>
15:45 - 17:15	Plenary Panel 3: Arctic Environment Ministers panel Moderator: Martin Breum, Denmark <i>Room: Tieva and overflow (Kero and Valtuustosali)</i>

FRIDAY OCTOBER 12						
08:30 - 10:00	<table border="1"> <tr> <td>MB6: Proteus Partnership: mainstreaming biodiversity information in the extractives sector Chair: Neville Ash, UNEP WCMC <i>Room: Valtuustosali</i></td> <td>KNO7: Arctic biodiversity governance and Arctic Council biodiversity cooperation Chair: Christian Prip, The Fridtjof Nansen Institute <i>Room: Tieva</i></td> <td>IAB6: Nomadic herders: Enhancing the resilience of pastoral ecosystems and livelihoods of nomadic herders Chairs: Svein Mathiesen, International Centre for Reindeer Husbandry; Kathrine Johnsen, GRID-Arendal; Ole Anders Turi, Saami Council <i>Room: Saivo</i></td> <td>IAB9: Arctic biodiversity goals in the Beringian region: positive lessons for success Chairs: Martin Robards, WCS; Evgeny Syroechkovskiy, Ministry of Natural Resources and Environment <i>Room: Erottaja</i></td> <td>AS10: From individual stressors to cumulative impacts: improving knowledge in the Arctic marine environment Chair: Catherine Coon, Bureau of Ocean Energy Management <i>Room: Kero</i></td> </tr> </table>	MB6: Proteus Partnership: mainstreaming biodiversity information in the extractives sector Chair: Neville Ash, UNEP WCMC <i>Room: Valtuustosali</i>	KNO7: Arctic biodiversity governance and Arctic Council biodiversity cooperation Chair: Christian Prip, The Fridtjof Nansen Institute <i>Room: Tieva</i>	IAB6: Nomadic herders: Enhancing the resilience of pastoral ecosystems and livelihoods of nomadic herders Chairs: Svein Mathiesen, International Centre for Reindeer Husbandry; Kathrine Johnsen, GRID-Arendal; Ole Anders Turi, Saami Council <i>Room: Saivo</i>	IAB9: Arctic biodiversity goals in the Beringian region: positive lessons for success Chairs: Martin Robards, WCS; Evgeny Syroechkovskiy, Ministry of Natural Resources and Environment <i>Room: Erottaja</i>	AS10: From individual stressors to cumulative impacts: improving knowledge in the Arctic marine environment Chair: Catherine Coon, Bureau of Ocean Energy Management <i>Room: Kero</i>
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12:00 - 12:15	Final thoughts Neville Ash, UN Environment <i>Room: Tieva and overflow (Kero and Valtuustosali)</i>					
12:15 - 12:30	Closing statements Congress co-chairs <i>Room: Tieva and overflow (Kero and Valtuustosali)</i>					

Plenary addresses

Several speakers will address the Arctic Biodiversity Congress plenary. Plenary sessions will be live-streamed from the Tievo plenary hall to neighbouring Kero and Valtuustotali in City Hall.

Livđe in the landscape:

Anna Morottaja

Anna Morottaja is an Inari Sámi musician, from Northern Finland where she lives in her childhood home near lake Muddusjärvi in which she fishes all year round. Traditional Inari Sámi music, livđe, is close to her heart and Anna is also a master of the northern Sámi joik. Livđe and joik are integral parts of her everyday life. Anna is known for the broad range of her voice and has taught livđe at kindergartens and schools.

In her performance Anna evokes the world through Inari Sámi livđe and illustrates it using the photography of Rauno Koivunen. The themes of livđe are connected to birds which provide their own tone to the seasons while the photos of Rauno describe the changing seasons in the North.

Rauno Koivunen has photographed nature in Lappi for several years especially lake Muddusjärvi during the changing seasons. Rauno comes from Ähtäri, Mid-Finland and became interested in nature when he moved to Inari in 2011. He is especially interested in capturing the tones of different seasons and in close-up photos of flora and fauna.

Inari Sámi is one of nine Sami languages and is spoken only in the Inari region, in northern Finland. Inari Sámi is spoken by 400 people and due to a successful revitalization work amongst kindergarten children and adults, is flourishing today. People are the main theme of livđe but birds, fish and other animals are also reflected. Livđe was almost lost to history due to the pressures of the modern world but was thankfully rescued through the work of artists such as Anna is becoming a part of everyday life in the Inari Sámi region.

Opening words

Sauli Niinistö, President of the Republic of Finland

Keynote speech

Tiina Sanila-Aikio, President of the Sámi Parliament of Finland

Keynote speech

Aleksi Härkönen, Chair of the Senior Arctic Officials of the Arctic Council

Tundra pasture ecosystems: past and future

Sergei Zimov, North-East Scientific Station of Pacific Institute of Geography, Russian Academy of Sciences

Indigenous peoples, biodiversity, and their interrelated nature

Dalee Sambo Dorough, Chair of the Inuit Circumpolar Council

Parameters for responsible investments in the Arctic

Tero Kiviniemi, Chair of the Arctic Economic Council Investments and Infrastructure Working Group

Arctic Youth Summit report back

Tasha Elizarde, Arctic Youth Summit participant

Final thoughts

Neville Ash, UN Environment

Panel discussions

Plenary panel 1: Our knowledge, our actions: Addressing biodiversity conservation in a changing Arctic

Date: Tuesday October 9

Location: Tieva, Lappia Hall (overflow in Kero, Valtustosali)

Time: 11:00-12:00

Already warming at twice the global rate, the Arctic environment is changing. As the Arctic warms it moves towards a transformational new state. Rising temperatures, melting ice, thawing permafrost, habitat disturbance, pollution, invasive alien species and acidifying oceans are just some of the changes affecting the region. These changes have wide ranging consequences for Arctic ecosystems and residents.

This panel will discuss the scale and pace of change, and the implications of it. It will examine current knowledge gaps and the effective use of knowledge, then investigate the types of actions, priorities, and the opportunities ahead to address Arctic biodiversity conservation and address common challenges.

Moderator: **Martin Breum**

Panelists:

- **Vladimir Kattsov**, World Climate Research Program, Russian Federation
- **Mike Gill**, Group on Earth Observations - Biodiversity Observation Network (GEO BON), Canada
- **Gunn-Britt Retter**, Saami Council, Norway
- **Tasha Elizarde**: Arctic Youth Ambassador

Plenary panel 2: The Arctic in a global context: biodiversity targets, Sustainable Development Goals and a post-2020 agenda

Date: Wednesday October 10

Location: Tieva, Lappia Hall (overflow in Kero, Valtustosali)

Time: 13:30-14:30

Arctic biodiversity is a unique global asset, and it faces numerous globally- interconnected threats, requiring comprehensive solutions and international cooperation. In a world where habitat degradation and species loss are increasingly prevalent, the scarcity and value of intact ecosystems and healthy species is increasing. The Arctic is one of the largest relatively undisturbed physical and ecological systems remaining on Earth and has been home to vibrant Indigenous cultures for millennia. This provides a rare opportunity to maintain the socio-ecological integrity of an entire biome. There is a need to make Arctic biodiversity conservation a priority and sustainable development in the Arctic a reality, while respecting and supporting Arctic residents. Yet, as the world is increasingly drawn to and inspired by the beauty and potential of the Arctic, as we increasingly commercially harvest its fish to feed ever-growing populations, exploit its minerals and petroleum, route our ships through its waters and especially as our actions alter its climate, Arctic biodiversity faces ever-increasing threats and emerging concerns. As we recognize the unique values of the Arctic and its critical importance to the Earth's oceanographic, atmospheric and biological systems, we must also take on the global responsibility to sustain the Arctic and its biodiversity for ourselves and our descendants.

While our challenges are interconnected, so too are our solutions. This panel will explore how the Arctic addresses the UN Aichi Biodiversity Targets and Sustainable Development Goals and how the global community can work together across borders, disciplines and barriers to offer the greatest potential to address the suite of challenges facing humanity and the environment, and will examine how the Arctic can shape the future of a post-2020 global agenda for environmental conservation and sustainable development.

Moderator: **Martin Breum**

Panelists:

- **Melanie Virtue**, Head of CMS Aquatic Species Team, Convention on Migratory Species
- **Alexander Shestakov**, Head of Division, Scientific and Policy Support, Convention on Biological Diversity
- **Martha Rojas Urrego**, Secretary General, Ramsar Convention on Wetlands
- **Dalee Sambo Dorough**, Chair, Inuit Circumpolar Council
- **Hannele Pokka**, Permanent Secretary, Ministry of the Environment, Finland

Plenary panel 3: Arctic Environment Ministers panel

Date: Thursday October 11

Location: Tieva, Lappia Hall (overflow in Kero, Valtustosali)

Time: 15:45-17:15

Moderator: **Martin Breum**

Panelists: **TBC**

Poster session

There will be a poster session from 17:15-18:30 on October 10 in Lappia Hall.

Where possible, posters will be made available on the Congress website for advanced viewing and download.

Nomadic herders lavvu dialogue

Location: Lavvu, outside Lappia Hall

Date: Thursday October 11, 10:30-12:30

Chairs: **Svein Mathiesen**, International Centre for Reindeer Husbandry; **Kathrine Johnsen**, GRID Arendal; **Gunn-Britt Retter**, Saami Council

Join Arctic youth and Indigenous leaders in the lavvu as they present observations of Arctic change and reflect on solutions for the sustainable use of protected areas. This lavvu dialogue is based on the Nomadic herder concept, where Indigenous peoples, scientists, youth and politicians conduct a dialogue. Indigenous youth will prepare a statement focusing on Indigenous perspectives (e.g. the values of biodiversity, knowledge gaps, needs for protection, participation). The dialogue will also touch upon Indigenous knowledge, and samples of Arctic Indigenous food will be served.

Session details

Tuesday October 9

CC1: Impact of reduced ice cover in the Arctic marine environment

Date: Tuesday October 9, 2018

Location: Valtuustosali, City Hall

Time: 13:00-14:30

Current trends in the Arctic marine environment indicate that species reliant on sea ice for reproduction, resting or foraging will experience range reductions as sea ice retreat occurs earlier and the open water season is prolonged. These changes will have cascading effects throughout the entire food web. This session will explore how species interactions, behaviours, distributions, and even genetics may be changing, and the implications for human use and biodiversity monitoring and conservation. Furthermore, the session will also feature presentations that urge the expansion of our knowledge and highlight approaches and tools that strengthen our ability to gather results on Arctic change.

Chairs: **Allen Pope**, International Arctic Science Committee (IASC); **Rolf Rødven**, Arctic Monitoring and Assessment Programme (AMAP)

Format: Series of presentations, followed by question/answer and discussion

Presentations:

- Earlier ice melt increases predation of common eider eggs by polar bears: **Allison Patterson**, McGill University
- What lies beneath? Melting sea ice and conservation of Arctic benthic habitats: **Peter Harris**, GRID-Arendal
- Polar bear life in the Russian Arctic in the light of recent research results: **Andrei Boltunov**, Marine Mammal Research and Expedition Center LTD
- Traditional knowledge about polar bears in East Greenland: recent changes in the catch and climate: **Fernando Ugarte**, Greenland Institute of Natural Resources
- Book: Marine Fishes of the Arctic Region: **Edda Johannesen**, Institute of Marine Research
- Population structure of caribou in an ice-bound archipelago: **Deborah Jenkins**, Trent University

EBM6: Large herbivores as agents of ecosystem based management in the circumpolar Arctic

Date: Tuesday October 9, 2018

Location: Saivo, Lappia Hall

Time: 13:00-14:30

There is an urgent need to mainstream biodiversity and ecosystem services ensuring that the recommendations and implementation of the ABA are implemented by not just government, but many organizations and peoples, and across sectors. Large herbivores, such as reindeer/caribou, bison, muskox, and horses are important drivers of diversity, structure and function in ecosystems across the circumpolar Arctic. Since the late Pleistocene, large wild herbivores have acted as agents of change between low- and high-productivity tundra and steppe-tundra ecosystems, respectively. During the late Holocene, indigenous peoples and their semi-domesticated and domesticated herds of livestock have often worked together to manipulate transitions between alternative ecosystem states to suit their collective needs. In the modern Arctic, ecosystem based management must properly account for the role of large herbivores. As Arctic ungulate populations wax and wane, it is critical to understand a range of herbivore-mediated patterns and processes. Participatory research with modern Indigenous peoples is one tool that has already demonstrated how large ungulate herds can be managed to increase or decrease e.g. woody plant diversity and ground cover. However, wild herds have also been linked to land cover changes. This session will explore the role of herbivores as agents of ecosystem based management in a series of presentations.

Chairs: **Bruce C. Forbes**, Arctic Centre, University of Lapland; **Sergei Zimov**, Northeast Science Station, Cherskii, Sakha Republic, Russia

Format: Series of presentations followed by discussion

Presentations:

- Humans in the ecology of pasture ecosystems: **Sergei Zimov**, Northeast Science Station, Cherskii, Sakha Republic, Russia
- The role human-animal agency in ecosystem based management across the tundra zone of Northern Fennoscandia: **Tim Horstkotte**, Umeå University
- Circumpolar arctic tundra biomass and productivity dynamics in response to projected climate change and herbivory: **Howard Epstein**, University of Virginia
- Instability of wild reindeer migration and possibility of adaptive management by local people in Arctic Siberia: **Shirow Tatsuzawa**, Hokkaido University/North-Eastern Federal University
- Stomping in silence: the overlooked role of ungulate trampling in shaping tundra ecosystems: **Maria Väisänen**, Ecology and Genetics Research Unit, University of Oulu
- Rangifer management controls a climate-sensitive tundra state transition: **Kari Anne Bråthen**, UiT- The Arctic University of Norway

EBM2: The CBMP Freshwater: Coordinated monitoring and assessment to improve knowledge on status and trends in circumpolar Arctic freshwaters

Date: Tuesday October 9, 2018

Location: Tieva, Lappia Hall

Time: 13:00-14:30

Arctic freshwater ecosystems are affected by natural and human-induced stressors resulting from climate change and industrial development. This session will examine changes in biodiversity of such freshwater ecosystems in relation to ongoing and predicted environmental change. The session will include recent findings on the state of Arctic freshwater biodiversity developed through the CBMP Freshwater, such as assessments on key circumpolar regions (e.g., North America, Greenland, Fenno-Scandia) and Focal Ecosystem Components (e.g., fish, benthos, algae). Presentations will also focus on recent advances in tools and approaches for assessing circumpolar freshwater biodiversity. The session will conclude with a panel presentation on relevance to the Arctic Biodiversity Assessment recommendations, as well as discussion of novel tools and approaches for Arctic freshwater biodiversity assessment and research gaps. The session will bring together international experts from multiple disciplines and emphasize the connectivity between science, monitoring and management necessary to implement CBMP and ABA frameworks across circumpolar freshwaters.

