

# WP 3 – Station Manager Forum

## Mid-term review presentation

Morten Rasch, University of Copenhagen

Elmer Topp-Jørgensen, Aarhus University



Annual Meeting II

24-28 September 2018

Salekhard, Russia



# Aim of the WP

## Overall aim:

To consolidate, develop and run an expanded Station Managers' Forum (SMF) of managers of research stations throughout the circumpolar Arctic, in northern countries and adjacent alpine and forest regions for:

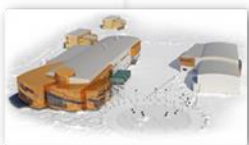
- (i) Knowledge exchange,
- (ii) Implementation of best practices of station management,
- (iii) Development of improved services for research station users
- (iv) Development of new technology and methods/procedures relevant for running research stations.



# Aim of the WP

## Specific aims:

- Facilitate internal knowledge exchange (i) among station managers, (ii) with other partners in INTERACT and (iii) between the SMF and relevant stakeholders, including cooperating partners, international organisations and networks, industry, etc.
- Facilitate knowledge exchange across domains and establish links between managers of terrestrial, atmospheric and marine research platforms on management and technology issues.
- Improve station management and the services provided to users of research stations by providing relevant thematic courses on practical station management issues and by providing a forum for discussion and knowledge exchange between station managers on management issues.



# Aim of the WP

## Specific aims, continued:

- Improve fieldwork efficiency and safety for users of research stations by producing a common field work planning guide and a common practical field guide for INTERACT stations.
- Reduce the environmental impact of research station operations and science activities by developing relevant procedures and technologies between station managers and relevant industries.
- Continue the development of the INTERACT Station GIS tool for research station management, with interlinked modules for (i) handling of applications for access to stations by non-TA applicants and successful TA applicants, (ii) presenting station characteristics to users and (iii) storing project metadata to allow dissemination to other repositories and media.









## Aim of the WP

### Tasks:




**Task 3.1:** Operate the INTERACT Station Managers' Forum as an advanced platform (Morten Rasch, UCPH)



**Task 3.2:** Creating awareness of the scene (Terry Callaghan, USFD)

**Task 3.3:** First Class Science Support (Elmer Topp-Jørgensen, AU)



**Task 3.4:** Enhanced Field Work Preparations and Field Guide (Morten Rasch, UCPH)



**Task 3.5:** Reducing Environmental Impact of Station Management and Science Activities (Nighat Johnson-Amin, IPF)



**Task 3.6:** INTERACT Station GIS (Tomas Thierfelder, SLU)



# Aim of the WP

## Deliverables:

**D3.1/6:** Six SMF meeting minutes (*Months 10, 15, 22, 34, 39, 46*)

**D3.7:** Training material and guidelines for four station management relevant courses (*Month 45*)

**D3.8:** INTERACT report on common Best Management Practices across the Terrestrial, Marine and Atmospheric Domains' (*Month 36*)

**D3.9:** 'INTERACT Field Work Planning Handbook for Arctic and Northern Alpine and Forest Areas' (*Month 24*)

**D3.10:** 'INTERACT Practical Field Guide for Arctic and Northern Alpine and Forest Areas' (*Month 24*)

**D3.11:** 'INTERACT Report on Reducing Environmental Impacts at Arctic and Northern Alpine and Forest Research Stations' (*Month 30*)

**D3.12:** 'INTERACT Station Catalogue', 3rd edition (*Month 33*)

**D3.13:** 'INTERACT Research and Monitoring Report', 2nd edition (*Month 45*)

**D3.14:** An INTERACT Station Catalogue data package and an INTERACT project metadata package for the INTERACT Station GIS system (*Month 18*)

**D3.15:** User manual and software documentation for the INTERACT Station GIS system (*Month 30*)

**D3.16:** Publication of new research station features on the INTERACT website (*Month 24*)




## A photograph showing a calm lake in the foreground, reflecting the sky. In the background, a dense forest of tall evergreen trees covers a hillside. A small, rustic wooden building or cabin is visible on the shoreline, partially obscured by the trees. The sky is blue with scattered white clouds.


[illegible]




## Partners involved in the WP






There are 42 partners from 17 different countries involved in INTERACT WP3. The Station Manager Forum as a whole includes managers of **82 stations**.



The stations involved range in size from **small unmanned field huts**, accommodating up to four people at a time, to large research facilities with an extensive staff and room for **more than 150 guest scientists**.



