



Instytut Geofizyki  
Polskiej Akademii Nauk

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Institute of Geophysics  
Polish Academy of Sciences



***„New Polish effort and investment  
plan to Arctic region”***

# Centre for Polar Studies has status of the Leading National Research Centre 2014-2018

Ministerstwo Nauki  
i Szkolnictwa Wzrostego

**KNO**

Krajowy Naukowy  
Ośrodek Wiodący



Uniwersytet Śląski



Instytut Geofizyki PAN



Instytut Oceanologii PAN

## Centrum Studiów Polarnych

<http://www.polarknow.us.edu.pl>



# New Centre of Excellence for Earth Sciences in Poland

The principal objective of the **Centre for Polar Studies (CPS)** is the further development of interdisciplinary research on the natural environment in the Arctic and Antarctic at an international level, and more effective education of young researchers.

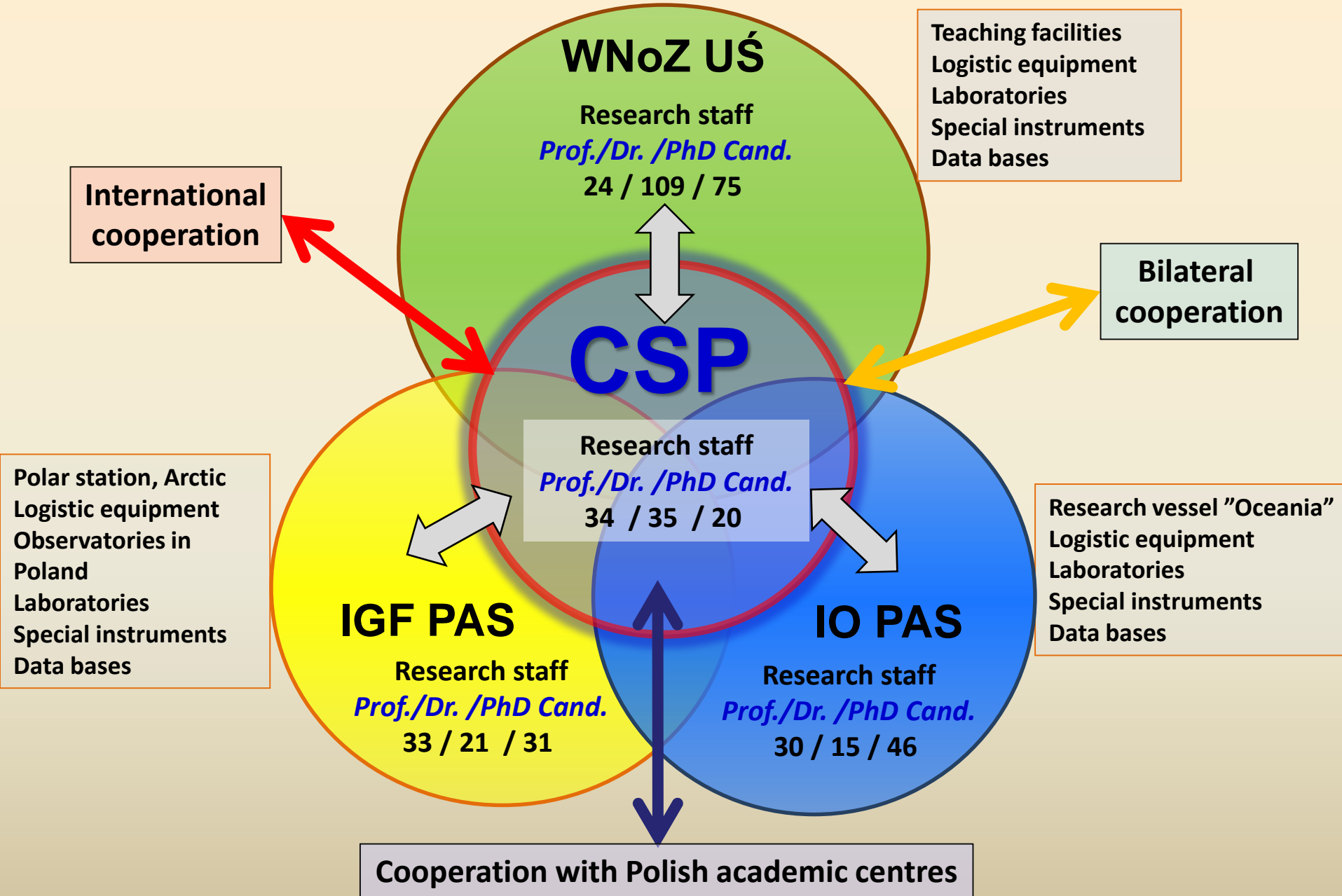
The main goal of our scientific research is investigating and understanding the changes and interactions between the most important abiotic elements of the polar environments.

