

# 2<sup>nd</sup> International Symposium on Plastics in the Arctic and Sub-Arctic Region

## Harpa Conference Centre, 22-23 Nov 2023

*Program version 20<sup>th</sup> November 2023*  
*All times are in GMT*

**Conference Presenter: Helen Inga von Ernst, Ministry for Foreign Affairs**

### **22<sup>nd</sup> November 2023**

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**08:00-09:00**

Registration, Harpa 2<sup>nd</sup> floor

**09:00-10:30**

PLENARY: Welcoming and Opening Addresses

**Location: Norðurljós**

Moderator: Ambassador **Pétur Ásgeirsson**, SAO Iceland

Opening Address by **Bjarni Benediktsson**, Minister for Foreign Affairs of Iceland

Address by Ambassador **Morten Höglund**, SAO Chair, Norway

Address on the INC by **Jyoti Mathur-Filipp**, Executive Secretary of the INC Secretariat of UNEP

Keynote address by **David Hik**, Chief Scientist & Executive Director – Programs, Polar Knowledge Canada

Address by **John Aldag**, Member of Parliament, Canada on the OSCE Parliamentary Resolution on Macroplastic and Nanoplastic Pollution

Short welcome by Symposium Partner, **Eirini Glyki**, Science Professional Officer, ICES

**“Are you feeding the plastic monster?”** **Olav Lekve**, Senior Communication Adviser, Norwegian Directorate of Fisheries & **Lise M. Strömqvist**, Communication Adviser, Norwegian Centre against Marine Litter

**10:30-11:00**

Coffee break

**Location: Hörpuhorn**

**11:00-15:30**

Three parallel sessions on thematic discussions:

**11:00 – 12:35**

**THEME 1: Monitoring and assessment of plastic pollution in the Arctic**

**Location: Norðurljós**

Moderator: **Anne Katrine Normann**, Centre for the Ocean and the Arctic, UiT Arctic University of Norway

Rapporteur: **Ólafur Ástþórsson**, former Deputy Director of the Marine Research Institute

- 11:00- 11:20 Keynote speaker: *Jennifer Provencher*, Environment and Climate Change Canada
- 11:20- 11:35 Beach Litter Monitoring in the Arctic using drone and satellite imagery. *Marc Schnuwara*, BioConsult SH GmbH & Co. KG
- 11:35- 11:50 Floating microplastics in the Eurasian Arctic: spatial and temporal trends. *Svetlana Pakhomova*, Norwegian Institute for Water Research
- 11:50- 12:05 Reproducible pipelines and readiness levels in plastic monitoring. *Amy Lusher*, Norwegian Institute for Water Research (NIVA)
- 12:05- 12:20 First analysis of micro- and meso-plastic particles in sea-surface samples collected in Icelandic coastal waters. *Belen Ovide*, Ocean Missions
- 12:20- 12:35 Sentinels of plastic: Monitoring plastic pollution in the Sub-Arctic ecosystem using Icelandic fin whales as indicators. *Valerie Chosson*, Marine and Freshwater Research Institute (MFRI)

**11:00 – 12:35**

**THEME 2: Methodological developments to determine macro, micro and nano plastics**

**Location: Silfurberg A**

Moderator: **Jóhann Sigurjónsson**, former Director, Marine Research Institute

Rapporteur: **Hrönn Egilsdóttir**, Head of Environmental Division, Marine & Freshwater Research Institute

- 11:00- 11:20 Keynote speaker: *Amy Lusher*, Norwegian Institute for Water Research (NIVA)
- 11:20- 11:35 Nanoplastics in Arctic' ecosystems: Myth or Reality? *Julien Gigault*, Takuvik (CNRS/Université Laval)
- 11:35- 11:50 Microplastic pollution in Ny-Alesund, Svalbard. *Yubo Li*, Shanghai Municipal Engineering Design Institute (Group) Co., Ltd.
- 11:50- 12:05 A pan-Arctic Monitoring program for litter and microplastics. *Jennifer Provencher*, Environment and Climate Change Canada
- 12:05- 12:20 Marine litter pollution in Southern Spitsbergen – lessons learnt from 6 tonnes of litter picked up from 30 km of the coast. *Adam Nawrot*, forScience Foundation
- 12:20- 12:35 Differentiating between microplastics, algae and dissolved organic matter using single particle ICPTOFMS. *Lyndsey Hendriks*, TOFWERK

**11:00 – 12:35**

**THEME 3: Sources and transport of plastic in the Arctic and sub-Arctic**

**Location: Silfurberg B**

Moderator: **Eirini Glyki**, Science Professional Officer, ICES

Rapporteur: **Gunn-Britt Retter**, Head of Arctic – and Environmental Unit, Saami Council.

