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IPY Report for ATCM XXX

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30 March 2007

The International Programme Office of the International Polar Year 2007-2008 welcomes the opportunity to bring the following information to the attention of all parties at ATCM XXX.

1) IPY Launch and Opening Ceremonies

The International Polar Year 2007-2008 launched on 1 March 2007 with broad international participation in launch events and extensive international press coverage. More than 30 institutions, organizations and nations conducted IPY launch celebrations. As shown on the IPY web site (www.ipy.org), more than 20 Consultative Parties to the Antarctic Treaty conducted IPY ceremonies or issued IPY declarations. In approximate chronological order of event or declaration:

New Zealand, Bulgaria, Argentina, Ukraine, UK, USA, Australia, Brazil, China, Finland, France, Germany, Italy, Japan, Norway, Poland, South Africa, Spain, Sweden, Netherlands, Russian Federation.

In addition, the SCAR President and SCAR Executive Director attended the IPY International Opening Ceremony held in Paris on 1 March 2007.

2) IPY Projects

IPY starts with 228 endorsed Projects: 170 in wide areas of science, 1 broad international collaboration on data management, and 57 education, outreach and communication activities. Of the IPY science Projects, 82 focus on Antarctic systems or on global processes that connect to and influence Antarctic systems. These Antarctic Projects include a very broad range science, from geology to glaciology and from archaeology to astronomy. Unlike previous Polar Year's, IPY 2007-2008 includes a very strong focus on ecology, biodiversity and biological processes, particularly in the Southern Ocean.

Overall, approximately one third of IPY Projects have substantial funding. Another one third have partial funding. As more nations develop IPY funding resources and processes, the funding situation for IPY Projects should continue to improve. At this point, funding for Antarctic research, particularly in areas of ecology, geology, glaciology, and oceanography, appears somewhat deficient relative to other areas of IPY science.

3) IPY Education and Outreach

In addition to IPY launch events and celebrations mentioned above, researchers and educators from many nations and organizations participate in international education and outreach activities. The 57 IPY Endorsed Education and Outreach Projects include films, books, museum exhibitions, atlases, classroom materials, conferences, workshops, voyages, and expeditions. As for the IPY Science Projects, only approximately one third of these Education and Outreach Project have sufficient funding to achieve their goals. Several nations evaluate education and outreach proposals separately from, and after, science proposal evaluation, so as for science funding, education and outreach funding should improve. However, IPY experience already shows that truly international education and outreach projects, those that might have broadest impact, face substantial difficulties in national funding processes.

IPY calls to the attention of all Parties at ATCM XXX the existence and potential excellence of several education and outreach activities directly relevant to Antarctica:

- 'Enhancing the Environmental Legacy of the IPY in Antarctica', led by the Antarctic Southern Ocean Coalition (ASOC), involving France, Argentina, Australia, Netherlands, South Africa, South Korea, and USA. This project aims (i) to assess and enhance the environmental legacy of the IPY 2007-08, (ii) to raise the environmental awareness of present and future generations of scientists and visitors, and (iii) to promote the long-term protection of the Antarctic wilderness.

- ‘Antarctic Touring Exhibition’, led by Natural History Museum, London, in partnership with the British Antarctic Survey, involving UK, France, Germany, Netherlands, USA, and Spain. This exhibition intends to explain the diversity, value and importance of Antarctic science, its international framework and its global linkages.
- ‘Antarctic Mission: multi-media exploration of the science of climate change in Antarctica’, led by ISMER (Institut des Sciences de la Mer de Rimouski, Canada) in partnership with Instituto Antartico Argentino, also involving Australia, UK and USA. This project provides an opportunity for thousands of people around the world to follow, on a daily basis via the internet, the exciting voyage of the three-masted sailing ship SEDNA as she travels to Antarctica.
- ‘RSV-INTREPID’, led by The Royal Society of Victoria (Australia), also involving New Zealand and UK. RSV-INTREPID aims to leave an understanding of the vital importance of polar regions (particularly Antarctica) to the global environment through its continuing promotion and advancement of science and technology and the encouragement of youth to pursue a career in Science.
- ‘International Antarctic Institute’, led by University of Tasmania (Australia), and involving Brazil, Malaysia, USA, Chile, New Zealand, UK, France, Norway, Germany, Spain, and Japan. The International Antarctic Institute (IAI) will serve as an educational centre for Antarctic programs facilitating cross accreditation of courses from partner institutes to deliver multidisciplinary educational programs at both the undergraduate and graduate level and provide partner institutes with access to an otherwise unavailable breadth of Antarctic courses and research programs. The IAI will facilitate the delivery of knowledge and information needed by the next generation researcher and policy maker to address sustainable resource management, climate impacts and other global environmental and social issues associated with Antarctica and the Southern Ocean.
- ‘The Sixth Continent Initiative - Capacity Building in Antarctic Scientific Research’, led by the International Polar Foundation, SCAR, and the International Antarctic Institute, and involving Belgium, UK, South Africa, Australia, Kenya, Japan, Malaysia. This project aims to open up possibilities for researchers from developing countries to conduct research in the Antarctic, and to introduce a new group of people to the culture of international scientific cooperation in Antarctica.

