



WP 4: Unpredictable Arctic – extreme weather events

Jonny Day
ECMWF

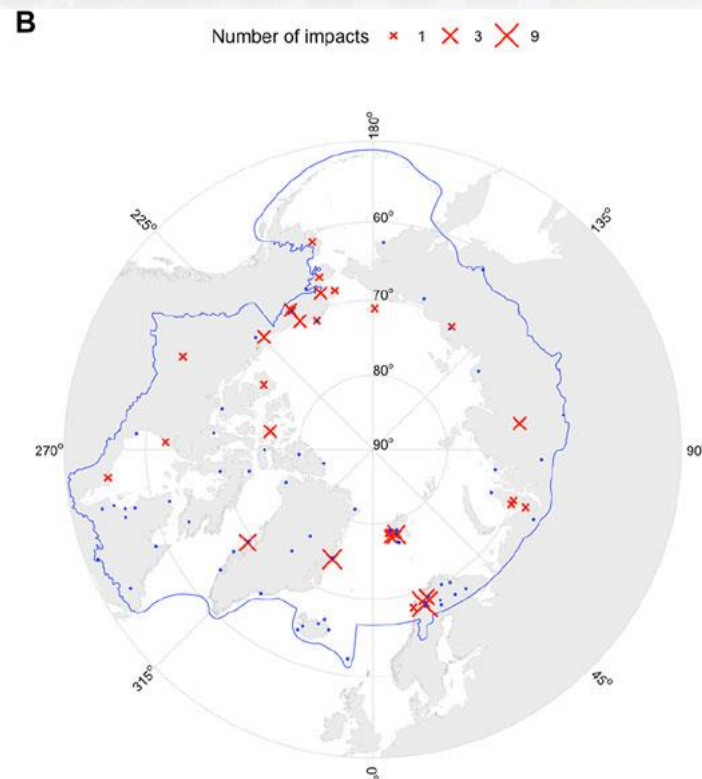
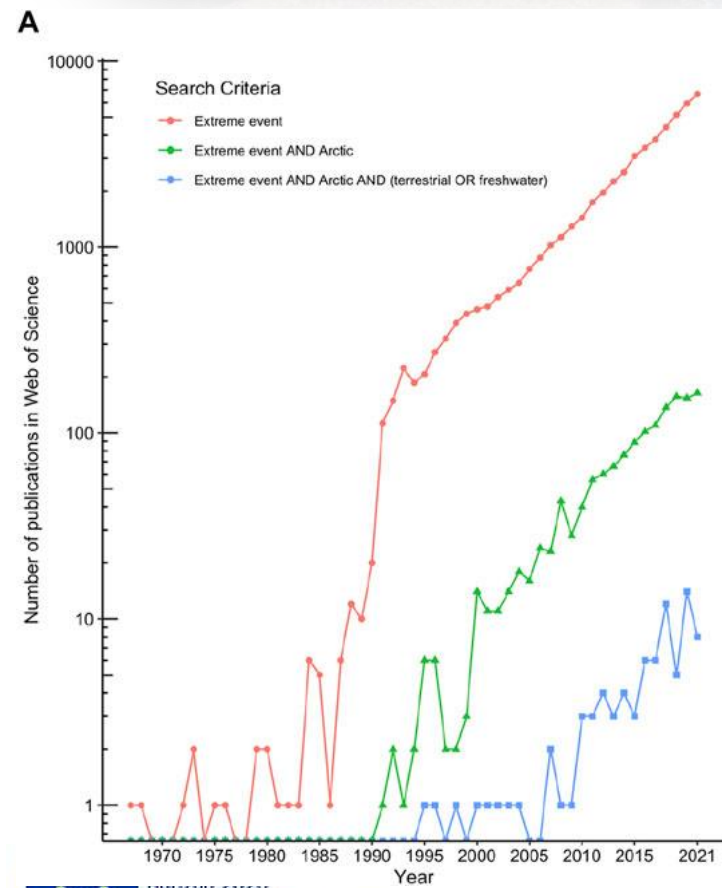
Aim of WP

Aim: to document and improve awareness of the many consequences of extreme weather events in the Arctic that are of importance to ecosystem services, local and global communities, so that appropriate timely responses can be made.

The specific objectives of this work package are to

- 1) document the effects of extreme weather events on rapid changes in biodiversity
- 2) identify the societal impacts of extreme weather on local communities through community engagement
- 3) evaluate the ability of current state-of-the-art weather predictions to forecast such events.

