

ARCTIC WILDLAND FIRE SHARING CIRCLE

SUMMARY
REPORT
2022



EMERGENCY PREVENTION,
PREPAREDNESS AND RESPONSE



Arcitc Wildland Fire Sharing Circle Summary Report

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This two-day online event was facilitated and hosted by Miami University, specifically by Professor Jessica McCarty, a member of the Arctic Monitoring and Assessment Programme's (AMAP) Expert Group on Short-Lived Climate Forcers (EG SLCF).

A planning group led by Tom Barry, CAFF Executive Secretary; Nina Ågren, EPPR Executive Secretary; Edward Alexander, Co-Chair, Gwich'in Council International; Devlin Fernandes, Executive Director of Gwich'in Council International; Michael Young, Arctic Council Wildland Fire Projects Coordinator of the U.S. Department of State; and Jessica McCarty of Miami University held several teleconferences and prepared the program for the Sharing Circle.

We are grateful for the financial support of the USA and to Miami University as a delivery partner.

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1. INTRODUCTION

In November 2021, the Conservation of Arctic Flora and Fauna (CAFF) and Emergency Prevention, Preparedness and Response (EPPR) Working Groups, in collaboration with Gwich'in Council International (GCI) organized the Arctic Wildland Fire Sharing Circle. Given the ongoing COVID-19 pandemic, the event was held online over two-days, 17-18 November 2021, with invited talks from across the Arctic and breakout sessions for discussion. Miami University hosted and facilitated the Sharing Circle, specifically Professor Jessica McCarty, a member of the Arctic Monitoring and Assessment Programme's (AMAP) Expert Group on Short-Lived Climate Forcers (EG SLCF).

The event brought together multiple Working Groups, diverse participants, and a range of projects active and planned for the Arctic in an innovative way to learn, share, and discuss. It fostered a spirit of inclusiveness, and was unique in looking across borders and Working Groups to bring a truly circumpolar lens to wildland fire in the Arctic.

This report summarizes the event.

1.1 BACKGROUND

In recent years, wildfires have increased in frequency, severity, and area across Arctic and boreal forests, bringing challenges as well as opportunities and requiring greater collaboration, knowledge sharing, and partnership. The Arctic Council is committed to monitoring and addressing the complexities of wildland fire in the North, including working with Arctic communities (Arctic Council, 2021). Gwich'in Council International is leading two projects to advance work on wildland fires at the Arctic Council, in the CAFF and EPPR Arctic Council Working Groups. There are other Arctic Council Working Groups and Expert Groups with projects and activities related to fire in the Arctic, as well as non-Arctic Council projects focusing on fire within the Arctic and boreal regions.

1.2 PURPOSE

Given the increasing attention and work on fires in the Arctic, the purpose of the Arctic Wildland Fire Sharing Circle was to share active and planned work, and enable people to learn about different projects to

assess their interest and capacity to participate, identify synergies and potential alignment of priorities and/or activities, and avoid duplication of work (see Annex 1 for the complete Concept Note).

The desired outcomes were to:

- Increase awareness and understanding of the ongoing work related to Arctic wildland fires;
- Enable networking between projects where there are similar or overlapping objectives; and
- Identify if and how others can be involved and contribute to each other's work.

1.3 STRUCTURE OF THE SHARING CIRCLE

The Sharing Circle was organized to include daily welcomes and closing reflections, a keynote address, presentations and lightning talks on ongoing and planned work, question and answer and discussion periods, and breakout discussions. A planning group led by Tom Barry, CAFF Executive Secretary; Nina Ågren, EPPR Executive Secretary; Edward Alexander, Co-Chair, Gwich'in Council International; Devlin Fernandes, Executive Director of Gwich'in Council International; Michael Young, Arctic Council Wildland Fire Projects Coordinator of the U.S. Department of State; and Jessica McCarty of Miami University held several teleconferences and prepared the program for the Sharing Circle.

Dr. McCarty moderated the event, hosted on the Zoom webinar platform, and simultaneous English-Russian interpretation was provided.

The presentations were grouped in sessions to highlight Arctic Council work on Day 1 and related work on Day 2. Showcasing work across the circumpolar Arctic was deemed critical, which was reflected in the agenda. Following the closing reflections each day, the Sharing Circle participants were invited to remain for breakout discussions, with instructions from Edward Alexander, Co-Chair of Gwich'in Council International. Given the delivery across multiple time zones and late hour for finishing in Europe and Russia, the breakout discussions were optional. See Annex 2 for the complete program.

2. PRESENTATIONS

An archive of all recorded presentations can be found at the Arctic Council Vimeo: vimeo.com/arcticcouncil.

2.1 WELCOME & KEYNOTE ADDRESSES

The Welcome Address was delivered by Ambassador Nikolay Korchunov of the Russian Federation, the Chair of the Senior Arctic Officials. Ambassador Korchunov noted the increasing wildland fire activity in the Russian Arctic, and that wildfires “are a cross-cutting, interdisciplinary issue that affects many different regions and cultures around the Arctic.” He ended his welcome remarks reminding all that even as the Arctic States, Permanent Participants, and Observers can expect Arctic wildfires to intensify, so can collaboration grow as well.

The Keynote Address was delivered by Edward Alexander, the Co-Chair of Gwich'in Council International. Edward Alexander emphasized the importance of incorporating Indigenous Knowledge into wildland fire and fire ecology science and management, work that he had been doing for many years within the Arctic Council framework and now across Arctic Council Working Group projects on fire. Edward Alexander lit a fire at his home in Fairbanks, Alaska, the United States that would burn throughout the entire Sharing Circle, linking the significance of fire to the Gwich'in people and the work to be done at the meeting and beyond.