- 11:00- 11:20 Keynote speaker: *Peter Murphy*, NOAA Marine Debris Program (U.S.)
- 11:20- 11:35 Atmospheric microplastic in the Arctic and the Norwegian mainland. *Dorte Herzke*, NILU & NIPH

- 11:35- 11:50 A plastic archive in Greenland: micro and nano particles in marine sediment. *Karla Parga Martinez*, University of Copenhagen
- 11:50- 12:05 Fishing nets on the coastline of the North Atlantic region - What is causing the issue and how can it be solved? *Wouter-Jan Strietman*, Wageningen Economic Research
- 12:05- 12:20 Vertical fluxes of microplastics and other anthropogenic particles measured using moored sediment traps in two Arctic glacial fjords (Svalbard archipelago). *Andrea Paluselli*, CNR-ISMAR
- 12:20- 12:35 Modeling influence of biogeochemical processes on the transport of microplastics in the Arctic Ocean. *Anfisa Berezina*, Norwegian Institute for Water Research NIVA

### 12:35 – 13:30

#### Lunch

**Location: Hörpuhorn**

### 13:30 – 15:30

#### THEME 1: Monitoring and assessment of plastic pollution in the Arctic (continued)

**Location: Norðurljós**

- 13:30- 13:45 Implementing national monitoring of plastic pollution in Norway. *Eivind Farnen*, Miljødirektoratet
- 13:45- 14:00 Microplastic monitoring in the ice cover of a Finnish freshwater lake. *Tuomo Soininen*, University of Eastern Finland
- 14:00- 14:15 Monitoring the Presence, Abundance, and Identity of Micro- and Nano-plastics of Arctic and Beringian foodwebs. *Soren George-Nichol*, University of Alaska Anchorage
- 14:15- 14:30 Microplastics and plastic additives in salmonids from the central Canadian Arctic. *Bonnie Hamilton*, Environment and Climate Change Canada / University of Alberta
- 14:30- 14:45 Indicators for plastic monitoring – linking the plastic value chain with environmental occurrence. *Katrin Vorkamp*, Aarhus University

14:45- 15:30 Panel discussions – outcomes from the presentations

**Moderator:** *Anne Katrine Normann*, Centre for the Ocean and the Arctic, UiT Arctic University of Norway

*Jennifer Provencher*, Environment and Climate Change Canada; *Ólafur Ástþórsson*, former Deputy Director of the Marine Research Institute; *Matthew Johnson*, Volatus Aerospace; *Emily Cowan*, SINTEF Ocean

### 13:30 – 15:30

#### THEME 2: Methodological developments to determine macro, micro and nano plastics (continued)

**Location: Silfurberg A**

- 13:30- 13:45 Characterization of microplastics in surface waters from Great Slave Lake and the Mackenzie River, Northwest Territories. *Madelaine Bourdages*, Carleton University
- 13:45- 14:00 Marine beach litter in the Baltic Sea. Outcome from the HELCOM BLUES project. *Eva Blidberg*, Keep Sweden Tidy Foundation
- 14:00- 14:15 Uptake and accumulation of car tire rubber-related organic chemicals in blue mussels (*Mytilus edulis*). *Kristin Galtung*, Norwegian Institute for Water Research (NIVA)
- 14:15- 14:30 Production and analysis methods for pristine and degraded microplastic and nanoplastic reference materials. *Andy Booth*, SINTEF Ocean
- 14:30- 14:45 Challenges and opportunities regarding beach litter monitoring in Norway: Lessons learned from three different datasets. *Marthe Larsen-Haarr*, Salt Lofoten AS

14:45- 15:30 Panel discussions - outcomes from the presentations

**Moderator:** *Jóhann Sigurjónsson*, former Director, Marine Research Institute

*Amy Lusher*, Norwegian Institute for Water Research (NIVA); *Hrönn Egilsdóttir*, Head of Environmental Division, Marine & Freshwater Research Institute; *Charlotte Carrier-Belleau*, Laval university and University College Dublin; *Ryan d'Arcy Metcalfe*, KIMO International

