Updates on Italian Arctic Activities

Nicoletta Ademollo*
Luigi P. D’Acqui (CNR-IRET)
Mauro Mazzola*

*National Research Council of Italy
Institute of Polar Sciences (CNR-ISP)

INTERACT 12-14 September 2023
Arctic Station “Dirigibile Italia”, Ny-Ålesund Research Station (Svalbard)

- Opened in 1997
- Managed by CNR-ISP, but hosts researchers from other institutions and universities
- Surface 330 m² with sleeping rooms, offices and laboratories
- Can host up to 7 researchers
- Since 2018 runs all year round
- Access through a national call and a peer-review process.
- Participates to INTERACT and SIOS access programs
More than 30 projects submitted for 2023, including INTERACT and SIOS access projects. We expect a similar number of attendances as in 2022. -> 1373 man-days in 2023
Large future projects and investments

PRA (Arctic Research Programme) funded by Italian Ministry for University and Research for studies over the Arctic (3 calls for projects up to now), has been renewed for two more years (1 M€/y).

https://www.programmaricercaartico.it/index-projects
Holthedalfonna ice drilling campaign took place in April 2023
Logistic planning

- Campaign took place in April 2023
- The headquarter was located in Ny-Alesund with the support of the Italian Arctic Station Dirigibile Italia
- Installation of a remote camp at the summit of Holthedalfonna able to host 8 personnel (5 researchers, 1 driller, 1 drill support, 1 mountain guide)
- Equipment transportation from Ny-Alesund to HDF summit by snow mobile.
- Possibility for personnel and material exchange during the field operation.
- Ice core will be transported back to Ny-Alesund by snow mobile. This approach has already been successfully carried out in previous campaigns.
- Cores will be store in Ny-Alesund in a freezing container until transportation to Europe by IPEV.
MAIN GOALS

• Collect a deep ice core from Holtedahlfonna (HDF) Glacier summit.

• Reconstruct the atmospheric composition of the last 300 years

• Reconstruct the sea ice change of the last 300 year north of Svalbard

• Investigate the degradation (or not) of the climate signal compared to the 2005 core

• Investigate the role of sea ice dynamics on Svalbard biogeochemical cycles

• Investigate the impact of Arctic amplification on the Svalbard environment

• Reconstruct the history of microbial colonization and evolution in relation to past climate
Efforts to reduce environmental impacts

From April 2023 the station have an electric car for moving people and weights in and around the Ny-Ålesund.
Availability/opportunities for international infrastructure access in the next 2 years

The **INTERACT** Access program is at its last year (2023), with 3 projects and *2 visits during 2023*

**SIOS** Access program for 2023, we got 3 request of access ([https://sios-svalbard.org](https://sios-svalbard.org)). *-> 1 approved*

The station is part of new **access programs** (physical, remote, virtual) in the frame of European initiatives. *-> POLARIN, INPA*

Access is possible through **collaborations with Italian research institutions and universities.**
New version of the Italian Arctic Data Center is available and slowly populating https://iadc.cnr.it

Metadata via Geonetwork

Data via ERDDAP

Next Generation EU -> funds for improving (NRT) availability and sharing of polar data