Chairs: **Joseph Culp**, Environment and Climate Change Canada; **Willem Goedkoop**, Swedish University of Agricultural Sciences

Format: Series of presentations followed by discussion

Presentations:

- Arctic Freshwater Plankton Response to Environmental Stressors on a Circumpolar Scale: **Kirsten Christoffersen**, University of Copenhagen, University Centre in Svalbard
- Circumpolar trends of diatoms: **Maria Kahlert**, Swedish University of Agricultural Sciences
- Circumpolar analysis of lake macrophyte communities for setting the baseline for future assessment: **Seppo Hellsten**, Finnish Environment Institute
- Biodiversity of benthic macroinvertebrates across the circumpolar region: evidence of latitudinal declines in richness in Arctic rivers and lakes: **Jennifer Lento**, University of New Brunswick
- Drivers of freshwater fish biodiversity depend on location and isolation in the circumpolar Arctic: **Sarah Laske**, US Geological Survey

MB4: Contributions through responsible mining to biodiversity conservation in the Arctic

Date: Tuesday October 9, 2018

Location: Kero, Lappia Hall

Time: 13:00-14:30

The mining sector has historically been attributed with the degradation, decline and loss of species, habitats and ecosystems, reducing the ability of our environment to provide humankind with the resources and services it relies upon. In response to this the mining sector has started to realise its responsibility to contribute to biodiversity conservation and the protection of natural resources. Within the arctic region, where biodiversity is under pressure from climate change, landuse change and increased potential development and where local, Indigenous and First National Peoples are dependent on healthy functional ecosystems, mining needs to ensure a no harm or net positive approach. This session of three presentations and a brainstorming session demonstrates how, through cross sectoral partnership and responsible practices, biodiversity can be mainstreamed into exploration, planning, design and project implementation. We will address the potential impacts and dependencies of local stakeholders and mining operators on the natural environment and will present case studies demonstrating best practices examples of: the application of net positive approach to biodiversity management; the application of the mitigation hierarchy towards no harm or positive outcomes for biodiversity; working with local stakeholders to ensure collaborative approaches to managing natural resources and livelihoods.

Chair: Warwick Mostert, Anglo American

Format: Series of presentations followed by discussion and brainstorming session

Presentations:

- How companies can come to the table in terms of biodiversity management: **Warwick Mostert**, Anglo American
- Critical questions in biodiversity offsets for peatland and forests: a case study from the AA Sakatti mine project: **Atte Moilanena and Janne Kotiaho**, Moilanen & Kotiaho
- Collaborative monitoring – Traditional Knowledge and scientific study: **Alex Hood**, De Beers, Canada
- Monitoring environmental effects of mine discharges in the Arctic: **Heikki Mykrä**, Finnish Environment Institute, Freshwater Centre
- Future needs and ideas on how to mainstream biodiversity at a wider scale - A participatory brainstorming session taking on the lessons learnt from the three presentations: **Warwick Mostert**, Anglo American
- Brainstorming session: moderated by **Warwick Mostert**

IAB4: Biodiversity, cultural heritage and land-use planning

Date: Tuesday October 9, 2018

Location: Erottaja, ELY

Time: 13:00-14:30

This session explores how traditional knowledge and/or cultural practices play an important role in achieving conservation objectives and implementing sustainable development goals in the Arctic, including in various protected areas networks.

Chair: Erica Oberndorfer, Labrador Institute Post-doctoral Fellow, CAFF-IASC Fellow

Format: Series of presentations followed by discussion

Presentations:

- Biodiversity and cultural landscapes: Inuit cultural practices increase small-scale biodiversity and create novel vegetation communities in Nunatsiavut (Labrador, Canada): **Erica Oberndorfer**, Labrador Institute Post-doctoral Fellow, CAFF-IASC Fellow
- Traditional Land Use, Tourism and Conservation of Biodiversity in Arctic Protected Areas in Finland: **Pekka Sulkava**, Metsähallitus, Parks & Wildlife Finland
- In the world of snow: ethno-landscape - human - laika sled dog: **Tatiana Degai**, Council of Itelmens "Tkhsanom"
- The Tsá Tué International Biosphere Reserve - a case study in Indigenous-led conservation initiatives: **David Livingstone**, Holarctic Environmental
- Impacts of reindeer management and forestry on biodiversity of northern forests: **Sirpa Rasmus**, University of Lapland, Arctic Centre

CC4: Early warnings: approaches to measuring, modelling and assessing change in biodiversity

Date: Tuesday October 9, 2018

Location: Valtuustosali, City Hall

Time: 15:00-16:30

Determining, tracking and predicting the rapid changes underway in Arctic biodiversity is complex. This session explores new opportunities and approaches to measuring, modelling and assessing change across sub- to high Arctic species and ecosystems, and the implications for the identification of important areas, land-use planning, and management of species at risk.

Chairs: Deb Cooper, US National Parks Service; **Erpur Hansen**, South Iceland Nature Research Centre

Format: Series of 12 minute presentations followed by 3 minutes questions/answers after each presenter

Presentations:

- New assessment highlights climate change as a serious threat to northern ecosystems in Finland - IUCN Red List of Ecosystems (RLE): **Tytti Kontula**, Finnish Environment Institute, Biodiversity Centre
- Extreme Temperature Prognoses for Russian Arctic Based on New Probability Modelling: **Alexey Kokorin**, WWF Russia
- Predicting the future for endangered birds: **Sirke Piirainen**, University of Helsinki & Arctic Centre, University of Lapland
- 135-year time series of Atlantic Puffin production is negatively correlated to sea surface temperature: Population control by temperature dependent survival of ectotherm sandeel prey? **Erpur Hansen**, South Iceland Nature Research Centre
- An international network for large-scale tracking of seabirds in the Northeast Atlantic – SEATRACK: **Hallvard Strøm**, Norwegian Polar Institute

EBM7: The CBMP as an international player and a regional Biodiversity Observation Network of GEO BON: exploring synergies

Date: Tuesday October 9, 2018

Location: Teiva, Lappia Hall

Time: 15:00-16:30

The CBMP Strategic Plan 2018 – 2021 includes an activity to map anticipated outputs to support national, regional and global needs. e.g. (1) the Aichi Targets and indicators; (2) Monitoring Plan attributes to the Biodiversity

Observation Network of the Group on Earth Observations – Biodiversity Observation Network (GEO BON) Essential Biodiversity Variables (3) Biodiversity Action Plans and other processes. The CBMP has been formally recognized as a regional GEO BON. GEO BON's mission is to improve the acquisition, coordination and delivery of biodiversity observation data to decision-makers. It operates as a global network with other 200 partner organizations representing expertise in remote sensing, in-situ observations, citizen science, modelling, indicators and policy outputs at national, regional and global scales for the biodiversity related conventions as well as the Intergovernmental Panel on Biodiversity and Ecosystem Services. This session will present the CBMP Strategic Plan and discuss the international linkages for the CBMP with focus on GEO BON. There is a great opportunity to develop some meaningful and co-beneficial interactions, particularly in the areas of model-based indicators, indicator visualizations, remote sensing techniques, biodiversity observation tool sharing and biodiversity observation network design.

Chairs: **Mike Gill**, Group on Earth Observations - Biodiversity Observation Network; **Tom Christensen**, Arctic Research Centre, Aarhus University

Format: Series of presentations followed by moderated panel discussion

Presentations:

- The Circumpolar Biodiversity Monitoring Program – The CBMP Strategic Plan 2018 – 2021: **Tom Christensen**, Arctic Research Centre, Aarhus University
- The Group on Earth Observations – Biodiversity Observation Network: From Data to Decision: **Mike Gill**, GEO BON
- Other international body (CBD/ IPBES) and Aichi and post 2020 Targets: **Alexander Shestakov**, Secretariat of the UN Convention on Biological Diversity
- Presentation highlighting Data that are created by the CBMP remote sensing work: **Liza Jenkins**, Michigan Tech Research Institute
- Presentation on SABR indicator/ FEC development and datacreation. Potential links to GEO - BON and other international partners: **Jen Lento**, University of New Brunswick

Moderated panel discussion led by **Mike Gill**, Group on Earth Observations - Biodiversity Observation Network and **Tom Christensen**, Arctic Research Centre, Aarhus University

AS4: Reducing the effects of commercial fishing on biodiversity

Date: Tuesday October 9, 2018

Location: Erottaja, ELY

Time: 15:00-16:30

Arctic waters support some of the largest industrial commercial fisheries in the world. These fisheries are responsible for a major contribution to the food security and availability of many parts of the world, as well as hundreds of billions of dollars in economic activity. The Arctic also supports small-scale fisheries which have significant value to the communities which rely on them. This session provides overviews of some attempts to understand and reduce the harm that commercial activities, such as bottom trawling or gillnets may cause to the Arctic marine environment. Topics include overview reports on commercial fishing, mapping of vulnerable areas, new methodologies and technologies, communications activities and how to conceptualize and manage a commercially viable invasive species.

Chair: **Signe Christensen-Dalsgaard**, Norwegian Institute for Nature Research

Format: Series of presentations followed by discussion

Presentations:

- What's the catch with lumpsuckers? A review of seabird bycatch in lumpsucker gillnet fisheries in the North Atlantic: **Signe Christensen-Dalsgaard**, Norwegian Institute for Nature Research
- An analysis of Circumpolar Arctic Commercial Fishing: **Doug Chiasson**, World Wildlife Fund
- Epibenthic community structure in Melville Bay, West Greenland – assessing biodiversity and trawling impacts of an experimental fishery from underwater imagery: **Mona Maria Fuhrmann**, Institute of Zoology, ZSL London
- Developing effective outreach tools to communicate fishing impacts in Greenland: **Mona Maria Fuhrmann**, Institute of Zoology, ZSL
- Allocation of research resources for invasive species with a commercial value: The case of the red king crab: **Melina Kourantidou**, University of Southern Denmark

KN09: Herbivory in the Arctic – understanding large-scale patterns and processes of a key ecological interaction

Date: Tuesday October 9, 2018

Location: Kero, Lappia Hall

Time: 15:00-16:30

Ongoing changes in the composition of plant and herbivore communities in northern regions are likely to have a large impact on the dynamics of arctic ecosystems, their ability to respond to changes, and the livelihoods of northern people who hunt or herd herbivorous animals. Even though plant-herbivore interactions have long been studied in the Arctic, the general finding is that the role of herbivory depends on where and when it takes place.

Given the importance of herbivory and the context-dependency of the outcomes of this interaction, there is a need of pan-arctic efforts in data collection and development of data layers that are comparable at a biome-wide scale. Since its establishment in 2014, the Herbivory Network has worked towards addressing the role of herbivory in Arctic and alpine ecosystems, and developing new approaches to harmonise research efforts. This session will include presentations illustrating central achievements of the Herbivory Network and recent developments in the field of Arctic herbivory. The presentations will emphasize and discuss possible ways to consolidate collaborative research on herbivory to understand the relevance of this ecological interaction at a biome-wide scale.

Chairs: **Isabel C. Barrio**, Agricultural University of Iceland; **Eeva Soinen**, UiT – The Arctic University of Norway

Format: Series of presentations followed by discussion

Presentations:

- Biome-wide patterns and drivers of Arctic herbivores functional and phylogenetic diversity: **Eeva Soinen**, UiT – The Arctic University of Norway
- Establishing baselines for future monitoring of invertebrate herbivory in the Arctic: **Isabel C Barrio**, Agricultural University of Iceland
- PanArctic variation in anti-browsing defense in tundra dwarf birches: **Elin Lindén**, Department of Ecology and Environmental Science, Umeå University
- Drivers of vegetation change in the high Arctic: **Virve Ravolainen**, Norwegian Polar Institute
- It takes two to make plants produce defences: Tundra herbivores create heterogeneous landscapes in palatability: **Katarina Inga**, Arctic University of Norway in Tromsø

KNO8: The problem of the polar bear: Does the symbol of the Arctic prevent us from fixing the Arctic?

Date: Tuesday October 9, 2018

Location: Saivo, Lappia Hall

Time: 15:00-16:30

Building mass awareness on the importance of nature is critical to achieving a sustainable, prosperous, and liveable future on planet Earth. The rapid rate of change taking place in the Arctic due to climate change is transforming the region's biodiversity, making it a critical focal point for any global conversation. However, communicating the urgent need for action to prevent biodiversity loss in the Arctic to audiences that will never visit the region has met with limited success. This session examines how Arctic biodiversity has been portrayed by various institutions and organizations in the past, and what might be done to communicate more effectively in the future. A central example within the session is the WWF's current 'Engaging a Billion for Biodiversity' campaign. Over the next three years, WWF's global engagement priority is to inspire mainstream support for environmental action to protect biodiversity. In partnership with the Convention on Biodiversity (CBD) and the World Organization of the Scout Movement (WOSM) the collaboration aims to help achieve the United Nations Convention on Biological Diversity's Aichi Biodiversity Target 1. This session details WWF's plans to engage a global audience using engagement techniques such as the Earth Hour platform and the Scouting Badge programme. The session will also detail ethnographic research findings of key learnings from previous representations, campaigns and pedagogic frameworks highlighting the importance of Arctic biodiversity in relation to climate change. We will tackle head on the challenges and opportunities the polar bear, as poster child for Arctic conservation, represents for communicating the wider challenges of Arctic biodiversity. Building on the unique opportunity of the conference expertise, the session moves into a round-table format where individuals will critically reflect on their own experience of communicating, campaigning and engaging about Arctic biodiversity. Through facilitated discussion we will consider how to more effectively convey the realities of the Arctic to future audiences.

Chairs: **Leanne Clare**, World Wildlife Fund - Arctic Programme; **Michael Alexander**, World Wildlife Fund - International

Format: Presentations and roundtable discussion

KNO1: Arctic biodiversity education and outreach

Date: Tuesday October 9, 2018

Location: Saivo, Lappia Hall

Time: 17:00-18:30

The Arctic Biodiversity Assessment has called for the development of communication and outreach tools and methodologies to better convey the importance and value of Arctic biodiversity and the changes it is undergoing. This interactive session explores case studies on Arctic biodiversity communication, including presentations on interactive exhibitions, youth programs, narrative forms, fiction and poetry, musical performance, and artistic collections.