# New Centre of Excellence for Earth Sciences in Poland

The impact of these changes on marine and terrestrial ecosystems will also be very important. Within the scientific scope of the CPS there will also be study of the impacts of accelerated climate changes in the Arctic on the climate and extreme phenomena in middle latitudes, including Poland.

A basic assumption in the activity of Centre for Polar Studies is being open to a wide domestic and international cooperation with leading research and educational centers for interdisciplinary and specialized polar studies.

# Centre for Polar Studies (CSP)



# International cooperation and support:

Unit	Country
Arctic Lidar Observatory for Middle Atmosphere Research (ALOMAR)	Norway
Alfred Wegener Institute/ Institute for Polar and Marine Research	Bremenhavn, Germany
University Centre in Svalbard	Svalbard
University of Sheffield	Sheffield, UK
International Arctic Science Committee (IASC)	Potsdam, Germany
University of Alberta	Edmonton, Canada
University of Oslo	Oslo Norway
Institute of Geology at Tallinn University of Technology	Tallinn, Estonia
Universidad Politécnica de Madrid	Madrid, Spain
University of Colorado at Boulder	Boulder, Colorado, USA
University of Iceland	Reykjavik, Island
Technische Universität Berlin	Berlin, Germany

# International Scientific Board of the Centre for Polar Studies:

**Chair - Prof. Dr. Jon Ove Methlie Hagen, Dr. H.C.**

Section Head Physical Geography, Department of Geosciences, Faculty of Mathematics and Natural Sciences, University of Oslo, Norway

**Prof. Dr. Robert Ettema**

Dean, College of Engineering & Applied Science, University of Wyoming, USA

**Prof. Dr. Andy Hodson**

Department of Geography, University of Sheffield, UK

**Prof. Dr. Ole Jørgen Lønne**

Head, Department of Arctic Biology, The University Centre in Svalbard, Longyearbyen, Norway