“This sharing circle is a unique opportunity for experts, knowledge-holders, project leaders and interested parties to join together and share and discover the ongoing work and innovative projects related to our common issue of Arctic wildfires.”

– Ambassador Nikolay Korchunov



“I said at the time that we’ve had a front row seat to an Arctic on fire - a precursor to a world of flame.”

– Edward Alexander



"Fire can be absolutely devastating and destructive, but it can also be a source of renewal, rebirth, and an area which builds our commonality."

– Edward Alexander

"Wildland fire has gone from being an effect of global climate change to a driver of it. It intersects with human, environmental, and animal health."

– Edward Alexander

"This Sharing Circle is a unique opportunity for experts, knowledge holders, project leaders, and interested parties to join together and share and discover the ongoing work and innovative projects related to our common issue of Arctic wildfires. It's an important effort to identify synergies between initiatives, bring the right minds and resources together to address this issue in a holistic and cross sectoral manner."

– Nikolay Korchunov

"We've been working to share our Indigenous practices – our Gwich'in practices around wildland fire – that go beyond suppression towards renewal, to stimulating biodiversity and perhaps even combating climate change as a carbon negative process."

– Edward Alexander

2.2 SESSION 1: FOCUS ON RESEARCH NEEDS, OUTPUTS, AND SYNERGIES OF ARCTIC COUNCIL WORKING GROUPS

The first session outlined previous, ongoing, and future work by AMAP, presented by Simon Wilson of the AMAP Secretariat; the CAFF Arctic Fire project, presented by Devlin Fernandes, Executive Director of Gwich'in Council International; and the Arctic Contaminants and Action Programme (ACAP), presented by Diane de Kerckhove of Environment and Climate Change Canada.

AMAP's work entails continuous assessments of emissions from Pan-Arctic fire and modeling current and future fires, with emphasis on peer-review. Two AMAP Expert Groups are working on Arctic fires - the Expert Group on Short-Lived Climate Forcers (SLCF EG) and the Climate Expert Group (Climate EG).

The CAFF Arctic Fire project is an innovative co-production project, linking Indigenous Knowledge with western fire ecology science. This includes collaboration with existing agencies collecting data on fire, best practices on fire management in the context of biodiversity, and highlighting Indigenous Knowledge generation for an Arctic Fire Monitoring Journal to augment and enhance the state of Arctic fire knowledge.

ACAP's work is focused on the prevention and reduction of pollution and environmental risks to the Arctic. Its Expert Group on Short-Lived Climate Pollutants (SLCP EG) recently started to develop a pilot project called 'Wildland fire management practices to reduce emissions of black carbon and other air pollutants' to build capacity in Arctic communities to manage fire-related pollutants and potentially reduce emissions.

Jennifer Spence, Executive Secretary of the Sustainable Development Working Group (SDWG) shared the SDWG focus areas and thematic priorities and noted that the management and impact of Arctic fires overlaps with the ongoing community-based work of SDWG, welcoming future projects that focus on Arctic fires.



2.3 SESSION 2: FOCUS ON EMERGENCY PREPAREDNESS AND RESPONSE

The second session was opened by Edward Alexander, Head of Delegation for Gwich'in Council International to EPPR, and Ed Soto, University of Alaska Fairbanks, the United States, to present the EPPR Circumpolar Wildland Fire project. This was followed by Arctic State-level presentations by Joel Kauppinen, of Finland, presenting 'ArcResc: Rescue Service in the Arctic' and Akram Gadaborshev & Irakly Arabidze, of the Russian Federation, presenting on 'EMERCOM of Russia.'

The EPPR project highlighted the complex relationship with fire of the Gwich'in and other Indigenous communities, including the need for wildland fire management and operational response to fire, like the Council of Athabaskan Tribal Governments (CATG) wildland firefighting crew based in the Yukon Flats of Alaska (CATG, 2021). The Circumpolar Wildland Fire project includes compiling and assessing instruments and best practices of emergency response and preparedness to wildland fire; developing a template with clauses relevant for wildfire response and training; summarizing how each Arctic State manages operational response, including interagency and/or state agreements in place; and a summary of standard practices and training by State, including a baseline operational survey of frameworks and agreements within and between Arctic States for wildland fires and all hazards.

Joel Kauppinen highlighted that ArcResc, a new initiative funded by the Ministry of Interior Finland, was seeking collaboration on best operational practices in Arctic environments, including wildfires.

Akram Gadaborshev presented the technical capabilities of EMERCOM Russia to use global satellite imagery to track and inform wildfire operations, while Irakly Arabidze spoke of the need for collaboration in the Arctic region on wildfires.

A 30-minute discussion for both Session 1 and 2 was held after the presentations on ArcResc and EMERCOM of Russia. The discussion was not recorded, and notes were not taken.

2.4 SESSION 3: BREAKOUT GROUP DISCUSSIONS

Breakout group discussions followed the sharing circle guidelines provided by Raven Speaks (2012), as introduced to the Arctic Wildland Fire Sharing Circle by Edward Alexander. Each sharing circle began with participants introducing themselves and reflecting on the day's presentations and their relationship with wildland fires. Breakout discussions were not recorded, and notes were not taken, to reflect how in-person discussions might occur in non-virtual spaces. Breakout group topics included: (1) Operational Fire Response; (2) Effects of Fire on Biodiversity; (3) Effects on Communities; (4) Arctic Fire and Emissions Science; and (5) Emerging Topics.

