

NEESPI Summit **SUMMARY**

3-4 May 2007, Helsinki, Finland

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Purpose of the Summit

To develop a plan for expanded involvement of Funding Agencies, Institutions, Private Companies and Nations in the current and future work of the NEESPI projects.

Format of the Summit

- **Brief reports of the NEESPI leaders**
- **Guidance from the ESSP leadership**
- **Sessions to achieve the above mentioned Purpose**

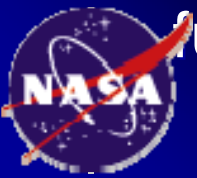
The NEESPI Vision Was to Provide . . .



- Opportunities to uniquely draw together knowledgeable scientists and develop mechanisms for obtaining and sharing sometimes difficult-to-obtain data and results about this large landmass and conduct critically important, unbiased Earth systems science
- An approach to enabling scientific investigation by collectively overcoming bureaucratic and logistical obstacles for international scientists participating in research in Northern Eurasian countries.
- An instrument for coordinating with other countries and multiple government agencies on Northern Eurasian science topics of mutual interest - and defining the roles where each partnering organization can contribute effectively
- A tool for defining and developing a prioritized science planning strategy for optimizing allocation of scientific resources for the study of this enormous complex region of global importance
- A mechanism for integrating disparate Earth science investigations from many countries and agencies that are already working in the region of Northern Eurasia

NASA Role in NEESPI

- Co-Lead (with ESA and CNES) the NEESPI remote sensing component
 - Develop and maintain a regional satellite data base with raw data and products
 - Develop and distribute special remote-sensing based datasets useful for climate modeling
 - Facilitate access to satellite data and products by NEESPI investigators
 - Support regional calibration/validation activities
- Partner to support Focus Research Centers, Science Data Centers, NEESPI logistics
- Support regional network activities
- Support NEESPI projects with a remote sensing component that were peer-reviewed and selected for funding by NASA



	Russia	US NASA	US NOAA	CHINA	ESA & EEC	Japan
Res supp	Yes					
Integ within	Yes					
Integ outside	Yes	Yes		Yes		
Comm to world	Yes					
Access to know/sc	Yes					
Product evaluat.		Yes			Yes	
Org data syst					Yes	
Data users		Yes			Yes	

Major Research Topics:

Romanovsky

- **Cryosphere - ecosystems interactions**
 - Permafrost - land cover (vegetation, hydrology)
 - Snow cover, glaciers, sea ice – ecosystems
 - Impact on regional and global carbon cycle
- **Cryosphere - climate interactions**
 - Interactions with surface energy budget
 - Direct (e.g., changes in albedo, surface roughness and other biogeophysical feedbacks)
 - Indirect (e.g., changes in atmospheric composition and other biogeochemical feedbacks)
 - Glaciers – terrestrial hydrology
- **Cryosphere – societal interactions**
 - Infrastructure
 - Natural hazards and disturbances
 - Subsistence

Currently, there are the following NEESPI Focus Research Centers

- *Center for Cold Land Processes and Arctic Coastal Studies*
 - *strong program with links to other international activities*
- *Center for Water System Studies*
 - *broad research agenda tied to the water cycle and GWSP agendas*
 - *interested in integrating all aspects of the water system*
- *Center on Aerosol Studies*
 - *strong research program on aerosols, good integration within the FRC*
 - *educational initiatives*
- *Center for Land Use Studies (GLP)*
- *Center for Biogeochemical Cycle Studies*
 - *strong data services related to land surface and carbon*
- *Center for Land Cover Studies (GLP)*
- *Regional Center for Dry Land Processes Studies*
 - *strong program in China; needs links with other countries*
- *Regional Center for NEESPI Studies in Eastern Europe*
- *Regional Center for NEESPI Studies in Siberia (CliC)*

Additionally, we envision (project): Center for Integration of the NEESPI Results and Modeling Studies, and two more Regional FRCs (in Moscow and Vladivostok)