**Prof. Dr. Francisco Navarro**

Departamento de Matemática Aplicada, Universidad Politécnica de Madrid, Spain

**Prof. Dr. Ursula Schauer**

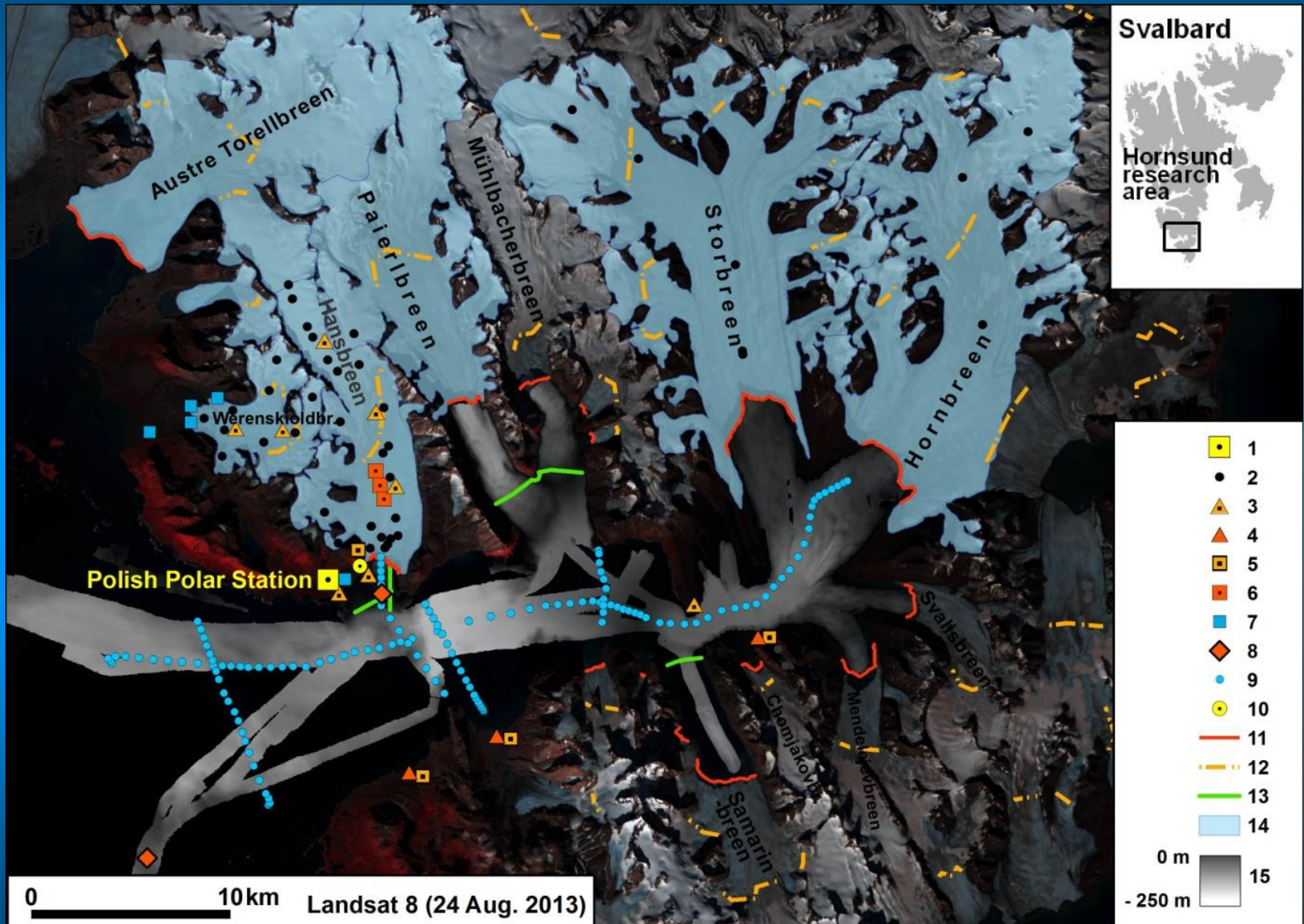
Stiftung Alfred-Wegener-Institut, für Polar- und Meeresforschung, Germany

## **Aims and activities of the Centre are:**

- **to cooperate in organizing environmental Ph.D. studies in the field of interdisciplinary polar research,**
- **to support mobility of research staff of universities, scientific institutes of Polish Academy of Sciences and research institutes,**
- **to develop internship programmes for Ph.D. graduates in the institutions – Members of the Centre,**
- **to conduct, coordinate and enhance scientific research and development projects, in particular involving junior research staff and Ph.D. students,**
- **to initiate and coordinate participation of the universities and other scientific institutions in international research programmes,**
- **to initiate, organize and oversee interdisciplinary laboratories to enable junior research staff and Ph.D. students conduct research,**
- **to acquire funds and perform research within mutual research enterprises (national and international).**