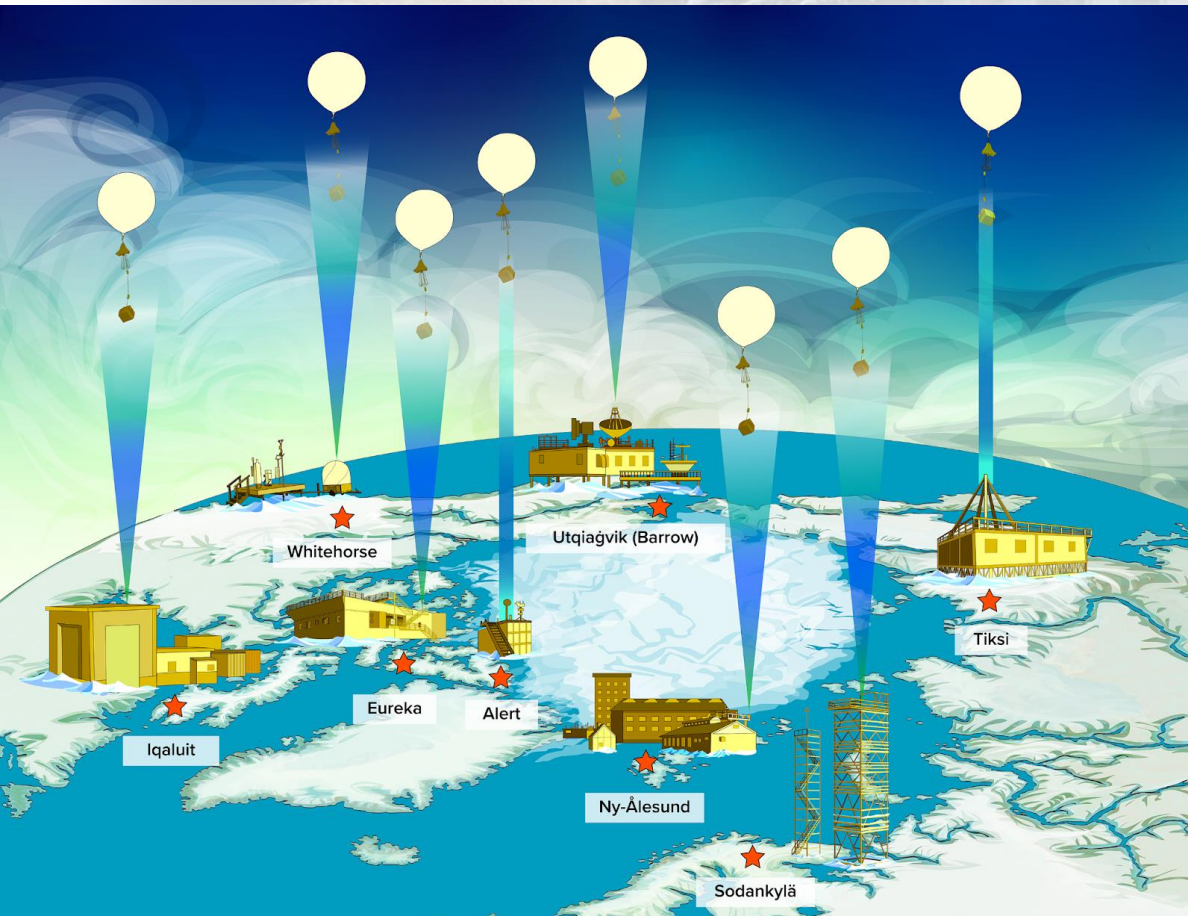
Progress made during the last year: Task 4.1



van Beest et al. (2022)

- Paper published September 2022: *Extreme event impacts on terrestrial and freshwater biota in the Arctic: A synthesis of knowledge and opportunities.*
- This synthesized 48 research articles, published over the past 25 years, highlighting a wide variety of extreme events throughout the Arctic.
- Formed the basis of a monitoring plan put in place under the SMF.

Progress made during the last year: Task 4.4



Multi-model evaluation of forecasting systems at Arctic/INTERACT stations YOPPsiteMIP – a flagship activity of the WMO's Polar Prediction Project

- Observatory files archived produced for 7 Arctic stations and archived at Met Norway's YOPP portal.
- Completion of forecast evaluation at these sites for during winter.
- Co-organised and presented at workshop 17-20 April in Stockholm on Model Intercomparison and Improvement Projects (MIIPs) for the polar regions and beyond.
- Completion of 3 papers on forecast evaluation and data descriptions.