CLiC
Lytle

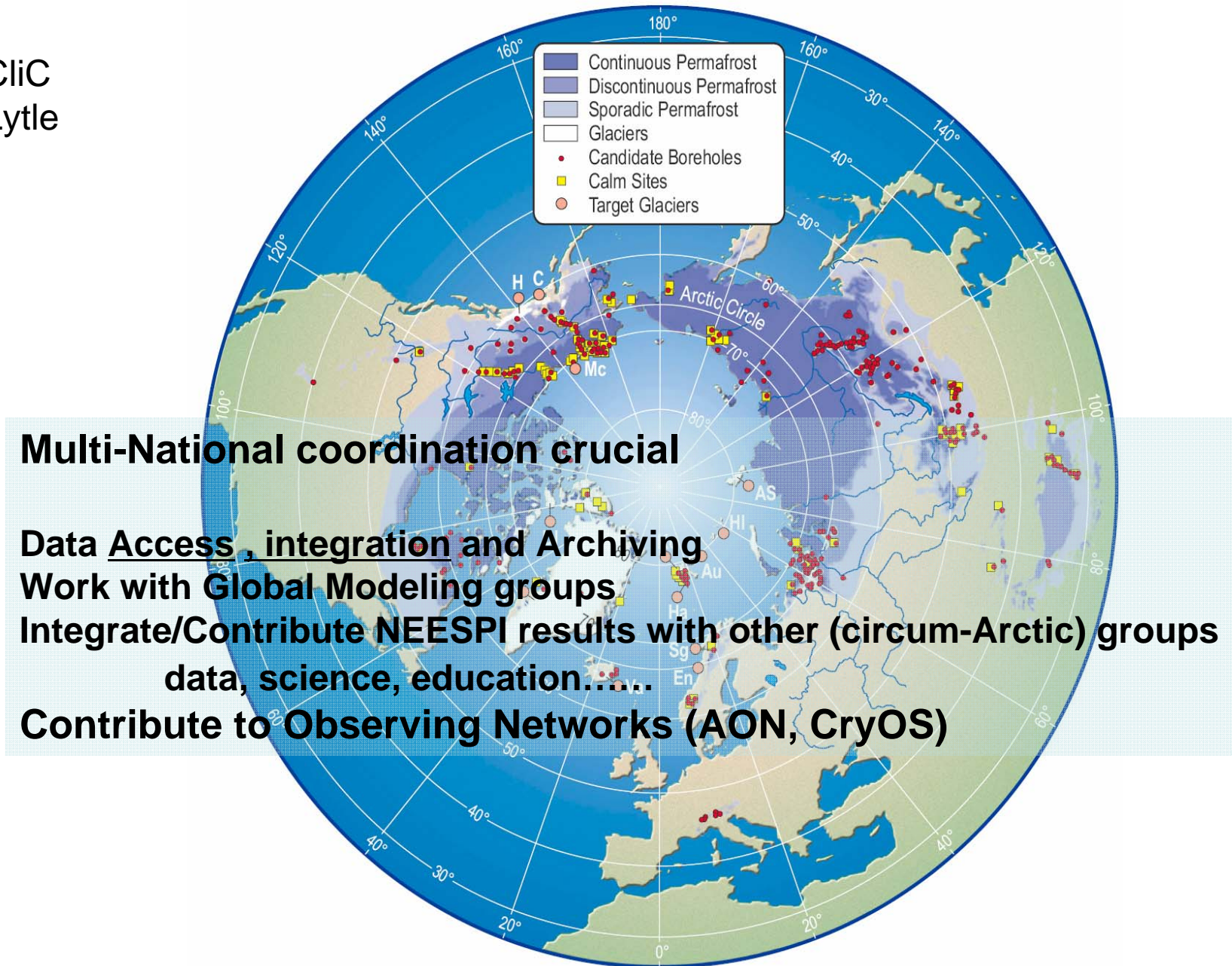


Figure 5: Location of permafrost candidate boreholes, active-layer monitoring sites (after International Permafrost Association) and GLACIODYN target glaciers.