Chair: **Shailyn Drukis**, Canadian Committee for IUCN

Format: Series of presentations followed by question/answer

Presentations:

- Interactive Exhibition as Tool for Learning Climate Change Impact on Arctic Biodiversity in Finnish Lapland: **Stéphanie C. Lefrère**, The Finnish Environment Institute (SYKE)
- Northern Connections: Involving Northern Youth in Biodiversity and Climate Change Initiatives: **Shailyn Drukis**, Canadian Committee for IUCN
- From galleries to guits, blogs to botanical gardens: the many facets of public engagement on Arctic biodiversity research at the Canadian Museum of Nature: **Paul Sokoloff**, Canadian Museum of Nature
- Learning and teaching on biodiversity with narrative forms and fiction: **Marcel Robischon**, Humboldt Universität zu Berlin
- Dialogus Arctica – an alternative way to communicate arctic values at risk: **Frode Aarvik**, Steinkaret Scene

EBM4: The State of the Arctic Marine Biodiversity Report (SAMBR)

Date: Tuesday October 9, 2018

Location: Tieva, Lappia Hall

Time: 17:00-18:30

The CBMP Marine has released the State of the Arctic Marine Biodiversity Report (SAMBR), a synthesis of the state of knowledge about biodiversity in Arctic marine ecosystems, detectable changes, and important gaps in the ability to assess status and trends of biodiversity across six focal ecosystem components (FECs): marine mammals, seabirds, fishes, benthos, plankton, and sea ice biota. The report provides an important first step to identify knowledge gaps in circumpolar biodiversity monitoring efforts. The session provides an overview of monitoring results, advice for monitoring and recent implementation actions taken to follow-up on recommendations. It concludes with a discussion about the next steps for CBMP Marine.

Chairs: **Alain Dupuis**, Fisheries and Oceans Canada; **John Bengtson**, NOAA; **Tom Christensen**, Aarhus University; Sara Longan, North Slope Science Initiative

Format: Series of presentations followed by discussion

Presentations:

- Introductory remarks: **Alain Dupuis**, Fisheries and Oceans Canada
- Sea ice biota key findings and information gaps: **Cecilie von Quillfeldt**, Norwegian Polar Institute
- Plankton key findings and information gaps: **Connie Lovejoy**, Université Laval
- Benthos key findings and information gaps: **Lis Lindal Jorgensen**, Institute of Marine Research
- Monitoring biodiversity of Arctic marine fishes: Key findings and information gaps: **Kevin Hedges**, Fisheries and Oceans Canada
- SAMBR and CBird: **Mia Rönkä**, University of Turku / Ministry of the Environment, Finland
- Marine Mammals key findings and information gaps: **Fernando Ugarte**, Greenland Institute of Natural Resources
- An analysis of SAMBR implementation: **Rosa Meehan**, ArcticTurn
- Roundtable discussion

MB1: Promoting of ecosystem services of Arctic wetlands for sustainable development

Date: Tuesday October 9, 2018

Location: Erottaja, ELY

Time: 17:00-18:30

This session asks the question, how can the application of an ecosystem services approach be used to better manage Arctic wetlands? The concept involves a variety of stakeholders to integrate ecosystem-based management in the use of wetlands and to achieve the Sustainable Development Goals. The session provides an introduction, a series of case studies and invites a discussion afterwards. The discussion addresses the priorities for countries to introduce ecosystem services concept as solution for stakeholder's input to achieve the Sustainable Development Goals and Aichi Biodiversity Targets.

Chairs: **Tatiana Minayeva**, Wetlands International/Care for Ecosystems; **Igor Semenov**, EthnoExpert

Format: Series of presentations followed by discussion

Presentations:

- Arctic wetlands ecosystem services overview: **Tatiana Minayeva**, Wetlands International/Care for Ecosystems
- Stakeholders in Arctic and their interests in wetlands ecosystem services: **Igor Semenov**, EthnoExpert
- Coastal wetlands – example of ecosystem services mapping for decision making: **Liudmila Sergienko**, State Petrozavodsk University
- Ecosystem services mapping for spatial development planning as risk management – Talotinsky case: **Anton Chistyakov**, EthnoExpert
- Flyways, ecosystems and ecosystem services: the role of the Arctic: **Taej Mundkur**, Wetlands International
- Using prognostic mapping method in revealing and solving nature-use conflicts in Numto nature park: **Anastasia Markina**, Peatlands Ecosystem Centre of the Institute of Forest Sciences RAS

AS6: Understanding cumulative effects on Arctic biodiversity and landscapes

Date: Tuesday October 9, 2018

Location: Kero, Lappia Hall

Time: 17:00-18:30

This session consists of a facilitated panel discussion of different Arctic right-holders and stakeholders about cumulative effects on Arctic biodiversity and livelihoods. The participants will discuss how visualization of spatial data, and the combination of scientific and traditional knowledge, could be used and improved to address different right-holders'/ stakeholders' needs for information, planning and communication.

Chairs: **Kathrine Johnsen**, GRID-Arendal; **Ole Anders Turi**, Saami Council

Format: facilitated panel discussion

Panelists:

- **Levi Westerveld**, GRID-Arendal
- **Starri Heiðmarsson**, Icelandic Institute of Natural History, Rif Field Station, Iceland
- **Mikhail Pogodaev**, Northern Forum
- Others TBD

IAB1: Hot spots, connectivity and sensitive areas for biodiversity conservation benefit

Date: Tuesday October 9, 2018

Location: Valtuustosali, City Hall

Time: 17:00-18:30

Arctic species today enjoy large areas of habitat that support a full range of ecological processes and interactions. But climate change, industrial development, pollution, local disturbances and invasive alien species are affecting the Arctic, and their impacts are increasing. The Arctic Biodiversity Assessment called for the advancement and protection of large areas of ecologically important marine, terrestrial and freshwater habitats, considering ecological resilience in a changing climate. To do this effectively requires the identification of hot spots, sensitive areas and connectivity for the benefit of conservation. This session explores these issues and presents recent work to advance hot spot and sensitive area identification and protection.

Chairs: **Reidar Hindrum**, Norwegian Environment Agency; **Deb Cooper**, US National Parks Service

Format: Series of presentations followed by discussion

Presenters:

- Rediscovery of walrus in the Pechora Sea: **Varvara Semenova**, Marine Mammal Research and Expedition Center LTD
- Abundance and species diversity hotspots of tracked marine predators across the North American Arctic: **David Yurkowski**, University of Manitoba
- Arctic-breeding seabirds' hotspots in space and time: a framework for year-round modelling of abundance and environmental niche using SEATRACK data: **Arnaud Tarroux**, Norwegian Institute for Nature Research
- Abundance and distribution of marine mammals wintering in the North Water and Northeast Water polynyas in Greenland: **Rikke Guldborg Hansen**, Greenland Institute of Natural Resources
- Arctic islands –biodiversity consequences of climate driven fragmentation of Arctic ecosystems: **Fredrik Dalerum**, University of Oviedo
- What traits make species sensitive to climate change in northern ecosystems? **Juha Pöyry**, Finnish Environment Institute (SYKE)

Wednesday October 10

MB5: Worldwide partnerships to conserve migratory birds: The Arctic Migratory Bird Initiative

Date: Wednesday October 10, 2018

Location: Valtuustosali, City Hall

Time: 8:30-10:00

Arctic-breeding birds use different flyways to move from Arctic breeding grounds to overwintering or stopover sites at lower latitudes. Many bird populations are declining at an unprecedented rate for variety of reasons, requiring cooperation and protection along entire flyways. This session will highlight CAFF's Arctic Migratory Birds Initiative (AMBI), a project designed to improve the status and secure the long-term sustainability of declining Arctic breeding migratory bird populations. This project has worked across four major flyways to engage global partners on the issue of bird and habitat conservation, including the mitigation of harmful anthropogenic actions including development and illegal-killing. This session will contain a series of presentations that highlight the successes of the project to-date and a discussion that will scope possibilities for future direction as the project enters its second phase.

Chair: **Evgeny Syroechkovskiy**, Ministry of Natural Resources and Ecology

Format: Series of presentations followed by discussion

Presentations:

- The Arctic Migratory Bird Initiative (AMBI) – international cooperation for Arctic breeding migratory birds: successes and challenges of the first 4 years: **Evgeny Syroechkovskiy**, Ministry of Natural Resources and Ecology
- What should we do with all these Snow Geese? ...Bringing Inuit local knowledge into management of an international wildlife resource: **Victoria Johnston**, Environment and Climate Change Canada
- Global Conservation Issues in a Northern Context: Addressing Seabird Bycatch in Arctic Fisheries: **Amie Black**, Environment and Climate Change Canada
- AMBI work in the African-Eurasian Flyway, habitat protection: **Anders Braa**, Norwegian Environment Agency
- AMBI work in the most threatened flyway on the planet - East Asian Australasian Flyway: **Doug Watkins**, AMBI
- AMBI, where do we go from here? TBC, AMBI

EBM10: Building long-term ecosystem monitoring programs to feed Arctic and international biodiversity assessments

Date: Wednesday October 10, 2018

Location: Erottaja, ELY

Time: 8:30-10:00

Arctic Council working groups put substantial effort into identifying and harmonizing data sets for Arctic and international assessments. The Circumpolar Biodiversity Monitoring Program (CBMP) has developed monitoring plans for marine, coastal, freshwater and terrestrial ecosystems and are in the process of identifying gaps in required biodiversity data. This session will explore how long-term ecosystem-based monitoring programs are designed, the considerations they must take, and how such programs can contribute to a circum-Arctic monitoring program. Presentations include examples of a long-standing and ongoing ecosystem-based monitoring program in Greenland, and the development of a new long-term monitoring program in Canada. Focus will be on how national programmes are developed to bring biodiversity related data to the CBMP and what CBMP does to streamline data collection and dissemination in Arctic and international assessments.

Chairs: **Torben R. Christensen** and **Elmer Topp-Jørgensen**, Aarhus University

Format: Series of presentations followed by discussion

Presentations:

- Greenland Ecosystem Monitoring Program: **Torben R. Christensen**, Aarhus University
- Zackenberg BioBasisProgram and linkages to CBMP: **Niels Martin Schmidt**, Aarhus University
- Establishing CHARS as an Arctic Flagship Research and Monitoring Site – Design and Implementation of the CHARS Terrestrial Monitoring Program: **Donald McLennan**, Polar Knowledge Canada - Canadian High Arctic Research Station
- CBMP strategic plan and data considerations: **Sara Longan**, North Slope Science Initiative

KNO2: Traditional Knowledge and science under a co-production of knowledge

Date: Wednesday October 10, 2018

Location: Tieva, Lappia Hall

Time: 8:30-10:00

The co-production of knowledge is a process where multiple actors come together on equal footing to combine epistemologies and methodologies to develop a collective way of knowing. Both Traditional Knowledge and scientific knowledge have unique ways of conceptualizing and understanding the environment and Arctic biodiversity. In this session speakers explore these ways of knowing and their own experiences of co-production of knowledge, providing lessons learned for wider application.

Chairs: **Carolina Behe**, Inuit Circumpolar Council; **Victoria Buschman**, University of Washington

Format: Series of presentations followed by discussion

Presentations:

- How Indigenous Knowledge and science partner to build evidence-based information for use in adaptive decision making and conservation planning: **Victoria Buschman**, University of Washington
- Traditional knowledge and so called western science, does that fit (work) together for securing biodiversity? **Jürgen Weissenberger**, Equinor
- Understanding the Arctic through a co-production of knowledge: **Carolina Behe**, Inuit Circumpolar Council
- Wildlife co-management processes under Canadian Land Claims Agreements: Drivers for the co-production of knowledge: **Gregor Gilbert**, Makivik Corporation
- The Aquatic Effects Monitoring Program (AEMP) and how Traditional Knowledge is incorporated as a line of evidence: **Alexandra Hood**, De Beers Canada Inc.

AS7: Arctic Ocean Acidification: Pan-Arctic processes and regional ecosystem impacts

Date: Wednesday October 10, 2018

Location: Kero, Lappia Hall

Time: 8:30-10:00

The Arctic Ocean and its surrounding seas are particularly susceptible to ocean acidification (OA) due to greater absorption of CO₂ by cold high-latitude waters and delivery of CO₂-rich water masses into the Arctic basin. Rapidly progressing acidification poses a significant threat to northern communities and commercial fisheries that depend on marine resources in the region. Arctic Monitoring and Assessment Programme finalizes the second Arctic Ocean Acidification (AOA) Assessment in 2018 which provides a five-year update on both physical and biological impacts of OA as well as regionally focused case studies. The results from the AOA 2018 assessment will be published for the first time at the Arctic Biodiversity Congress. A scientific team of authors report here on the status and trends of Arctic OA as well as region specific processes that have emerged since the last AOA in 2013. The format of the session will be five 15 minutes presentations of the assessment results followed by discussions. A total of five case studies discuss region-specific impacts to marine resources and describe economic impacts to rapidly progressing OA. A new component of the 2018 AOA update includes a pan-Arctic economic assessment of acidification impacts to marine resources and northern economies.

Chairs: **Emily Osborne**, National Oceanic and Atmospheric Administration; **Richard Bellerby**, Norwegian Institute for Water Research; **Claudia Gelfond**, University of Alaska, Fairbanks

Format: Series of presentations followed by discussion

Presentations:

- Arctic ocean acidification: Scientific updates on chemical processes: **Richard Bellerby**, East China Normal University and Norwegian Institute for Water Research
- Biological responses to Arctic ocean acidification: **Peter Thor**, Swedish Meteorological and Hydrological Institute
- Climate change impacts on subsistence fisheries in the Western Canadian Arctic- A framework linking climate model projections to local communities: **Nadja Steiner**, Fisheries and Oceans Canada
- Socioeconomic effects of ocean acidification in northern Norway: A kelp-urchin case study: **Philip Wallhead**, Norwegian Institute for Water Research
- Socio-economic Impacts of Arctic ocean acidification: **Henry Huntington**, Huntington Consulting

IAB2: Safeguarding habitats for Arctic species under changing environmental conditions

Date: Wednesday October 10, 2018

Location: Saivo, Lappia Hall

Time: 8:30-10:00

The Arctic Biodiversity Assessment highlighted the need to develop and implement mechanisms that best safeguard Arctic biodiversity under changing environmental conditions, such as loss of sea ice, glaciers and permafrost. This session explores species distributions, species habitat needs, the vulnerability of habitats under changing environmental conditions and paths forward to safeguard important areas for biodiversity.

