

NEESPI. Intro

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Current NEESPI Statistics (April 2010):

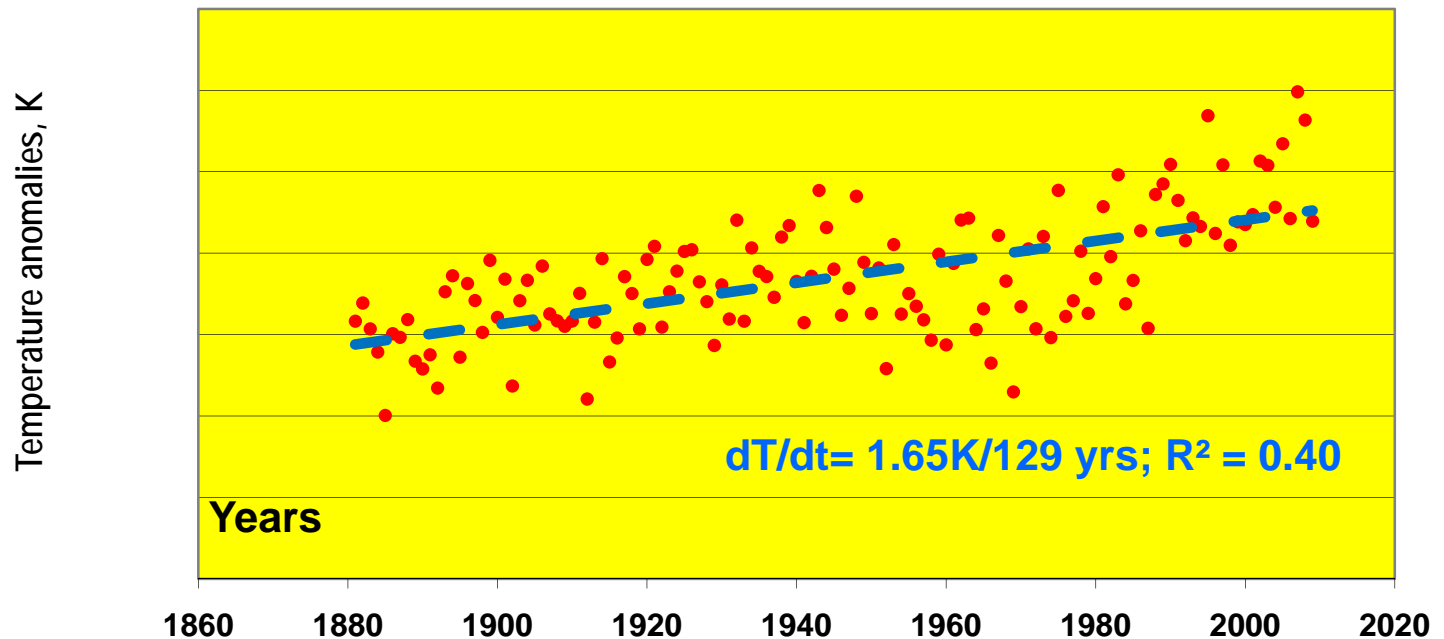
More than 560 scientists from more than 200 institutions of 30 countries are working on more than 130 individual funded projects under the Initiative umbrella (with annual budget ~\$15M), several more projects are in the process of joining NEESPI. Four major sponsors of NEESPI remain: the United States, Russia, European Union, and Japan.

Additionally, NEESPI receives in kind assistance from EU, US, Russian, Chinese, Japanese, Ukrainian and International Agencies and Institutions.

Contemporary climatic changes in Northern Eurasia force us to be expedient in our research.

Firstly, changes are accelerating, particularly, **in Siberia**
=> 11 new NEESPI projects with their foci on Siberia
(total budget of ~ 6M \$US) were launched in 2009-10.

**Northern Asia
north of 40°N,
1881-2009**
Surface air
temperature
anomalies from
the means for
the 1951-1975
period.



During the past 20 years, all anomalies were above 0.5°C and 8 of them were above 1.5K. Year 2007 showed a record anomaly of 2.5K.