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7 datasets found. Showing datasets 1 - 7 on page 1 of 1 pages.

MODF for Eureka, Canada, during YOPP SOP1 and SOP2

YOPPsiteMIP

Institutions: NOAA, NOAA, Norwegian Meteorological Institute / Arctic Data Centre

Last metadata update: 2023-06-09T10:51:10Z

<https://doi.org/10.21343/85j-1c61>

Temporal Extent

Start date: 2018-02-01T00:00:00Z

End date: 2018-09-30T23:59:00Z

... Elena Akish ... Sara Morris ... PSL Data team ... ADC support ... YOPPsiteMIP ... MODF for Eureka, Canada, during YOPP SOP1 and SOP2 ...

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Dataset Landing Page

Data access:

Show extended metadata Child data...[4] Export Metadata

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MODF for Tiksi, Russia, during YOPP SOP1 and SOP2

Project

- YOPP (2)

Collection

- ADC (7)
- NSDN (7)
- YOPP (7)

Personnel

- ADC support (7)
- Elena Akish (3)
- PSL Data team (3)
- Sara Morris (3)
- Laura Huang (2)

Show more

Organisation

- Norwegian Meteorological Institute / Arctic Data Centre (7)
- NOAA (3)
- Environment and Climate Change Canada (2)
- Finnish Meteorological Institute (1)

Data Center

- NOMET/ADC (7)

Publisher

- Norwegian Meteorological Institute (7)

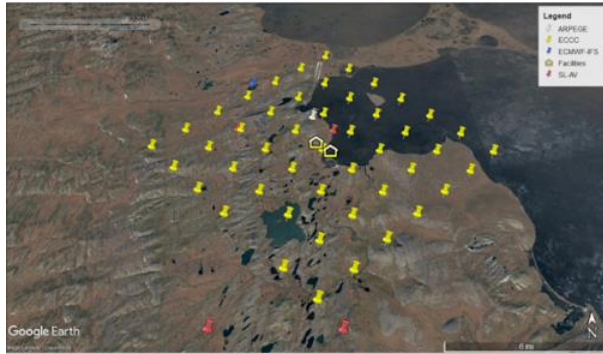
Eureka



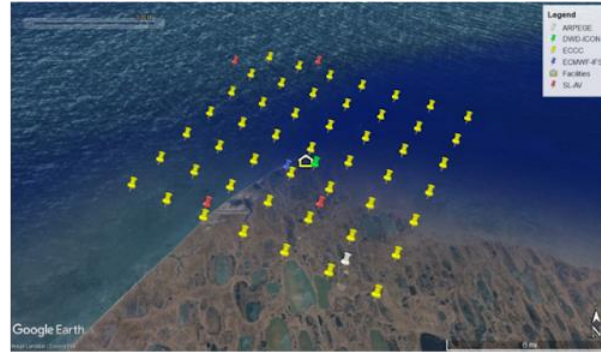
Ny-Ålesund



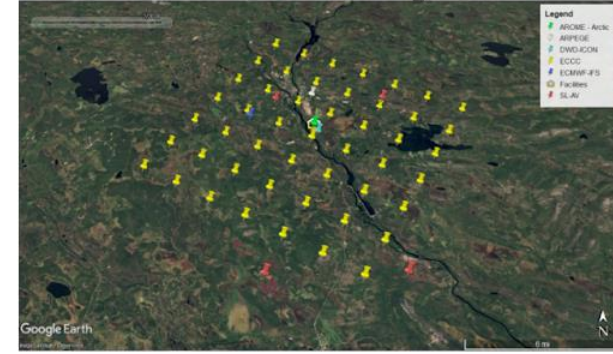
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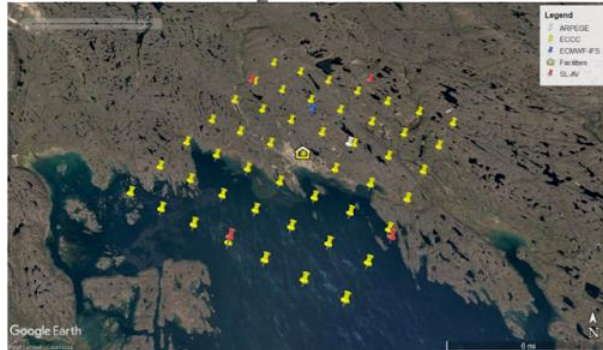
Utqiagvik



