

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



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## 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.”



## Progress – Task 8.0 – **ONGOING**

### Task 8.0 WP management

**Activity:** Administrative tasks.

**Status:** Completing general administrative/financial requests from project coordinators; Request from Giorgio Falsaperna for performance indicators ... working on this (use of survey results to populate metrics ... numbers of stations ...?)



## Progress – Task 8.1 – ONGOING

### Task 8.1 Identifying emerging pollutants ...

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

**Activity:** Review existing information on chemicals of emerging Arctic concern to identify those 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.

**Status:** Contact with experts involved in screening activities/networks; Contact with WP2 leads ... noted INTERACT 2015 survey (7 of 44 stations monitored pollutants); 'Zero draft' of new survey questionnaire

- **D8.1** Catalogue listing local and transboundary emerging pollutants selected for possible (targeted) screening at INTERACT Stations (Month 18 / Jul 2021)

## Progress – Task 8.2 – **FIRST STEPS**

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

**Activity:** Design, 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

**Status:** Started contacting experts involved in screening activities and networks to explain INTERACT work and invite for possible collaboration; AMAP 2021-2023 workplan proposal connections

- **D8.2** Protocols for (target and non-target) screening of contaminants of emerging concern at INTERACT stations (Month 24 / Jan 2022)

## Progress – Task 8.3 – **NONE**

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

**Activity:** Implement and/or test protocols developed under Task 8.2, and where possible link this work into ongoing screening monitoring programs and networks

**Status:** no action undertaken to date

- **D8.3** Compilation of results from testing of protocols with Managers at selected INTERACT Stations (Month 36 / Jan 23)
- **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 / Jul 23)



**Progress – Task 8.4 – NONE**

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

**Status:** no action undertaken to date



## Requirements from others

... **work with station managers (WP2) [especially managers of 4 selected stations]** 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



# Draft: INTERACT III – Survey of Pollution Screening Activities in the INTERACT station network

## Part A (questions 1-11): To be completed by all stations in the Network

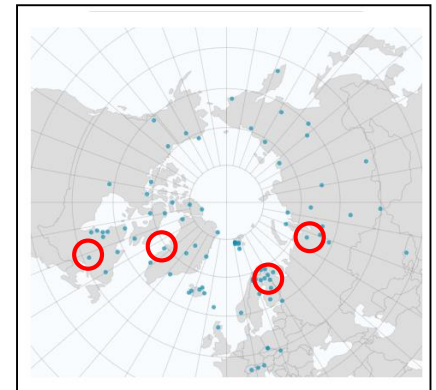
1. Do you know whether monitoring of contaminants in environmental media is carried out in connection with (recent/current/planned) monitoring/research activities at your station? If yes – in which environmental media, and for which groups of contaminants?
2. Do you know if this includes screening for emerging contaminants on concern?
3. Are samples handled/analyzed at the station, beyond basic collection and packaging/storage?
4. Does the station have clean laboratory facilities (if yes describe)?
5. Does your laboratory have dedicated storage facilities for samples collected for shipment to laboratories for analysis for environmental contaminants?
6. Are you aware of potential issues (materials/practices) that could result in contamination of samples that are stored/handled at your station prior to their analysis environmental contaminants?, if so what would you identify in this regard:
7. Do you conduct screening at your station to control for potential contamination by emerging contaminants that could contaminate environmental samples?:
8. Do you work with a particular laboratory/laboratories to control – if so which for:
9. Do you work with local communities to monitor environmental contaminants to address their concerns?
10. Do you communicate information on environmental contaminants back to local communities?
11. Do you apply advice on chemical contamination included in the INTERACT Station Catalogue', 'Best Practices of Station Management', 'Field Work Planning Handbook', 'INTERACT Minimum Monitoring Programme? – and is this effective?

## Part B (questions 12-18): To be completed by WP2/WP8 Partner Stations (responses from others welcome)

12. Do you have concerns regarding materials/chemicals brought in to your station by researchers (For safety of station operators and visitors? / For integrity of samples collected at the station?)  
  
Briefly describe your station facilities/practices for management of wastewater/solid waste.
13. Do you have a policy to address possible environmental contamination by materials/chemicals brought into your station by researchers?
14. Would you (as station managers) see a need to take additional measures to allow contaminant monitoring at your site?
15. Has any review of potential contamination for legacy chemicals, chemicals of emerging concern, pharmaceuticals and personal care products, or plastics/microplastics been conducted at your station?
16. What of the following materials would you expect to be commonly found at your station ...  
Fleece jackets/Personal care products/Cleaninproducts/Pharmaceuticals/Insecticides/biocides/Flame retardants/Plastic packaging/Food waste/Electronic waste/batteries/Building materials/Chemical reagents/Fuel/Other...
17. What types of waste materials are produced at your site, and how are they disposed of?  
  
Materials - Volume per year - Disposal practices
18. What sources of energy (heat and electricity) do you use?

## Ways forward

1. Continue contacts with external experts (**during September/October**)
2. Finalize and circulate Survey questionnaire (**by end October**)
  - All stations (**respond by end November**)
  - Selected stations (**respond by end November**)
    - ❖ Oulanka Research Station, Finland (19)
    - ❖ Arctic Station, Greenland (73)
    - ❖ The Arctic Research Station, Russian Federation (30)
    - ❖ Centre d'études nordique, CEN ?, Canada (69?)
3. Compile survey results (**by end of year**)
4. Initiate work to prepare D.1 (**by end of year**)





Thats it for now...

Thanks for listening



**AMAP**  
Arctic Monitoring and  
Assessment Programme



**INTER⇌ACT**