“People up there said that these convective storms had once been rare but were on the rise. When we had a public meeting about the fires in Utqiagvik, which used to be called Barrow, an Elder approached me and said that she had never seen a thunderstorm prior to 1992. I was really impressed by that so my interest in thunderstorms was piqued enough to plot the lightning data from the sensors used by the fire service since the 1980s.”

– *Randi Jandt, “Alaska Fire Science Consortium: Arctic Thunderstorms”.*

2.5 SESSION 4: WILDLAND FIRES IN EURASIA AND FENNOSCANDIA

Three speakers were featured in Session 4, including Mikhail Pogodaev, Deputy Minister for Arctic Development and Indigenous Peoples Affairs of Sakha Republic (Yakutia) and Special Envoy of the Russian Chairmanship in the Arctic Council on Indigenous Peoples and Regional Cooperation, presenting ‘Wildfires in Sakha Republic’; Elena Kukavskaya, V.N. Sukachev Institute of Forest Siberian Branch of the Russian Academy of Sciences, presenting ‘Siberian Wildland Fire Research’; and Juha Aalto, of the Finnish Meteorological Institute and University of Helsinki, presenting on the recently completed ‘IBA-Forest Fires’ project. A 15-minute discussion followed these talks to be cognizant of the time difference in Yakutsk and Krasnoyarsk for Pogodaev and Kukavskaya, respectively.

Mikhail Pogodaev noted the extreme 2020 and 2021 wildfire seasons exceeded traditional Indigenous Knowledge of the 40-year time span between severe fires as well as the average annual number of wildfires. Further, wildfire damage to pastures impacts traditional Indigenous livelihoods and has led to significant impairment of air quality.

Elena Kukavskaya, an expert in wildfires, forestry, and remote sensing, presented geospatial products of new fuel load estimates for central Siberia, including expanding work beyond the taiga to tundra areas. Because Siberia constitutes a large portion of the global terrestrial carbon stock, wildfires and anthropogenic land use like timber extraction can lead to impacts on the global carbon cycle.

Juha Aalto presented completed work of the multi-year IBA Forest Fires in Fennoscandia project, completed in Spring 2021, showing a decreased burned area in forest fires over the past 30 years, with forest fire frequency and behavior dependent on weather, forest structure, and human behavior, especially fire suppression.