The Station Managers' Forum **cooperates** with a huge number of individual stakeholders, incl. scientists from the terrestrial research community, local communities, industry, policy makers, the press and others communicating science, the marine infrastructure community, the atmospheric infrastructure community and the Antarctic infrastructure community.





## Achievements so far

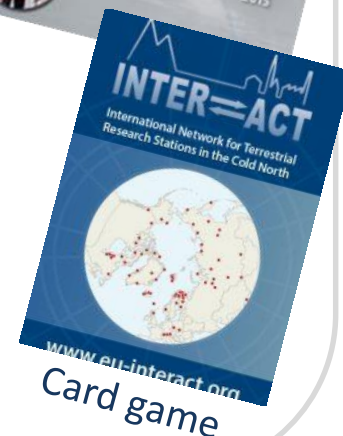
The biggest achievement of the INTERACT Station Managers' Forum during both INTERACT I and INTERACT II has without comparison been **to bring managers of research stations from all over the Arctic and the Northern Alpine region together** to network, cooperate, exchange knowledge, coordinate and produce useful products across country borders, for the research community and its local, regional and international stakeholders.



# Achievements so far

## Task 3.1: Operate the INTERACT Station Managers' Forum as an advanced platform (Morten Rasch, UCPH)

- Three Station Manager Fora, incl. agenda and minutes
- Coordination with all other tasks in workpackage
- Provided platform for other workpackages to coordinate with station managers
- Liaison with Antarctic, Marine and Atmospheric communities
- Prepared manual for street view captures of research stations and started up the actual mapping (first stations added)
- Prepared draft outline for short customized video clips of research stations (first station videos produced)



# Achievements so far

## Station catalogue – new features



INTER  $\rightleftharpoons$  ACT GIS

LOGIN | SIGN UP

Stations Research Publications Application About



### Welcome to INTERACT GIS

INTERACT GIS provides information regarding approximately 85 terrestrial field-stations situated under arctic or sub-arctic conditions, whether in the Arctic proper or at high altitudes elsewhere in the northern hemisphere. INTERACT GIS basically provides two different types of web-based services, whereof one is openly providing information regarding stations and their associated landscape characteristics. Via the filtering functionalities offered by INTERACT GIS, a search for stations that fulfil multiple research, educational, and/or monitoring criteria is enabled. In addition, the sheer fun of examining Arctic field-stations is provided.

The second type of web-based service offered by INTERACT GIS requires an account that may be acquired under the above SIGN UP symbol. As an active arctic field-station, INTERACT GIS may be used for automated management of station visitors, activities, and publications. An accumulating record of station's activities is thereby captured, stored, and disseminated at real-time pace, providing decision support for collective planning of Arctic research, education, and/or monitoring activities.

With INTERACT GIS offering truly spatial on-line capabilities, like combining geo-referenced station's information with streamed map-services, it is per definition a web-based Geographic Information System. As an example, the collective record of research publications stored and disseminated with INTERACT GIS is geo-referenced via station activities onto visualisations that utilise streamed map-services.

InteractGIS has been developed under the auspices of the INTERACT and SITES infrastructure projects, with particular contributions from the Swedish field stations at Abisko and Tarfala.

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INTER  $\rightleftharpoons$  ACT


**SITES**  
Swedish Infrastructure for Ecosystem Science

INTER  $\rightleftharpoons$  ACT

# Achievements so far

## Station catalogue – new features



 LOGIN | SIGN UP

[Stations](#) [Research](#) [Publications](#) [Application](#) [About](#)

### INTERACT RESEARCH AND MONITORING STATIONS

**Climate Zone:**

Any Zone

**Permafrost:**

Any Ration

**Features:**

All features

Search Result: **83** sites [Reset](#)

[Show research for stations](#)

