

SECOND INTERNATIONAL SYMPOSIUM

PLASTICS IN THE ARCTIC & SUB-ARCTIC REGION

SYMPOSIUM PROGRAM



Government of Iceland



Centre for the Ocean
and the Arctic



Nordic Council
of Ministers

2nd International Symposium on Plastics in the Arctic and Sub-Arctic Region

Harpa Conference Centre, 22-23 Nov 2023

Program version 20th November 2023
All times are in GMT

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

22nd November 2023

08:00-09:00

Registration, Harpa 2nd 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

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, Lofotráðet

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, Lofotráðet

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

Theme 6: Presented by *Josephine Nyman*, 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 Vilhjámsdóttir**, 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*