International Polar Initiative
Looking Beyond the International Polar Year

Volker Rachold on behalf the Steering Group
on the Long-term Polar Cooperative Initiative

Co-Chairs D. Hik, J.-G. Winther, Vice-Chair: Ø. Hov, Secretary: V. Ryabinin

AMAP  APECS  EPB-ESF  IASC  IASSA  ICSU  IOC  SCAR  UoA  UNEP  WMO
International Polar Year (IPY)

IPY 2007-2008 was an intense, internationally coordinated campaign of research intended to initiate a new era in polar science.

http://www.arcticportal.org/ipy-joint-committee
IPY Legacies

- **Scientific legacy**: prototypes of observational systems and networks; technologies; baseline data sets; deeper understanding of the Earth System
- **Collaborative Legacy**: enhanced collaboration and joint funding; information sharing
- **Human Legacy**: next generation of researchers and leaders; involvement of Arctic residents; public awareness and interest
How and why we came to the IPI concept

IPY

Steering Group

IPDecade Workshop
St. Petersburg, April 2012

Will the Initiative bring us what we could not obtain if it did not exist?

IPI

IPY 2012 CONFERENCE MONTREAL

American Geophysical Union

ISAR-3
Third International Symposium on the Arctic Research
A sustained ‘International Polar Initiative’

- address the emerging challenges identified within the IPY;
- optimizing and better coordinating existing resources and facilities;
- developing mechanisms for concerted investments in areas where activities are lacking;
- deliver better, more reliable scientific information for risk management and policy-making and other societal relevant activities and services in the Polar Regions.

http://internationalpolarinitiative.org
• Regional issues: Arctic, Antarctic and the Southern Ocean, alpine regions

Fast and dramatic transformations in the polar regions profoundly impact their environment, economy and the life of local residents.

Motivation

• Changes in the Polar Regions have very significant global implications and are anticipated to increase in the decades to come.

“What happens in the poles does not stay in the poles”
Are key polar problems adequately addressed?

**Arctic:** lack of resources for sustainable observations and as a result, of availability of adequate information services, is a **huge impediment for the sustainable development** of the North and efficiency of adaptation of this region to changing climate, economic and environmental conditions.

**Southern Ocean and Antarctica:** the Inadequacy of the observing system results in the lack of or **insufficient understanding of** the complex working of this region as a part of the Earth System. This significantly reduces the degree of trust in predictions and projections of the global climate and the state of regional ecosystem.

**Mountain regions:** the inadequacy of basic information making it difficult to understand changes in coupled human-environmental systems affecting cycling of energy, water availability, the biota or decisions about resources at local and regional levels.

**Conclusion:**
Main polar issues are **not addressed** at present as effectively as needed.
Does previous R&D, i.e. under IPY, make it possible to address the locally- and globally- important issues?

Outcomes of IPY make it possible to address most of the open issues in a more coordinated and efficient manner. Many solutions exist as prototypes. From science – to science & implementation

However:

No organization can effectively achieve its objectives in the Polar Regions without efficient coordination and sharing resources with other stakeholders and partners.

Need for a **fundamental change in approach.** To make this change happen is our **responsibility.**
What kind of an undertaking is proposed?

(The) International Polar Initiative (IPI)

Initially, a **Framework Agreement** of key international stakeholders on coordination and cooperation in achieving common agreed objectives of high societal impact. It should come with a **Protocol** on initial activities and composition of an IPI Steering Group.

After that we will proceed to the development of a common **Implementation Plan** of activities and start of their implementation. If this process succeeds, it will result in a wide interagency collaborative program of polar activities.

Light *management* structure.

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IPI scope as seen now

- *Earth System approach*
- *Research, observations, modeling, prediction, and services*
- *Natural and human systems and their interaction*
- *Outreach, education, involvement and mentoring of early career scientists*
- *Active and supported participation of the local residents*
- *Synergies between the Northern and Southern Hemispheres: bipolar Alpine regions - on project basis*
- *Accessible knowledge base to inform decisions on risk reduction, conservation, and sustainable development*
- *Data policy favoring openness, interoperability, and practical outcomes*
- *Adding value to and enabling work of multiple communities*
FUTURE EARTH:
A 10-year initiative by a new international Science and Technology Alliance for Global Sustainability

A global platform for international research collaboration

- augments earth system science with impacts of environmental change on people, adaptation and transformation
- delivers interdisciplinary research on global environmental change for sustainable development
- strengthens partnership between researchers/funders/users (co-design)

www.icsu.org/future-earth
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<th>Tentative timeline:</th>
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| **Second half 2012 - first half 2013:** Update of the IPI Concept  
Wide discussion with researchers & funding agencies  
Website |
| **Second half 2013 – first half 2014:** Review of IPI Concept by international agencies  
Discussion of IPI at national level  
Establishment of and work of an IPI Interim Committee  
Identification of initial activities to be sustained and developed under IPI |
| **Second half 2014 – First half 2015:** Signing the IPI Framework Agreement and Protocol  
Establishment of IPI Steering Committee  
Work on initial activities |
| ~2015-2016: Development of the first version of IPI Implementation Plan  
Establishment of IPI working bodies of IPI  
Initial calls for IPI activities |
| ~2017-2018: Start of IPI full-scope implementation |

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