Sodankylä



Iqaluit

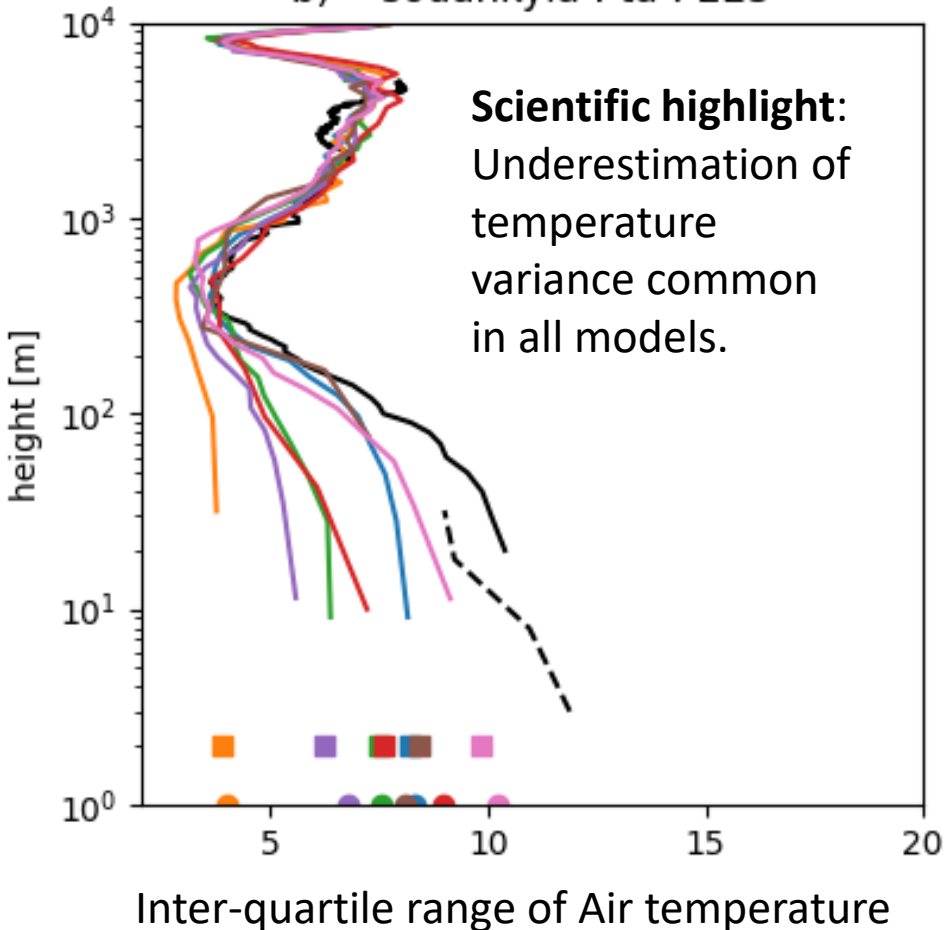


Whitehorse



Progress made during the last year

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3 papers produced:

1. Day et al., (submitted to GMD): **The YOPP site Model Intercomparison Project (YOPPsiteMIP) phase 1: project overview and Arctic winter forecast evaluation.**
2. Morris et al. (submitted to ESSD): *Special Observing Period (SOP) Data for the Year of Polar Prediction site Model Intercomparison and Improvement Project (YOPPsiteMIIP).*
3. Uttal et al. (in prep), *Merged Observatory Data Files (MODFs) for the YOPP site Model Intercomparison Project (YOPPsiteMIP)*

Applying for a Copernicus cross journal special issue to include these contributions.

Ways forward

- Link to YOPPsiteMIP data from the INTERACT data infrastructure?
- Wrapping up publications, review process and promotion.
- Use of Merged Observatory Data Files for other applications (meteorology and beyond).
- Completion of Merged observatory Data File production toolkit (led by others).
- Evaluation of YOPPsiteMIP dataset focussed on summer (led by others).
- Potential continuation of related activities in Polar Coupled Analysis and Prediction for Services (PCAPS) project under WMO's World Weather Research Programme.