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REVIEW OF EC-PORS ACTIVITY SINCE EC-PORS 4
The International Polar Partnership Initiative (IPPI)

(Submitted by the WMO Secretariat with input from the interagency Steering Group on a long-term cooperative international polar initiative)

ISSUES TO BE DISCUSSED

Significant progress of planning of the long-term cooperative international polar initiative and the proposal to name it the International Polar Partnership Initiative (IPPI).

Potential significance of IPPI for achieving WMO objectives and resultant EC-PORS position towards IPPI and future contribution to its planning process.

DECISIONS/ACTIONS REQUIRED:

- To comment on the development of the Initiative.
- To agree on modalities of EC-PORS contribution to further development of the Initiative, particularly during 2014, with a view of presenting the IPPI to WMO EC-66 and potentially to Cg-17.

REFERENCES

1. Excerpt from the Report of EC-65 “Polar Observations, research and Services – the International Polar Initiative (IPI)”
2. Draft Concept of IPPI

The International Polar Partnership Initiative (IPPI)

1. In April 2011 a WMO/Roshydromet Workshop was held in St. Petersburg, Russia to discuss the idea of an International Polar Decade (IPD) as a means to preserve the legacies of the International Polar Year 2007-2008 (IPY). Following the workshop and the discussions of its outcomes at the 16th World Meteorological Congress in 2011, an interagency Steering Group was formed to develop a concept for a long-term cooperative international polar initiative. Dr D. Grimes represents the WMO on the Steering Group in his capacity of EC-PORS Co-Chair. EC-PORS acts as the main forum for discussing all WMO matters associated with the potential polar initiative. Dr V. Ryabinin of the WMO Secretariat serves as the Steering Group secretary and point of contact.
2. In April 2012 the Steering Group drafted a Concept for an International Polar Initiative (IPI). The main idea of IPI is to combine efforts of key polar stakeholders in achieving a set of mutually agreed societally important objectives in an efficient and economical way. The efficiency of activities and economy of resources would result from strengthened coordination of agency and national programmes and reduction of duplication. IPI is intended to address globally important polar issues through a combination of observations, research and service development.
3. In 2011-2013 the work of the Steering Group was organized mainly by correspondence. The notable exception was the final IPY 2012 Conference "From Knowledge to Action" in Montreal in April 2012. The majority of the Group members were participating, and they used the occasion of the Conference for having a short informal meeting of the Steering Group. IPI was discussed at the several sessions at the Montreal Conference, at the Town Hall of the AGU Fall Session in December 2012 (San Francisco, USA), and at the meetings of several other organizations and programmes. Several organizations informally supported the proposal of IPI. There was general interest in IPI among various stakeholders and research groups.
4. Dr Grimes presented the progress in developing the initiative to the WMO EC-65. The Council recognized that the initial idea of IPD had been fruitfully developed by the Steering Group and evolved into the concept of IPI. It also noted the existence of informal support to the initiative expressed by several international organizations and science forums. The Council agreed that in order to determine the merit for WMO of participating in an IPI, it would be necessary for the Steering Group to finalize the Concept of IPI. The Council requested EC-PORS to continue representing WMO in the inter-agency Steering Group and stated that the WMO polar and cryosphere initiatives such as GIPPS, GCW, and AntON could be considered as prospective WMO contributions to IPI. The Council further requested EC-PORS to consult widely with relevant international organizations and to bring forward recommendations on the optimal level and modalities of the WMO participation in IPI for the Council's consideration at EC-66. Annex 1 to this document contains the corresponding part of the EC-65 final report.