### 13:30 – 15:30

#### THEME 3: Sources and transport of plastic in the Arctic and sub-Arctic (continued)

##### Location: Silfurberg B

- 13:30- 13:45 Atmospheric deposition-flux rates of microplastics particles recorded in Icelandic surface-lake sediments. *Mathis Blache*, University of Iceland
- 13:45- 14:00 Microplastic pollution in sediments around Svalbard, from sea-ice covered areas on the continental shelf to deep slope gullies. *France Collard*, Norwegian Institute for Water Research
- 14:00- 14:15 Microplastic concentrations and modelling of microplastic transport in the Baltic Sea and Arctic Sea ice. *Hermann Kaartokallio*, Finnish Environment Institute
- 14:15- 14:30 Evidence of highly local marine litter sources in an Arctic Archipelago (Lofoten, Norway). *Vilde Sørnes Solbakken*, SALT Lofoten AS
- 14:30- 14:45 Marine litter on the seafloor around Iceland: Analyzing seafloor images from benthic habitat mapping in 2004-2019. *Petrún Sigurðardóttir*, Marine and Freshwater Research Institute

14:45- 15:30 Panel discussions - outcomes from the presentations

**Moderator:** *Eirini Glyki*, Science Professional Officer, ICES

*Peter Murphy*, NOAA Marine Debris Program (U.S.); *Gunn-Britt Retter*, Head of Arctic – and Environmental Unit, Saami Council; *Jake Thompson*, University Centre of the Westfjords; *Sydney Fox*, Reykjavík University

### 15:30 – 16:00

Coffee break

Location: Hörpuhorn

### 16:00 – 17:00

#### PLENARY: Main messages from THEMES 1, 2 AND 3

Location: Norðurljós

Messages from science to governments, industry, public and the global INC process

**Theme 1:** Presented by *Anne Katrine Normann*, Centre for the Ocean and the Arctic, UiT Arctic University of Norway

**Theme 2:** Presented by *Jóhann Sigurjónsson*, former Director, Marine Research Institute

**Theme 3:** Presented by *Eirini Glyki*, Science Professional Officer, ICES

### 17:00 – 19:00

Reception hosted by the Icelandic Government, Minister of Food, Agriculture and Fisheries

Location: Hörpuhorn

## 23rd November 2023

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**08:30 – 12:30**

Three parallel sessions on thematic discussions

**08:30 – 10:05**

**THEME 4: Impacts of marine litter in the Arctic (environmental, economic, and social)**

**Location: Norðurljós**

Moderator: **Kristian Jensen**, Communications and Program Consultant, Lofotrádet

Rapporteur: **Sigurros Friðriksdóttir**, Advisor, Environment Agency

- 08:30- 08:50 Keynote speaker: *Lisa Qiluqqi Koperqualuk*, ICC Canada President
- 08:50- 09:05 Development of a decision matrix for coastal litter clean-ups in Norway. *Jannike Falk-Andersson*, Norsk Institutt for Vannforskning
- 09:05- 09:20 Social perspectives on plastic pollution. Example from northern Norway. *Christina Koch*, Vårt Hav. Troms og Finnmark/ Naturvernforbundet i Finnmark
- 09:20- 09:35 Benthic organisms in Arctic ecosystems: presence and effects of nanoparticles in the context of single and multiple stressors. *Charlotte Carrier-Belleau*, Laval University and University College Dublin
- 09:35- 09:50 Plastic pollution in Norwegian coastal soils affect microbial diversity and soil gas composition. *Gunhild Bødtker*, NORCE
- 09:50-10:05 Characteristics of microplastic particles that influence atmospheric deposition in remote regions. *Sydney Fox*, Reykjavik University

**08:30 – 10:05**

**THEME 5: Arctic challenges and solutions for improved waste management**

**Location: Silfurberg A**

Moderator: **Sigurgeir Bárðarson**, Attorney at Law, Fisheries Iceland

Rapporteur: **Katrin Vorkamp**, Department of Environmental Science, Aarhus University

- 08:30- 08:50 Keynote speaker: Thomais Vlachogianni, Senior Policy & Programme Officer, MIO-ECSDE
- 08:50- 09:05 Microplastic in gravity-driven membrane filtration for cold climate decentralized wastewater treatment: fouling analysis and water quality investigation. *Selina Hube*, University of Iceland - Faculty of Civil and Environmental Engineering
- 09:05- 09:20 Net cuttings waste from fishing: developing best practices in the fishing industry. *Ryan d’Arcy Metcalfe*, KIMO International
- 09:20- 09:35 Occurrence of microplastics in the subarctic waters near a wastewater treatment plant in Reykjavík, Iceland. *Ásta Margrét Ásmundsdóttir*, University of Akureyri
- 09:35- 09:50 Novel bio-inspired alternatives to plastic packaging in Arctic fisheries. *Philippe Amstislavski*, University of Alaska Anchorage
- 09:50-10:05 Plastics: From wishcycling to recycling. *Audrey Matthews*, University of Akureyri