Chairs: **Mark Marissink**, Swedish Environmental Protection Agency; **Marina von Weissenberg**, Ministry of the Environment, Finland

Format: Series of presentations followed by discussion

Presentations:

- Linking foraging behaviour and energetics to identify and safeguard marine habitat around colonies of an Arctic seabird: **Allison Patterson**, McGill University
- Arctic benthic species and community distribution, sensitive ecosystems and biodiversity in the Atlantic and Pacific Gateways: **Lis Lindal Jørgensen**, Institute of Marine Research, Norway (IMR)
- Velocity of climate change in the Finnish protected area network: **Risto Heikkinen**, Finnish Environment Institute
- Present and future effectiveness of Arctic Protected Areas in Russia: **Mikhail Stishov**, WWF-Russia
- Spatial prioritization approach to identify irreplaceability and cost-effective improvement opportunities in a protected area network: **Santtu Kareksela**, Parks & Wildlife Finland
- Effects of overabundant geese on shorebirds breeding in Arctic Canada: **Paul Smith**, Environment and Climate Change Canada

KNO3: Make Arctic data accessible and reusable – roadmap to open and cost effective data management policy

Date: Wednesday October 10, 2018

Location: Kero, Lappia Hall

Time: 10:30-12:00

Understanding and responding to Arctic changes and challenges requires accessible and reliable data to facilitate monitoring, research, management and decision making. Large amounts of important data is being processed into Arctic Council reports and for other purposes, but afterwards this data is often very difficult and costly to find and access in order for it to be reused. Existing data infrastructures are inefficient and, if modernized, could promote data sharing and be more cost effective.

Chairs: **Peter Pouplier**, Arctic SDI; **Tom Barry**, CAFF Secretariat

Format: Series of presentations followed by discussion

Presentations:

- Introduction to the reasons behind information management best practices, based on open international standards, to build communities of practice to share existing and new data: **Peter Pouplier**, Arctic SDI / Danish Agency of Data Supply and Efficiency and **Fredrik Persäter**/ Swedish Mapping, Cadastre and Land Registration Authority
- Data presentation and sharing in practice – the Arctic Biodiversity Data Service (ABDS): **Kári Fannar Lárusson**, CAFF Secretariat
- Readily available Arctic data, tools and services for data sharing supporting the Arctic Scientific community and the work of Arctic Council– the Arctic SDI Basemap, services and tools in the Arctic: **Jani Kylmäaho**, Arctic SDI / National Land Survey of Finland
- User needs assessment – Arctic Marine data as an example: **Gerhard Heggebø**, Arctic SDI / Norwegian Mapping Authority
- How to build an information management policy promoting open data policies for sharing data: **Peter Pouplier**, Arctic SDI / Danish Agency of Data Supply and Efficiency and **Fredrik Persäter**/ Swedish Mapping, Cadastre and Land Registration Authority

EBM3: The State of the Arctic Biodiversity Terrestrial Report (START): the Circumpolar Biodiversity Monitoring Program, Terrestrial

Date: Wednesday October 10

Location: Tieva, Lappia Hall

Time: 10:30-12:00

The State of The Arctic Biodiversity Terrestrial Report (START) will be published in 2019, and report on the status and trends of terrestrial ecosystems in the Arctic. The START is compiled by expert contributors to the CBMP Terrestrial and based on peer reviewed articles of key components of the terrestrial ecosystem that will be published as a special journal issue in Ambio. Presentations will cover the background for the work in the CBMP Terrestrial Group, including the overall structure and approach of the CBMP Arctic Terrestrial Biodiversity Monitoring Plan. The session will present snapshots from the START results and explore ways to use the results for prioritising nature conservation work in the future, and address how to use knowledge and new technology in an effective way. The session will close with a discussion to provide comments and input to the work on the START report, including the development of key findings and advice for future monitoring, based on the identified data, knowledge gaps and information needs.

Chairs: **Mora Aronsson**, Swedish University of Agricultural Sciences, Swedish Species Information Centre; **Starri Heiðmarsson**, Icelandic Institute of Natural History

Format: Series of presentations followed by round table discussion

Presentations:

- Introduction to the CBMP Terrestrial, StArT and Special Journal issue (Ambio): **Sara Longan**, North Slope Science Initiative, Anchorage, Alaska and **Niels Martin Schmidt**, Aarhus University
- Invasive species on a northward march: **Kristine Westergaard**, Norwegian Institute for Nature Research
- Finding and measuring the invisible diversity, novel DNA methods with special reference to arctic invertebrates: **Stephen Coulson**, Swedish University of Agricultural Sciences, The Swedish Species Information Centre
- Current prioritization approaches – how well can we identify different priorities and the related challenges: **Santtu Kareksela**, Metsähallitus
- START: key findings panel/roundtable: Moderated by **Jason Taylor**, National Park Service
 - **Knud Falk**, Arctic Falcons Specialist Group
 - **Virve Ravolainen**, Norwegian Polar Institute
 - **Stephen Coulson**, Swedish University of Agricultural Sciences, The Swedish Species Information Centre
 - **Kristine Westergaard**, Norwegian Institute for Nature Research
 - **Santtu Kareksela**, Metsähallitus
 - **Erica Oberndorfer**, Labrador Institute Post-doctoral Fellow, CAFF-IASC Fellow
 - **Cynthia Jacobson**, CAFF Chair, US Fish and Wildlife Service
 - **Sara Longan**, North Slope Science Initiative, Anchorage
 - PP representative (tbc)

AS9: Biodiversity in the high seas of the Central Arctic Ocean: Advancements in scientific understanding and future management

Date: Wednesday October 10, 2018

Location: Valtuustosal, City Hall

Time: 10:30-12:00

The high seas region of the Central Arctic Ocean (CAO) is a remote area characterized by significant extent of multi-year sea ice which has existed for millennia. The current warming trend and the resulting reduction of sea ice cover from the CAO have signaled an emerging need to improve our understanding of its understudied ecosystems and to explore management options to protect this area from future anthropogenic pressures. Recent international scientific and policy cooperation on the CAO have led to opportunities to improve our understanding of its ecosystems and biodiversity. In particular, negotiations on a legally-binding Agreement to Prevent Unregulated

Fishing in the High Seas of the Central Arctic Ocean. In support of these negotiations, meetings of Scientific Experts on Fish Stocks in the CAO have taken place to review the state of the knowledge on fish and invertebrate species and to develop plans for fishery research using an ecosystem-based approach. In addition, a working group of the Arctic Council has been working with regional science bodies to complete an Integrated Ecosystem Assessment of the CAO. This session will address these topics and their relevance for integrated, ecosystem based management of the region.

Chairs: **Maya Gold**, Fisheries and Oceans Canada; **Alf Hakon Hoel**, University of Tromsø and Norwegian Institute of Marine Research; **Lisa Speer**, Natural Resources Defense Council

Format: Series of presentations followed by discussion

Presentations:

- The CAO Fishing Agreement: Negotiations and next steps: **Maya Gold**, Fisheries and Oceans Canada
- Scientific cooperation in the central Arctic Ocean: **Alf Hakon Hoel**, University of Tromsø
- The Central Arctic Ocean Integrated Assessment: Informing Ecosystem-based Management: **Lisa Speer**, Natural Resources Defense Council
- Ecosystem-Based Management in the Central Arctic Ocean: **Henry Huntington**, Pew Charitable Trusts
- Implications of the UN high seas negotiations on the CAO: **David VanderZwaag**, Dalhousie University

IAB7: Bowhead whale conservation and future research cooperation

Date: Wednesday October 10, 2018

Location: Saivo, Lappia Hall

Time: 10:30-12:00

This session facilitates cooperation on bowhead whale research, which has been identified as a knowledge gap in the CAFF State of Arctic Marine Biodiversity Report (2017). This session explores recent developments and partnerships, including monitoring techniques and tools such as acoustics, vessel designs, tagging and aerial surveys to help identify critical areas and calving grounds and further conservation and protection of this important and iconic Arctic species.

Chairs: **Gert Polet**, World Wide Fund for Nature; **Erik van de Linde**, Ice Whale Foundation

Format: Series of presentations followed by discussion

Presentations:

- Spitsbergen's bowhead whales (*Balaena mysticetus*) – a summary of new findings: **Kit Kovacs**, Norwegian Polar Institute
- Proposed inventories of Bowhead whale distribution and behavior in the dynamic drift ice zone in the Fram Strait during the polar winter: **Herman Sips**, Ice Whale Foundation
- Bowhead whale acoustic occurrence and vocal behavior in Fram Strait: **Karolin Thomisch**, Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research
- You can't always go back: bowhead whales, over-exploitation, global warming, and orca predation: **Steven Ferguson**, Fisheries and Oceans Canada
- Abundance and distribution of bowhead whales during winter and summer in the Greenland Sea: **Rikke Guldborg Hansen**, Greenland Institute for Natural Resources
- Okhotsk Sea bowhead whales as a live model on how climate change may affect the species in the polar regions: **Olga Shpak**, A.N. Severtsov Institute of Ecology and Evolution
- Application of environmental DNA for monitoring abundance and diversity of bowhead whales (*Balaena mysticetus*): **Morten Tange Olsen**, Natural History Museum of Denmark

KNO10: Arctic terrestrial invertebrate diversity

Date: Wednesday October 10, 2018

Location: Erottaja, ELY

Time: 10:30-12:00

This session brings together world-wide experts on Arctic terrestrial arthropod diversity to synthesize current knowledge and discuss the recommendations of the Circumpolar Biodiversity Monitoring Plan for terrestrial arthropods in light of recent advances in the field. The speakers are key representatives of the recently established UArctic thematic network – NeAT, Network for Arthropods of the Tundra formed at the first Arctic Biodiversity Congress in Trondheim 2014. The session will show case how NeAT has become an important expert network for digitizing and sharing of data and knowledge as well as for coordination of Circumarctic invertebrate biodiversity research, monitoring and management

Chairs: **Toke T. Høye**, Aarhus University; **Lauren Culler**, Dartmouth College

Format: Series of presentations followed by discussion

Presentations:

- Survival of invertebrates during the polar winter: TBD
- Global patterns in the species richness, phylogenetic diversity and ecological functioning of the flower-visitor communities of an arcto-alpine plant (*Dryas*): **Tomas Roslin**, Swedish Agricultural University
- Image-based monitoring of Arctic arthropods: **Toke Høye**, Aarhus University

- Warming alters the indirect effects of predators on ecosystem functioning in the Arctic: **Amanda Koltz**, Washington University, St. Louis
- Mapping constraints of climate and land type on insect compositions: **Douglas Chesters**, Institute of Zoology, Chinese Academy of Sciences, Beijing

CC2: Biodiversity and climate change: impacts on non-marine ecosystems

Date: Wednesday October 10, 2018

Location: Saivo, Lappia Hall

Time: 15:15-17:15

Freshwater and terrestrial ecosystems are undergoing multiple drivers of change. As the Arctic warms and the tundra greens, entire regime shifts, diversity and assemblages may change. This session explores how any why terrestrial and freshwater ecosystems are changing, the diverse responses to drivers, and the resulting implications for biodiversity and management, including the exploration of possible tipping points and surprise cascading effects.

Chairs: **Arkady Tishkov**, Institute of Geography, Russian Academy of Sciences; **Leigh Welling**, US National Park Service

Format: Series of presentations, followed by question/answer and discussion

Presentations:

- Biodiversity in heathlands and barrens of Nova Scotia, Canada: islands of “Subarctic” vegetation in temperate and boreal zones: **Jeremy Lundholm**, Saint Mary’s University
- Responses of tundra carbon cycling and storage to reindeer-induced vegetation transition: **Henni Yläanne**, Lund University
- Greening of the tundra as a driver of the current trends in the Arctic biota: Russian Perspective: **Elena Belonovskaya**, Institute of Geography, Russian Academy of Sciences
- Geomorphology shapes multidiversity patterns of Arctic vegetation: **Miska Luoto**, University of Helsinki
- Water as a resource, stress and disturbance shaping tundra vegetation: **Julia Kemppinen**, University of Helsinki
- The future of Arctic biodiversity is dependent on evolution of the snow cover: **Pekka Niittynen**, University of Helsinki
- High-potential for a future tipping-point in Arctic land surface conditions: **Juha Aalto**, University of Helsinki
- Climate and productivity forced regime shifts in subarctic lakes: **Kimmo Kahilainen**, UiT The Arctic University of Norway

KNO13: Technologies and techniques to advance biodiversity monitoring and modelling

Date: Wednesday October 10, 2018

Location: Erottaja, ELY

Time: 15:15-17:15

The unprecedented changes being experienced in the Arctic emphasize the importance and urgency of getting information to decision-makers in a timely manner. To do so requires easily accessible, comprehensive data, coordinated and consistent monitoring, up-to-date assessments of trends and informed responses. This session explores case studies in methodologies and technologies to help monitor and track changes in Arctic biodiversity and ecosystems.

Chairs: **Liza Jenkins**, Michigan Tech Research Institute; **Catherine Coon**, Bureau of Ocean Energy Management (BOEM)

Format: Series of presentations followed by discussion

Presentations:

- Leveraging drones to quantify the landscape-context of tundra biodiversity change: **Jeffrey Kerby**, Dartmouth College
- Rapid decay of palsas monitored using RTK GPS, UAS data and aerial photographs: **Timo Kumpula**, University of Eastern Finland
- Geomorphology matrix as a base of Arctic coastal zone monitoring in Global change dynamic: **Dmitriy Dobrynin**, Working Group on Anseriformes of Northern Eurasia
- Animal energyscapes: A new dimension for arctic environmental spatial planning: **David Grémillet**, French National Center for Scientific Research - CNRS
- Exploring Arctic ecosystem futures through biodiversity models and using these models for evaluation of global biodiversity models: **TBD**, UN Environment World Conservation Monitoring Centre
- Model evaluation by specialists – using Reindeer Movements for map quality assessment: **Sven Adler**, Swedish University of Agricultural Sciences
- The current extent of Arctic microbiology, zoology and botany research: **Anna-Maria Virkkala**, University of Helsinki
- Efficient monitoring of Swedish sub-arctic habitats with the use of directed balanced sampling: **Hans Gardfjell**, Swedish University of Agricultural sciences

AS2: Oil spill prevention, preparedness and response in the Arctic

Date: Wednesday October 10, 2018

Location: Valtuustosali, City Hall

Time: 15:15-17:15

Changes in the Arctic sea ice are opening previously inaccessible areas to industrial activity, including natural resource development and shipping. Whether through ship accidents, well leaks or blowouts, oil spills pose serious risks to the Arctic environment. Extreme weather conditions and ice-covered waters can increase the likelihood of oil spills, affect response capabilities and hinder effective clean-up. The damage caused by oil spills can be long-lasting and far reaching, affecting Arctic ecosystems and threatening food security for Arctic peoples. This session brings together presentations from researchers, Indigenous representatives, NGOs, managers and industry to share their perspectives and knowledge on oil spill prevention, preparedness and response in the Arctic.