5. On 10 and 11 February 2014 a meeting of the extended Steering Group on a Long-Term Cooperative International Initiative took place in Paris. It was kindly hosted by the IOC of UNESCO. WMO supported travel of 4 participants in the meeting. Experts from the following organizations or activities were present: AMAP, IASC, International Arctic Social Sciences Association (IASSA), International Hydrographical Organization (IHO), IOC/UNESCO, GRIDA/Arendal (on behalf of UNEP), UNESCO, ICSU and Future Earth, European Polar Board (EPB) and European Science Foundation, APECS, Mountain Research Initiative (MRI), and University of the Arctic. Dr V. Ryabinin, the focal point for IPI, participated in the meeting from WMO and WCRP. Ambassador Lind (a Senior Arctic Official from Sweden) participated in a part of the sessions representing the Arctic Council Task Force on Scientific Cooperation. Dr I. Krupnik of the Smithsonian Institution, Dr T. Jung, the Chair of the WWRP Polar Prediction Project, Dr. M. Roué of the French "Museum national d'Histoire naturelle" participated as experts, Dr. D. Scott, Executive Director, Canadian Polar Commission, participated as experts. IOC Executive Secretary and Assistant Director-General of UNESCO, Dr W. Watson-Wright opened the meeting. A co-chair of the Steering Group, Dr D. Hik chaired the meeting. AMAP, IASC, IASSA, IHO, EPB, MRI were represented by their CEOs.
6. The meeting reviewed polar interests and objectives of participating organizations and made a strong attempt to identify commonalities between them. It revised the IPI Concept (Annex 2) and proposed to change its title in order to strengthen its collaborative cross-disciplinary role. Two new titles for the initiative were considered: the International Polar Alliance (IPA) or the International Polar Partnership Initiative (IPPI). One of them should be selected very shortly. The title International Polar Partnership Initiative (IPPI) will be used in this document as preferable because it does not introduce a conflict with the title of the International Permafrost Association and has some other advantages. ECPORS may wish to comment on the proposed titles. The meeting also proposed a way forward (a road map) for further discussion and endorsement of the proposed initiative. The rest of the year 2014 will be used for seeking final comments from potential participants in IPPI (both agencies and nations). At the end of the year, all comments will be included in the final IPPI proposal that will be submitted for consideration by international organizations and nations in 2015. The proposal may be submitted for consideration of the 17th World Meteorological Congress, 28th Session of IOC Assembly, ICARP III and several other high-level meetings. Two more meetings of the Steering Group are tentatively planned for the week of the Arctic Science Summit Week (April 2014, Helsinki) and in November 2014 (possibly in Barcelona) to finalise the IPPI Concept and proposal.
7. The Paris meeting recognised the following advantages of IPPI:
 - the existence of a wide range of common polar interests and objectives of many international organizations and as well as a number of important gaps in the current capabilities and unattended issues in the polar regions that can be addressed through IPPI;
 - compatibility of IPPI with the planning process of various communities and organizations such as ICARP III of IASC, Horizon Scan of SCAR, Arctic Human Development Report II and the resultant ability to accommodate both

bottom-up ideas from science communities and more centralized coordination considerations needed to achieve practical results;

- a possibility to support data interoperability among various stakeholders,
- usefulness of involving alpine activities where relevant, for example in addressing cryospheric issues;
- useful focus on “achieving more with less” leading to efficient use of resources, and
- a possibility of being implemented in an economical way, via ongoing agency efforts and with the support of a “micro secretariat”.

8. After a rather prolonged period of initial planning (2011-2013) of a long-term cooperative international polar initiative, we have now in place:

- an active planning group of representatives of major polar stakeholders;
- a short draft concept of IPPI nearing its completion;
- informal expressions of interest and support from several international polar organizations;
- a draft proposal on the timeline of further development of IPPI and its eventual endorsement by the key stakeholders.

9. One of the difficulties encountered in the IPI planning process has been defensive position of some players who saw IPI as a threat to their own interests and as a possible entry point for unnecessary high-level supervision of their activities. Still there are unfounded concerns vis-à-vis the need for extra funding for IPPI. For WMO, a broad international cooperation initiative like IPPI is not a burden but a useful platform to

- develop and help to sustain observing systems in the polar regions based on sharing of resources and partnership and support the interoperability of the observing systems;
- strengthen the necessary cooperation with communities of researchers;
- bring WMO polar cryospheric initiatives such as GIPPS, GCW, AntON and cooperative activities such as JCOMM and some others, closer to users and make them more relevant for risk management and policy-making and other societal interests in the polar regions.

A very strong and positive involvement of EC-PORS in the final planning stage of IPPI during 2014 is therefore encouraged.

10. EC-PORS is invited to comment on the status of IPPI planning, the IPPI Concept, chosen approach, and the timeline, and to agree on modalities of the EC-PORS contribution to further development of the Initiative, particularly in 2014, with a view of presenting the IPPI to WMO EC-66 and potentially to Cg-17. Personal involvement of some EC-PORS members in finalizing the Concept, their participation in the anticipated meetings of the Steering Group in 2014, a review of the Concept and proposal by correspondence with EC-PORS before the EC-66 and after it would be highly desirable.

EC-65 AGENDA ITEM 4.5: RESEARCH

WMO POLAR ACTIVITIES AND INITIATIVES TEXT FROM THE GENERAL SUMMARY SUPPORTING THE DECISIONS OF EC-65

Polar Observations, research and Services – the International Polar Initiative (IPI)

4.5(5).1 The Council noted with interest the proposal of an International Polar Initiative (IPI) prepared by the inter-agency Steering Group on Long-term Cooperative Polar Initiative. The Council acknowledged the efforts of the Steering Group aimed at impartially reviewing the needs for an International Polar Decade (IPD), which was proposed in 2011 as a means to secure valuable legacies of the International Polar Year 2007-2008 (IPY), and recognized that the idea of IPD has been fruitfully developed by the Steering Group and evolved into the concept of IPI.