Specialty models (or a configuration of models) and/or recent results of their application within the NEESPI domain

- **VMGO Regional Climate Model** (Shkolnik et al. 2008, 2010)
- **Russian Global NWP Model** SL-AV at RAS Inst. of Numerical Math. and HydrometCentre of Russia (Prof. Mikhail Tolstykh, 2009, Personal Communication)
- **MIT Earth System Model** (Sokolov et al. 2009)
- **Coupled regional modeling system WRF-DuMO** (Darmenova et al. 2009)
- Coupling of VMGO RCM with **Siberian Biospheric Model** (Tchebakova et al. 2009)
- **Permafrost Dynamic Model** (Marchenko et al. 2008)
- **Terrestrial Ecosystem Model** (Zhuang et al. 2009)
- Application of **GAP model driven by in situ data** (Shuman et al. 2009)
- **Specialty modifications to the VIC Model** (Wood, Troy, et al. 2009) **and the WBMPlus** (Shiklomanov et al. 2007, 2009) to simulate/project the changes in the water cycle in the cold and dry regions

Last year NEESPI Meetings, Workshops, Sessions

- 1. 15-19 December 2008, San-Francisco, USA. NEESPI Session at the Annual Fall AGU Meeting**
- 2. 4-6 March 2009, St. Petersburg, Russia. NEESPI programmatic Workshop “Hydrological application of changes in land cover/use, water management and climate across Northern Eurasia”**
- 3. 20-23 April, 2008, Vienna, Austria. NEESPI Session at the EGU General Assembly**
- 4. 24 April 2009, Sopron, Hungary. First Consultative Workshop of the Regional NEESPI Research Center for Non-boreal Southeast Europe**
- 5. 14-15 July, 2009, Krasnoyarsk, Russia. Regional NEESPI Workshop devoted to Siberia**
- 6. 9-15 Sept., 2009, Bishkek, Kyrgyzstan. Regional Event devoted to High Elevation Studies (summer school, and two workshops)**
- 7. 16-17 December 2009, San-Francisco, USA NEESPI Session at the Annual Fall AGU Meeting**

2-9 May, 2010, Vienna, Austria. This Session



**Our friend and one of
the NEESPI founders,
Dr. Donald Deering,
passed away on
February 15, 2010.**

Future Meeting Plans

- 14-18 June, 2010, Miedzyzdroje, Poland:
6th BALTEX Science Conference
- 5 -11 July, 2010, Tomsk, Russia:
ENVIROMIS Event
- 25-28 August Tartu, Estonia :
Joint LCLUC, GOFC, & NEESPI Workshop
- 8-10 Sept. 2010, Lanzhou, China :
3rd Int. Symp. on Arid Climate Change
- 13-17 December 2010, San-Francisco:
NEESPI Session at the next AGU Meeting
- Summer 2011, St. Petersburg, Russia:
School on Regional Climate Modeling

NEESPI Outreach, <http://neespi.org>

During the past 3 years, ~25 dedicated NEESPI Workshops and 6 NEESPI Open Science Sessions at the International Meetings were convened and more than 350 papers and books were published (the total number of publications exceeds 500).

In April 2007: 1st Special NEESPI issue (13 papers) in *Global and Planetary Change*

In December 2007: 2nd NEESPI Special issue in *Environmental Research Letters* (15 papers)

In April 2009: Book "*Regional Aspects of Climate-Terrestrial-Hydrologic Interactions in Non-boreal Eastern Europe*" Groisman and Ivanov (Eds.) published by Springer Verlag.

In May 2009: An overview NEESPI paper in *Bull. Amer. Meteorol. Soc.*

In October 2009 through March 2010: the 3rd NEESPI Special issue in *Environmental Research Letters* (34 papers)

Current situation:

- **Two books are *in press* and scheduled for the first half of 2010.**
Both of them are devoted to Eurasian Arctic (land and sea shelf)
- Book "Environmental Changes in Siberia: Regional Changes and their Global Consequences" is in preparation

Several “outreach” posters at our Poster Session

- NEESPI Overview
- Land Cover Land Use Change in the Arctic
- Studies at high elevations of Northern Eurasia
- NEESPI Publications (in particular, two special Issues of the *Environmental Research Letters* ~ 45 science papers)

Book in preparation (due October 2010):
**“Environmental Changes in Siberia: Regional
Changes and their Global Consequences”**

Chapters

Introduction

- **Climate change:**
- **Water cycle changes**
- **Changes in the cryosphere**
- **Terrestrial ecosystems
and their changes**
- **Human dimensions of land
cover and land use changes**
- **Atmospheric pollution**
- **Development of
information systems**

Integration and Synthesis

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