

Italy's engagement in the Arctic

Italian expeditions in the Arctic

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1899 : Luigi di Savoia Duke of Abruzzi sailed from Archangelsk with his ship "Stella Polare" and arrived to the Franz Joseph Land.

1926 : **Umberto Nobile** together with Roald Amundsen (Norway) and Lincoln Ellsworth (USA), was the first to reach the North Pole on the Norge airship.

1928: the second expedition on another airship, "Dirigibile Italia", had a tragic epilogue.

1961 – 1969 : Silvio Zavatti explorer and anthropologist, set up five polar expeditions in Canada, Lapland and Greenland.

1971 : Guido Monzino reached the North Pole (Capo Columbia) by dog sleight.

«Dirigibile Italia» base in Ny-Ålesund, Norway

Italian base "**Dirigibile Italia**": multidisciplinary research centre managed by the National Research Council (CNR).

Founded in 1997 at Ny-Alesund, Svalbard Islands.





It can host up to **7 researchers**, who study components of Arctic environment (atmosphere, hydrosphere, cryosphere, lithosphere, biosphere) and the interactions between biological, physical and chemical processes.



Researchers use three multidisciplinary observation platforms:





• Amundsen-Nobile Climate Change Tower (climate change)

• Gruvebadet Laboratory (ground-level aerosol)

• Mooring Dirigibile Italia (marine monitoring)





Italy's growing political interest for the Arctic

Arctic Table

coordination forum including Ministries, research institutes and companies **2011**

> Italy obtains the Observer status in the Arctic Council 2013

MFA policy paper "Toward an **Italian strategy for the Arctic** - national guidelines" **2015** Foreign Affairs Commission of the Chamber of Deputies: fact-finding investigation on the Italian strategy for the Arctic 2016-2017

Budget Law for 2018 establishes the Arctic Research Committee (CSA) and the Arctic Research Programme (PRA) 2018-2020

Guidelines of the Italian engagement

- Respect the Arctic States sovereignty rights and promote local and indigenous values, cultures and traditions.
- Expand bilateral and multilateral cooperation in the Arctic, in compliance with the international standards and in coordination with partners Countries, the EU and international organizations.
- Promote sustainable development to balance environmental protection aspects, business opportunities and needs of local communities.
- Strengthen the involvement of private sector and raise awareness on Arctic issues.

Scientific research activities

 International Research Projects (SAON,SIOS, NARWHALS)

 Participation in all 6 Working Groups and some EG and TF of the Arctic Council

 Involvement of the major national research agencies (CNR, ENEA, INGV, OGS)

Arctic Research Program 2018-2020

Focus: High North (July 2017 and 2018 and October 2019) oceanographic campaign in the Arctic Ocean led by the Hydrographic Institute of the Italian Navy, in collaboration with national research agencies and the NATO Centre for Maritime Research and Experimentation

The Arctic Research Programme- PRA

Context Analysis

- Relevant norms and legislation
- International cooperation and Italian contribution
- Italian research activities

Scenarios and prospects

- Global warming
- Impact on the Arctic
 - Research on variations on high atmosphere
 - Coordination of research activities and dissemination to a wider audience

Actions

- Open call for research projects
- Implementation of a data system to collect environmental and climate data resulting from Italian research
- Post-degree course on polar issues
- Support to Italian participation in the Arctic Council Working Groups and other international frameworks

Objectives and topics of PRA

Monitoring Arctic ecosystem changes

Quantitative understanding of the processes causing «Arctic Amplification»

Paleoclimate reconstructions obtained by the integrated analysis of data



Assessment of the changes of Arctic seas atmospheric and water column

Analysis of the effects of climate change on wellness, health and security of Arctic inhabitants and also on the preservation of indigenous culture and on the sustainable development of the region



Economic dimension

ENI: «Goliat» offshore oilfield (Norway)

Zero emission technologies (zero flaring zero discharge), systems for the prevention and monitoring of advanced spills, capillary involvement of all stakeholders, especially indigenous peoples.

e-Geos: COSMO-SkyMed system

Constellation of four radar satellites for Earth observation and for civil use. It is currently the only existing operating instrument that can guarantee a continuous, complete and regular transition for monitoring ice covering.

Fincantieri: RV Kronprins Haakon

It is among the world's most advanced research vessels, built for the Norwegian Polar Institute; classed as an ice-breaker, the ship will meet current and future needs for monitoring and data collection in icecovered and open waters year-round.



Raising awareness

- Master «Sustainable development, Geopolitics of resources and Arctic studies» (since 2016)
- •«Arctic Connections» an international symposium (2018 and 2019) and «Zero Hackaton 2019 Ocean and Polar Connections»
- UArctic Congress 2018: SIOI has been accepted as first Italian member

SIOI

- Polar Museum «Zavatti», located in Fermo, about the Arctic region
- **Magazine «II Polo»**, quarterly of the Istituto Geografico Polare «Silvio Zavatti»



• «Arctic, an interactive journey to the North Pole» is an exhibition about the main Italian activities in Ny Ålesund, Svalbard Islands, where CNR runs the «Dirigibile Italia» research station



Thank you for your attention