

# **3rd Annual PPS Arctic Meeting**

## **5-8 April 2008**

### **Memorial University, St. John's, Newfoundland, Canada**

*Notes compiled by Gareth Rees. These are not complete minutes of the meeting, which split into parallel sessions on a number of occasions, but are an attempt to summarise the main direction of the plenary sessions. These notes should be read together with the agenda of the meeting, and copies of presentations.*

#### PPS Arctic Board Meeting

The PPS Arctic Board discussed its role, membership, timing of meetings, development of current activities, strategic use of the IPY period, and the future after the IPY period. A summary of its discussions was presented by Gareth Rees on Sunday 6 April (see note below).

#### Topic-specific group meetings

The Norwegian-Russian group (PPS Arctic Norway and BENEFITS projects) discussed its approach to Remote Sensing activities. The following aspects were discussed:

- Region of study. The core area is northern Fennoscandia plus the Kola Peninsula, but with the intention of extending farther east if possible. The southern boundary of the study area is not clear. One possibility is simply to use the AMAP definition, which in the core area would imply the Arctic Circle as the southern boundary.
- Availability of high-resolution imagery, including what can be obtained through Google Earth.
- Availability of Digital Elevation Models.
- Classification methods for high-resolution data. A methodological survey and accuracy assessment should be carried out.
- Base scale for remote sensing studies. This was agreed as 15 m, corresponding to the highest resolution of Landsat ETM+ pixels.
- Possibility of determining historical treelines using archived satellite imagery (e.g. Landsat TM and MSS, and Corona) and aerial photographs.
- Outputs: methodological papers, maps of core territory and all territory, analysis of historical treelines and changes.
- The group also discussed the scope of fieldwork to be carried out during summer 2008.

(No notes currently available for other sessions)

#### Aim of the meeting and brief update on PPS Arctic (structure, components, history and overall aim)

Annika Hofgaard introduced PPS Arctic in the following terms:

Who we are? How did we get here? What is our role and responsibility within IPY? Why do we hold annual meetings? They represent the main tool to keep the project together. Annika summarised the PPS Arctic meetings from 2005 onwards. The main aim of this year's meeting is to think about products from PPS Arctic. These can be thought of at different levels – the project level, national, bilateral and circumarctic levels. Types of product include: scientific publications, knowledge, networks, sites, and a legacy for next IPY. Our aim is to encourage circumarctic collaboration, and especially the exchange of students and young scientists. The poster session (see below) is intended to provide active input to the discussion and design of products.

Annika then presented information on the countries involved in PPS Arctic and statistics of membership, and placed the International Polar Year (IPY) in recent and historical context from the first and second Polar Years (1882-3, 1932-3), through the International Geophysical Year (1957-8) to the IPY (2007-8/9). The polar regions are recognised as key parts of the global system. The IPY fosters international collaboration and has as its characteristics that it addresses convincing science issues, promotes research activities that would not otherwise occur, focusses on international coordinated polar observations and analysis, attracts and develops the next generation of polar scientists, and engages the public. It is also multidisciplinary, bipolar, innovative and socially relevant.

Next Annika outlined the history of PPS Arctic and its current structure. Although the official end of the IPY is in March 2009, some of the constituent projects within PPS Arctic are in fact funded until 2011.

Annika then outlined the approach to be taken in reporting the activities of national groups (see below). This should include: status of included projects; funding situation; active study sites; geographical representation; thematic representation; recruitment needs; student involvement.

The status of the PPS Arctic Manual was described. Briefly, although it is still being edited it has already been used.

The PPS Arctic website exists in a draft form. It is not yet live, but can be seen at <http://www4.nina.no/pps>. It will require input and updates.

Gareth Rees summarised Saturday's board meeting. The role of the board is seen as being to keep PPS Arctic 'on the road', to keep informed of (and to try to influence) relevant national developments, and to keep informed of relevant networks and projects, establishing links where appropriate. The board had concluded that it would be desirable to include a student member in future.

The board also discussed the strategic use of the IPY period. This is in fact reflected in the themes of the annual meetings: Québec (2006) – planning; Tromsø (2007) – protocol design; St John's (2008) – products; Russia (2009) – results. The 2010 meeting will probably be held in Edmonton, again with a focus on results. Probably this will be

arranged as, or to include, an open conference.

Finally the board considered the possibilities and potential responsibilities for long-term networks after the IPY. The intention is to create an open, stable international network which will maintain the recognition and support of IASC and will provide continuity of sites, networks, data and field stations. We should aim to continue annual or perhaps biennial meetings after IPY, and should learn from other successful long-term networks. A focus on students will be desirable, and we should think strategically about funding in the future. The next IPY may be in 2058!

Short update by national groups/projects (*national representatives; 10 min/country*)

**Presentations** were given as follows (copies of presentations are available)

Norway (Annika Hofgaard)  
Canada (Karen Harper)  
Russia (Tatiana Vlassova)  
Sweden (and USA) (David Cairns)

Nancy Doubleday provided some comments on the social protocols and projects related to them.

PPS Arctic Manual: work report and discussion

Work on the manual was well advanced. The meeting broke up into working groups to make progress on individual sections of the manual and these working groups reported back to the plenary session. Since no-one was planning any phenological measurements, the phenology protocol was deleted. For each of the remaining sections, a lead editor and two assistants were identified. Each lead editor would be responsible for his or her own section with input from the assistants, and the finally agreed section would then be forwarded to Gareth Rees who would edit the whole document. The lead editors for the remaining sections were:

I: site-level measurements: Gareth Rees  
II: individuals and vegetation: Greg Henry  
III: soil measurements: John Jacobs  
IV: regional socioeconomic and cultural observations: Nancy Doubleday.

