

Arctic Monitoring and Assessment Programme (AMAP)

Extract: AMAP Workplan for 2025-2027 that was formally welcomed at the SAO level, during the 14th Meeting of the Arctic Council, 12 May 2025.

AMAP Mandate

The Arctic Monitoring and Assessment Programme's (AMAP) mandate is to monitor and assess the status of the Arctic region with respect to pollution and climate change issues by documenting levels and trends, pathways and processes, and effects on the physical environment, ecosystems and people, and by proposing actions to reduce associated threats for consideration by governments.

This involves documenting and advancing our understanding of Arctic change, assessing impacts, and developing projections for future scenarios to inform Arctic and global communities through comprehensive information products. These products provide clear, evidence-based recommendations for actions to protect the Arctic environment, its ecosystems and people, as well as to mitigate threats and enhance sustainable development of the Arctic. Through its activities, AMAP develops evidence-based information and data products, including monitoring guidelines and plans, models and model output, data visualizations, and targeted assessment reports prepared by subject matter experts and other knowledge holders (AMAP Experts) working within the framework of AMAP's six Expert Groups. AMAP scientific products are subject to independent peer review, which is integral for ensuring their scientific integrity. These products provide the basis for Summaries for Policy-Makers (SPMs) that are produced under the authority of the WG, formally approved by the AMAP Heads of Delegation and constitute the formal AMAP deliverables to the Arctic Council.

AMAP's work on climate and pollution issues supports the Arctic Council's overarching goals of addressing environmental protection, sustainable development and scientific cooperation, including the Arctic Council's priority on understanding and addressing how environmental changes can affect the livelihoods of Arctic Indigenous Peoples and other Arctic inhabitants. AMAP's work serves to ensure that information specific to the Arctic region is available and delivered in a timely and effective manner to other relevant international policy and regulatory audiences, in particular the UN Environment Programme's Stockholm (POPs) and Minamata (mercury) Conventions as well as the UN Economic Commission for Europe's Air Convention (Convention on Long-range Transboundary Air Pollution), and work targeting the needs of the UN Framework Convention on Climate Change and Intergovernmental Panel on Climate Change.

AMAP WORK PLAN FOR 2025-2027

Introduction

AMAP's Work Plan for 2025-2027 reflects the long-term commitment of the Arctic Council to monitor and assess changes in the levels of pollution and climate change and their impacts on Arctic ecosystems and human populations. AMAP projects and activities to be undertaken

under this work plan will continue to be guided by the strategic goals and guiding principles detailed in the *AMAP Strategic Framework 2019+*, which also outlines mechanisms to ensure the appropriate operationalization of AMAP's strategic goals and the evaluation of AMAP's achievements and implementation.

This work plan presents AMAP's near-term priorities for the period 2025-2027, taking into consideration the needs and requirements of the Arctic Council, the priority issues of its member states and Permanent Participants, and the data and information needs of other international organizations and processes that use AMAP results in their work. This will include feeding into the UN's unified conventional work on jointly addressing climate change, pollution and biodiversity loss, that is, the triple planetary crisis.

AMAP's strategic directions recognize that achieving enhanced understanding of Arctic change and its impacts through inclusive partnership with Arctic Indigenous Peoples, and other Arctic inhabitants is of utmost importance. Hence, a particular emphasis will be made on making use of best practices for engagement of Indigenous Knowledge, and Traditional and Local Knowledge in AMAP work. This work plan also recognizes the value of potential contributions by Arctic Council Observers; the informal dialogue with Observers initiated by AMAP in 2024 will continue throughout this work plan in order to facilitate and strengthen Observer engagement in AMAP work.

AMAP monitoring, modelling, data management, assessments, and outreach activities are intended to inform sound, evidence-based policy- and decision-making, as well as to serve the information needs of other relevant bodies and stakeholders, and the broader public.

LIST OF INDIVIDUAL PROGRAMMES WITH PROJECTS AND ACTIVITIES

Addressing Issues of Climate Change and its Impacts (Arctic Council Strategy Goal 6)

WG partners: Parts of the work connect to other Arctic Council WGs, specifically CAFF, ACAP and EGBCM.

Other partners: Observers such as the World Meteorological Organization (WMO) and the Intergovernmental Panel on Climate Change (IPCC).