Map List



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# Achievements so far

## Station catalogue – new features

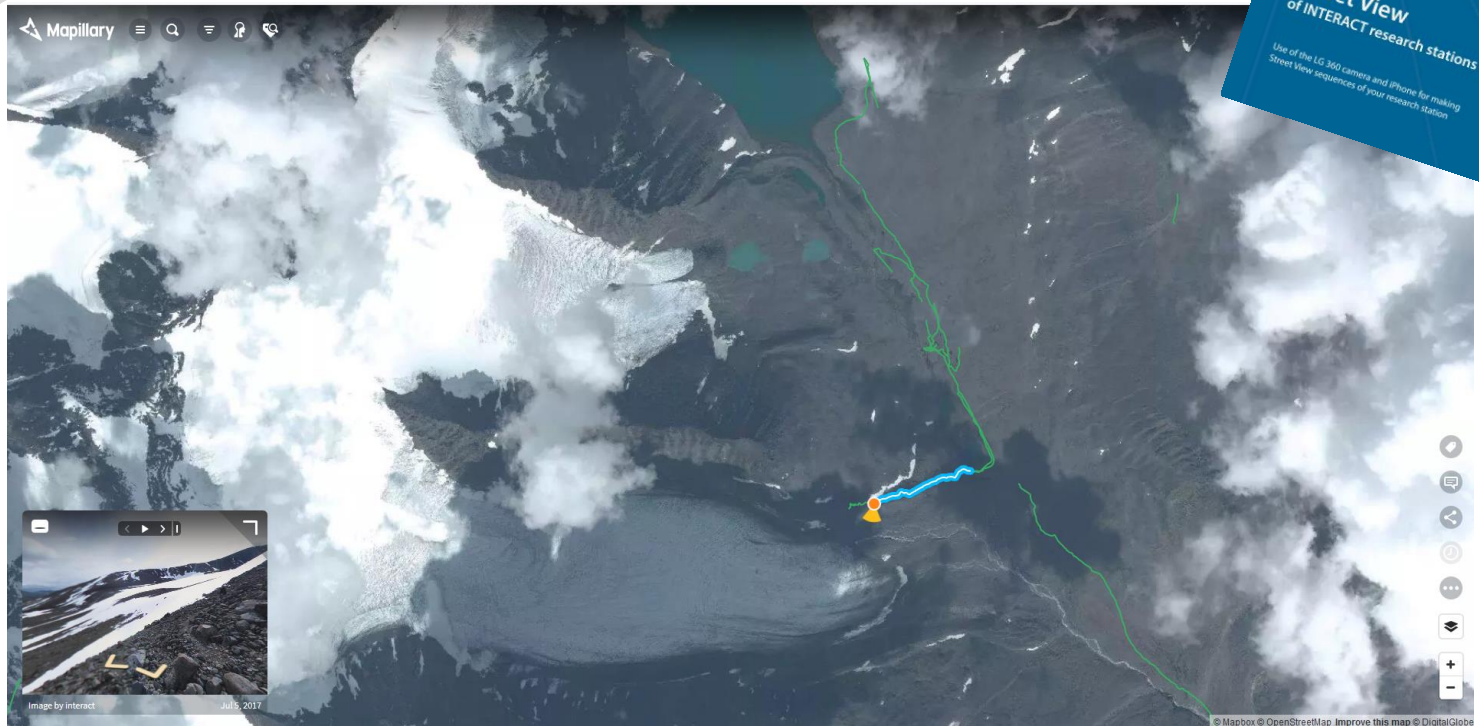


Tarfala, Sweden



# Achievements so far

## Station catalogue – new features



Study area





# Achievements so far

## Station catalogue – new features















Station facilities

# Achievements so far

## Station catalogue – new features

### INTERACT STATION VIDEO STORYBOARD

 <p><b>INTERACT INTRO</b></p> <p>5-10 seconds</p> <p>There will be a standard intro for all station videos, with INTERACT logos and common theme music.</p> <p>This could be where station funders are acknowledged, etc. (although this can also come at the end as well – or both).</p>	 <p><b>FLY IN TOWARDS THE STATION</b></p> <p>5-15 seconds</p> <p>If feasible, use a drone to have some nice imagery of getting to the station. This will give some idea of what it takes to arrive at the station as well as a feeling for the surrounding environment.</p> <p>This is a nice place to show some of the beautiful scenery around the station!</p>
 <p><b>ABISKO</b></p> <p>5-10 seconds</p> <p>A continuation of the previous segment, but moving closer to the station.</p> <p>A voice-over could say a little about the station location – altitude, environment, etc.</p> <p>Again, this is a nice place to show some of the beautiful scenery around the station!</p>	 <p><b>WELCOME TO THE STATION!</b></p> <p>10-20 seconds</p> <p>Some words of welcome from the station manager. This should include at least:</p> <ul style="list-style-type: none"> <li>- Size of the station</li> <li>- How many people can be accommodated</li> <li>- When the station is open (season)</li> </ul> <p>The manager should stand outside one of the station buildings, ideally with a nice view of the landscape in the background.</p>
 <p><b>WEATHER</b></p> <p>5-10 seconds</p> <p>Some weather-related imagery.</p> <p>A brief description of the type of weather to be expected during the field season (temperatures, amount of precipitation, etc.).</p> <p>Some mention of what type of clothing is necessary might also be appropriate.</p>	 <p><b>SURROUNDING LANDSCAPE</b></p> <p>5-15 seconds</p> <p>Again some imagery of the surrounds of the station. This time with more details about the local environment, e.g. glaciers, wetlands, vegetation types, etc.</p> <p>This could be nicely filmed using a drone.</p>
 <p><b>ENVIRONMENTAL FEATURES</b></p> <p><b>WILDLIFE</b></p> <p>5-10 seconds</p> <p>Are there particular features of the environment of which visitors should be aware? E.g. Is there wildlife one needs to watch out for, etc. Mention anything important for teams planning their field work.</p> <p>If you can get nice imagery of wildlife, this would be a great place to include it!</p>	 <p><b>STATION FACILITIES</b></p> <p>5-15 seconds</p> <p>This segment describes what facilities are available at the station.</p> <p>Images from inside the station, e.g. bedrooms, kitchens, etc. (the labs come in the next segment) should be included. Is there electricity, running water, etc.</p> <p>Other images of the station, as appropriate (e.g. showing transport options to get into the field such as snowmobiles, etc.)</p>