What could ILEAPS actually do for NEESPI...(and vice-versa)

Kabat

Initiate and partly facilitate a tri-lateral EU- Russia – US ***science to policy*** workshop towards a possible EU R&D dedicated call for an integrated research in Northern EuroAsia (in collaboration with major players in the region like MPI groups).....

Possible avenues for NEESPI implementation

Contribute systematically to Earth observing systems and CEOP - develop supersites

Undertake regional assessments of relevance to Global Change Programs

Move from many interesting but not tightly connected studies to fewer highly relevant truly pan-regional contributions to ESSP's interests

Acknowledge important human dimension

The logo for KiitIS is rendered in a 3D, blocky font. The letters are yellow with a gradient that transitions to orange and red at the bottom. The text is slanted slightly to the right and has a dark shadow underneath, giving it a three-dimensional appearance.

What Can NEESPI & GWSP Do for Each Other?

Vorosmarty

- NEESPI science issues strongly water-related
- NEESPI an ideal regional focus study of GWSP
- Attribution studies (*GWSP Question 1*) & resilience / adaptability / governance issues (*GWSP Q3*) are clear avenues of collaboration w/ NEESPI
- Jointly developing hydrometeorological data integration & indicators of N. Eurasian water system state would be mutually beneficial (*GWSP Indicators and Atlas Cross-cutting Themes*)

IMPLICATIONS OF THE DISCUSSIONS

1. What does NEESPI have to offer to national programs?

- access to international expertise (capacity building, more effective problem solving).
- data not normally available in the region.
- platform for accessing a challenging part of the world.
- links to the international environmental science community.
- leverage investments and infrastructure of other nations.

2. Communications:

- Meeting planning – must coordinate at the planning stage
- Must ensure the information is shared between partners.

3. Data Systems

- need to define information needs.
- need to initiate and understand data flows.
- need to map out data flows and illustrate interoperability, integration of insitu and remote sensing data, links to users,

Topics I:

Existing and Planned Structure (Difficulties/ Levels of support):

- International Project Office (Europe?)/ location, funding
STRATEGY FOR A PROJECT OFFICE STARTING THIS FALL
- Regional Focus Research Centers
- Topical Focus Research Centers

-Status:

What is approved (structure) and what is not approved?

- data policy?
- Committee structure (Science committee, coordinating committee)?
COMMITMENTS TO NSCC AND NSAP. TORS TO BE REVISED
- who has committed to sponsoring NEESPI activities (is there a list?)
THERE WILL BE A LIST OF THE POTENTIAL NSCC MEMBERS DRAWN UP AND THEIR ROLE WILL BE IDENTIFIED IN THE TORS.

Plans:

- Preparation of an Implementation plan/ roadmap
REGIONAL ASSESSMENT NEEDS TO BE PERFORMED FOR NEESPI
IMPLEMENTATION PLAN WILL BE DEVELOPED TARGETED AT PROGRAM
MANAGERS TO WRITE CALLS FOR PROPOSALS – FIRST DRAFT BY
DECEMBER
- Preparation of documentation of NEESPI as a GEOSS demonstration project
- Other Contributions to GEOSS
CONTACTS WITH GEOSS SHOULD BE POSTPONED UNTIL THE
IMPLEMENTATION PLAN IS COMPLETE.
- Science Contributions to Climate Change science (IPCC, etc) and applications

Integration of NEESPI activities:

- within Centers (complete?)
- within sub-regions?
- between topics?
- develop a comprehensive scientific framework for NEESPI?

Data Issues:

- Needs for data and data services
- Creation of NEESPI Data Bases (Link with CEOP)

Data systems (to what degree to we develop our own and to what extent of we use what others have produced)?

- Logistics problems for work in the NESSPI Region

Participation in NEESPI:

- Membership of smaller states in NEESPI

WILL BE ROOM FOR THEM WITHIN THE “CLUSTER” CONCEPT

Publications:

- NEESPI Newsletter
- Publications policy

Timeline for future meetings

SCIENCE SESSION AT THE FALL AGU

NEESPI SAP WILL OCCUR IN DECEMBER 2007

STRONG SUPPORT FOR EDUCATION ACTIVITIES