Invitation to the Nordic Tipping Week

Event in a nutshell

- Where: <u>Helsinki</u> and <u>Rovaniem</u>i
- When: 21-23.10.2025 in Helsinki and 24.10.2025 in Rovaniemi
- **Purpose:** Assess the direct and indirect impacts of AMOC tipping points on the Nordic region, and the societal adaptation strategies.
- Costs: The event is free, with food and lodging covered for all participants, and travel support is available for early career scientists and those from lower-income countries. We will also cover the Helsinki-Rovaniemi train for those who will participate in both parts of the event (limited availability).
- Deadlines: Abstract submission and registration by 22.8.2025

Introduction

In response to the Open Letter to the Nordic Council of Ministers, the Council is funding a workshop and a report on the direct and indirect impacts of AMOC tipping points on the Nordic region. The first part of the event will take place in Helsinki and focus on the interdisciplinary science of AMOC tipping and its broad impacts, whereas the second part will take place in Rovaniemi and focus on local knowledge, adaptive capacity of northern livelihoods and knowledge and skills through stakeholder interaction. The Rovaniemi event will be carried out as a Heritage Futures workshop in collaboration with University of Turku, Futures Research Center.

The workshop will discuss a wide range of topics and we welcome contributions from natural sciences through economics to social sciences and beyond. The workshop will focus on group work, but will also welcome poster contributions (see the schedule below). The workshop will produce the draft outline for a report on direct and indirect impacts of AMOC tipping points on the Nordic region and the societal adaptation strategies. The report will be coordinated by the Finnish Meteorological Institute, and the workshop participants are welcomed to contribute to it. The workshop and the report is done in coordination with JPI Oceans/JPI Climate and the Nordic Tipping Week will feed information into a wider report on AMOC tipping risk that the JPI Oceans/JPI Climate are sponsoring.

We hope to see many of you at the workshop in October!

Scientific Advisory Board

Finland: Aleksi Nummelin and Timo Vihma, Finnish Meteorological Institute; Hanna Lappalainen and Petteri Uotila, University of Helsinki; Sirpa Rasmus, University of Lapland Norway: Ada Gjermundsen, University of Oslo Iceland: Áslaug Geirsdóttir, University of Iceland Denmark: Chuncheng Guo, Danish Meteorological Institute Faroe Islands: Hjálmar Hátun, The Faroe Marine Research Institute Sweden: Juan Rocha and Laura Pereira, Stockholm University

Initial agenda

Helsinki (21-23.10.2025)

Time	Tuesday	Wednesday	Thursday
9-12		Group work on topics	Group work on topics
12-13	Arrival and lunch	Lunch	Lunch
13-15	AMOC tipping risk keynotes	Group work on topics	Gearing up towards the stakeholder event
15-16	Break & posters	Break & posters	Summary and end of Helsinki workshop
16-18	Impact keynotes	Summary	Outreach event in the city
18-	Ice-breaker & posters	Dinner	Departure for science train (at 7 pm)

Rovaniemi (24.10.2025 with a pre-event in Finnish on 23.10.2025)

Time	Friday
8-9	Breakfast and arrival
9-11:30	Impacts of AMOC tipping and their local and regional relevance - keynotes and perspectives from researchers, practitioners and knowledge-holders.
11:30-12:30	Lunch
12:30-15	Heritage Futures workshop: how to ensure local and regional resilience given uncertain tipping points in the climate system; local knowledge; knowledge and skills gaps
15-16	Summary and departure

Background

A number of human influences, from greenhouse gas emissions to excess nutrient input to the coastal ocean, are pushing different parts of the Earth system towards its boundaries and possibly over. Greenhouse gas emissions, global warming, and intensifying hydrological cycle are changing the physical state of the atmosphere, ocean, ice sheets, and ecosystems both on land and in the ocean. Our limited understanding of the safe operating space, the interconnected nature of the processes involved, and the timescales of change creates a challenge for prediction and governance. Recently, the scientific community has drawn the political attention towards one of the tipping elements in the Earth's climate system - The Atlantic Meridional Overturning Circulation (AMOC), which is risking collapse in the face of warming climate and could severely disrupt both the climate system and societies, especially in areas close the North Atlantic, such as the Nordic Countries (e.g. the Open Letter to the Nordic Council of Ministers). The message is clear, AMOC, as well as other tipping elements in the Earth System (Global tipping points report) are increasingly at a risk of reaching a tipping point due to human-induced global warming. On one hand, these risks are a challenge for governance (Milkoreit et al., 2024) and communication as it is difficult to mobilize political momentum to keep slowly changing elements from reaching their tipping points (melting ice sheets), and for those parts that change rapidly (e.g. coral die off due to marine heat waves) and gain attention, it is already too late to act. On the other hand, the science is clear on the methods to slow down and revert global warming, whereas it is not clear on the regional scale manifestation of climate tipping points, their impacts on societies, geopolitics, and the ways societies may prepare and adapt to these changes.

Therefore, we are arranging a first-of-its-kind working week dedicated to the regional impacts (climate and societal) of different tipping elements and strategies for building societal resilience. We will focus on the Nordic region, which has a relatively stable mean climate but faces potentially severe climate impacts, particularly from the tipping of AMOC. The objectives of the working week are (i) to develop a state-of-play report on the potential environmental impacts of Nordic-relevant tipping elements and assess the level of societal preparedness (resilience) in the Nordic countries for these environmental changes (ii) to create a suggestion for a research program that addresses the knowledge gaps and increases societal resilience.