 <p><b>LAB FACILITIES</b></p> <p>5-15 seconds</p> <p>What lab facilities are available? Is there storage space (e.g. deep-freezers etc.)? Is there a workshop for repairs, etc?</p> <p>This segment can show the interior of the station labs and any other relevant equipment available for use in the field.</p>	 <p><b>SCIENCE @ THE STATION</b></p> <p>10-20 seconds</p> <p>This segment provides an overview of the science carried out at the station – biology, physics, ecology, etc.</p> <p>Scientists could be shown out in the field, in the lab, or interviewed.</p>
 <p><b>WE LOOK FORWARD TO HOSTING YOU!</b></p> <p>10-15 seconds</p> <p>A closing segment where the station manager can encourage people to come to the station.</p> <p>The manager can stand in the same place as the beginning segment, or in another similar location (also with view of the station and/or surrounds).</p> <p>Pan out to a wide view, moving away from the station – again maybe filmed with a drone.</p>	 <p><b>INTERACT OUTRO</b></p> <p>5-10 seconds</p> <p>There will be a standard outro for all station videos, with INTERACT logos and common theme music.</p> <p>This could be where station funders are acknowledged, etc.</p> <p>Also make sure to include contact information here (email address, website, etc.). This information will stay on the screen as the video ends.</p>

## Video storyboard

### Uploads





# Achievements so far

## Task 3.2: Creating awareness of the scene (Terry Callaghan, USFD)

- Presenting the organizational landscape of arctic research at SMF II, including presentation of selected networks of relevance to INTERACT Stations
- Network survey - identifying other projects, programmes networks and organization of relevance to station managers, and preparing for identification of INTERACT network ambassadors to advice other stations on how to join



### INTERACT Stations participate in:

- ca. 95 global or arctic scientific networks and organisations
- ca. 75 regional networks and science collaborations

# Achievements so far

## Task 3.3: First Class Science Support (Elmer Topp-Jørgensen, AU)

- Basic course on arctic safety at SMF II
- Station manager developed course in October 2018
- Established cooperation with the Antarctic community at COMNAP meeting in Brno, Czech Republic, in summer 2017
- Securing cross-disciplinary cooperation through the EU Arctic Cluster infrastructure projects, i.e. INTERACT, EU-PolarNet, European Polarboard and ARICE – ongoing
- Defined mentoring components for INTERACT SMF



# Achievements so far



## Arctic field Safety course

### Objective

The course participants must be able to identify and limit the risks of activities carried out at a research station. In addition, they must describe actions that prevent or restrict the impact of incidents and accidents associated with the station's activities.

This is a pilot course; therefore, participants must contribute to design the final course.

### Participants

The course is primarily aimed at persons who are responsible for the day-to-day operation of a research station. The course may also be relevant to persons who are responsible for implementing major field activities.