4.5(5).2 The Council acknowledged that IPI represents a novel attempt to efficiently respond to the existing challenges of polar observations, research and environmental services that are related to fast and profound changes in the Polar Regions and their likely global implications, and in this regard IPI may have a potential to help WMO to achieve its objectives in the Polar Regions in terms of developing more sustained observing systems and environmental information services. The Council noted with interest that the draft Concept of IPI includes a proposal to comprise observations, research, and services in the “Third Pole Region” in the scope of IPI activities. The Council considered inclusion of these issues as a positive development and thanked the Steering Group on Long-term Cooperative Polar Initiative for elaborating the draft Concept of IPI.

4.5(5).3 The Council noted that the draft Concept of IPI had been presented to several international organizations and science forums, which expressed their initial informal support to the initiative.

4.5(5).4 The Council further noted that the EC Panel on Polar Observations, Research and Services (EC-PORS) had also reviewed the draft Concept of IPI at its fourth session in Lanzhou, China, in March 2013.

4.5(5).5 The Council agreed that in order to determine the merit for WMO of participating in an IPI, it would be necessary for the Steering Group to finalize the Concept of IPI. The Council requested EC-PORS to continue representing WMO in the inter-agency Steering Group. The WMO polar and cryosphere initiatives such as GIPPS, GCW, and AntON could be considered as WMO contributions to IPI, and potential linkages of IPI and the Future Earth could be also considered.

4.5(5).6 The Council further requested EC-PORS to consult widely with relevant international organizations and bring forward recommendations on the optimal level and modalities of the WMO participation in IPI for the Council's consideration at EC-66.

Concept: International Polar Partnership (Initiative)

"Why then do we feel this strange attraction for these polar regions, a feeling so powerful and lasting, that when we return home we forget the mental and physical hardships, and want nothing more than to return to them?"

— Jean-Baptiste Charcot

Why an IPP(I)?

People have always been fascinated by the polar regions. They are often thought of as remote snow and ice covered deserts, where only a few hardy people, explorers and scientists venture. However this view is changing and it's the science at the poles that is leading this change. The polar environment affects the Earth system and its climate in many ways, influencing weather patterns and extreme events world-wide. Both polar regions are being economically exploited and the "opening" of the Arctic will further increase its already significant role as a major player in the global economy. Despite the marked progress in environmental research, scientists are still getting to grips with the multitude and complexity of physical and biogeochemical processes that take place in the both polar regions, and how these relate to the rest of the globe. Because of interrelated physical processes, human activity and teleconnections, it cannot be stated any more plainly: ***what happens in the poles does not stay in the poles.***

Although at present there is wide recognition of the importance of polar issues, much of the current understanding and in particular the relationship between human and natural influences is incomplete. Indeed, we need to look at the poles as a fully coupled human-natural system. ***Change is outpacing our understanding*** of the Arctic and the Antarctic and our ability to provide knowledge for decision-making in polar-related activities.

What will the IPP(I) address?

An IPP(I) will:

- bring together and coordinate those working on polar issues to identify synergies and effectively use existing resources to address important issues of common interest,
- facilitate research to address interaction of human and biophysical systems on many timescales, and
- develop a nuanced understanding of the human and natural processes in the poles that directly relate to the future of people around the world.

With these goals in mind, promising directions for IPP(I) are those which advocate for further, nuanced knowledge of the poles, engage all stakeholders, are relevant to societal issues, and, most importantly, benefit from enhanced collaboration and coordination in polar activities, such as:

- Establishing and maintaining polar observing, assessment, prediction, and services systems
- Promoting interdisciplinary/multiplatform data collection, exchange, and interoperability
- Building capacity in communities of polar scientists and practitioners
- Developing a common language and cooperative synergistic relations between local peoples, social and natural scientists, and practitioners

Are we adequately addressing key problems? If not, what will be the consequences?

The poles remain the most extensive data voids on the planet. Almost all current observing systems depend on short-term research funding, while contributions to polar predictions systems are available in prototype versions only. In the Arctic, polar information services needed for sustainable development suffer from a lack of adequate observations. In the Antarctic, the inadequacy of the observing system results in lack of or insufficient understanding of several key processes.

