

## WP 8 – Cleaner Arctic, cleaner world: documenting and reducing pollution



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Programme (AMAP)

# Aim of the WP

- *Pollution - an increasing societal challenge*
- *Terrestrial monitoring is still inadequate*
- *New chemicals of concern are being found in the Arctic*



Burning trash, Ísafjörður, Iceland. Photo: Bjarki Sigursveinsson, Flickr

“Station Managers’ Forum will document the use of plastics at stations and recommend options for reduced environmental footprints of stations and researchers. “

“ ... activity to identify emerging pollutants at INTERACT Stations ... and use this information ... “

“Additional measures to document and respond to pollution will greatly enhance local and international services offered by the advanced infrastructure.”

## Partners involved in WP8

AMAP Secretariat (partner No. 39) WP lead and sole partner

However we are (hopefully) not alone:

- Station managers (INTERACT WP2)
- High engagement with at least 4 stations (INTERACT WP2)
- Student researchers in relevant fields of interest (via INTERACT, WP7)
- External connections through AMAP network, etc
- Arctic communities engagement (via INTERACT?)





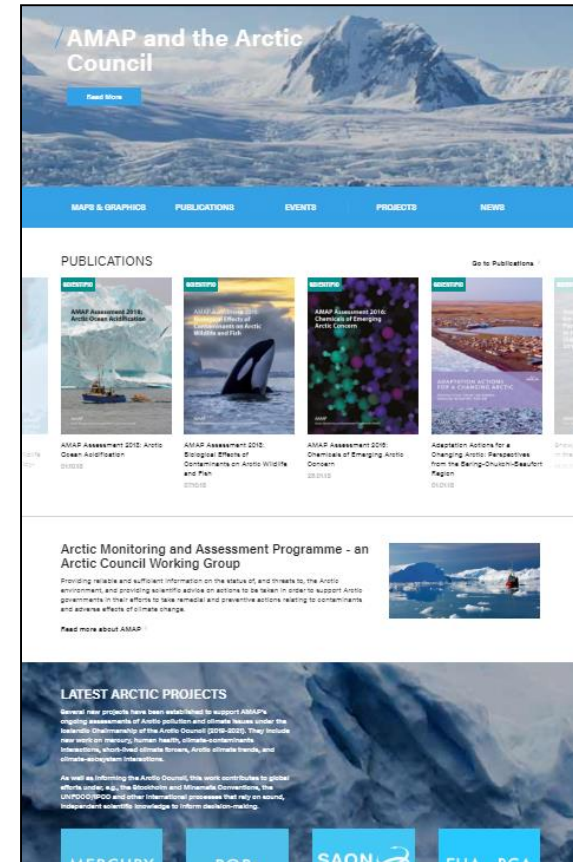
# Partners involved in the WP

## Arctic Monitoring and Assessment Programme - an Arctic Council Working Group

Providing reliable and sufficient information on the status of, and threats to, the Arctic environment, and providing scientific advice on actions to be taken in order to support Arctic governments in their efforts to take remedial and preventive actions relating to contaminants and adverse effects of climate change.

Secretariat: Tromsø

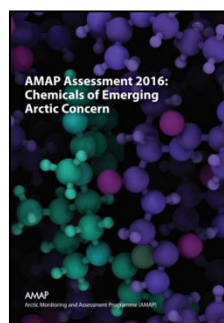
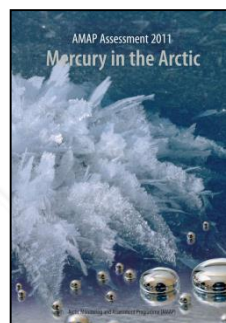
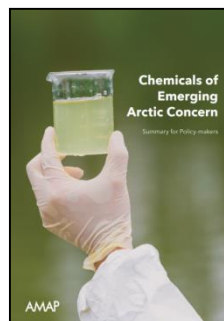
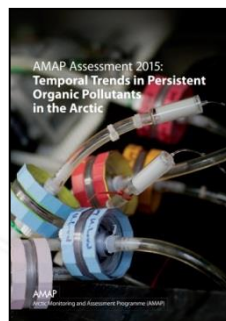
Website: [www.amap.no](http://www.amap.no)



# AMAP Pollution Issues

## AMAP Assessments (Pollution)

- Persistent Organic Pollutants (POPs)
- Mercury / Heavy metals
- Chemicals of Emerging Arctic Concern
- Short-lived Climate Forcers