Products

Several types of product are envisaged from PPS Arctic. These are likely to include: Scientific publications (PhD and MSc theses, research papers, book chapters, journal volumes and books), popular science publications, enhanced knowledge (PhD and MSc degrees, skilled young scientists), a scientific network (at present we have PPS Arctic/TTI, but we should consider how it can be developed and given a future after IPY), sites, and a long-term legacy (we should think in terms of a 10- and 50-year

timescale. Publications and sites will still exist after 50 years, while many of the people involved in PPS Arctic are unlikely still to be active in research and networks are unlikely still to exist.)

Planned products were discussed by topic, and by country. Gareth Rees presented the results of a breakout discussion on geospatial products, Brian Starzomski presented the results of a similar discussion on ecological products, and Nancy Doubleday on socio-cultural products. **Presentations** of all of these discussions are available.

Karen Harper presented the planned products from Canada, although these were not exclusively Canadian. These included synthesis papers, book chapters for the IPY series 'From Pole to Pole', a special issue of an arctic journal, results from individual projects, as well as data (with metadata in compliance with the standards established for the IPY, and with secure, accessible long-term storage), non-technical products (national treeline map, a children's book, and a legacy of non-technical publications for northern communities), and non-print products (plant collections, photographs, northern tree seed storage). Annika Hofgaard presented the planned products from the Norway-Russia-UK group, including theses, scientific publications (identified in detail), workshops, and exchanges of scientists and students. **Presentations** are available for both sets of national products. These presentations in general identify the task leader, task workers, work titles, data characteristics, timeline and need for fieldwork of all products.

Some general points emerged during discussion of products. A policy on authorship would be helpful, for example defining who should be a co-author of a paper and the responsibilities of co-authorship. PNAS has a statement that could perhaps be adapted, and ITEX also has authorship protocols. A suitable statement could be included on the PPS Arctic web site, along with a standard form of words (and keywords) that should be used to acknowledge PPS Arctic/TTI. Brian Starzomski agreed to investigate these possibilities. The web site should also have a non-public area where preliminary data can be stored and shared.

Peter Kershaw suggested that we could also aim to produce something similar to the ACIA report, perhaps with a PDF summary version on the PPS Arctic web site if this is acceptable to the publisher. David Cairns initiated a discussion of the desirable balance between books and journal articles as output. There was general agreement that books are less desirable than journal articles. There was also some discussion of suitable journals at which to target publications. *Arctic* was thought to be particularly suitable in general, other journals mentioned included Canadian Journal of Forestry Research and Global Change Biology.

#### Graduate student and postdoc project presentation

Postdoc **presentations** (available as PDFs) by: Brian Starzomski, Mikhail Zimin, Silvie Blangy, Ryan Danby, Keith Lewis.

Student **presentations** (available as PDFs) by: Ingrid Ertshus Mathisen, Danielle

DeFields, Carissa Brown, Andrew Trant, Tatiana Kravchenko, Morgan Ip, Rod Savidge (on behalf of Xin Yuan and Charlene Baker), Elena Glukhova, Steve Mamet, Gavin Kernaghan, Valérie Guèvremont, Scott Williamson.

Ways forward: Integration of scientific fields; Student involvement; Student exchange; Recruitment; Sum up of plans for 2008-2009; Next meeting

### *Collaboration within PPSA*

The circumpolar perspective needs to be enhanced (how can we get North America closer to Europe?) One possibility is to find funds for student exchange. Perhaps we can do something associated with next year's meeting? But transatlantic air fares increase markedly on 1 June so this might be expensive. Or organise a graduate course before the next meeting (e.g. on statistics, remote sensing, data analysis and synthesis).

### *Summary of plans for 2008-09*

Products have been identified at project, national and PPS Arctic levels, in most cases with lead authors. Some are scheduled for completion during 2008-09.

Fieldwork – all sites with funding will be active.

Student exchange.

Long term network – we should aim to keep IASC informed about the TTI/PPSA success story (this is a task for the Board)

Web page – please visit it and send updates.

A list of participants with e-mail addresses, and an e-mail mailing list which people can invite themselves to join, should be set up.

The PPS Arctic logo should be finalised. (This is more or less done.)

### *Election of student member to Board*

Andrew Trant was elected to the Board.

### *Next annual meeting*

It was agreed that the 2009 annual meeting should take place in the Russian arctic, at Apatity or Kirovsk, probably in April 2009. It will be hosted by the Russian Academy of Sciences and Moscow State University. Its focus will be the presentation of results and refinement of products, and it is expected that it will therefore be more of a conference than a workshop. The duration was not decided. This might depend on whether there is a pre-meeting and/or a field trip afterwards. However, it will be desirable to move quickly because the area is a popular skiing resort. There is also a possibility that visas may take a long time to arrange,

### *Open science conference 2010*

There was some discussion of the 2010 meeting, which will be at least in part an open

conference (with registration fees – PPS Arctic Canada is not expected to bear the cost). The date might most suitably be in the autumn, and the location was tentatively identified as Edmonton. Coordination with other IPY conferences will be investigated. The responsibilities of the Board and of PPS Arctic Canada need to be clarified.