Newsletter December 2005

Contents
1. Commission (short) history, rationale and steering committee
2. Past activities: Co-sponsoring of conferences and sessions
3. Upcoming conference participations
4. Activities within the IPY

CRE Steering Committee

Chair:
Martin Gude (Department of Geography, University of Jena, Germany)

Co-chair:
Christer Jonasson (Abisko Scientific Research Station, Sweden)

Members:
Nancy Doubleday (Carleton University, Ottawa, Canada)
Ole Humlum (University of Oslo, Norway)
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Jef Vandenberghe (Vrije Universiteit, Amsterdam, The Netherlands)
Tatiana Vlassova (Russian Academy of Sciences, Moscow, Russia)
Xiaoping Yang (Chinese Academy of Sciences, Beijing, China)
1. Commission (short) history, rationale and steering committee

During the International Geographical Congress in Glasgow in August 2004, the International Geographical Union (IGU) renewed its focus on periglacial topics by approving the new Commission on Cold Region Environments. This was initiated by Jef Vandenberghe, who already led the former commission activities on periglacial topics.

On this occasion, a formal Agreement of Cooperation was signed by the presidents of IGU and IPA (International Permafrost Association) committing the two organisations to the establishment of the new Commission in order to extend their joint activities and related cooperation.

The commission has a broad scope related to polar and high mountain environments. These sensitive cold-climate regions face increased impacts and responses to environmental stresses, the consequences and sources of which are not purely physical. Hence, these issues require the incorporation of social, economic and environmental aspects.

The themes stress the need for interdisciplinary efforts to assess an integrated understanding of cold region geo-ecosystems, including land use and climate change issues. A second focus is on the improvement of combining process and geo-archive information in arctic and alpine environments as well as in former periglacial environments.

Within this geographical-oriented commission, an integration of many aspects of the physical environment with the social and economic realms, such as sustainable development, is emphasized. Commission activities concentrate on the organisation and co-sponsoring of topical workshops and conference sessions, as well as contributing geographical expertise to organisations dealing with cold region issues.

2. Past activities: Co-sponsoring of conferences and sessions

**Shifting lands: new insights into periglacial geomorphology**


Conference themes: Periglacial dynamics, Weathering in cold areas, Paraglacial dynamics

Organized by: Samuel Etienne, University Blaise Pascal Clermont-Ferrand 2, Laboratoire de Géographie physique CNRS GEOLAB.

The conference was co-Sponsored by: IGU Commission on Cold Region Environments, Comité National de Géographie — Association Française du Périglaciaire, Groupe Français de Géomorphologie (GFG), ESF — European Science Foundation SEDIFLUX Network.

**2nd European Permafrost Conference EUCOP**


Organized by: Hans-W. Hubberten, Alfred-Wegener-Institut für Polar und Meeresforschung, Forschungsstelle Potsdam
The CRE commission co-organized and chaired together with M. Davies (IPA Working Group Permafrost Engineering) and A. Kaeaeb (IPA Working Group Glacier and Permafrost Hazards in High Mountains) the Session 9 with the theme "Permafrost engineering, land use planning, hazard and risk assessment in the context of global change". A total of almost 50 oral and poster presentations were given in this session.

Additionally, the CRE commission presented itself in a talk with the title “The IGU commission on cold region environments within the context of changing land use impacts in permafrost areas”.

Second International Conference on Arctic Research Planning
ICARP II
November 10 - 12 2005, Copenhagen, Denmark
http://www.icarp.dk/Index.html

The goal of ICARP is to prepare Arctic research plans to guide international cooperation over the next 10-15 years.

A comprehensive pre-conference process has engaged over 140 scientists in the preparation of eleven draft science plans, now available.

ICARP brings together senior and young scholars, policy experts, Arctic indigenous and other residents, science and land managers as well as funding agencies to discuss and extend the draft plans taking special note of the problems, priorities and concerns of those who live in or near the Arctic.

The outcome of ICARP will complement ongoing national and international programmes and planned major initiatives, such as the International Polar Year (IPY), in order to guide international cooperation over the next decade of change in the Arctic.

The ICARP Themes
- Sustainable development and Arctic economies
- Indigenous peoples and change in the Arctic
- Arctic coastal processes
- Deep central basin of the Arctic Ocean
- Arctic Ocean margins and gateways
- Arctic shelf seas
- Terrestrial cryospheric and hydrologic systems
- Terrestrial biosphere and biodiversity
- Modelling and predicting Arctic climate and ecosystems
- Resilience, vulnerability and rapid change
- Science in the public interest

An abstract has been submitted by the CRE commission with reference to the themes 1, 7 and 10. The presentation was by poster and is entitled: The International Geographical Union (IGU) commission on “Cold Region Environments” within the context of changing land use impacts in arctic areas. Various steering committee members of the CRE commission will attend the conference.
3. Upcoming conference participations

IGU 2006 Brisbane Conference, Australia, 03.-07. July 2006
www.igu2006.org

Conference Theme: Regional Responses to Global Changes – A view from the Antipodes

The IGU 2006 Brisbane Conference will focus on regional responses in a changing world with emphasis on tropical and arid zones, particularly in Australia, New Zealand, south-east Asia and the south-west Pacific.

The programme will include a package of specialist conference sessions on relevant, contemporary regional themes, such as: vulnerability and hazard management; dynamic processes (catchment, coastal, etc.), environmental change; managing impacts of human actions in forestry, fishing, coastal development, tourism and urbanisation; migration; policy development and implementation; governance issues.