Assessment of implications of climate change on Arctic communities and societies

Lead/co-leads: Shared leadership

Rationale and overall objective: It is clear that climate change is having widespread and immediate impacts on Arctic ecosystems and societies, as highlighted in the SPM for the AMAP

Arctic Climate Change Update 2021: Key Trends and Impacts report. To develop measures to mitigate these impacts and create adaptation strategies, further information is needed on a smaller, more regional scale. Past AMAP work that focused primarily on the physical changes in the cryosphere has been expanded to document the impacts of these and other climate-related changes in the Arctic, both in relation to ecosystems and ecosystem feedbacks to climate and their implications for Arctic Indigenous Peoples, and Arctic communities and societies, building on material reported in the *AMAP Arctic Climate Change Update 2021: Key Trends and Impacts* as well as on the three Adaptation Actions for a Changing Arctic assessments published in 2017 and 2018. The overall goal of this activity is to advance and deepen understanding of the multiple risks and societal implications associated with climate-related changes and associated extreme events, including impacts on livelihoods and economy, ecosystem services, transport and infrastructure, and health, safety and well-being in the pan-Arctic region. Indigenous Peoples and other communities in the Arctic will be important participants in this work.

The results of this work will be useful for helping communities develop adaptation and potential mitigation measures.

Main activities: Assessment of Societal Implications of Climate Change in the Arctic

(SICCA): An assessment of the multiple risks and societal implications associated with climate-related changes on northern communities and Indigenous Peoples in relation to food production, transportation, infrastructure, energy systems, tourism, disasters, health, safety and well-being, livelihoods, culture and economy will be carried out. A co-assessment approach is being developed and applied to the extent feasible.

Timeline: An assessment report on societal implications of climate change in the Arctic is planned for 2027. A corresponding SPM will be produced, for anticipated delivery in 2027.

Key climate issues, trends and impacts

Leads/co-leads: Shared leadership

Rationale and overall objective: A key activity of AMAP is to ensure continued monitoring of key climate indicators/essential climate variables at Arctic sites, to extend the coverage of these observations, and to include additional parameters as may be needed. However, major climate change assessments, including the ACIA (2004) and two SWIPA (2011 and 2017) assessments, as well as the IPCC assessments, are very resource-demanding and time-consuming to prepare, review and publish, resulting in an interval of about six to seven years between each major assessment. While the extent and comprehensiveness of such assessments is extremely important, the current rate of climate change and the increasing extent of its impacts led HoDs in 2021 to request the Climate Expert Group (CEG) to produce shorter, more frequent (preferably biennial) reports on topics that are identified as in need of a critical update or for highlighting their importance.

Accordingly, following on from two such shorter climate update reports, the *AMAP Arctic Climate Update 2021: Key trends and indicators* and the *AMAP Arctic Climate Update 2024: Key trends and indicators*, the AMAP Climate Expert Group will prepare a third update report, with data and observations through the end of 2025.

Main Activity: Climate Update Report 2026: A biennial report aiming to briefly assess key climate issues of concern, as identified by climate scientists and supported by AMAP Heads of Delegation.

Timeline: A climate update report is planned for 2026, and a Summary for Policy-makers will be prepared, for anticipated delivery in 2027.

Implications and risks of climate interventions (new activity)

Leads: A scoping group with experts will be established in early 2025.

Rationale and overall objectives: With the prospect that the global warming target set in the Paris agreement's – to keep the global temperature rise this century well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5°C – may be exceeded, climate interventions (or so-called 'geoengineering') approaches are receiving increasing attention. Climate interventions is an umbrella term, generally understood to include both carbon dioxide removal (CDR) and solar radiation modification (SRM) technologies that some consider could be employed to alter climate. Many of the climate interventions being discussed in various circles include techniques that would be applied in the Arctic (refreezing of sea ice etc.) or have potential to harmfully impact the people of the Arctic and Arctic ecosystems. AMAP is initiating work to consider how to evaluate implications and risks of these potential approaches for the Arctic region and its residents, and to identify gaps in knowledge.

Main activity: Scoping of future AMAP work on implications and risks of climate interventions.

Timeline: This activity will begin with a scoping process in 2025.