**08:30 – 10:05**

## THEME 6: Tackling plastic pollution: international collaboration, policies, best practices and novel developments from around the world

### Location: Silfurberg B

Moderator: **Josephine Nymand**, Head of Department, Greenland Institute of Natural Resources

Rapporteur: **K. Sóley Bjarnadóttir**, Advisor, Environment Agency of Iceland

- 08:30- 08:50 Keynote speaker: *Sæunn Júlía Sigurjónsdóttir*, the Nature Conservation representative for the Young Environmentalists
- 08:50- 09:05 FAO global efforts to prevent and reduce ALDFG. *Haraldur Einarsson*, Fishing Technology and operations team (NFIFO)/ Food and Agriculture Organization of the United Nations (FAO)
- 09:05- 09:20 A marine plastic cloud - Global oceanic plastic pollution mass balance in relation to the Arctic. *Thomas Maes*, GRID-Arendal/SEAMOHT
- 09:20- 09:35 Plastics in dental care clinics and growing concerns about the environmental impact. *Ásbjörn Jokstad*, UiT the Arctic University of Norway
- 09:35- 09:50 The Arctic on a global scale: influence of Arctic States within the ongoing global plastic treaty negotiations. *Emily Cowan*, SINTEF Ocean
- 09:50-10:05 Fighting marine litter in the Arctic: How to engage tourists. *Julia Hager*, mountain2ocean & PolarJournal

### 10:05 – 10:30

#### Coffee break

### Location: Hörpuhorn

### 10:30 – 12:30

## THEME 4: Impacts of marine litter in the Arctic (environmental, economic, and social) (continued)

### Location: Norðurljós

- 10:30- 10:45 Educating our future Arctic plastics researchers. *Matthew Johnson*, Volatus Aerospace
- 10:45- 11:00 A spatiotemporal analysis of plastic ingestion in Canadian Arctic-breeding northern fulmars (*Fulmarus glacialis*). *Kristine Hanifen*, Acadia University
- 11:00- 11:15 Clean-up Norway Svalbard. *Snorre Sklet*, SALT
- 11:15- 11:30 Including local voices in the marine debris conversation to advance environmental justice for island and coastal communities: Perspectives from St. Paul Island, Alaska. *Douglas Causey*, University of Alaska Anchorage
- 11:30- 11:45 Marine litter in the Arctic: Results from three years of citizen science, *Malin Dahl*, Keep Norway Beautiful

11:45- 12:30 Panel discussions – outcomes from the presentations

Moderator: *Kristian Jensen*, Communications and Program Consultant, Lofotrådet

*Lisa Qiluqqi Koperqualuk*, ICC Canada President; *Sigurros Friðriksdóttir*, Advisor, Environment Agency; *Bonnie Hamilton*, University of Alberta; *Andy Booth*, SINTEF Ocean

### 10:30 – 12:30

## THEME 5: Arctic challenges and solutions for improved waste management (continued)

### Location: Silfurberg A

- 10:30- 10:45 Marine debris from wastewater outfalls. *Jake Thompson*, University Centre of the Westfjords

- 10:45- 11:00 Blurred interface: How lack of coordination between governance levels obstructs waste management in fishing harbors. The case of Tromsø. *Anne Katrine Normann*, Center for the Ocean and the Arctic, UiT
- 11:00- 11:15 Creative Solutions for Marine Debris Prevention in the Arctic. *Veronica Padula*, Aleut Community of St. Paul Island Tribal Government and Seattle Aquarium
- 11:15- 11:30 Bringing value to marine waste. *Øistein Aleksandersen*, Nofir
- 11:30- 11:45 Climate Change and Plastic Pollution – Similar Needs for Systemic Changes. *Jakob Bonnevie Cyvin*, Norwegian University of Technology and Science (NTNU)

11:45- 12:30 Panel discussions – outcomes from the presentations  
**Moderator:** *Sigurgeir Bárðarson*, Attorney at Law, Fisheries Iceland