Chairs: **Patti Bruns**, Emergency Prevention, Preparedness and Response (EPPR); **Liisa Rohweder**, WWF Finland; **Melanie Lancaster**, WWF Arctic

Format: Series of presentations followed by discussion

Presentations:

- Oil spill preparedness, response and capacity in the Arctic: an introduction: **Liisa Rohweder**, WWF
- Modernising the international Arctic oil and gas regulatory framework, TBC: WWF
- Response capacity for oiled wildlife and clean up in the Russian Arctic: **Alexey Knizhnikov**, WWF
- Arctic Coast Bioremediation (The first “small” results of a “big” project): **Vladimir Myazin**, Institute of North Industrial Ecology Problems, Kola Science Centre of Russian Academy of Science
- Ecosystem modelling as a tool to assess the impact of a major oil spill on an economically and ecologically important fish species in the Arctic: **Geir Morten Skeie**, Akvaplan-niva
- Case study treatment of Oil Spill Response Limited’s approach to building credible cold weather capability: **Paul Foley**, Operations Manager, Oil Spill Response Limited
- TBD: **Jens Peter Holst-Andersen**, Emergency Prevention, Preparedness and Response (EPPR)

AS8: Arctic Invasive Alien Species Action Plan: National implementation and empowering decision making by mobilizing, sharing, and analyzing Arctic invasive alien species data

Date: Wednesday October 10, 2018

Location: Kero, Lappia Hall

Time: 15:15-17:15

Effective implementation of the CAFE-PAME Arctic Invasive Alien Species (ARIAS) Strategy and Action Plan is dependent on national implementation, international cooperation and the availability of high quality data. The session will include presentations on national implementation activities, explore how governments can work together to advance the ARIAS Strategy and Action Plan through international environmental frameworks and other relevant bodies, and highlight national- and regional-scale information systems and tools to share information and technologies to advance understanding and reporting of species occurrence, identification, and analysis.

Chair: **Jamie K. Reaser**, US National Invasive Species Council

Format: Series of presentations followed by discussion

Presentations:

- National Implementation: Finland: **Johanna Niemivuo-Lahti**, Ministry of Agriculture and Forestry, Finland
- National Implementation: United States: **Aaron Martin**, US Fish and Wildlife Service
- Thematic Implementation: Community-based Monitoring (Priority Actions 2.3 & 3.2): **Maya Gold**, Fisheries and Oceans Canada
- Thematic Implementation: Information Management and Decision Support Tools (Priority Actions 2.3, 2.4 & 3.2): **Gerald (Stinger) Guala**, US Geological Survey
- Thematic Implementation: Risk Assessment (Priority Actions 2.1, 3.3 & 3.7): **Kim Gustavson**, Aarhus University
- Advancing Technologies to Address Invasive Alien Species: **Jamie K. Reaser**, US National Invasive Species Council
- Moderated group discussion: **Jamie K. Reaser**, US National Invasive Species Council

IAB3: Arctic marine protected areas: identification, effectiveness, co-management and cooperation

Date: Wednesday October 10, 2018

Location: Tieva, Lappia Hall

Time: 15:15-17:15

This session will explore different approaches to identifying and managing priority areas for protection in the Arctic marine environment. It will share recent work by the Arctic Council and others related to marine protected area networks and protection of Arctic biodiversity, present examples of innovative examples at the pan-Arctic and national scale to identify, understand and manage important conservation areas and the human benefits they provide and engage with experts at the session to identify priorities for future work by the Arctic Council and its partners to advance and accelerate progress to conserve Arctic marine biodiversity.

Chair: **Lisa Speer**, Natural Resources Defense Council
Format: Series of presentations followed by discussion

PART 1 Identifying Important Places

- A pan-Arctic network of Marine Protected Areas: **Irina Onufrenya**, WWF Russia
- Arctic Council work to support a pan-Arctic MPA network (background on PAME & CAFF work): **Tom Barry**, CAFF International Secretariat
- Arctic Protected Planet Report: Placing the Arctic in a global context: **Fiona Danks**, UN Environment World Conservation Monitoring Centre

20 minute question and answer

PART 2 Managing MPAs and MPA Networks

- Systematic approach to identification and conservation of priority areas in the Russian Arctic Seas: **Boris Solovyev**, Institute of Ecology and Evolution of Russian Academy of Sciences
- Indigenous management of MPAs: **Kayla Hansen-Craik**, Inuvialuit Regional Corporation
- Assessing sensitivity of marine and coastal areas to ocean uses in Greenland: **Tom Christensen**, Arctic Research Center, Aarhus University

20 minute Q+A

Facilitated discussion with speakers and audience: **Lisa Speer**, Natural Resources Defense Council

Thursday October 11

KNO6: Pan-arctic assessment and data management of plant diversity and community

Date: Thursday October 11, 2018

Location: Erottaja, ELY

Time: 8:30-10:00

This session addresses the development of standardized methods to assess and manage records of plant species diversity and plant communities at the pan-arctic scale. These efforts include a recent update of the Circumpolar Arctic Vegetation Map (CAVM), and the Arctic Vegetation Archive (AVA). Standardization efforts are discussed with respect to taxonomy, spatial sampling design, meta-data requirements and management of records in a common data base. The session covers contributions highlighting different aspects of the above standardization, as well as the status of CAVM and AVA. The presentations are followed by a discussion on how the resulting data sets can be used for pan-arctic biodiversity assessment and management, specifically CBMP efforts. Further the session will discuss strategies to ensure integration of legacy data sets (e.g. from Russia) and continuity of field assessments and integration to a common data base. A pan-arctic data base of standardized plot-based plant diversity and community data will form the base line for future change assessments and significantly improve predictions of species distribution and ecosystem functioning.

Chair: **Gabriela Schaeppman-Strub**, University of Zurich

Format: Series of presentations followed by discussion

Presentations:

- Circumpolar arctic vegetation mapping, plot-data archive, classification, and transects: A framework for examining arctic terrestrial change: **Donald A. Walker**, University of Alaska Fairbanks
- The next steps for bringing Russian Arctic vegetation datasets into the AVA: **Ksenia Ermokhina**, A.N. Severtsov Institute of Ecology and Evolution RAS, Earth Cryosphere Institute SB RAS
- Classification of the *Arctophila fulva* wetlands in the Arctic: **Natalia Koroleva**, Polar-Alpine Botanical Garden Kirovsk
- Biodiversity, phytomass, and vegetation indices along arctic tundra temperature gradients: **Howard E. Epstein**, University of Virginia
- Biodiversity of Canadian Arctic Vascular Plants and Lichens: Field Work, Floristics and Museum Collections: **Jeffery Saarela**, Canadian Museum of Nature
- Moderated discussion: **Gabriela Schaeppman-Strub**, University of Zurich

KNO11: Community-based monitoring of Arctic biodiversity

Date: Thursday October 11, 2018

Location: Kero, Lappia Hall

Time: 8:30-10:00

Arctic inhabitants spend vast amounts of time on land and at sea. Drawing on personal experience, information shared with others, and knowledge handed down through generations, Arctic residents recognize subtle environmental changes and offer insights into their causes. They are community-based monitors by virtue of their day-to-day activities. In addition to their inherent community based monitoring (CBM) capacity, Arctic residents

can employ standard scientific monitoring procedures in the practice of citizen science, thereby extending the reach and effectiveness of programs that rely on a limited number of trained scientists to carry out monitoring. Indigenous and other Arctic peoples wish to impart their environmental understanding to scientific discourse, not only because they have a great deal to offer, but also because this exchange represents an important step towards full participation in resource management activities. This session explores a series of case studies that highlight the value and important contributions that community-based monitoring can make to Arctic biodiversity conservation.

Chairs: **Paul MacDonald**, Canadian Wildlife Service; **Bruce Wright**, Aleut International Association

Format: Series of presentations followed by discussion

- Conversation biology: Community-based conservation of wildlife in Labrador through ongoing dialogue and sharing knowledge systems: **Paul MacDonald**, Canadian Wildlife Service
- Community-led monitoring and ecological restoration in the Arctic: history, power and resilience: **Philippe Fayt**, Snowchange Cooperative
- The value of community-based monitoring to support green-infrastructure planning, sustainable resource use and multi-use of the landscape: **Henrik Hedenäs**, Swedish University of Agricultural Sciences
- PISUNA - From community-based monitoring to management in Greenland: **David Mitchell**, IUCN
- Mainstreaming biodiversity through partnership: Arctic expedition cruise tourism and citizen science: **Audrey Taylor**, University of Alaska Anchorage

EBM1: The CBMP Arctic Coastal Biodiversity Monitoring Plan: Monitoring and reporting important changes in the biodiversity of Arctic coastal ecosystems – Plan development and evaluation

Date: Thursday October 11, 2018

Location: Tieva, Lappia Hall

Time: 8:30-10:00

This session will present, discuss and invite evaluation of the Circumpolar Biodiversity Monitoring Program's (CBMP) Arctic Coastal Biodiversity Monitoring Plan. The overall goal of the Coastal Plan is to provide a general circumpolar framework for monitoring and reporting important biodiversity changes in Arctic coastal ecosystems in member nations with Arctic coastlines – Russian Federation, Norway, Kingdom of Denmark, Iceland, the USA and Canada. A key challenge is to develop a plan that is sufficiently broad to allow member nations to implement national approaches, while maintaining sufficient structure to be able to report in a coordinated circumpolar context. Presentations will cover the overall structure and approach of the Coastal Plan, the approach to co-generating both Indigenous knowledge and science to inform the Plan, the process to arrive at a prioritized list of Coastal Focal Ecosystem Components across nations, new monitoring developments arising from the Plan, and a summary of national implementation approaches. The session will close with a panel and discussion/input from the audience to provide comments to improve the Plan. We will also invite session attendees to review the Plan and provide feedback to the Coastal Expert Monitoring Group as part of the final review process for the Plan.

Chairs: **Donald McLennan**, Polar Knowledge Canada - Canadian High Arctic Research Station; **Tahzay Jones**, US National Park Service

Format: Series of presentations followed by moderated discussion

Presenters:

- The Coastal Plan – Process, general structure, and approach: **Tahzay Jones**, US National Park Service
- Co-generation of knowledge to inform the Coastal Plan: **Carolina Behe**, Inuit Circumpolar Council
- Selection, quality assurance and prioritization of Focal Ecosystem Component: **Susse Wegeberg**, Aarhus University
- Coastal ecosystems of Russian Federation - status of information and prospects for integrated monitoring: **Liudmila Sergienko**, Petrozavodsk State University
- If you build it they will come - A new coastal monitoring program for Svalbard: **Paul Renaud**, Akvaplan-niva - Norwegian Institute for Water Research
- Moderated discussion: First thoughts on national implementation of the Coastal Plan: **Donald McLennan**, Polar Knowledge Canada - Canadian High Arctic Research Station

AS1: Effects of POPs and Hg on Arctic wildlife: AMAP assessment

Date: Thursday October 11, 2018

Location: Valtuustosali, City Hall

Time: 8:30-10:00

Since the last assessments addressing biological effects of persistent organic pollutants (POPs) (2009) and mercury (2011), a number of new studies have been published in the scientific literature on (potential) biological effects of these contaminants. Organohalogen compounds (OHCs) and mercury have received particular attention, and in some studies this work is being combined with assessment of climate change impacts. New chemical contaminants are being detected in the Arctic, but as yet little information is available on the potential biological and ecosystem effects of these chemicals of emerging Arctic concern (CEAC). This special session would focus on the results of the new AMAP assessment that addresses some of these issues and provides an overview of the current state

of knowledge (reviewing scientific work conducted 2010 to present). It covers levels of OHCs and Hg and/or associated effects in key Arctic marine and terrestrial mammals, birds and fish species and populations. It also addresses the current knowledge on how combined effects of several OHCs, (including perfluoroalkyl substances, PFASs) and Hg, as well as several individual or congener-specific contaminants, can affect biological pathways and outcomes. Furthermore, consideration will be given to potential toxic effects of combined exposure to both targeted and as yet unknown contaminants of emerging concern, and how this advances our understanding of impacts of complex contaminant mixtures that reflect environmentally realistic exposure scenarios for Arctic biota. Depending on the species and population, and tissue and contaminant burdens, exposure levels can be great enough to exceed putative risk-threshold levels that have been previously estimated for non-target species and species outside the Arctic. In new Arctic monitoring work, species exposure to specific OHCs (such as PCBs) and Hg have been shown to result in deleterious and observable effects via mode(s) of action and mechanisms that are a function of the contaminant type and level of exposure. The assessment therefore includes an updated risk assessment for sum PCBs and Hg for a number of Arctic species.

Chairs: **Robert Letcher**, Environment and Climate Change Canada; **Rune Dietz**, Aarhus University

Format: Series of presentations followed by discussion

Presentations:

- Biological effects of contaminant exposure in Arctic wildlife and fish: **Christian Sonne**, Aarhus University
- Risk evaluation of PCBs and Hg in marine and terrestrial mammals and birds: **Rune Dietz**, Aarhus University
- Contaminant exposure, pathways and effects in a changing Arctic: **Igor Eulaers**, Aarhus University
- Key findings, conclusions, recommendations and the future directions for understanding POP and mercury impacts in Arctic wildlife and fish: **Robert Letcher**, Environment and Climate Change Canada

IAB5: Transboundary management of Arctic biodiversity

Date: Thursday October 11, 2018

Location: Saivo, Lappia Hall

Time: 8:30-10:00

The ranges of migratory species, dispersal of persistent contaminants, movement of commerce, invasion of non-native species and impacts of development-decisions do not follow political boundaries. International cooperation is therefore increasingly essential to fully address the challenges facing Arctic biodiversity now and in the decades to come. This session provides some examples of approaches to transboundary cooperation to help safeguard habitat and protect species.

Chairs: **Kristiina Nikkonen**, Ministry of the Environment, Finland; **Trish Hayes**, Fisheries and Oceans Canada

Format: Series of presentations followed by discussion

Presentations:

- Intergovernmental cooperation safeguarding Arctic biodiversity: Finnish-Russian Working Group on Nature Conservation since 1985: **Aimo Saano**, Metsähallitus Parks & Wildlife Finland / The Finnish-Russian Working Group on Nature Conservation
- Transboundary cooperation between Norway, Russia and Finland in Pasvik-Inari Trilateral Park: **Riina Tervo**, Metsähallitus, Parks & Wildlife Finland
- The Wadden Sea Flyway Initiative for connecting and inspiring people: Conservation of migratory birds from the Arctic to Africa on the East-Atlantic Flyway: **Gregor Scheiffarth**, Lower Saxon Wadden Sea National Park Authority
- Trans-boundary management of Arctic fox: **Tom Arnbom**, WWF
- Industrial development in the calving grounds of the Porcupine Caribou herd in Alaska: At what cost? **Craig Machtans**, Environment and Climate Change Canada
- International Cooperation for Successful Conservation of Threatened Migratory Species in the Arctic and Beyond - the Story of the Lesser White-fronted Goose: **Nina Mikander**, UNEP/AEWA Secretariat

KNO12: Ideas for enhancing effective communication and outreach for subsistence based households in Western Alaska: what we learned from Alaskan native women

Date: Thursday October 11, 2018

Location: Erottaja, ELY

Time: 10:30-12:00

This session will explore the strategies that Alaskan Native women employ in response to climate change on their subsistence based households, the role of Traditional Knowledge in times of climate change, and what those women practicing a subsistence lifestyle would like scholars to know. Furthermore, the session broadens the topic to explore ways of knowing and how information is passed in Indigenous cultures via ceremony. The purpose of this session is to bring Alaska Native women more fully back into the discussions and conversations about monitoring and assessing Arctic biodiversity. This session will provide an opportunity for understanding women's concerns about Arctic biodiversity with the hope that conversations could shift to ask what works in terms of communication and outreach for these women and their households, rather than asking how do we get women to respond to external outreach and communication tools and methodologies.