Understanding Climate Change Impacts on Arctic Ecosystems and Associated Climate Feedbacks (Joint AMAP/CAFF project)

Co-leads: Work package co-leads from Kingdom of Denmark, Norway, Saami Council and ICC

Rationale and overall objective: Climate change is altering Arctic ecosystems and biodiversity. These changes feed back to the climate system, with a potential to dampen or accelerate local to regional changes in climate and greenhouse gas emissions. The resulting

impacts on ecosystem services, livelihoods and well-being will have far-reaching consequences for Arctic Indigenous Peoples, other Arctic communities and beyond. The objective of this activity is to assess how climate change affects Arctic ecosystems and climate feedbacks to inform strategies for adaptation and resiliency. Co-production of knowledge, through leadership of Permanent Participants and ethical and equitable engagement with Indigenous Knowledge are an important part of the project.

Main activities: The scoping document and implementation plan to assess impacts of climate change on Arctic ecosystems and ecosystem feedbacks to climate have been adopted by AMAP and CAFF and work is ongoing for the preparation of scientific articles for a special journal issue, policy-summaries and communication products. Potential additional products will be considered as work on this project goes forward.

Timeline and budget: Scientific papers are under preparation for delivery in 2025. The steering committee will advise on the timeline for project deliverables in future work.

Addressing Contaminants and Human Health Issues (Arctic Council Strategy Goals 2 and 4)

Lead/co-leads: Shared leadership

WG partners: Parts of the work connect with that of other Arctic Council WGs, specifically ACAP (chemicals and SLCFs), CAFF (pollution effects on biota; litter and microplastics), EPPR (radioactivity, wildfires), PAME (marine litter and microplastics), SDWG (human health), and EGBCM (SLCFs).

Rationale and overall objective: Within its scope, AMAP monitors and assesses a wide range of types of contaminants and pollutants, including POPs, mercury and other metals, SLCFs, radionuclides and plastics that originate from both long-range transport and local sources, and are also affected by the changing climate. Although levels of certain contaminants of concern for the Arctic, especially those subject to international regulations are declining in Arctic populations, levels of some POPs, methylmercury and PFASs remain a cause for concern in some regions of the Arctic, with local and subsistence foods being the largest source of exposure, as demonstrated in data compiled in the *AMAP Assessment 2021: Human Health in the Arctic*. The aim of this work is to inform policy- and decision-makers in the Arctic Council States, PPs and others, including Observer States and Organizations, on issues relating to contaminants and human health (both regionally and globally). This includes work requested by the SAOs and Ministers to support further development and implementation of the Stockholm Convention, the Minamata Convention, CLRTAP, and work connected to the UNFCCC/IPCC as well as UN Sustainable Development Goals (SDGs): #2 on food security, #3 on ensuring healthy lives, #6 on access to safe drinking water, and #13 on action to combat climate change and its impacts.

Main activities:

- Updating assessments of temporal trends of mercury and POPs. The latter is intended to produce a comprehensive assessment update that will consider trends in multiple media and evaluate climate change influences.
- Assessing impacts of climate change on health and well-being, further considering dietary transitions and their impacts, and participating in coordinated work on effects of contaminants.
- Developing new approaches to better integrate AMAP assessment work by addressing the interaction between climate change, contaminants, and human and animal health, including zoonotic diseases and new methods for risk assessment.
- Contributing results from POP/mercury trend work as well as human health monitoring as important input to the Stockholm and Minamata Conventions Effectiveness Evaluations.
- Conducting a review of black carbon radiative forcing, an assessment of the possible effect of the Global Methane Pledge in mitigating Arctic warming, and further work on Arctic wildfires to better quantify emissions and define future fire scenarios. Parts of the work will be undertaken to support the activities of the EGBCM as well as feeding into the work of ACAP. AMAP's work on SLCFs also supports related work under the UN ECE Air Convention (CLRTAP) associated with the further revision of the Gothenburg Protocol, and IPCC work on its SLCF Methodology Report.
- Scoping future assessments on radioactivity and litter and microplastics, potentially to be undertaken in the period 2027-2029.
- The AMAP Secretariat will follow the work of the International Council on the Exploration of the Sea (ICES), the North Pacific Marine Science Organization (PICES) and PAME WG on the Integrated Assessment of the Central Arctic Ocean (WGICA) for the purpose of identifying opportunities for collaboration. Collaborative work with OSPAR and HELCOM on development of common assessment tools will continue.