*Thomais Vlachogianni*, Senior Policy & Programme Officer, MIO-ECSDE; *Katrin Vorkamp*, Department of Environmental Science, Aarhus University; *Lyndsey Hendriks*, TOFWERK; *Wouter-Jan Strietman*, Wageningen Economic Research

### 10:30 – 12:30

## THEME 6: Tackling plastic pollution: international collaboration, policies, best practices and novel developments from around the world (continued)

### Location: Silfurberg B

- 10:30- 10:45 Raising awareness of marine litter and engaging international partners through the Arctic cleanup. *Kristina Tirman*, Ocean Conservancy
- 10:45- 11:00 Clean Up Iceland: The expedition cruise industry's efforts to clean Icelandic shorelines. *Gyða Guðmundsdóttir*, Association of Arctic Expedition Cruise Operators (AECO)
- 11:00- 11:15 Developing a solid policy framework for plastic pollution and waste management in the Arctic through multi-stakeholder co-creation - Implications for national and international policymakers and Indigenous groups. *Dimitris Symeonidis*, Afforest4Future
- 11:15- 11:30 Experience and challenges through development of Rent Hav – a digital tool for mapping marine litter. *Eirik Okkenhaug*, The Norwegian center against marine litter
- 11:30- 11:45 "Valuation of nature" as a tool to reduce (the impact of) plastic pollution. *Gunn-Britt Retter*, Saami Council

11:45- 12:30 Panel discussions – outcomes from the presentations  
**Moderator:** *Josephine Nymand*, Head of Department, Greenland Institute of Natural Resources

*Sæunn Júlía Sigurjónsdóttir*, the Nature Conservation representative for the Young Environmentalists; *K. Sóley Bjarnadóttir*, Advisor, Environment Agency of Iceland; *Vilde Sørnes Solbakken*, SALT Lofoten AS; *Madelaine Bourdage*, Carleton University

### 12:30 – 13:30

Lunch

**Location: Hörpuhorn**

### 13:30 – 18:00

Plenary

### 13:30 – 14:30

**PLENARY: Main messages from THEMES 4, 5 AND 6**

## **Location: Norðurljós**

Messages from science to governments, industry, public and the global INC process

**Theme 4:** Presented by *Kristian Jensen*, Communications and Program Consultant, Lofotrádet

**Theme 5:** Presented by *Sigurgeir Bárðarson*, Attorney at Law, Fisheries Iceland

**Theme 6:** Presented by *Josephine Nymand*, Head of Department, Greenland Institute of Natural Resources

**14:30 – 15:15**

## **PLENARY PANEL I: Conserving the Arctic**

### **Location: Norðurljós**

Moderator: **Thomas Maes**, GRID-Arendal

*Georg Hanke*, European Commission, Joint Research Centre

*Eva Kruemmel*, ICC Canada

*Susana Hancock*, APECS

*Árni Finnsson*, Icelandic Environment Association

**15:15 – 15:45**

Coffee break

### **Location: Hörpuhorn**

**15:45 – 16:30**

## **PLENARY PANEL II: From Local to Global Actions**

### **Location: Norðurljós**

Moderator: **Hrönn Jörundsdóttir**, Icelandic Food and Veterinary Authority

*Todd Gouvin*, TG Environmental

*Peter Murphy*, NOAA Marine Debris Program (U.S.)

*Georg Haney*, Environmental Manager, Hampiðjan Group

*Veronica Padula*, Aleut Community of St. Paul Island Tribal Government and Seattle Aquarium.

**16:30 – 17:15**

## **PLENARY PANEL III: Innovative Plastic Pollution Reduction**

### **Location: Norðurljós**

Moderator: **Magnús Jóhannesson**, Former Director Arctic Council Secretariat, Chair, Scientific Steering Committee

*Hlöðver Stefán Þorgeirsson*, Waste Water R&D Lead, Water Supply and Wastewater

*Elin Bergman*, Chair of Cradlenet

*Heiðrún Lind Marteinsdóttir*, Manager, Fisheries Iceland

*Robert B. Larsen*, UiT Norway

**17:15 – 17:45**

## Ministerial Discussion

### Location: Norðurljós

Moderator: *Jóhanna Vilhjálmssdóttir*, writer, radio host and former TV reporter

*Guðlaugur Þór Þórðarson*, Minister of the Environment, Energy and Climate

*Malcolm Noonan*, Minister of State, Housing and Local Government, Ireland

**17:45 – 18:00**

## Symposium Closing Remarks

Prime Minister of Iceland, Ms. *Katrín Jakobsdóttir*