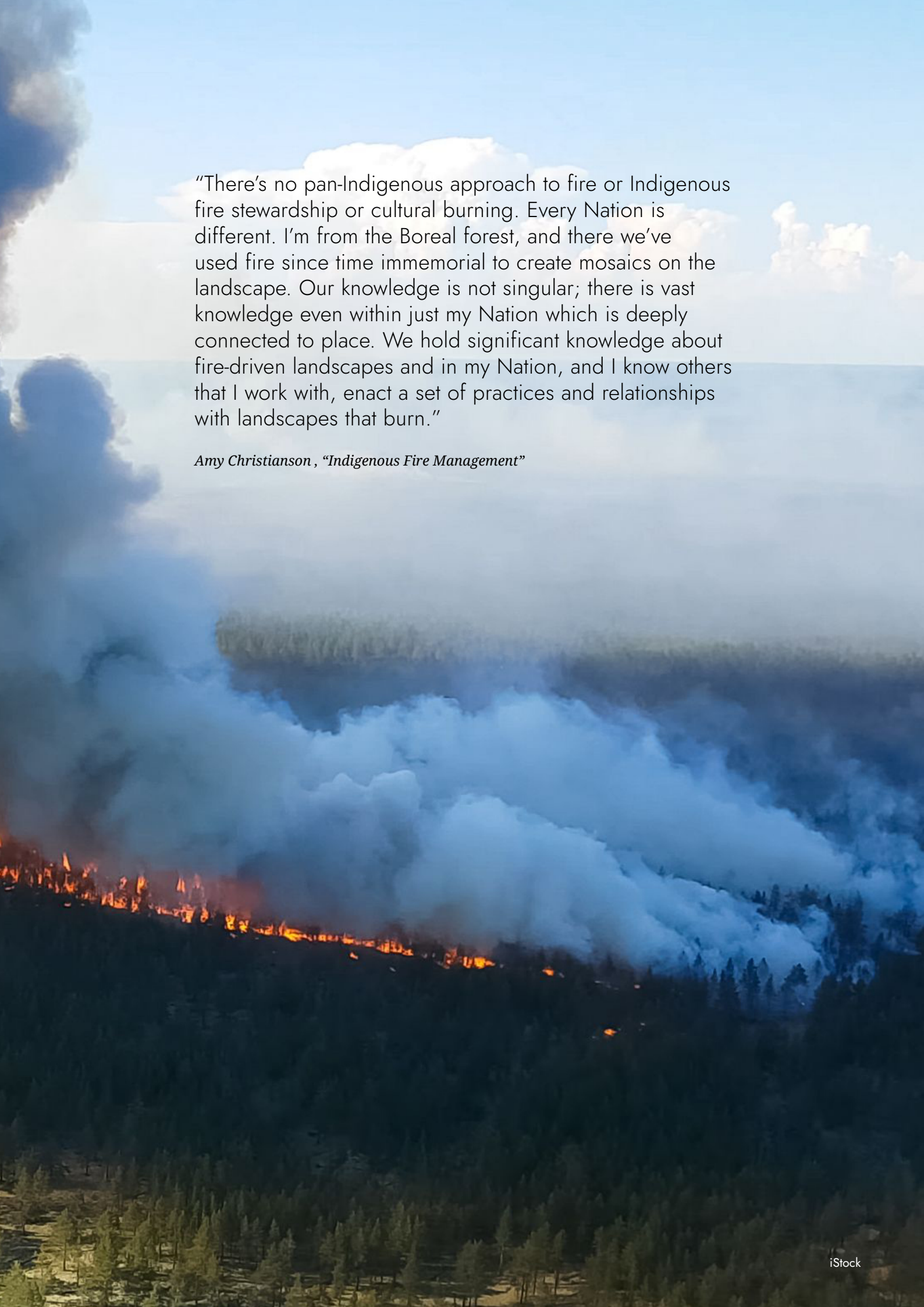
2.6 SESSION 5: LIGHTNING TALKS

During the Lightning Talks, invited speakers were given 10 minutes to highlight their work on Arctic fires. The talks included Stephen Arnold, University of Leeds, United Kingdom, “ACRoBEAR”; Jesús San Miguel-Ayanz, Joint Research Centre of the European Commission, “Global Wildfire Information System (GWIS)”; Tiina Kurvits, GRID Arendal (for the United National Environmental Programme), “GRID-Arendal Polar & Climate Programme”; Vito Vitale, National Research Council - Institute of Polar sciences (CNR-ISP) of Italy, “Arctic PASSION”; Ulas Im, Aarhus University, Denmark, “Biomass burning emissions and aerosols over the Arctic”; Amy Cardinal Christianson, Canadian Forest Service, “Indigenous Fire Management”; Mike Flannigan, Thompson Rivers University, Canada, “Canada Wildfire”; and Randi Jandt, University of Alaska Fairbanks, the United States, “Alaska Fire Science Consortium: Arctic Thunderstorms”.

Throughout these concise talks from non-Arctic Council projects, tools, data, visualizations, and collaboration opportunities were highlighted. A 30-minute discussion concluded Session 5, which was not recorded and notes were not taken.

“The project involves a wide range of researchers spanning social scientists to climatologists to air quality modelers and fire scientists; trying to bring all of these people together to better understand how fires might be responding to rapid climate change at high latitudes. The key interest of our project is how that response, in terms of fire activity, is manifesting in terms of air pollution impacts on local communities, and also how local communities are able to respond to that risk and adapt to that risk, and how they perceive that risk.”

– Stephen Arnold, “ACRoBEAR”



"There's no pan-Indigenous approach to fire or Indigenous fire stewardship or cultural burning. Every Nation is different. I'm from the Boreal forest, and there we've used fire since time immemorial to create mosaics on the landscape. Our knowledge is not singular; there is vast knowledge even within just my Nation which is deeply connected to place. We hold significant knowledge about fire-driven landscapes and in my Nation, and I know others that I work with, enact a set of practices and relationships with landscapes that burn."

Amy Christianson , "Indigenous Fire Management"

2.7 SESSION 6: MOVING FORWARD AND FINAL BREAKOUT DISCUSSION

Edward Alexander, Co-Chair of Gwich'in Council International, provided closing reflections to the Sharing Circle. Participants were encouraged to begin new conversations and build on existing networks. A list of all participants with their contact information was sent to everyone who registered at the conclusion of the meeting, and details on the posting of the recorded talks was given. This summary report was announced and promised to be circulated to all participants.

The final breakout group discussions followed the sharing circle guidelines provided by Raven Speaks (2012). Each sharing circle began with participants introducing themselves and reflecting on the day's presentations and their relationship with wildland fires. Breakout discussions were not recorded, and notes were not taken, to reflect how in-person discussions might occur in non-virtual spaces. Breakout group topics for Day 2 included: (1) Operational Fire Response; (2) Indigenous Fire Knowledge; and (3) Arctic Fire and Emissions Science.

"This model is able to simulate fire occurrence, burned area, and emissions, and it can distinguish between natural and man-made fires. We want to use this model in the Arctic, but mainly in Greenland, to determine the physical factors controlling the magnitude of changes in climate change and how they would affect wildfires and biomass burning emissions in Greenland. Black carbon, which is one of the major aerosols produced by biomass burning, can further deposit to the ice and change the albedo and modify climate change"

– Ulas Im, *"Biomass burning emissions and aerosols over the Arctic"*

2.8 REFLECTIONS FROM WORKING GROUP CHAIRS

"This exchange is creating opportunities to identify linkages across our work, and allowing us to uncover new models for cooperation."

– Kathy Nghiem

Kathy Nghiem, Chair of the Emergency Prevention, Preparedness, and Response Working Group offered closing reflections on Day 1, highlighting that fire is an important issue that cuts across the boundaries of science, biodiversity, and environmental protection. She noted the diversity and breadth of expertise and knowledge on wildland fires across Arctic and non-Arctic states, from research and studies, to practices honed over generations, to new and emerging technologies.

"Wildland fires have huge ecological importance in the renewal of boreal forests, and are vital to many endangered insect species, however the destructive side of wildland fires is now being enforced by climate change, with a negative feedback loop to climate change and implications for biodiversity and human well-being."