### Prerequisites

It is expected; that participants have knowledge of arctic conditions and have knowledge of the general operation of a research station or for the implementation of major field activities.

### Duration:

The course starts Monday 1 October at 04PM and ends Monday 8 October at 11AM (on arrival by plane from Ny-Ålesund).

### Program

The course is structured as a combination of theory and practice, why accommodation in the field will be a major part of the course.

# Achievements so far

## Task 3.4: Enhanced Field Work Preparations Handbook and Field Guide (Morten Rasch, UCPH)

- An almost ready to publish draft of the INTERACT Field Work Planning Handbook is ready for final editing before publication
- A template for the INTERACT Practical Field Guide has been prepared for discussion at this meeting

The INTERACT Field Work Planning Handbook will be published as a >200 pages hardcover book. The INTERACT Practical Field Guide will be published as a c. 40 pages booklet on sturdy, waterproof paper. Both will have a layout similar to the other publications in the INTERACT book series





# Achievements so far

## Task 3.5: Reducing Environmental Impact of Station Management and Science Activities (Nighat Johnson-Amin, IPF)

- A 'Reducing the Environmental Impact of Station Management' seminar was held at INTERACT II Station Manager Forum III in Italy in March 2018
- Reporting is in progress

**Business representatives from**

- water systems,
- energy control systems,
- alternative energy

**Led by staff from the '0- emission'  
Princess Elisabeth Station in Antarctica**



# Achievements so far

## Task 3.6: INTERACT Station GIS (Tomas Thierfelder, SLU)

- Contract with Umeå University to be future platform for INTERACT GIS
- Transfer of INTERACT GIS to Microsoft platform by Umeå University
- A new version of INTERACT GIS was suggested and discussed at the INTERACT II Station Manager Forum III in Italy in March 2018
- The new version of INTERACT GIS will be presented and discussed at this meeting – expected launch of Version 1: November 2018



Station ownership  
reflected in future  
management organisation

# Achievements so far

INTER = ACT GIS STATION - VILLUM RESEARCH STATION (VRS) WORKSPACE • ELMER\_TOPP•

Profile Permissions

## STATION PROFILE

**Station name**  
Villum Research Station (VRS)

**Stations' homepage address**  
<http://envs.au.dk/en/research/facilities/villumresearchstation>


**Status**  
Open

**Type of station**  
Station

**Stations' Latitude**  
81.60000000

**Stations' Longitude**  
-16.65000000

**Visible in application form** ☒

**Featured image**  
  
Germerse... Ingen fil valgt.

**Station acronym**  
vrs

**Country of location**  
Greenland

**Operating country**  
-- Please select --

**Operating period**  
Year-round

**Opening year**  
1990

**Email address\* (to receive applications)**  
jef@bios.au.dk

**Station terms document**  
Germerse... Ingen fil valgt.

Select information text to edit  
Contact information

Villum Research Station

<https://www.interactgis-demo.its.umu.se/Station/Profile/78>

All INTERACT stations



# Achievements so far

**INTERACT GIS**

Stations Research Publications Application About

## CREATE APPLICATION

Application guide Application Reservation Confirmation

### ABOUT THE FORM

**PROJECTS**

To find your project you have to identify the Principal Investigator (PI) of your project first and then select from the list of higher ongoing projects.

**Important!** Projects without a valid end year or not having been updated/saved since 4 September yyyy will NOT show up in the list. If so please login to interactGIS and update your project.

**COURSE OR EDUCATION**

All courses where the last sign-up date has not passed yet are listed.

**CONFERENCE OR WORKSHOP**

All conferences where the last sign-up date has not passed yet are listed.

**APPLICATION DEADLINE**

Research applications should be made prior to the stations application deadline for visits during the current field season. See Terms & conditions for more information.