4) IPY Legacies

IPY should produce many legacies. Some we can already name: vast steps forward in data and information and improved skill of global and regional weather and climate models, for example. Others, involving new systems for attribution and distribution of scientific information, new science funding paradigms, or even new political or economic cooperation, may come into view more slowly.

For two identified and anticipated IPY legacies, namely the recruitment of next generations of vigorous and talented polar researchers and the establishment of longterm sustained polar observational systems, planning and action now, at the onset of IPY, will ensure maximum impact and success.

Two SCAR actions seem particularly appropriate and urgent for these legacies. First, SCAR should continue and strengthen its young scientist fellowship programme and should, together with IASC, formally accredit and support the developing international Association of Polar Early Career Scientists (APECS). Second, SCAR should continue to provide leadership and energy for the planning, development and implementation of pan-Antarctic observing systems.

IPY 2007-2008 highlights the particular need for sustained polar observing systems. From the rich history of previous Polar Years, we already recognize the need to study the Earth as an integrated system, and that we require “coordinated, synchronized and long-term sustained observations to provide information on characteristics, changes and the distinctive nature of phenomena in space and time” (Weyprecht, 1879).

During this IPY, the ATCM might like to note that the Arctic Council Ministerial Meeting of 26 October, 2006 has provided a mandate for sustained Arctic observing networks by urging *"all Member countries to maintain and extend long term monitoring of change in all parts of the Arctic, and request[ing] ... efforts to create a coordinated Arctic Observing network that meets identified societal needs"*. In view of this Arctic IPY initiative, and in view of the need to carefully and continuously observe both polar regions, the IPY IPO on behalf of the global polar research community would feel most encouraged if at this time the ATCM could be persuaded to urge the Treaty Parties to do the same, with language much like the following:

- "ATCM urges Treaty Parties to maintain and extend long term monitoring of change in all parts of the Antarctic, and requests its subsidiary bodies to cooperate with SCAR and other partners in efforts to create a coordinated Antarctic observing network that meets identified societal needs".

The IPY sponsors, ICSU and WMO, have from the start seen IPY as a unique and compelling opportunity to develop sustained observing systems at both poles as key elements of the IPY legacy, in order to improve our ability to detect and understand change in polar regions as the basis for improving forecasts of further change, and so as to guide policy makers in their attempts to mitigate or adapt to future change.

In this regard, IPY notes that SCAR's climate review paper for ATCM (IP 05) clearly underlines the fact that major change is going on especially in the Antarctic Peninsula, and that the potential for major change arising in West Antarctica as the Earth's temperature passes key thresholds is high, with potentially dire effects on sea level.

Finally, IPY particularly calls to the attention of all Parties SCAR's annual report to the ATCM (IP06) which highlights ongoing activities to develop (a) a bipolar cryosphere observing system; (b) a Southern Ocean Observing System, and (c) PAntOS a Pan-Antarctic Observing System network which would incorporate (a) and (b) plus other programmes for observing different parts of the Antarctic System (solid Earth, and lower and upper atmosphere).

5) IPY Events

At the fifth meeting of the IPY Joint Committee, held 28 February and 2 March 2007, the JC endorsed a general IPY science conference plan that anticipates major international IPY-specific or IPY-focused events every 2 years, starting in 2008. In this sequence, 2008 would represent an opportunity for initial and mid-course assessment, 2010 would represent an early look at IPY science, and 2012 would represent an opportunity for overall assessment.

The IPY JC has endorsed initial plans for the first two (2008 and 2010) events. The SCAR/IASC Open Science Conference, scheduled for St. Petersburg from July 8-11, 2008, with the bipolar theme: 'Polar Research - Arctic and Antarctic Perspectives in the International Polar Year' represents a timely and welcome opportunity for IPY mid-course assessment. An Early Science Conference, hosted by Norway and tentatively scheduled for May or June of 2010, represents a timely and useful opportunity to stimulate discovery and collaboration.

Submitted by:

D. Carlson, IPY IPO