– Mia Rönkä

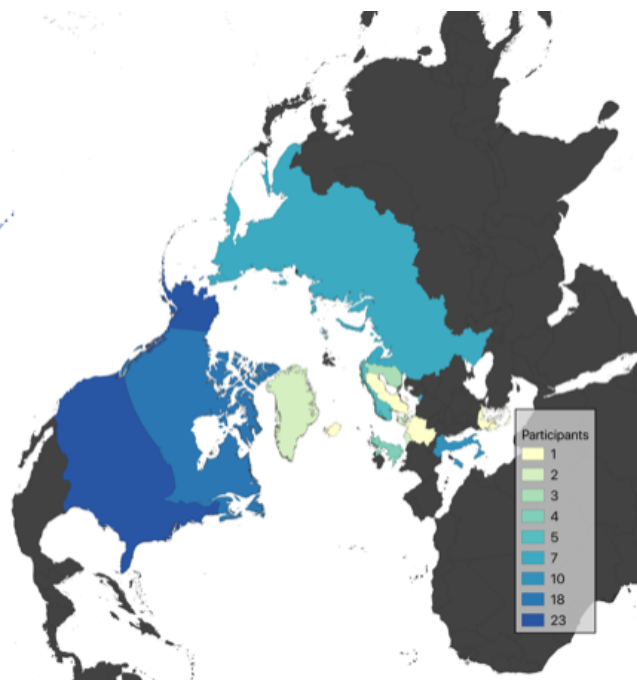
Mia Rönkä, Chair of the Conservation of Arctic Flora and Fauna Working Group, opened Day 2, reflecting on the model of cooperation between Arctic Council Working Groups to address on-the-ground conservation issues with social, economic, and cultural impacts in collaboration, and the number of people and projects outside the Council also contributing to this important issue.

Both Chairs noted with thanks the participants, hosts, and organizers.

3. RESULTS OF THE ARCTIC WILDLAND FIRE SHARING CIRCLE

A total of 90 participants joined throughout the two-day Sharing Circle, including at least one participant from each of the Arctic states and four of the Permanent Participants (see Annex 3 List of Participants). This map shows the count of virtual attendees by country.

Presenters and participants were solicited to submit projects engaged in Arctic wildland fire initiatives, even those not affiliated with the Arctic Council. A total of 15 projects were submitted, spanning across Arctic States and Permanent Participants and beyond (see below). Project names are hyperlinked to relevant websites where available. Two new projects, ArcResc and Kluane National Park and Reserve Fire History and Stand Origin Mapping, are scheduled to begin in early 2022.



PROJECT NAME/ PRINCIPAL CONTACT

- [ACRoBEAR](#)
Stephen Arnold
- [AXA Chair in Wildfires and Climate](#)
Apostolos Voulgarakis
- [Forest fires in Fennoscandia under changing climate and forest cover](#)
Juha Aalto
- [Alaska Fire Science Consortium](#)
Randi Jandt
- ArcResc - Capacities of the rescue services in the Arctic: advancement of knowledge and cooperation
Joel Kauppinen
- Kluane National Park and Reserve Fire History and Stand Origin Mapping
Ellen Whitman & Chris Hunter
- [ArcticFIRE](#)
Devlin Fernandes
- [EPPR Circumpolar Wildland Fire Cooperation](#)
Devlin Fernandes
- [Monitoring and communicating Arctic wildfire emissions](#)
Mark Parrington
- [Arctic PASSION](#)
Vito Vitale
- [FireIce: Fire in the land of ice: climatic drivers & feedbacks](#)
Sander Veraverbeke
- [NASA Arctic-Boreal Vulnerability Experiment](#)
Peter Griffith, Scott Goetz, Chip Miller, Liz Hoy
- [AMAP EG SLCF Fire Emissions](#)
Jessica McCarty
- [Fires pushing trees North](#)
Sander Veraverbeke
- [Rapid Response Assessment on Global Wildfires](#)
Tiina Kurvits

"Presentations from policy groups and lightning science talks were very interesting. Breakouts were a great way to get to know people."

"The Sharing Circle was very well arranged, informative and inspiring, and the spirit reflected the project well."

"It was highly informative and interesting and despite the limitations of "virtual" delivery", very engaging. Lots of great information and beautifully coordinated and facilitated."

"The Keynote and Introductions each day really set the stage. The lightning talks were also very informative."

"A little more break time would be nice, even if it meant an earlier start time. I also like when there is a report back from a discussion section to provide information to the overall group."

"The time keeping was impeccable, and the presenters were well chosen and interesting."

We received positive and helpful feedback about both the format and content of the Sharing Circle from participants after the event and during the December 2021 Senior Arctic Officials' meeting.

We achieved the desired outcomes, and demonstrated that the Sharing Circle can be a model to address cross-cutting issues. We learned about different technologies and the importance of having interpreters for participation, and differing views on breakout groups.

4. MOVING FORWARD

The Arctic Wildland Fire Sharing Circle was conceived and deployed as a starting point for Arctic wildland fire discussion, collaboration, and cooperation. Within the Arctic Council, much work is already underway. Outside the Arctic Council even more work has been done and will continue.

5. ACKNOWLEDGEMENTS

We are grateful for everyone's contributions and participation at the Arctic Council Wildland Fire Sharing Circle.