While the regional overlap between this conference theme and the CRE commission focus is weak, the topical overlap is strong. Therefore, the CRE commission proposed the topic “Cold region environments and global change” for specialty paper sessions. For this topic a whole afternoon is reserved, i.e. two sessions with 90 minutes each.

The specialty sessions is planned to be convened by the commission members M. Gude and N. Doubleday.

Researchers from any field interested in cold region environments should consider submitting an abstract via the above mentioned homepage. Please be aware of the following deadlines:

24 February 2006: Deadline for receipt of abstracts that are eligible for consideration in specialist sessions.

28 April 2006: Deadline for receipt of abstracts for inclusion in general paper sessions. (These papers may, however, be relocated into a relevant specialist session, where desirable).

Asian Conference on Permafrost and Field Excursion Along the Qinghai-Tibet Railway
7-9 August 2006, Lanzhou, China
http://www.casnw.net/permafrost/index.html

Field Excursion Along the Qinghai-Tibet Railway: 10-16 August 2006

Conference theme

Under a changing climate and influenced by steadily increasing anthropogenic activities, the permafrost in Central Asia has been undergoing dramatic changes due to its warm characteristics and unique environments at high elevations. As a result, the evolution of permafrost environments substantially impact natural ecosystems, engineering infrastructures, and land use due to their close interactions with the underlying permafrost conditions. The construction of the Qinghai-Tibetan Railway (QTR) that traverses 632 km of permafrost has attracted much attention. The QTR is scheduled for operation in 2007, with the main construction completed in 2006. Other
major cold regions projects in China are the West Line of Water Diversion Programs from the Yangtze to the Yellow Rivers, oil and gas pipelines with Kazakhstan and Russia, and electric transmissions. These programs influence natural ecosystems in permafrost regions and require continued research on frozen ground and on the impacts to the natural ecosystems, and cooperation among countries in Central Asia and their mountain and plateaus regions.

The first Asian Permafrost Conference will be held on 7-9 August 2006 in Lanzhou, China, under the auspices of the International Permafrost Association (IPA), Chinese Geographical Society, and Chinese Academy of Sciences State Key Laboratory of Frozen Soils Engineering (SKLFSE).

The following topics are included but not limited to:
- permafrost engineering, properties of frozen soils, model development, and their applications;
- permafrost hazards and periglacial environments in mountain/plateau regions;
- climatic and environmental and cryospheric changes;
- permafrost hydrology and cold regions water resources and land use; and
- monitoring, mapping, and modelling of mountain and high-elevation permafrost.

Reports and papers are welcomed from all permafrost regions of the world. A series of peer-reviewed papers are proposed for publication in English-language journals. An abstract volume will be available at the conference. The official language is English.

Results of the conference will contribute to the IPA planning and implementation for the International Polar Year (2007-08) and the International Year of Planet Earth (2007).

The post-conference field trip is planned on 10-16 August 2006. Participants will travel along the QTR from Golmud to Lhasa to inspect the completed QTR, operating Qinghai-Tibet Highway and fiber-optic cables, and recently rehabilitated Product Oil Pipeline.

**Deadlines**

Abstract for oral and poster presentations: 30 January 2006
Registration for hotel and field excursion: 30 June 2006

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4. **Activities within the International Polar Year (IPY) 2007/8**

**International Polar Year (IPY) 2007/8**

Following an initial call launched by an international Joint Committee, the CRE commission has submitted an Expression of Intent (EoI) with the title “LUPOG - Land Use Impact in Polar and Sub-Polar Geosystems”.

**Aims of LUPOG**

To maintain sustainable land use in polar and sub-polar regions, an understanding, observation, controlling and modelling of geosystem reactions is of major importance.

To cope with these problems, an international programme with three stages is suggested:
1.) An assessment of actual and projected future land use will provide basic data on impacts and their consequences.
2.) Establishment of a monitoring system suitable to assist in the evaluation of future changes in land use in polar areas and their impact on the geosystems.
3.) In order to facilitate the evaluation of actual and future land use impacts, a best practices manual should be produced.

The full EoI can be reached on the website mentioned above.

The international organizing committee of the IPY assessed the LUPOG EoI as one that has the potential to make a significant contribution to the IPY 2007-2008. Ongoing is the clustering and reorganization of the initial EoIs into core projects. The LUPOG proposal attracted interest from various leaders of core projects and the LUPOG themes have been included in several of these core project proposals. For example, LUPOG is among others included in one of the major Swedish IPY initiatives, ENVISNAR (Environmental baselines, processes, changes and Impacts on people in sub-arctic Sweden and the Nordic Arctic Regions, full Proposal 213). The international co-ordination process is ongoing and a next deadline for submitting full proposals is January 30th.

While the approval process is an internationally co-coordinated system (refer link for further details) through a top-down and bottom-up process of project ideas and co-ordination, the funding will basically remain on a national basis.

5. Further activities

1.) The CRE commission intends to launch a book project with the topic "Cold Region Environments". The book is intended to address the general public (e.g. teachers) and is therefore in the context of outreach and education rather than pure science. A list of contents is planned to be compiled in the near future. Potential authors should then be contacted and asked for contributions. Further details will be discussed on the workshop in 2006.

2.) Two workshops are intended to be organized by the CRE commission within the next two years. The themes should cover human dimensions and sustainability in cold regions.
- May/June 2006 in Basel (Switzerland)
- Summer 2007 in Russia or Sweden (Abisko)

Further details about these workshops will be published soon.