The ***main polar issues are not addressed at present as effectively as required***. There needs to be a considerably greater sense of urgency among decision makers and awareness by the general public regarding the global importance of environmental issues in the polar regions and of the need to address them in coordinated, sustained, planned, timely, and resourceful manner and to speed up the transition of activities from research to operations. ***A failure to effectively address polar issues will be felt much more strongly and in an increased number and variety of ways by future generations.***

Are we in position to address the existing challenges in the polar regions? If yes, how?

The International Polar Year 2007-2008 produced an unprecedented “snapshot” of the polar regions, expanding greatly our understanding of the poles, while often providing as many questions as answers. At present ***there is the scientific and technological possibility to ensure reliable and comprehensive monitoring of the polar regions*** and to further deepen the understanding of main processes and phenomena and their interactions ***in order to support informed decision making***. However, ***current financial considerations require*** increased efficiency of using existing funding, aiming at ***high return on investment*** and focusing on practical use of research outcomes and the ability to do more with less. ***Cooperation, coordination, and sharing of resources should therefore be the main strategy*** for developing polar activities. Because it is a long-sighted initiative, the IPP(I) will be able to continue to ensure the training of future generations of polar researchers. To achieve the increased

efficiency of joint activities by several organizations ***a common implementation plan is needed for the development of observing systems, research, services, education and outreach, and practical applications of knowledge in the polar regions.*** The plan should help to conduct future polar activities in a socially conscious manner and in a true cooperation with local residents.

Some possible successes the IPP(I) is poised to address are:

- Observation and data assimilation systems in the polar regions that are able to support skillful environmental predictions at a range of time scales, effective environmental assessments, early warning systems, search and rescue, and pollution prevention and combat operations
- Other examples

Scope of the IPP(I)

The IPP(I) is born out of a conviction that the magnitude of the changes at the poles and the strength of their interactions with the rest of the Earth system call for ***full breadth of polar and environmental sciences, observations, data, analysis, modeling, prediction and services.*** A cross-disciplinary and systems approach is needed to address ***both natural and human systems*** as well as their interaction. IPP(I) will not attempt identify important research questions, but will defer this task to its qualified participants. Potential IPPI participants are already doing this through the International Arctic Science Committee's 3rd International Conference on Arctic Research Planning (ICARP-III), "crowdsourcing" techniques such as the Scientific Committee on Antarctic Research's Horizon Scan, and the International Arctic Social Science Association's Arctic Human Development Report II. These "bottom-up" processes rely on expertise and enthusiasm of broad research communities.

The IPP(I) recognizes significant similarities between polar and alpine regions. Observing systems in alpine regions are generally less developed than elsewhere, much like the poles. Overlapping extreme environments can play host to related physical, ecological, or human systems. ***Linkages between high latitude and high altitude environments are important*** for the IPP(I) and will be included in the planning documents in all aspects where considerable synergies are to be expected.

*Outreach, education, mentoring, training of ***early career scientists and specialists*** both the North and South are necessary conditions for the initiative's success and an investment into building the work force for decades to come. In addition, meaningful and resourceful involvement of the ***local residents***, including indigenous peoples, should be ensured.*

Who will participate in the IPPI?

In order to address polar challenges, major national and international agencies and organizations will have to have a broad range of individual and cooperative activities. Taking into account the stakeholders' main goals, objectives, resources

and available expertise and comparing them with the magnitude of the challenges facing us, lead to the unequivocal conclusion that ***no stakeholder can effectively achieve its objectives in the polar regions without efficient coordination and sharing resources with partners.***

This IPP(I) Concept Document has been developed with input from representatives of organizations such as:

- Arctic Monitoring and Assessment Programme (an Arctic Council Working Group)
- Association of Polar Early Career Scientists
- GRID-Arendal (for UNEP)
- Intergovernmental Oceanographic Commission of UNESCO
- International Arctic Science Committee
- International Arctic Social Sciences Association
- International Council for Science
- International Hydrographic Organization
- Mountain Research Initiative
- Scientific Committee on Antarctic Research
- UNESCO
- University of the Arctic
- World Meteorological Organization

The IPP(I) is envisioned as a platform to bring together organizations (national, international, intergovernmental, academic, industrial, etc.) with interests in the goals and topics stated in this concept document. Because the IPP(I) aims to bring other groups to the same table and values coordination rather than additional new programs itself, it is envisioned that it can be run by only a micro-secretariat (part time person?) which facilitates frequent and close communications between participants.

While international organizations provide a forum for discussion of issues, finding joint approaches and solutions, it is the nations that are the final beneficiaries of the joint activities and the main actors of them. Small funding for programme coordination will initially come from international agencies and programmes but the main bulk of resources required for research and development activities, field work, construction, and exploitation will come from interested nations.