ALL ATTENDEES - STATES, PERMANENT PARTICIPANTS, WORKING GROUPS, OBSERVERS & INVITED GUESTS

KEYNOTE & CLOSING REFLECTIONS

- Edward Alexander, Gwich'in Council International

OPENING REMARKS & DAILY REFLECTIONS

- Ambassador Nikolay Korchunov, Chair of the Senior Arctic Officials
- Kathy Nghiem, Chair of Emergency Prevention, Preparedness and Response (EPPR) Working Group
- Mia Rönkä, Chair of Conservation of Arctic Flora and Fauna (CAFF) Working Group

PRESENTATIONS

- Simon Wilson: Arctic Monitoring & Assessment Programme (AMAP)
- Devlin Fernandes: Arctic FIRE (CAFF)
- Diane de Kerckhove: Arctic Contaminants Action Programme (ACAP)
- Jennifer Spence: Sustainable Development Working Group (SDWG)
- Edward Alexander & Ed Soto: Circumpolar Wildland Fire (EPPR)
- Joel Kauppinen, ArcResc: Rescue Service in the Arctic
- Akram Gadaborshev & Irakly Arabidze: EMERCOM of Russia
- Mikhail Pogodaev: Wildfires in Sakha Republic

- Elena Kukavskaya: Siberian Wildland Fire Research
- Juha Aalto: Forest Fires in Fennoscandia Under Changing Climate and Forest Cover
- Stephen Arnold: ACROBEAR
- Jesús San Miguel-Ayán: Global Wildfire Information System (GWIS)
- Tiina Kurvits: GRID Arendal
- Vito Vitale: Arctic PASSION
- Ulas Im: Biomass Burning Emissions and Aerosols Over the Arctic
- Amy Cardinal Christianson: Indigenous Fire Management
- Mike Flannigan: Canada Wildfire
- Randi Jandt: Alaska Fire Science Consortium - Arctic Thunderstorms

FACILITATION, SUPPORT & INTERPRETATION

- Jessica McCarty, Justin Fain, Maryam Zamanialaei, Miami University
- Michael Young, USA
- Tom Barry, CAFF
- Nina Ågren, EPPR
- Antonina Koryachkina, Russian & English interpretation
- Marina Tonkopeeva, Russian & English interpretation

FUNDING

- United States of America

APPENDICES

ANNEX 1: CONCEPT NOTE

Arctic Wildland Fire Sharing Circle

17-18 Nov 2021 on Zoom

Wildfires are increasing in frequency, severity, and area across the Arctic, bringing challenges as well as opportunities and requiring greater collaboration, knowledge sharing, and partnership. Gwich'in Council International (GCI) is leading two projects to advance work on wildfires at the Arctic Council, in the CAFF and EPPR Arctic Council Working Groups. There are other Arctic Council Working Groups and Expert Groups with projects or activities related to fire in the Arctic, as well as non-Arctic Council projects focusing on fire with an Arctic scope.

EPPR and CAFF are organising a Sharing Circle scheduled for 17-18 November 2021 where projects and people can learn about work in progress. Sessions will be held on Zoom and begin at 6am AKST/10 am EST/3 pm GMT/4 pm CET/5 pm Helsinki/6 pm Moscow/10 pm Krasnoyarsk each day.

This document provides an overview of the event, agenda, and registration instructions.

Concept

- Organize a virtual event to bring together projects and people related to Arctic Wildland fires, consisting of two approximately 3-hour sessions spread over two days, with optional breakout sessions at the end of each day.
- Enable projects and organizations to share, through presentations and written materials, highlights of their work, driving questions, and opportunities for involvement.
- Enable people to learn about different projects to assess their interest and capacity to participate, identify synergies and potential alignment of priorities and/or activities, and avoid duplication of work.

Drivers

- Multiple existing projects led by Arctic Council working groups, with ongoing direction from the SAOs to work collaboratively
- Desire to engage Permanent Participants and incorporate Indigenous Knowledge in projects
- Awareness of non-Arctic Council-led projects related to fires in the Arctic, with overlapping involvement on project Steering Committees, and requests from some of these projects for involvement from Arctic States and Permanent Participants
- Limited capacity for everyone to participate in everything
- Desire to appropriately align resources and expertise with project goals

Audience

We anticipate a diverse audience, from those with little-to-no expertise in fires who are interested in learning about what is going on, to those with much expertise interested in sharing and understanding how their knowledge/work fits with existing/planned activities. We welcome:

- Arctic Council States, Permanent Participants, Working Groups and Observers
- Project Leads and Committee Members
- Organizations and institutions holding knowledge relevant to understanding fire

Desired outcomes

- Increase awareness and understanding of the ongoing work related to Arctic wildland fires
- Enable networking between projects where there are similar or overlapping objectives
- Identify if and how others can be involved and contribute to each other's work
- Produce a report containing a:
 - Summary of the workshop discussions (key points and suggestions); and
 - A summary of projects, including those presented at the meeting and others submitted to be shared

Registration

Please register here for the event by 5 Nov 2021

Translation

There will be translation for English-Russian.

Submissions

- We ask people participating on behalf of Arctic wildland fire initiatives to please submit some short details on the project and/or data platform they are representing:
<https://forms.gle/FZhEXfzJW7J2c1Fa7>
- We will compile all submissions to share after the event, and will follow up with submissions invited to present

Event Organizing Committee

Edward Alexander and Devlin Fernandes, Gwich'in Council International; Mike Young, USA; Tom Barry, CAFF; Nina Ågren, EPPR; and Jessica McCarty, Miami University

We are grateful for the financial support of the USA and to Miami University as a delivery partner.