Chairs: **Elizabeth Kersey**, The Alaska Climate Resiliency Project; **Nastasia Levi**, The Alaska Climate Resiliency Project

Format: Series of presentations followed by discussion

- Ideas for enhancing effective communication and outreach for subsistence based households in Western Alaska: what we learned from Alaskan native women: **Elizabeth Kersey** and **Nastasia Levi**, The Alaska Climate Resiliency Project
- The habitat of how we pass information: **Niviaaluk Brandt**, Kawerak Inc

MB3: Green financing, blue economy: Investments in Arctic biodiversity

Date: Thursday October 11, 2018

Location: Saivo, Lappia Hall

Time: 10:30-12:00

The Arctic is a diverse, rapidly-changing and environmentally sensitive region that is home to over four million culturally diverse residents, and an emerging global investment opportunity. This session will provide an orientation of available financial platforms, partnerships and examples of existing initiatives and interventions aiming at mitigation of climate impacts, pollution prevention, enhancing energy and resource efficiencies, including cross-media impacts, to address removal of hot-spots and improving the Arctic environment in general. The session will have several presentations followed by a panel discussion with a summary of key conclusions.

Chair: **Husamuddin Ahmadzai**, Nordic Environment Finance Corporation (NEFCO)

Format: Series of presentations followed by discussion

Presentations:

- Financing green investments in the Arctic and Barents Region- NEFCO's near term cooperation: **Husamuddin Ahmadzai**, Nordic Environment Finance Corporation (NEFCO)
- The Arctic blue economy: risks and opportunities: **Tom Arnbom**, World Wildlife Fund
- Financing green investments in the Arctic and Barents Region- The Arctic Council Project Support Instrument (PSI) and NEFCO's near term cooperation: **Husamuddin Ahmadzai**, Nordic Environment Finance Corporation (NEFCO)
- Financing green investments in the Arctic and Barents Region- The Barents Hot-spots Facility (BHSF) and NEFCO's near term cooperation: **Henrik G. Forsström**, Nordic Environment Finance Corporation
- Financing sustainable development in the Russian Arctic zone: **Vladim Litvak**, VTB Ecology

EBM5: Species specific conservation actions in the time of ecosystem-based management

Date: Thursday October 11, 2018

Location: Tieva, Lappia Hall

Time: 10:30-12:00

At the same time as ecosystem-based management, together with ecosystem-based monitoring, are advocated by CAFF and others, many ongoing conservation programs focus on specific threatened species, whereas other management actions focus on overabundant or increasing species. Even within CAFF, working groups are often assembled around a certain species or a taxonomically defined species group. It may be easier to obtain financial or political support, and gather experts around the challenges of specific species. A species-specific approach can however evolve into ecosystem-based initiatives. In this session, we will use the case of the conservation of the critically endangered arctic fox in Fennoscandia as a start point to discuss how a species focused conservation effort can evolve into ecosystem-based monitoring and management. The aim of the session is to shed light on the dichotomy and possible synergies between species-focused and ecosystem-based approaches in management in the Arctic in general. The format of the session will be a series of presentations followed by a discussion with all participants.

Chairs: **Dorothee Ehrich**, UiT - The Arctic University of Norway; **Nina Elisabeth Eide**, Norwegian Institute for Nature Research

Format: Series of presentations followed by discussion

Presentations:

- Ecosystem drivers and adaptive management of the critically endangered arctic fox in northeastern Norway: **Dorothee Ehrich**, UiT - The Arctic University of Norway
- Status and conservation goals for the critically endangered Arctic fox in Scandinavia. When is mission completed? **Nina Elisabeth Eide**, Norwegian Institute for Nature Research
- The fluctuating world of a tundra predator guild: Bottom-up constraints overrule top-down species interactions in winter: **Marianne Stoessel**, Stockholm University
- Opposite predation-mediated effects of food web dynamics on an endangered arctic-nesting goose species: implications for management: **Filippo Marolla**, UiT - The Arctic University of Norway
- Large scale Arctic raptors monitoring as an alternative to the ecosystem based approach: **Olga Kulikova**, Scientific center for Arctic research of the Yamal-Nenets Autonomous District, Russia; **Nadia French**, PRPI/University of Birmingham

KNO4: Enhanced assessment of marine biodiversity and anthropogenic stressors through integration of research and monitoring under CAFF-CBMP and AMAP

Date: Thursday October 11, 2018

Location: Valtuustosali, City Hall

Time: 10:30-12:00

Arctic marine biodiversity faces increasing threats from a variety of anthropogenic stressors including, chemical pollutants, climate change, and ocean acidification. The primary objective of CBMP is to provide early detection of changes in biodiversity and ecosystems and monitor and measure trends that can be used to inform the development of international policies to mitigate further degradation of Arctic biodiversity. With the publication of the State of the Arctic Marine Biodiversity Report (SAMBR) in 2017, CBMP Marine has demonstrated how cooperative efforts to monitor and report on biodiversity can both help identify status and trends, as well as identify vital gaps in monitoring. As CBMP is an ecosystem based biodiversity monitoring programme, environmental parameters needs to be taken into account as part of the ecosystem drivers, to help explain causalities in the ecosystem. The CBMP-Marine, however, does not have the mandate and capacity to assess the drivers of changes in biodiversity. The assessment of anthropogenic drivers and impacts on the Arctic environment falls under the mandate of the Arctic Monitoring Assessment Programme (AMAP), whose recent activities have included assessments of chemical pollutants, climate change impacts on the cryosphere, and ocean acidification.

Chairs: **Jason Stow**, Fisheries and Oceans Canada; **Tom Christensen**, Aarhus University; **Alain Dupuis**, Fisheries and Oceans Canada

Format: Series of presentations followed by discussion

Presentations:

- State of the Arctic Marine Biodiversity Assessment: CBMP Marine as an adaptive monitoring programme, key findings and advice for future work: **Tom Christensen**, Aarhus University
- Pan Arctic standardization for identifying biodiversity, drivers and stressors in a changing Arctic benthic ecosystem: **Lis Lindal Jørgensen**, Institute of Marine Research, Norway (IMR)
- Key findings from the SWIPA assessment related to marine biodiversity: **Sebastian Gerland**, Norwegian Polar Institute
- Key findings on Arctic Ocean Acidification and the need for information on the sensitivity of ecological components: **Richard Bellerby**, East China Normal University and Norwegian Institute for Water Research
- Key findings from Biological Effects of Pollutants on species/ecosystem risks and advice for future monitoring and research: **Rune Dietz**, Aarhus University and/or **Rob Letcher**, Environment and Climate Change Canada
- Roundtable discussion on how CBMP and AMAP can work together on integrated ecosystem monitoring

EBM9: Biodiversity as a fundamental component of environmental impact assessments and land use planning

Date: Thursday October 11, 2018

Location: Kero, Lappia Hall

Time: 10:30-12:00

The session will include presentations that focus on how biodiversity issues are linked with Environmental Impact Assessments in the Arctic. How biodiversity issues can be included most efficiently? What methods exist for this? Akwé: Kon Guidelines and experiences of their implementation in Finland are shared and refined in the discussion. Presentations from a variety of perspectives will be followed by a roundtable discussion.

Chairs: **Peter Convey**, British Antarctic Survey

Format: Series of presentations followed by discussion

Presentations:

- Good practice recommendations for EIA and public participation in the Arctic: **Päivi A. Karvinen**, Ministry of the Environment, Finland
- Biodiversity Convention and Akwé: Kon Guidelines in the Arctic – Incorporating traditional knowledge based cultural, environmental and social impact assessment into existing EIA procedures: **Assi Harkoma**, Arctic Centre, University of Lapland
- Monitoring in Arctic Ecosystem-based Management: Opportunities in Collaboration and Governance: **Shailyn Drukis**, Canadian Committee for IUCN
- Pan-arctic wildlife monitoring: stakeholder needs and gaps in driver representation in socio-ecological systems: **Helen Wheeler**, Anglia Ruskin University, UK
- Area protection in and around Antarctica – lessons from the other pole: **Peter Convey**, British Antarctic Survey

CC5: Resilience and management of Arctic wetlands: a social-ecological systems approach

Date: Thursday October 11, 2018

Location: Erottaja, ELY

Time: 13:30-15:00

Wetlands are crucially important for fostering and protecting biodiversity, and play an important role in the sustainable development of the Arctic in their relation to climate change, adaption, ecosystems services and livelihood for indigenous and local people. While a significant portion of the planet's wetlands areas are found in the Arctic region, surprisingly little is known about their status, the relative success of management interventions, and of the efforts to regulate human activities that impact wetlands to protect them and the biodiversity they support. This session aims to get an overview of what is known about Arctic wetlands areas, clarify where key knowledge gaps are, and develop a social-ecological systems analysis to identify measures that can be expanded to better manage Arctic wetlands areas.

Chairs: **David Schönberg Alm**, Swedish Environmental Protection Agency; **Marcus Carson**, Stockholm Environmental Institute; **Magnus Land**, Stockholm Environmental Institute

Format: Series of presentations followed by moderated discussion

Presentations:

- Resilience and Management of Arctic Wetlands - a project overview: **David Schönberg Alm**, Swedish Environmental Protection Agency and **Magnus Land**, Stockholm Environmental Institute
- Resilience and Management of Arctic Wetlands - a phase 2 overview: **David Schönberg Alm**, Swedish Environmental Protection Agency and **Marcus Carson**, Stockholm Environmental Institute
- Arctic coastal wetlands – critical Arctic ecosystems with an uncertain future: **Donald McLennan**, Polar Knowledge Canada - Canadian High Arctic Research Station
- Arctic Wetlands – an outlook from a global perspective, **Tobias Salathe**, Ramsar Convention on Wetlands

EBM11: Conservation and sustainable harvest

Date: Thursday October 11, 2018

Location: Valtuustosali, City Hall

Time: 13:30-15:00

Small-scale, traditional harvest of mammals, birds and fish has provided the foundation for Arctic societies since humans first arrived in the region, and continues to do so today for many people in the Arctic. The Arctic Biodiversity Assessment called for the sustainable management of the Arctic's living resources and their habitat. Improved management and conservation actions are based on greater understanding of the potential for harm to species and ecosystems, better regulation and enforcement, and in many cases on greater engagement with Arctic peoples. The incorporation of traditional values, practices and knowledge can help improve both management and enforcement. This session explores successful harvest management practices and explores additional places where these approaches could help to achieve biodiversity, while fulfilling various and Sustainable Development Goals.

Chairs: **Alexander Shestakov**, CBD; **Gregor Gilbert**, Makivik Corporation

Format: Series of presentations followed by discussion

Presentations:

- Quantifying the impact of hunting and oiling on Brünnich's guillemots *Uria lomvia* in the Northwest Atlantic: **Morten Frederiksen**, Aarhus University
- Understanding Alaskan Inuit food security and conservation through use: **Carolina Behe**, Inuit Circumpolar Council
- Reconciling conservation and sustainable harvest: **Geneviève Desportes**, North Atlantic Marine Mammal Commission
- A participatory approach to reducing the poaching of Bewick's swans in the Russian Arctic: **Julia Newth**, Wildfowl & Wetlands Trust
- Salmon and salmon-dependent people in Alaska: Highlights of an interdisciplinary research initiative: **Peter Westley**, University of Alaska Fairbanks
- How aboriginal hunting in the Northeast of the Russian Arctic influences migratory waterbird population?: **Konstantin Klovov**, Saint-Petersburg State University

KNO5: Intraspecific diversity in Arctic freshwater systems and its relevance in biodiversity and conservation: from pattern to process

Date: Thursday October 11, 2018

Location: Kero, Lappia Hall

Time: 13:30-15:00

The session is composed of presentations from diverse speakers that demonstrate intraspecific diversity in aquatic systems in the Arctic and sub-Arctic, its rapid evolution in the face of climate change, and discussion on how to implement knowledge of species adaptation and resilience into practices for conservation. The session focuses on the ecology-evolution-development framework, illustrating studies on aquatic species in the Arctic and subarctic areas, and how pattern and descriptive oriented views can lead to detrimental conservation strategies. It will conclude with discussions on how to preserve biodiversity by integrating knowledge of key processes in the development and evolution of species into management and conservation plans.

Chairs: **Camille Leblanc**, Department of Aquaculture and Fish Biology, Hólar University College; **Skúli Skúlason**, Department of Aquaculture and Fish Biology, Hólar University College

Format: Series of presentations followed by discussion

Presentations:

- Eco-evo-devo framework for the understanding of biodiversity: moving on from a pattern to process oriented view: **Skúli Skúlason**, Department of Aquaculture and Fish Biology, Hólar University College
- How do ecological factors shape intraspecific biodiversity in Arctic fishes: **Bjarni Kristjánsson**, Department of Aquaculture and Fish Biology, Hólar University College
- How intraspecific biodiversity affects ecosystem properties and functioning: **Kimmo Kahilainen**, UiT The Arctic University of Norway,
- How failing to recognise phenotypic and genetic structure that lies beneath the species can lead to conservation dead-end: **Colin W. Bean**, Scottish Natural Heritage

- Developmental approaches toward the preservation of biodiversity through an understanding of its origins: **Kevin Parsons**, Institute of Biodiversity Animal Health and Comparative Medicine, University of Glasgow
- The significance of intraspecific diversity and its conservation: **Colin Adams**, Scottish Centre for Ecology and the Natural Environment, University of Glasgow

AS3: Reducing the effects of shipping on biodiversity

Date: Thursday October 11, 2018

Location: Saivo, Lappia Hall

Time: 13:30-15:00

This session focuses on anthropogenic stressors in the marine environment related to vessel traffic and underwater noise. Stressors include underwater noise, risk of pollution, and direct impacts of vessels/activities on animals (ship strikes, repeated disturbance, etc.). Presenters will review how the stressor negatively affects biodiversity, and explore ways in which we can mitigate or manage these negative consequences. The session will consist of a series of presentations, followed by an open question period and panel discussion.