# The unique Arctic field laboratory 'Hornsund':

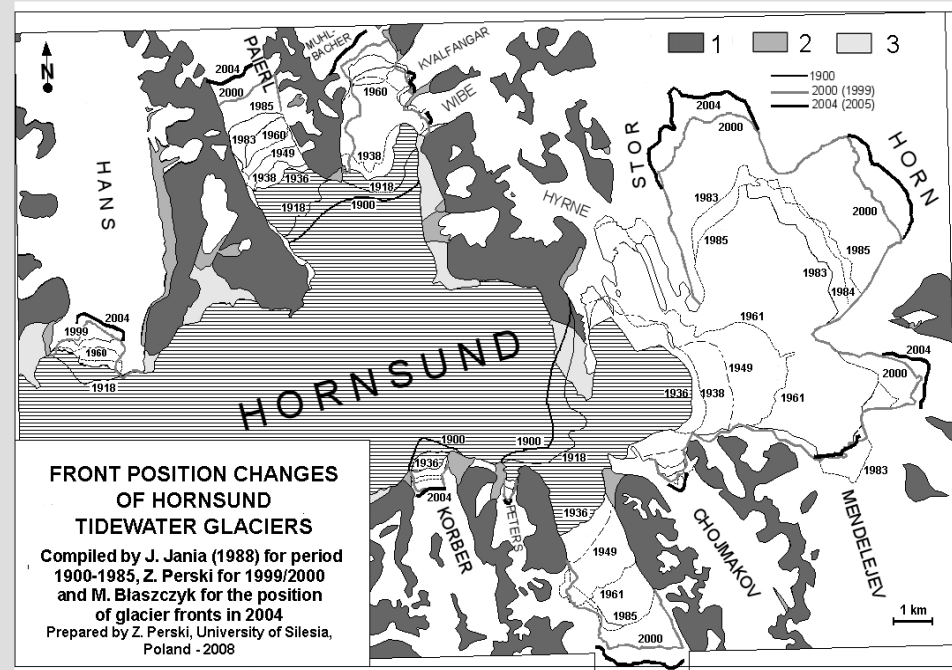
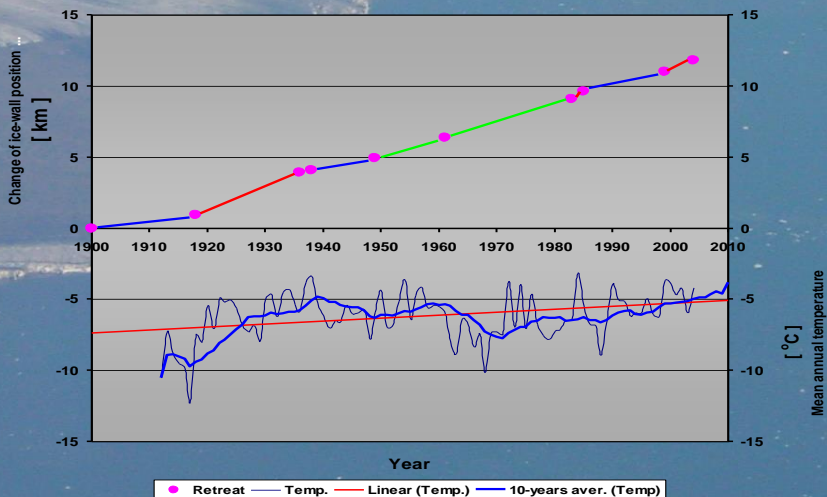