Links for more info

- Gwich'in Council International:
<https://gwichincouncil.com/wildland-fire>
- CAFF:
<https://www.caff.is/arcticfire>
- EPPR:
<https://eppr.org/projects/circumpolar-wildland-fire-project/>

ANNEX 2: ARCTIC WILDLAND FIRE SHARING CIRCLE FINAL AGENDA

Day 1: Focus on Arctic Council Wildland Fire initiatives (ongoing and planned) 17 November 2021 Total time: 4 hours Start time: 0600 AKST / 1000 EST/ 1500 GMT / 1600 CET / 1700 EET / 1800 Moscow / 2200 Krasnoyarsk				
Start	Elapsed Time	End time	What	Description
0:00	0:05	0:05	Greetings & Housekeeping	Jessica McCarty, Facilitator
0:05	0:10	0:15	Welcome, Chair of the Senior Arctic Officials	Ambassador Nikolay Korchunov
0:15	0:15	0:30	Keynote	Edward Alexander
Session 1				
0:30	0:15	0:45	Presentation 1: AMAP (Arctic Monitoring & Assessment Programme)	Simon Wilson
0:45	0:15	1:00	Presentation 2: CAFF Arctic Fire (Conservation of Arctic Flora and Fauna)	Devlin Fernandes
1:00	0:15	1:15	Presentation 4: ACAP (Arctic Contaminants and Action Programme)	Diane de Kerckhove
1:15	0:10	1:25	SDWG (Sustainable Development Working Group)	Jennifer Spence*
1:25	0:15	1:40	Break	
Session 2				
1:40	0:15	1:55	Presentation 3: EPPR (Emergency Prevention, Preparedness and Response)	Edward Alexander & Ed Soto
1:55	0:10	2:05	ArcResc: Rescue Service in the Arctic	Joel Kauppinen
2:05	0:10	2:15	EMERCOM of Russia	Akram Gadaborshev & Irakly Arabidze
2:15	0:30	2:45	Discussion	Jessica McCarty, facilitating Covering presentations from both sessions; Questions from attendees, Q&A, and Chat addressed during this time (not recorded).
2:45	0:15	3:05	Break	Recording re-starts after the break
3:05	0:05	3:10	Reflections & Closing from Chair of EPPR	Kathy Nghiem

Session 3				
3:10	0:05	3:15	Housekeeping for Breakout Discussions Please indicate your interest in the poll.	Jessica McCarty
3:15	0:45	4:00	Targeted Breakout Discussions in Day 1 Zoom Meeting, Following Sharing Circle Instructions**	<p>Call for Discussion in Sharing Circle format: Edward Alexander</p> <p>Begin the sharing circle by each participant introducing themselves and reflecting on today's presentations. Participants will be able to go between sessions every ~20 minutes. Breakout discussions are not recorded and notes are not taken.</p> <p>Breakout Groups will be limited to 10 participants: (1) Operational Fire Response; (2) Effects of Fire on Biodiversity; (3) Effects on Communities; (4) Arctic Fire and Emissions Science; (5) Emerging Topics ***</p>
<p>*Speaker not available for the discussion</p> <p>** Day 1 Breakout Discussions held in a separate Zoom meeting (no recording, interpretation available).</p> <p>*** More rooms created as needed to accommodate interested participants.</p>				

Day 2: Expanding collaboration - non-AC projects with a focus on Arctic-Boreal wildland fires
18 November 2021 | Total time: 4 hours 15 minutes
Start time: 0600 AKST / 1000 EST/ 1500 GMT / 1600 CET / 1700 EET / 1800 Moscow / 2200 Krasnoyarsk

Start	Elapsed Time	End time	What	Description
0:00	0:05	0:05	Welcome, CAFF Chair	Mia Rönkä
Session 4				
0:05	0:15	0:20	Wildfires in Sakha Republic	Mikhail Pogodaev
0:20	0:15	0:35	Siberian Wildland Fire Research	Elena Kukavskaya
0:35	0:10	0:45	IBA-Forest Fires	Juha Aalto
0:45	0:15	1:00	Discussion	Questions from Session 4 in the Q&A; not recorded
1:00	0:15	1:15	Break	Recording re-starts after the break
Session 5: Lightning Talks				
1:15	0:10	1:25	ACRoBEAR	Stephen Arnold
1:25	0:10	1:35	Global Wildfire Information System (GWIS)	Jesús San Miguel-Ayaz

1:35	0:10	1:45	GRID Arendal	Tiina Kurvits
1:45	0:10	1:55	Arctic PASSION	Vito Vitale
1:55	0:10	2:05	Biomass burning emissions and aerosols over the Arctic	Ulas Im
2:05	0:10	2:15	Break	
2:15	0:10	2:25	Indigenous Fire Management	Amy Cardinal Christianson
2:25	0:10	2:35	Canada Wildfire	Mike Flannigan
2:35	0:10	2:45	Alaska Fire Science Consortium: Arctic Thunderstorms	Randi Jandt
2:45	0:30	3:15	Discussion	Covering Session 5; Identify Breakout Rooms; not recorded.
3:15	0:15	3:30	Break	Recording re-starts after the break
Session 6				
3:30	0:05	3:35	Moving Forward: Summary Report, Project(s) Google Form	Jessica McCarty
3:35	0:10	3:45	Closing Thoughts	Edward Alexander
3:45	0:30	4:15	Targeted Breakout Discussions in Day 2 Zoom Meeting, Following Sharing Circle Instructions****	<p>Call for Discussion: Edward Alexander</p> <p>Begin the sharing circle by each participant introducing themselves and reflecting on today's presentations and the event.</p> <p>Breakout rooms identified during discussion. Limited to 10-15 participants per room. Breakout discussions are not recorded, notes are not taken.</p>