### SUBSTANCES CONSIDERED IN THE ASSESSMENT OF CHEMICALS OF EMERGING ARCTIC CONCERN

- Brominated flame retardants (BFRs)\*
- Chlorinated flame retardants (CFRs)
- Chlorinated paraffins\*
- Current-use pesticides (CUPs)\*
- Halogenated natural products (HNPs)\*\*
- Hexachlorobutadiene (HCBD)\*\*\*
- Organophosphate-based flame retardants (PFRs)
- Organotins
- Pentachlorophenol (PCP)\*\*\*
- Per- and polyfluoroalkyl substances (PFASs)\*
- Pharmaceuticals and personal care products (PPCPs)
- Phthalates
- Plastics and microplastics
- Polychlorinated naphthalenes (PCNs)\*\*\*
- Polycyclic aromatic hydrocarbons (PAHs)
- Siloxanes
- Unintentionally generated polychlorinated biphenyls (PCBs)

## AMAP Monitoring

*AMAP Trends and Effects Programme* (based on national implementation); Screening studies; **marine** litter and microplastics (guidelines 2021)

## WP8 Objectives

... **to work with station managers** (WP2) to identify potential sources of emerging contaminants of concern and reduce their impacts by:

- Identifying/establishing screening monitoring protocols for emerging pollutants; field testing protocols at INTERACT stations
- Working with INTERACT station-managers/researchers to promote and support screening monitoring studies
- Refining existing systems at INTERACT stations to minimize introduction and use of new chemicals/pollutants of concern





## WP8 Tasks

### **Task 8.0 Work package management**

#### **Task 8.1 Identifying emerging pollutants ...**

where INTERACT can play a role, and policies suggested to reduce/minimize use/impacts

Existing information on chemicals of emerging Arctic concern will be reviewed to identify those that are most relevant with respect to possible use/presence at or around selected INTERACT research stations, for possible investigation of occurrence and/or actions to reduce possible local contamination.

#### **Task 8.2 Development of protocols for screening monitoring at and close to selected INTERACT monitoring stations**

Designing, in consultation with INTERACT station managers and others protocols for investigating the presence of chemicals of emerging concern at or around INTERACT stations using target and/or non-target screening methods.

#### **Task 8.3 Enhancing screening monitoring applications at INTERACT Stations**

Implementing and/or testing the protocols developed under Task 8.3, and where possible linking this work into ongoing screening monitoring programs and networks.

#### **Task 8.4 Informing appropriate agencies of potential threats from emerging pollutants**

# Tasks: Engagement in other WPs

## Task 7.5 Ensuring a new generation of international environmental assessors

(1 Month in WP7)

Arctic Council working groups inform policy makers about ongoing environmental issues and their impacts in the Arctic through environmental assessments

This task will mentor active researchers from the INTERACT research community to build capacity and create a new generation of international environmental assessors.



GLADYS TOOK HER HIGHBALLS  
VERY SERIOUSLY.





# WP8 deliverables

## WP8 Deliverables

**D8.1** Catalogue listing local and transboundary emerging pollutants selected for possible (targeted) screening at INTERACT Stations (Month 18)

**D8.2** Protocols for (target and non-target) screening of contaminants of emerging concern at INTERACT stations (Month 24)

**D8.3** Compilation of results from testing of protocols with Managers at **selected INTERACT Stations** (Month 36)

**D8.4** Plan, in consultation with INTERACT Station Managers and Researchers, for development of screening monitoring networks and enhancing application of screening monitoring (Month 42)

I love deadlines. I like the whooshing sound they make as they fly by.

-Douglas Adams

# Internal collaboration

## Task 2.5 Cleaner Arctic (Lead: AU)

- ... will contribute to WP8
- ... will explore ways in which research stations can reduce their pollution
- ... will explore ways in which research stations can contribute to the AMAP and other monitoring programmes on pollution by implementing a pilot monitoring programme at **a minimum of four INTERACT stations**
- 2.5.1 ... a survey on energy use and sources, plastic types/usage, waste handling at INTERACT stations ...
- 2.5.2 ... a pilot implementation plastic monitoring programme at four selected INTERACT stations in collaboration with local communities



What information would be helpful from the other WPs?

- Which stations, and which local communities
- Contact points (station managers , community contacts, researchers)
- Stations involved in contaminant monitoring (sample collection) ?
- Stations where researchers are engaged in contaminant monitoring

# External collaboration

