WP 6 – Rapid response to environmental emergency alerts

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Aim of WP6

- Identification and documentation of potential risks
- Establishing a process starting with alerting research station staff to possible environmental emergencies via an one-stop-shop
- Trial run
- Establish cooperation with relevant organization and initiatives
- Provide protocols for infrastructure wide observations; and/or sampling, sample transport or data submission and collection
- Outreach in popular science language
Progress since last meeting

WP finished in April 2020
Reached all deliverables and milestones

- ✓ D6.1 Report on the red phone action plan
- ✓ D6.2 Refined action plan including experience from a field trial
- ✓ D6.3 Popular Science summary of the action plan

- ✓ M6.1 Field trial of a fictitious hazard event completed
- ✓ M6.2 Identification of appropriate agencies that can ensure long term sustainability of the red phone rapid response capability
Main outputs

A list of most important risks in the Arctic

Environmental contaminants (air pollution, black carbon, microplastics, POP’s...)

Diseases – climate-sensitive infections (anthrax, rabies, air-borne diseases, tick-borne diseases...)

Non-native and range-expanding species

Extreme events (extreme rain/snowfall, winter warming...)

Hazards (avalanches, wildfires, methane eruptions, volcanic eruptions, floods, mudslides, rockfalls...)
Main outputs

Experiences from the trial run

- gaps and obstacles in collecting any type of data for anybody else
  - Understandable protocols
  - Easy sampling, no special equipment necessary
  - Shipping regulations
  - Sampling permissions

Mosquito collection

MATERIAL LIST: Entomological net, zip-lock bags, 1.5-ml microcentrifuge tubes, forceps, RNALater, pipette

Mosquitoes can be easily caught into entomological nets, placed in zip-lock bags, frozen and transferred into test tubes. This short video shows how to catch insects into a sweep net: https://www.youtube.com/watch?v=vKUVrIkJ5Sw.

1) Collect samples from one locality into one or more tubes (approx. 50 individuals in one tube). Please never mix samples from different localities. If possible, visually separate different mosquito species.
2) Please write down the main characteristics of the samples on the label. You may include additional information on location, date, temperature, etc.
Main outputs

List of relevant agencies, laboratories, databases or projects

- See M6.2 and/or D6.3

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<tr>
<th>NON-NATIVE AND RANGE EXPANDING SPECIES</th>
<th>The Arctic Invasive Alien Species (ARIAS)</th>
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<tr>
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<td>Global Naturalized Alien Flora (GLONAF)</td>
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<td>The European Network on Invasive Alien Species (NOBANIS)</td>
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<td>Finnish national alien species portal (in Finnish)</td>
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<td>Global Register of Introduced and Invasive Species</td>
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<td>Arctic contaminants action program</td>
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Any remaining task

Webpage hub – keep the information up to date

Rapid Response to Environmental Emergency Alerts

Non-native and range expanding species

Invasive plants are non-native trees, shrubs, and herbaceous plants that are spread by global trade, human and animal transport and escaping from gardens. They invade forests and block out native plants from growing, which in turn decreases the available habitat for native wildlife. Many invasive plants cannot be used by wildlife for food which puts grazing pressures on the few native plants that remain. They also pose threats to agricultural fields, due to their ability to spread quickly, outcompete crop and forest plants, and deteriorate soil quality. The thick spread of invasive plants makes them costly and time consuming to remove once they have taken hold.

Where to report the sighting

Svalbard

Canada

USA...
[https://www.invasive-species-usa.gov](https://www.invasive-species-usa.gov)

Read more

Watch the movie by the Nordic Council of Ministers and the Office of the Governor of Svalbard.
Thank you for the attention!