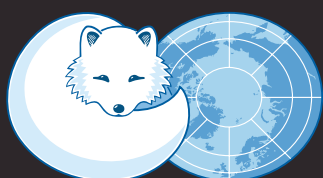
ANNEX 3: LIST OF PARTICIPANTS

Name	Affiliation
Juha Aalto	Finnish Meteorological Institute
Nina Ågren	Emergency Prevention, Preparedness, and Response Working Group
Edward Alexander	Gwich'in Council International
Stefania Amici	Istituto Nazionale di Geofisica e Vulcanologia, Italy
Stefan Andersson	Swedish Civil Contingencies Agency (MSB)
Irakly Arabidze	EMERCOM of Russia
Stephen Arnold	ACRoBEAR, University of Leeds, UK
Kristina Bär	Arctic Council Secretariat
Jennifer Barnes	U.S. National Park Service
Alice Baronetti	Institute of Geosciences and Earth Resources - CNR, Pisa, Italy
Tom Barry	Conservation of Arctic Flora and Fauna Working Group
Francesca Becherini	National Research Council of Italy
Liane Benoit	Arctic Athabaskan Council
Luc Bibeau	Government of Yukon, Canada
Lisa Bidinosti	Environment and Climate Change Canada-Canadian Wildlife Service
Yianni Boosalis	Environment and Climate Change Canada
Troy Bouffard	Center for Arctic Security and Resilience, University of Alaska Fairbanks, U.S.
Yan Boulanger	Natural Resources Canada
Lucas Brehaut	Canadian Forest Services
Kendrick Brown	Natural Resources Canada
Gilbert Castellanos	U.S. Department of the Interior
Amy Christianson	Canadian Forest Service
Jessica Cook	Arctic Council Secretariat
Kaytlin Cooper	Gwich'in Renewable Resources Board
Diane de Kerckhove	Environment & Climate Change Canada
Scott Dehnisch	USAID
Thomas Diehl	Joint Research Centre - European Commission
Brian Douglas	Yukon Wildland Fire Management, Canada
Bill Erasmus	Arctic Athabaskan Council
Justin Fain	Miami University, U.S.
Devlin Fernandes	Gwich'in Council International
Adriana Ford	Leverhulme Centre for Wildfires, Environment and Society, U.K.
Norah Foy	Environment and Climate Change Canada
Akram Gadoborshev	EMERCOM of Russia
Olga Gavrichkova	Research Institute on Terrestrial Ecosystems, National Research Council of Italy (IRET CNR)
Alena Gerasimova	Association of World Reindeer Herders
Julie Green Prangsgaard	Government of Greenland - Ministry for Agriculture, Self-Sufficiency, Energy and Environment
Viktoria Guseva	Saami Council
Elizabeth Hoy	NASA Goddard/Global Science and Technology, Inc., U.S.
Kseniia Iartceva	Arctic Contaminants and Action Programme
Ulas Im	Aarhus University, Denmark

Piyush Jain	Canadian Forest Service
Wes James	U.S. Coast Guard
Randi Jandt	Alaska Fire Science Consortium, University of Alaska Fairbanks, U.S.
Jurgena Kamberaj	European Commission, Joint Research Centre
Tiina Kurvits	UNEP/GRID-Arendal
Peter Lahm	U.S. Forest Service
Heidi Vassbotn Løfqvist	Directorate for Civil Protection, Norway
Rosa-Máren Magga	Arctic Council Indigenous Peoples' Secretariat
Svien Mathiesen	World Association of Reindeer Herders
Jessica McCarty	Miami University, U.S.
Eric Miller	Bureau of Land Management, Alaska Fire Service, U.S.
Andrey Mukhin	Rosreestr, Russian Federation
Enrica Nestola	CNR, Italy
Kathy Nghiem	Emergency Prevention, Preparedness, and Response Working Group
Sue Novotny	Arctic Council Secretariat
Erica Oberndorfer	Agriculture and Agri-Food Canada
Richard Olsen	Government of the Northwest Territories Canada - Environment and Natural Resources
Duarte Oom	European Commission, Joint Research Centre
Mark Parrington	European Centre for Medium-Range Weather Forecasts
Ville-Veikko Paunu	Finnish Environment Institute SYKE, Finland
Mikhail Pogodaev	Development of the Arctic and Northern Affairs of the Republic of Sakha (Yakutia), Russian Federation
Courtney Price	Conservation of Arctic Flora and Fauna Working Group
Mia Rönkä	Conservation of Arctic Flora and Fauna Working Group
Gordy Sachs	U.S. Forest Service
Jesús San Miguel-Ayaz	European Commission, Joint Research Centre
Muhammad Agung Santoso	Imperial College London, U.K.
Lisa Saperstein	U.S. Fish and Wildlife Service
Rebecca Scholten	Vrije Universiteit Amsterdam
Tina Schoolmeester	GRID-Arendal (for UNEP)
Kent Slaughter	US Bureau of Land Management - Alaska
Ed Soto	University of Alaska, U.S.
Jennifer Spence	Sustainable Development Working Group
Michaela Stith	Wilson Center, U.S.
Sólrún Svandal	Ministry for Foreign Affairs, Iceland
Nadezhda Tchebakova	V.N. Sukachev Institute of Forest, Russian Federation
Maxwell Torney	US EPA
Sander Veraverbeke	Vrije Universiteit Amsterdam, The Netherlands
Amin Virani	Canadian Coast Guard
Vito Vitale	National Research Council - Institute of Polar sciences (CNR-ISP), Italy
Apostolos Voulgarakis	Technical University of Crete, Crete
Ellen Whitman	Natural Resources Canada
Brian Wiens	Canada Wildfire
Simon Wilson	Arctic Monitoring & Assessment Programme
Michael Young	U.S. Department of State
Maryam Zamanialaei	Miami University, U.S.

A. REFERENCES

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ARCTIC COUNCIL

Arctic Council Secretariat
Fram Centre
NO-9296 Tromsø Norway
acs@arctic-council.org
arctic-council.org