### APPLICATION FORM

Research Station to visit\*  
-- Select station --

Terms & Conditions  
☐ I agree to the terms & conditions\*

Type of application  
☒ Project  
☐ Course  
☐ Conference  
☐ Other

Principal investigator  
-- No station selected --

Project\*  
-- No PI selected --

Long title:  
-

First name\* ☐ Principal Investigator  
Applicant first name

Surname\*  
Applicant surname

Email\*  
eg. xyz@place.org

Institution address\*  
eg. xyz@place.org

Name & invoice address\*  
Name and address

VAT registration number  
XYZ123456

Profession or Discipline  
-- Please select --

Academic degree  
-- Please select --

Nationality  
-- Please select --

Mobile  
-- Please select --

Phone  
-- Please select --

☒ Go back

Scientists applying for access





# Achievements so far



ADMIN - VILLUM RESEARCH STATION (VRS) WORKSPACE • ELHER, TOPP

INTER = ACT GIS

Applications Publications Search

## APPLICATIONS

Year: 2018 Status: Registered

**Applicant**  
Elmer Topp-Jørgensen  
jts@topp.dk  
Aarhus University Department of  
Bioscience Frederiksbergvej 399 4000  
Roskilde Denmark

**Invoice address**  
Elmer  
VAT number  
Puh-ha

**Project**  
INTERACT GIS Test 1  
Test test

**Principal investigator**  
Elmer Topp-Jørgensen  
jts@topp.dk  
Aarhus University Department of  
Bioscience Frederiksbergvej 399 4000  
Roskilde Denmark

Add reservation(s) for:

Role	Full Name	Gender	Born	Arrival	Departure	Requirements
Organizer	Elmer Topp-Jørgensen	0	1971	2018-09-28	2018-09-29	

Add reservation(s) for:

Group	Women	Men	Arrival	Departure	Requirements
-					

Applications

Applicant	Type	Reason for visit	Visitors	Arrival	Departure	Received
Elmer Topp-Jørgensen	INTERACT GIS Test 1	1	2018-09-28	2018-09-29	2018-09-21	
Elmer Topp-Jørgensen	INTERACT GIS Test 1	1	2018-08-26	2018-08-29	2018-08-28	
Elmer Topp-Jørgensen	Test Course	2	2018-08-30	2018-10-02	2018-08-20	

InteractGIS has been developed under the auspices of the INTERACT and SITES infrastructure projects, with particular contributions from the Swedish field stations at Abisko and Torshov.

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Handling applications





## Added value

- Bringing station managers together to exchange information continuously lead to new developments and ideas
- International cooperation also lead to new developments and ideas (e.g. EU-PolarNet/ COMNAP cooperation – inspired an antarctic station catalogue and EU infrastructure database managed by the European Polar Board)
- Efficient and safe science (by enabling scientists to find suitable stations, knowledge gaps and be better prepared for fieldwork)
- Adding station managers perspectives to publications of other workpackages



# Deviations from workplan

Workpackage 3 is running as planned.

There are no deviations from the workplan.

We are expecting to continue to deliver timely and in accordance with the contracts (but expect a delay in an upcoming milestone due to visa problems).

The cooperation within the group of extremely enthusiastic station managers is and has been the biggest asset in achieving this.



# Expected impacts

Workpackage 3 is bringing station managers together in a forum with the main purpose of improving the research community, to local people and to others being affected by or having interests in what is happening in the North.

## **Improved station management and services**

- Courses, 0-emissions, mentoring, best practices, INTERACT GIS

## **Improved safety and efficient science**

- Fieldwork planning handbooks, catalogue, mentoring, INTERACT GIS

We consider the establishment of best practices on many different issues, developed through the research community as an important mean for improving the research community.

## **More robust assessments and predictions**

- Increased use of INTERACT stations, expanded geographical coverage of scientific networks through Awareness of the scene, network ambassadors

We hope that our consultation with the research community, the atmospheric research community and the Antarctic research community will result in similar improvements in INTERACT.