Chair: **William Halliday**, Wildlife Conservation Society (WCS), Canada

Format: Series of presentations followed by discussion

Presentations:

- The state of underwater noise throughout the Arctic marine environment: a review: **William Halliday**, WCS Canada
- The potential effect of underwater noise from construction and explosives when improving fairways: **Camilla Anita Spansvoll**, Norwegian Coastal Administration
- Vulnerability of Arctic marine mammals to vessel traffic in the increasingly ice-free Northwest Passage and Northern Sea Route: **Donna Hauser**, University of Washington, University of Alaska Fairbanks
- Arctic shipping, AMSA and the Polar Code: a toolbox for keeping Arctic marine mammals safe: **Melanie Lancaster**, WWF
- Moderated discussion: **William Halliday**, WCS Canada

MB2: Inspiring Arctic voices through youth

Date: Thursday October 11, 2018

Location: Tieva, Lappia Hall

Time: 13:30-15:00

Arctic youth are the Arctic's future. The way we engage young people today will determine the prospects for the Arctic's sustainable development and futures for Arctic biodiversity. To utilize young people's potential as agents of change requires involving and empowering them in Arctic development, policies and supporting their participation in important forums and discussions. This session allows youth from across the Arctic and beyond, to use their own voices to recall observations of Arctic change, highlight conservation priorities and concerns for Arctic biodiversity, and seek to inspire action to address their unique perspectives. Join a small group of Arctic youth participating in the Arctic Youth Summit to hear their stories. After a series of talks a moderated roundtable discussion will follow.

Chair: **Sanna Koskinen**, WWF Finland

Format: Series of talks followed by moderated discussion

Speakers: Representatives from the Arctic Youth Summit

Friday October 12

MB6: Proteus Partnership: mainstreaming biodiversity information in the extractives sector

Date: Friday October 12, 2018

Location: Valtuustosali, City Hall

Time: 8:30-10:00

There is a need to improve biodiversity data, knowledge and decision making by increasing the capacity to develop innovative partnerships that involve a variety of Arctic stakeholders. Increasingly the private sector is an important actor to respond to biodiversity challenges, while contributing to better biodiversity data for use by all. Through the Proteus Partnership companies in the extractives industry provide financial support for the collation and maintenance of key global biodiversity spatial datasets. Beyond the important financial support to biodiversity data, Proteus provides a platform which brings companies together with the conservation community to share knowledge and good practice, develop capacity, and place biodiversity data into real-world contexts. Encouraging scientific, policy, NGO, academia and industry audiences to interact and providing the opportunity to communicate and collaborate around key Arctic biodiversity issues is critical, as outlined in the Arctic Biodiversity Assessment recommendations. Partnership development, particularly with industry, can result in innovative solutions and more advanced responsibility for protecting critical biodiversity. This session will facilitate inter-disciplinary discussion on the opportunities provided by innovative partnerships such as Proteus to mainstream biodiversity into private sector operations, and will consider how this model of collaboration can be further developed in the Arctic.

Chair: Neville Ash, UNEP World Conservation Monitoring Centre (WCMC)

Format: Series of presentations followed by discussion

Presenters:

- Improving global data and strengthening business approaches for biodiversity management: **Matt Jones**, UNEP World Conservation Monitoring Centre (WCMC)
- Biodiversity data in decision making, how global data support businesses: **Melania Buffagni**, Eni
- How to increase our knowledge on biodiversity in an area prone for development? **Jürgen Weissenberger**, Equinor
- Facilitated discussion: Lessons for data sharing and the way forwards: **Neville Ash**, UNEP WCMC

KNO7: Arctic biodiversity governance and Arctic Council biodiversity cooperation

Date: Friday October 12, 2018

Location: Tieva, Lappia Hall

Time: 8:30-10:00

The challenges facing Arctic biodiversity are interconnected, requiring comprehensive solutions and international cooperation. We have a unique and urgent opportunity in the Arctic to conserve large, undisturbed ecosystems and the species and cultures they support. Doing so will help protect the integrity of Arctic biodiversity and the sustainability of Arctic communities. The future of the Arctic and its biodiversity requires an active and decisive approach to conservation and sustainability. This session explores the concepts and frameworks of Arctic biodiversity governance, specifically highlighting presentations that discuss the role of the Arctic Council to support, enable and recognize partners and governance frameworks that act to conserve Arctic biodiversity.

Chair: Christian Prip, The Fridtjof Nansen Institute

Format: Series of presentations followed by discussion

Presentations:

- Report from the High Level Expert Working Group Session: **Thomas S. Axworthy**, Secretary General of the InterAction Council of Former Heads of State and Government
- The Arctic Council and biodiversity - need for a governance framework beyond monitoring and assessments? **Christian Prip**, The Fridtjof Nansen Institute
- Food sovereignty and self governance: **Nicole Kanayurak**, Inuit Circumpolar Council
- Importance of non-Arctic states in conserving Arctic biodiversity: a case study of Britain and Ireland: **Matt Parsons**, Joint Nature Conservation Committee (UK)
- Institutional Adaptation for an equitable role of Indigenous Knowledge in decision-making: **Nicole Kanayurak**, Inuit Circumpolar Council
- Korea's contribution to Arctic Migratory Birds Initiative (AMBI) and future plans: **Sung-Ryong Kang**, National Institute of Ecology

IAB6: Nomadic herders: Enhancing the resilience of pastoral ecosystems and livelihoods of nomadic herders

Date: Friday October 12, 2018

Location: Saivo, Lappia Hall

Time: 8:30-10:00

The Arctic and sub-Arctic environment, climate and biodiversity is changing in ways unprecedented in our long histories in the north, challenging traditional ways of life, wellbeing, and food security. These changes constitutes a legitimate concern for traditional indigenous livelihoods, therefore the objective with this session is: to present and discuss reduction of land degradation, improve biodiversity conservation and increase community resilience by enhancing the capacity of Indigenous peoples to protect the environment through sustainable use. The session discuss indigenous knowledge and governance of protected areas.

Chairs: Svein Mathiesen, Association of World Reindeer Herders; **Kathrine Johnsen**, GRID-Arendal; Ole Anders Turi, Saami Council

Format: Series of presentations followed by panel discussion

Presentations and panelists:

- Concept of Nomadic Herders - Indigenous knowledge, biodiversity and land degradation: **Svein Mathiesen**, UEI at International Centre for Reindeer Husbandry
- Actions for mitigation of cumulative impact - from a reindeer husbandry perspective: **Anna Skarin**, Swedish University of Agricultural Sciences, Mikael Kuhmonen, Sirges sameby
- Protection of nature through sustainable use by reindeer herders in Russia: **Gregory Ledkov**, RAIPON
- Territory of traditional Nature and reindeer husbandry use the experience from Republic of Sakha Yakutia: **Mikhail Pogodaev**, Association of World Reindeer Herders
- The Local Environmental Observer (LEO) Network: A Tool for Participatory Collection of Environmental Observations: **Mike Brook**, Alaska Native Tribal Health Consortium
- Indigenous Peoples governance of land in Alaska: TBC, Aleut International Association
- Moderated discussion: **Anders Oskal**, International Centre for Reindeer Husbandry

IAB9: Arctic biodiversity goals in the transboundary and cross-cultural Beringian region: positive lessons for success

Date: Friday October 12, 2018

Location: Erottaja, ELY

Time: 8:30-10:00

The conservation and sustainable use of Arctic Biodiversity frequently requires coordination of activities across political and cultural boundaries. The current demarcation of political borders in the Arctic rarely reflects ecological or cultural borders. Thus, groups that rely on specific wildlife species across their ranges, and those who seek to ensure conservation of species through effective rangewide initiatives, are separated. While efforts at the international level, such as the Arctic Council, can establish broad goals for effective collaboration, the specific processes that result in effective implementation of these broad scale plans are less articulated. In this session, we focus on the unique situation of the rapidly changing, bio-diverse, multi-lateral, and multi-cultural Beringia region as a case study to explore specific efforts that are helping ensure the vibrancy of Arctic Bio-cultural diversity. We focus specifically on actions that have promoted sharing of information, development of shared protocols, and implementation of trans-boundary and cross-cultural solutions. We highlight the specific implementation of at least three core Arctic Council initiatives in relation to coastal biodiversity – Arctic Migratory Bird Initiative (AMBI), Circumpolar Biodiversity Monitoring Program (CBMP), and the Emergency Prevention, Preparedness, and Response (EPPR) and Protection of the Arctic Marine Environment (PAME) working groups.

Chairs: **Martin Robards**, Wildlife Conservation Society; **Evgeny Syroechkovskiy**, Ministry of Natural Resources and Environment, Russian Federation

Format: Series of presentations followed by discussion

Presentations:

- The biocultural landscape of Beringia - An Alaskan perspective: **Leigh Welling**, US National Park Service
- The biocultural landscape of Beringia - A Chukotkan perspective: **Evgeny Syroechkovskiy**, Ministry of Natural Resources and Environment
- The changing biocultural landscapes of Beringia - Climate Change, Ecosystem Change, Social Change, New Industries: **Jim Lawler**, US National Park Service
- Protected areas and Indigenous communities in Chukotka: **Konstantin Klokov**, Saint-Petersburg State University
- Migratory birds: **Evgeny Syroechkovskiy**, Ministry of Natural Resources and Environment
- Marine mammals: **Peter Boveng**, NOAA Marine Mammal Lab
- Coastal subsistence fisheries: **Martin Robards**, Wildlife Conservation Society

AS10: From individual stressors to cumulative impacts: Improving knowledge in the Arctic marine environment

Date: Friday October 12, 2018

Location: Kero, Lappia Hall

Time: 8:30-10:00

According to CAFF's recent State of the Arctic Marine Biodiversity Report (SAMBR), Arctic marine species and ecosystems are undergoing pressure from cumulative changes in their physical, chemical and biological environment. Some changes may be gradual, but there may also be large and sudden shifts that can affect how the ecosystem functions. It is hard to determine where and when these "tipping points" exist because the Arctic marine environment experiences a variety of stressors and subsequent reactions that can interact in complex and surprising ways. For those charged with managing natural resources and public policy in the region, it is crucial to identify the combined effects of stressors and potential thresholds to prepare effectively for an uncertain future. This session will contain presentations on various stressors in the Arctic marine environment, touching on themes of pollution, invasive species, industrial development, microplastics and climate change. The following discussion will explore how to conceptualize change in the Arctic marine environment in the face of cumulative impacts.

Chair: **Catherine Coon**, Bureau of Ocean Energy Management (BOEM)

Format: Series of presentations followed by discussion

Presentations:

- ARCTOX: a pan-Arctic sampling network to track the mercury contamination of Arctic seabirds and marine food webs: **Jerome Fort**, French National Center for Scientific Research (LIENSs-CNRS)
- The reefs of the Arctic - photoautotrophic ecosystem engineers endangered by microplastic and climate change? **Sebastian Teichert**, GeoZentrum Nordbayern, Friedrich-Alexander-Universität Erlangen-Nürnberg
- Invasive Crab Species in the Barents Sea: Stakeholder Perceptions, Incentives, and Path Dependencies: **Brooks Kaiser**, University of Southern Denmark
- Environmental impacts of drill cuttings deposition on sea floor biodiversity in the south-western Barents Sea – a contribution to ecosystem-based management: **Sabine Cochrane**, Akvaplan-niva
- Building an ecological atlas: from spatial data to conservation across dynamic Arctic seas: **Benjamin Sullender**, Audubon Alaska

AS5: Conflict between people and polar bears in the Arctic: how to address an increasing issue?

Date: Friday October 12, 2018

Location: Erottaja, ELY

Time: 10:30-12:00

A reduction in available and suitable sea ice habitat for polar bears, combined with greater human presence in some areas, is predicted to result in more interactions between people and polar bears in the Arctic. Such encounters can lead to people being injured or killed, property damage and polar bears killed in defence. Ensuring the safe coexistence of humans and polar bears in the face of change is an essential component of polar bear management. This session will discuss continuing and emerging challenges of co-existence between people and polar bears. Using case studies across the Arctic, it will discuss recent advances in information tracking, technological innovations and attractant management. We welcome to this session presentations that showcase challenges with or solutions to managing conflict between people and other Arctic species that will be useful for knowledge exchange.

Chair: **Melanie Lancaster**, World Wide Fund for Nature

Format: Series of presentations followed by discussion

Presentations:

- Human-polar bear conflict: recap from CAFF ABC 2014: **Melanie Lancaster**, WWF
- Communities living with polar bears: **Gregor Gilbert**, Makivik Corporation; **Mark Basterfield**, Nunavut Marine Wildlife Management Board
- Arctic governments working together: pan-Arctic workplan for HPBC reduction: **Sybille Klenzendorf**, WWF and co-chair of Polar Bear Range States Conflict Working Group
- The polar bear deterrence toolbox: innovations: **Femke Hilderink**, World Wide Fund for Nature
- Industry perspective from the oil and gas sector on reducing human-polar bear conflict: **Christina Pohl**, BP Alaska

EBM8: Guidelines for ecosystem approach to management across the Arctic: who, what, where and how?

Date: Friday October 12, 2018

Location: Saivo, Lappia Hall

Time: 10:30-12:00

The Arctic Council's Joint PAME/AMAP/CAFF/SDWG Ecosystem Approach Expert Group (EA-EG) has been tasked with the development of guidelines for an Ecosystem Approach to management in the Arctic. The EA-EG is developing a framework for EA guidelines and now seeks engagement with the Arctic Council and its partners to fully develop them. A first draft of EA guidelines resulting from the EA-EG's 6th EA Workshop (<https://pame.is/index.php/projects/ecosystem-approach/ea-documents-and-workshop-reports/6th-ea-workshop>) will be presented as a starting point. Presentations on Case Studies of EA will be made by EA experts from the International Council for Exploration of the Seas (ICES), Arctic countries, observers and Indigenous communities, followed by facilitated discussion. The case studies and discussion will address the "who" of EA guidelines (who is the target audience?); the "what" (what are guidelines? at what level of detail and specificity?); the "where" (addressing scale integration from pan-Arctic to local); and "how" (how does one implement guidelines?). The output of the session will be a written summary outlining key points of discussion and recommendations for future Arctic Council priorities and cross-working group collaboration to advance Ecosystem Approach to Management and conservation of marine biodiversity.