# The unique Arctic field laboratory 'Hornsund':

- 1 – Polish Polar Station (S. Siedlecki Station, working continuously since 1978);
- 2 – measuring points for glacier characteristics (stakes for monitoring mass balance, ice motion and snow cover properties), on Hansbreen since 1989;
- 3 – multiple-measurement automatic weather stations, working all year long;
- 4 – simple automatic weather stations (Hobo), working all year long;
- 5 – automatic, year-long time-lapse cameras;
- 6 – monitoring stations for subglacial water pressure, basal sliding and thermal state of the glacier (co-operation with the University of British Columbia);
- 7 – rivers and subglacial outflows monitored;
- 8 – constant temperature and dissolved solute monitoring stations (CTD) in a vertical sea water profile (moorings);
- 9 – annually repeated CTD profiling on research vessel (R/V) Oceania;
- 10 – short-term fluctuations of Hansbreen's cliff extent monitoring station (a laser rangefinder and a panoramic radar);
- 11 – tidewater glacier fronts in a satellite monitoring scheme (since 2000);
- 12 – mean interannual ELA (equilibrium line altitude);
- 13 – salinity and flow measurements acoustic soundings;
- 14 – glaciers with bed topography and internal structure surveyed with ground-penetrating radar (in international co-operation).

Barents Sea

Greenland Sea





**POLISH POLAR  
CONSORTIUM**



POLISH POLAR  
CONSORTIUM

## Polish Polar Consortium established

Polish Polar  
Consortium

60 Będzińska Street  
41-200 Sosnowiec

+48 571 449 704

The members of the Consortium - 18 Polish scientific institutions  
(15 higher education institutions and 5 research institutes)

- wish to collaborate in conducting and managing polar research in order  
to gain better understanding of the current changes in the environments  
of the Arctic and Antarctic and their influence on other parts of the Earth.

The Consortium functions in close cooperation with the Committee on  
Polar Research of the Polish Academy of Sciences which was a mentor  
of its formation.

We truly believe that the inauguration of the Polish Polar Consortium  
is a milestone in integration of Polish research society and development  
of Polish polar research

The Polish Polar Consortium (Polskie Konsorcjum Polarne, PKPol) is a national platform dedicated to promote and support close cooperation of universities, research institutes and other institutions involved in studies of polar regions.

The PKPol was established in 2014  
by eighteen institutions:



Jagiellonian University  
in Kraków



University of Silesia  
in Katowice



Adam Mickiewicz University  
in Poznań



Maria Curie-Skłodowska University  
in Lublin

UMCS



UNIWERSYTET GDAŃSKI

University of Gdańsk



Jan Kochanowski University  
in Kielce



Nicolaus Copernicus University  
in Toruń



Uniwersytet  
Wrocławski

University of Wrocław



Institute of Geophysics,  
Polish Academy of Sciences, Warszawa



Institute of Oceanography,  
Polish Academy of Sciences, Sopot



Institute of Geological Sciences,  
Polish Academy of Sciences, Warszawa



Gdynia Maritime University



Polish Geological Institute  
National Research Institute



Gdańsk University of Technology



University of Warsaw



University of Łódź

Uniwersytet  
ŁÓDZKI

Institute of Biochemistry and Biophysics  
Polish Academy of Science



Warsaw University of Technology



POLISH POLAR  
CONSORTIUM

## Mission and goals

<http://www.pkpolar.pl>  
[office@pkpolar.pl](mailto:office@pkpolar.pl)

The mission of the Polish Polar Consortium is to build a framework for an effective cooperation of the Polish polar research community, in the fields of:

- fundraising for research activities;
- conducting high-quality scientific projects;
- development of fieldwork logistics; organizing of research expeditions;
- supporting of activities of the Polish polar stations.

Activities of the Consortium will also facilitate collaboration in research and science management at an international level.

Special emphasis is put on education and support of Polish polar early career scientists.

Further goals for the near future include collaboration with the economic sector, and education and outreach activities addressed to broad audience.

# National Polish Roadmap for Research Infrastructures





# National Polish Roadmap for Research Infrastructures

## Special support to investment plan for 2015-2017: (First Phase)

**HYDRA** – instrumentation for comprehensive research and monitoring of glacio-marine basins and changes of the coastal zone in polar regions.

**CRYODYN** – instrumentation for comprehensive research on the structure and dynamics of the cryosphere and polar catchments.

**CLIMEV** – instrumentation for studying the dynamics of changes in the atmosphere in the polar regions.

Thank you for your attention



*fot. Adam Nawrot*