New activities:

- A scoping activity on rare earth elements and their possible implications for the Arctic will be undertaken by the AMAP mercury expert group.
- A project group will be established to undertake work on zoonosis, including developing proposals for monitoring zoonotic diseases.
- A task team will be established to review new approaches to monitoring that could be considered for inclusion in AMAP's Monitoring Programme
- A project will be undertaken to consider how Indigenous Knowledge can be better utilized in AMAP assessments, and how co-production can be advanced in AMAP work.

Timeline: The activities are part of a coordinated plan for activities with deliverables in 2027. Where appropriate, timelines will be aligned to the extent possible with timelines associated with provision of information to relevant international processes.

Funding: Participating national experts will have national support; some activities are linked to external funding including Nordic Council supported projects.

ADMINISTRATION

The AMAP Secretariat supports the work and the meetings of the AMAP WG, currently chaired by Canada, and the AMAP Heads of Delegations (HoDs) as well as intersessional activities that follow from these. The AMAP Secretariat manages information on specific AMAP activities, supports the AMAP Expert Groups, including work associated with arrangement of meetings and the production of deliverables. The AMAP Secretariat also manages AMAP's relations with the Arctic Council and the Arctic Council Secretariat (ACS), and with other external organizations.

Secretariat staff currently comprises an Executive Secretary, Deputy Executive Secretary positions (5.5 person-years), and an Administrative Officer (0.4 person-year). The AMAP Secretariat Office is in Tromsø, Norway, in an office space shared with the ACS, the secretariats of EPPR and ACAP and the Indigenous Peoples' Secretariat (IPS). Core funding for the AMAP Secretariat is provided by Norway with additional contributions from other countries and funding bodies.

COMMUNICATIONS AND OUTREACH

In the period, AMAP work has been reported at several events, including:

- Arctic Circle: October 2023 and 2024, Iceland
- Arctic Frontiers: January/February 2024 and January 2025, Tromsø, Norway
- Arctic Science Summit Week (ASSW): March 2025, Colorado, USA
- International Atomic Energy Agency (IAEA), November 2022, Vienna, Austria
- International Symposium on Plastics in the Arctic and Sub-Arctic Region, November 2023, Iceland
- Minamata COP-5: October/November 2024, Geneva, Switzerland
- One Planet Polar Summit, November 2023, Paris, France
- OSPAR Radioactive Substances Committee (RSC). February 2025
- UNEP Intergovernmental Negotiating Committee on Plastic Pollution, INC-4, Ottawa, Canada

- UNFCCC: COP28 (November-December, Dubai, UAE) and COP29 (November 2024, Azerbaijan)
- UNFCCC Local Communities and Indigenous Peoples Platform (LCIPP): October 2023, Kirkenes, Norway
- Waste Management Symposia, 2022, 2024, and 2025, Arizona, USA
- Kristin Harila x AMAP Arctic Youth Expedition 2025, Finnmark, Norway

AMAP outreach includes a series of thematic webinars, also including Observers and the publication of a series of newsletters.

One of AMAP's strategic goals is to: *inform its target audiences by producing sound evidence-based, policy-relevant assessments, communications, and outreach products for use in policy- and decision-making processes as well as raising awareness in the general public. AMAP will work closely with other Arctic Council Working Groups, Permanent Participants, governments, Observers, educational institutions, the media, and other organizations to promote AMAP results.*

To that end, AMAP produces:

- Peer-reviewed scientific and technical reports that target scientific and educational communities. These reports provide validated documentation for statements and conclusions communicated in AMAP deliverables to Arctic Council Ministerial meetings.
- Summaries for Policy-makers, which summarize key findings of assessment reports and other technical work and provide evidence-based recommendations for future work and policy decisions.
- Fact sheets, infographics, films and interactive presentations of the environmental status in the Arctic.
- Webinars, newsletters.

AMAP work is translated into other languages and provides the basis for a large number of scientific journal publications. AMAP work is presented at international conferences and other events. AMAP continues to upgrade and further develop AMAP website services.

AMAP will routinely evaluate the ways in which information on climate and pollution issues is consolidated and delivered. For climate issues, the rapid changes may point to a need for more frequently updated products, and there are deliberations on preparing shorter summaries on climate issues of concern.