Chair: **Hein Rune Skjoldal**, Institute of Marine Research

Format: Series of presentations followed by moderated panel discussion

Presentations:

- Introduction to Guidelines for Ecosystem Approach to Management in the Arctic: **Hein Rune Skjoldal**, Institute of Marine Research
- The Circumpolar Inuit Wildlife Management Summit 2017: **Nicole Kanayurak**, Inuit Circumpolar Council
- Moderated panel discussion led by **Hein Rune Skjoldal**, Institute of Marine Research

Panelists:

- **Vernae Angnagoobok**, Inuit Circumpolar Council
- **Maya Gold**, Fisheries and Oceans Canada
- **John Bengtson**, NOAA
- **Cecilie von Quillfeldt**, Norwegian Polar Institute

CC3: Building social-ecological resilience

Date: Friday October 12, 2018

Location: Tieva, Lappia Hall

Time: 10:30-12:00

Resilience is the ability of a system to bounce back and thrive during and after disturbances and shocks. It is a cross-cutting topic which has become increasingly important to the Arctic Council in the face of rapid changes. Social and ecological systems in the Arctic are inextricably linked, and some aspects of these systems are changing fundamentally and surpassing thresholds which may be irreversible. Residents of the Arctic have always adapted to environmental changes, but the current rate and intensity of climate change, combined with other social, environmental, economic and political shifts and constraints, make adaptation extremely challenging in today's Arctic. This session explores approaches and partnerships to foster social-ecological resilience.

Chairs: **Marcus Carson**, Stockholm Environment Institute / Government of Sweden; **Saara Lilja-Rothsten**, Ministry of Agriculture & Forestry, Government of Finland

Format: Series of presentations followed by discussion

Presentations:

- The Arctic Resilience Action Framework - moving from insight to action: **Marcus Carson**, Stockholm Environment Institute / Government of Sweden
- The Arctic Resilience Forum 2018 Lessons learned: **Saara Lilja-Rothsten**, Ministry of Agriculture & Forestry, Government of Finland
- Herder's knowledge and repeated measurements of reindeer use set the baseline for understanding reindeer impact on woody taxa: **Anna Skarin**, Swedish University of Agricultural Sciences
- Sustainable and resilient reindeer husbandry in an increasingly uncertain world: A comparative analysis with yak herding in Tibetan plateau: **Mia Landauer**, Arctic Centre, University of Lapland, Finland

KNO14: Leading by example: lessons from Arctic biodiversity monitoring programs and assessments

Date: Friday October 12, 2018

Location: Valtuustosali, City Hall

Time: 10:30-12:00

This session explores a series of case studies that are employing some best practices in Arctic biodiversity monitoring. Issues to be covered include: mainstreaming biodiversity data, cumulative effects monitoring and cascading impacts, biotic and abiotic monitoring practices, the utilization of Traditional Knowledge, and effective reporting.

Chairs: **Niels Martin Schmidt**, Aarhus University/ Zackenberg Research Station; **Donald McLennan**, Polar Knowledge Canada - Canadian High Arctic Research Station

Format: Series of presentations followed by discussion

- A look at Canada's General Status Ranking Program – Mainstreaming data flow on Canada's northern biodiversity with the help of NatureServe: **Rob Gau**, Government of the Northwest Territories
- Yamal EcoSystems – monitoring terrestrial ecosystems of Yamal Peninsula under changing climate and human impact: **Aleksandr Sokolov**, Arctic Research Station of Institute of Plant and Animal Ecology, Ural Branch, Russian Academy of Sciences
- Climate-Ecological Observatory for Arctic Tundra (COAT): **Eeva Soinenen**, UiT - The Arctic University of Tromsø
- Using Inuit traditional ecological knowledge for detecting and monitoring avian cholera among common eiders in the eastern Canadian Arctic: **Allison Patterson**, McGill University
- "Interactions Working Group": A circumpolar initiative to measure and predict the cascading impacts of "Indirect Trophic Interactions" in Arctic terrestrial vertebrate communities: **Olivier Gilg**, University Bourgogne (F) & Groupe de Recherche en Ecologie Arctique (GREA)
- Trends in Arctic falcon populations – a preliminary overview for CAFF's Circumpolar Biodiversity Monitoring Programme: **Knud Falk**, Arctic Falcons Specialist Group

IAB8: Status, challenges and opportunities for Arctic Ocean protection and governance

Date: Friday October 12, 2018

Location: Kero, Lappia Hall

Time: 10:30-12:00

While recent assessments of the state of the Arctic marine biodiversity point to several alarming trends, protecting that biodiversity in a representative network of marine protected areas and reserves is lagging far behind both internationally agreed targets and scientific understanding of the protection needs. If the network of marine protected areas in the Arctic seas is developed with the rate of the 11 years 2005-2016, 10% protected area coverage will only be reached in 2113. We present an assessment of the current situation, highlight important gaps in the protected area network, and outline a way forward. The UN negotiations towards a new implementing agreement that would create a tool to protect biodiversity in areas beyond national jurisdiction are beginning. We

discuss these trends and opportunities in a series of presentations followed by a panel discussion.

Chair: Laura Meller, Greenpeace Norden

Format: Series of presentations followed by discussion

Presentations:

- Arctic Ocean on track to meet 2020 protection target - in the year 2113: **Elena Sakirko**, Greenpeace Russia
- Governance of the Arctic marine environment – current state of play and future challenges: **Stefan Kirchner**, Arctic Centre, University of Lapland
- A Methodology for Identifying Important Ecological Areas in the Arctic: **Jon Warrenchuk**, Oceana
- How can a new legally binding agreement under UNCLOS help protect the Central Arctic Ocean? **Laura Meller**, Greenpeace Norden

5. Associated events

Side meetings

There are a series of side meetings associated with the Congress that are taking place during the week of the October 8.

Information on these side meetings can be found here: www.arcticbiodiversity.is/participants/side-meetings

Arctic Environment Ministers Meeting (AEMM)

The Congress is being held in conjunction with a meeting of the Environment Ministers of the Arctic States which runs from October 11-12. One component of this meeting includes a ministerial plenary panel discussion at the Arctic Biodiversity Congress on the afternoon of October 11.

Building on the Finnish Arctic Council Chairmanship theme of “Exploring Common Solutions”, Environment Ministers are invited to share perspectives on biodiversity challenges facing their countries and regions, as well as offer practical ideas on how Arctic States, Permanent Participants and Observers can collectively work to address these challenges.

Arctic Biodiversity Through the Lens Photography Competition and sweepstakes

The CAFF Secretariat held the Arctic Biodiversity “Through the Lens” Photography Competition in the months leading up to the Congress. Winners of the competition will be announced during the reception and winning images will be exhibited at the Congress.

Congress participants have the chance to enter a sweepstakes to win a fine art print from the competition to take home. To enter the sweepstakes, find the voting station located in Lappia Hall.

The competition proved very successful with over 1600 images submitted. The grand prize winner will receive a photography trip to Rovaniemi, Finland. The competition was judged by photographers Carsten Egevang (ARC-PIC.com), Einar Guðmann, Krista Ylinen, Gyða Henningsdóttir and Lawrence Hislop.

The Arctic Biodiversity “Through the Lens” Photography Competition is intended to raise awareness of the importance of Arctic biodiversity, the challenges biodiversity faces and to celebrate the beauty of the Arctic.

If you or your organization would like to exhibit these images, please contact Kári Fannar Lárusson at kari@caff.is. For more information please visit: <https://photocontest.arcticbiodiversity.is>

We thank our generous sponsors for making this competition possible.



Ministry for Foreign
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Miljöministeriet
Ministry of the Environment



Nordic Council
of Ministers

500PX



Arctic Youth Summit

Led by WWF Finland and the US, the Arctic Youth Summit runs from October 5-12, 2018 and brings together more than 30 youth aged 18-25 from across the globe to empower youth to engage in biodiversity conservation, to provide experience and insight into how biodiversity issues are addressed in the Arctic, and create time and space for the exchange of ideas.

Members from the Arctic Youth Summit will join the Congress during a plenary keynote address, panel participation, and in session MB2: Inspiring Arctic voices through youth.



6. Organizers

Congress Secretariat and Organization Committee

The Arctic Biodiversity Congress is being hosted and arranged by the the Conservation of Arctic Flora and Fauna (CAFF) working group of the Arctic Council and the Ministry of the Environment, Finland. The Ministry of the Environment, Finland is the Finnish focal point for CAFF (hosting the CAFF national representative) and is the Finnish contact point for the Congress.

- Cynthia Jacobson, CAFF Chair, U.S. Fish and Wildlife Service, Alaska
- Aulikki Alanen, Ministry of the Environment, Finland
- Henna Haapala, Ministry of the Environment, Finland
- Sari Sironen, Ministry of the Environment, Finland
- Tom Barry, CAFF International Secretariat
- Courtney Price, CAFF International Secretariat
- Kári Fannar Lárusson, CAFF International Secretariat
- Olga Pálsdóttir, CAFF International Secretariat
- Hólmgrímur Helgason, CAFF International Secretariat

The CAFF Management Board was consulted in decisions involving the overall direction of the Congress, and is instrumental in follow-up on possible findings and recommendations from the Congress. They will report to the Senior Arctic Officials of the Arctic Council on the outcomes of the Congress.

Program Advisory Committee

The Program Advisory Committee comprises a mix of qualified individuals who provided advice on key dimensions of the Congress program including the inclusion and selection of diverse and relevant program content, and linkages to other CAFF, Arctic Council and other local, regional and global efforts.

- Cynthia Jacobson, U.S. Fish and Wildlife Service, Alaska
- Aulikki Alanen, Ministry of the Environment, Finland
- Henna Haapala, Ministry of the Environment, Finland
- Tom Barry, CAFF International Secretariat
- Courtney Price, CAFF International Secretariat
- Kári Fannar Lárusson, CAFF International Secretariat
- Tom Christensen, co-chair Circumpolar Biodiversity Monitoring Program, Aarhus University
- Sarah Longan, co-chair Circumpolar Biodiversity Monitoring Program, North Slope Science Initiative
- Evgeny Syroechkovskiy, All-Russian Institute for Nature Conservation
- Mark Marissink, Swedish Environmental Protection Agency
- Carolina Behe, Inuit Circumpolar Council, Alaska
- Camilia Zoe-Chocolate, Arctic Athabaskan Council
- Ole-Anders Turi, Sámiráđđái / Saami Council
- Mike Gill, GEOBON
- Alexander Shestakov, WWF Global Arctic Programme
- Melanie Lancaster, WWF Global Arctic Programme
- Trish Hayes, Fisheries and Oceans Canada
- Reidar Hindrum, Norwegian Environmental Agency

- Allen Pope, International Arctic Science Committee (IASC)
- Gerlis Fugmann, Association of Polar Early Career Scientists (APECS)
- John Bengtson, National Oceanic and Atmospheric Administration (NOAA)
- Joseph Culp, Environment and Climate Change Canada (ECCC)
- Willem Goedkoop, Swedish University of Agricultural Sciences
- Starri Heiðmarsson, Icelandic Institute of Natural History
- Mora Aronsson, Swedish University of Agricultural Sciences
- Timo Koivurova, Arctic Centre, University of Lapland, Finland
- Donald McLennan, Canadian High Arctic Research Station, Polar Knowledge, Canada
- Tahzay Jones, U.S. National Parks Service
- Jason Taylor, U.S. National Parks Service
- Geneviève Desportes, North Atlantic Marine Mammal Commission (NAMMCO)
- Neville Ash, UN Environment
- Robert Höft, Convention on Biological Diversity (CBD)
- Liza Jenkins, Michigan Technological University
- Marianne Kroglund, Arctic Monitoring and Assessment Programme (AMAP)
- Jon L. Fuglestad, Arctic Monitoring and Assessment Programme (AMAP)
- Patti Bruns, Arctic Contaminants Action Plan (ACAP) and Emergency Prevention Preparedness and Response (EPPR)
- Soffia Guðmundsdóttir, Protection of the Arctic Marine Environment (PAME)
- Bernard Funston, Sustainable Development Working Group (SDWG)
- Maka Monture, Arctic Youth Ambassadors Program

Industry Advisory Committee

Representatives from industry provided guidance and organization on issues affecting industry in the Congress program.

- Equinor
- Association of Oil & Gas Producers (IOGP)
- Association of Arctic Expedition Cruise Operators (AECO)
- International Petroleum Industry Environmental Conservation Association (IPIECA)
- Lapland Chamber of Commerce
- North Star Group
- Institute of the North
- ExxonMobil
- ConocoPhillips
- Shell
- AECOM engineering
- ENI Energy company
- Arctic Economic Council
- Anglo American
- Finnish Forest Industries
- Saami Council
- CAFF
- Ministry of the Environment, Finland

Conservation of Arctic Flora and Fauna

CAFF is the biodiversity working group of the Arctic Council and consists of National Representatives assigned by each of the eight Arctic Council Member States (Canada, Kingdom of Denmark, Finland, Iceland, Norway, Sweden, Russian Federation, United States), representatives of Indigenous Peoples' organizations that are Permanent Participants to the Council (Aleut International Association, Arctic Athabaskan Council, Gwich'in Council International, Inuit Circumpolar Council, Russian Association of Indigenous Peoples of the North, Saami Council) and Arctic Council observer countries and organizations.



CAFF's mandate is 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.

For more information visit the CAFF website: www.caff.is

Arctic Council

The Arctic Council is a high-level intergovernmental forum to provide a means for promoting cooperation, coordination and interaction among the Arctic States, with the involvement of the Arctic Indigenous communities and other Arctic inhabitants on common Arctic issues, in particular on issues of sustainable development and environmental protection in the Arctic.



For more information visit the Arctic Council website: www.arctic-council.org

Ministry of the Environment, Finland

The Ministry of the Environment is responsible for preparing matters to be submitted for consideration by the Government and Parliament, such as matters concerning communities, the built environment, housing, biodiversity, sustainable use of natural resources, environmental protection, communities, the built environment and housing.



Ympäristöministeriö
Miljöministeriet
Ministry of the Environment

The Ministry of the Environment leads national efforts and encourages cooperation in:

- promoting sustainable development,
- securing a good living environment, and
- safeguarding biodiversity for both current and future generations.

Within its own administrative branch, the Ministry is responsible for:

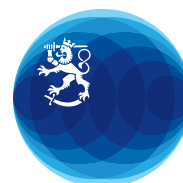
- strategic planning
- providing guidance and resources
- drafting legislation
- international cooperation

The Ministry of the Environment's administrative branch includes the Finnish Environment Institute (SYKE) and the Housing Finance and Development Centre of Finland (ARA). In matters falling within its remit, the Ministry of the Environment directs the Centres for Economic Development, Transport and the Environment (ELY Centres). The Ministry also guides and funds Parks & Wildlife Finland within Metsähallitus, the state enterprise administering state-owned land and water areas.

For more information please visit the Ministry of the Environment, Finland's website: www.ym.fi

Ministry for Foreign Affairs of Finland

The Ministry for Foreign Affairs concentrates on foreign and security policy, trade policy and development policy as well as on significant foreign policy issues and international relations in general. The Ministry also assists other branches of government in the coordination of international affairs.



Ulkoministeriö
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For more information please visit the Ministry for Foreign Affairs of Finland's website: www.um.fi