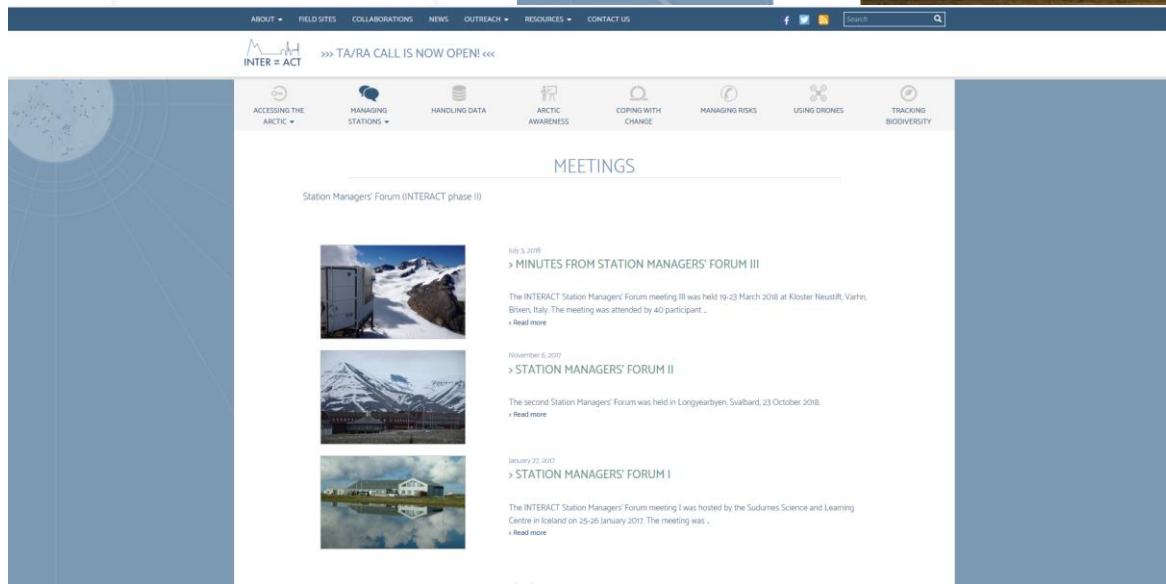
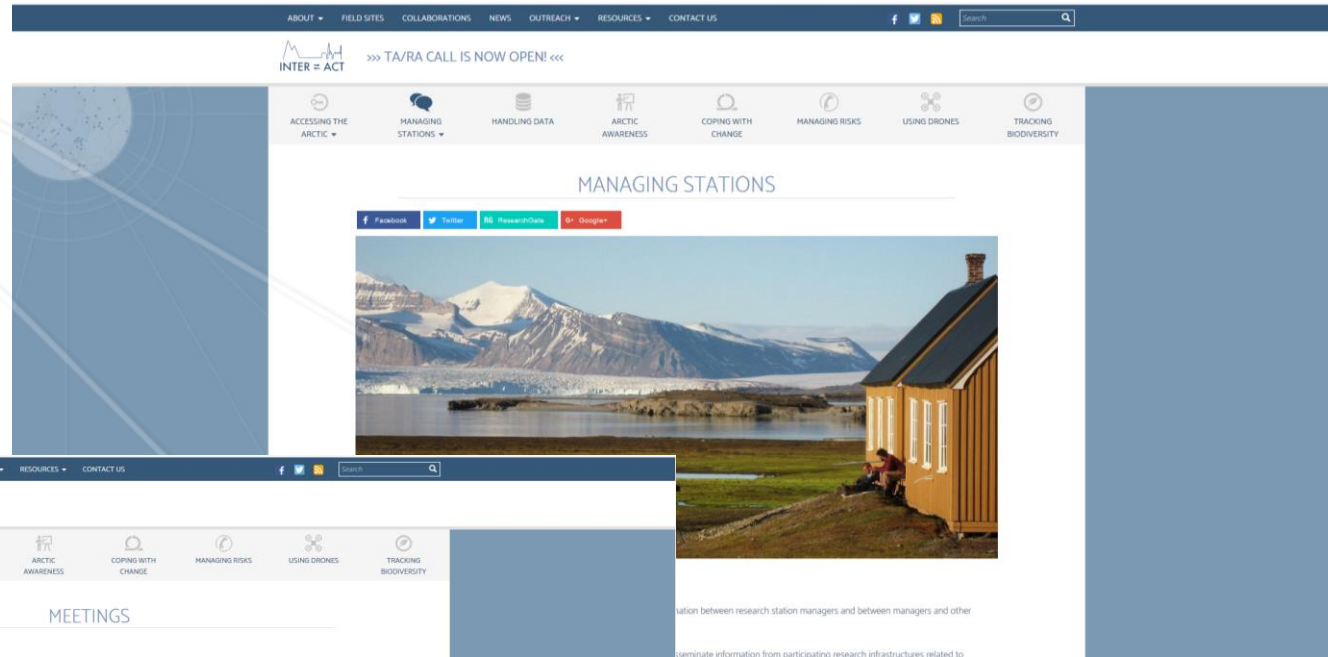
## **Wider application of INTERACT products through collaboration other communities**

- International conferences/meetings, best practices across domains, joint workshops





# Thanks for your attention



Annual Meeting II  
24-28 September 2018  
Salekhard, Russia



<https://eu-interact.org/managing-stations/>