Holistic multi- and interdisciplinary approach
in supporting the Arctic sustainable development
Environmental research and modeling for supporting of social-economic development

PEEX international collaboration virtual-zoom-meeting / Research Seminar

19 February 2021, Friday, 14:00-17+ pm (Moscow time)

Collaboration Meeting Concept (Introductory Information)

The growing demands for Arctic resources, as well as rapid and multidirectional changes, including climate change, taking place in recent decades in this vulnerable region, require integrated approaches to support society adaptation to these changes, social and environmental sustainability in the implementation of economic activities in the Arctic domain. The holistic multi- and interdisciplinary approach need to be further elaborated in depth and applied to:

- Economic assessment of environmental damage;
- Green growth models and tools development (green growth is an economic growth accompanied by a significant improvement of the environment);
- Development tools of sustainable environmental management in the Arctic, including taking into account the indigenous peoples knowledge and interests;
- Development social tools to building trust;
- Indigenous people: traditional knowledge and adaptation actions.

The goal of the meeting is to raise awareness about different approaches to study, observe and model environmental processes as well as about currently existing and future problems of social and economic sustainability in the Arctic to find possibilities using methods of observations and modelling in natural sciences to solve social and economic tasks.

moderators (INEP KSC RAS): Elena Klyuchnikova & Vladimir Masloboev
moderators (UHEL INAR): Hanna K. Lappalainen & Alexander Mahura

Opening / Welcome

In memory Prof. Sergej Zilitinkevich - co-founder of the PEEX Programme

Oral Talks/ Presentations:

14:00 - Session 1: Conceptual approaches and examples
- 15 min – Elena Klyuchnikova, INEP KSC RAS – Interdisciplinary nature-socio-economic studies for Kola/Arctic domain: examples from INEP KSC RAS experience
- 20 min – Lassi Heininen, UL – FutArcSoc as a novel inter- and transdisciplinary research concept for an analysis of Arctic environment and societies
- 20 min – Alexander Baklanov, WMO, UCPH – Center of Environment, Energy and Health (CEEH) concept
- 15 min – Anatoly Shvidenko, IIASA – Sustainability of the Northern Eurasia forest sector in a changing world: ecological, economic and social challenge
- 10 min – Igor Esau, NERSC - Integration of local data, local models and local socio-environmental scenarios
- 10 min – Viktor Gornyy, SRCES RAS – Statistical approach to solving socio-economic problems using remote sensing methods (few examples**)**
- 10 min – Petr Terentev, INEP – Indigenous people use traditional knowledge as a tool for study of nature and climate change processes.

15:40 - Coffee/ Tea

15:50 - Session 2: Natural science in support for socio-economical studies (SES)
- 10 min – Eugene Borovichev INEP – Climate change based response of Arctic ecosystem
- 10 min – Pavel Konstantinov, MSU – In-situ and ground based observations/ data in support SES
- 10 min – Larisa Sogacheva FMI – Remote sensing/ satellite observations/ data in support SES
- 10 min – Risto Makkonen, FMI/UHEL – Global-hemispheric scales (climate & atmospheric composition) modelling in support SES
- 10 min – Alexander Mahura, INAR/UHEL – Regional-urban scales (meteorology & atmospheric composition) modelling in support SES

16:50 - Coffee/ Tea

17:00 - Session 3: Discussions / Brainstorming:

Wrap-up – summary / End of the meeting

Participants/ institutions:
- INEP KSC RAS (Institute of Industrial Ecology Problems in the North, Kola Science Center, Russian Academy of Sciences)
- UHEL-INAR (University of Helsinki, Institute for Atmospheric and Earth System Research)
- IIMM KSC RAS (Institute for Informatics and Mathematical Modeling, Kola Science Center, RAS), Apatity, Russia
- IES KSC RAS (Institute for Economic Studies, Kola Science Center, RAS), Apatity, Russia
- PGI (Polar Geophysical Institute, Kola Science Center, RAS), Apatity, Russia
- MASU (Murmansk Arctic State University), Murmansk, Russia
- UL (University of Lapland), Rovaniemi, Finland
- FMI (Finnish Meteorological Institute), Helsinki, Finland
- SRCES RAS (Scientific Research Center for Ecological Safety, RAS), St. Petersburg, Russia
- IIASA (International Institute for Applied Systems Analysis), Vienna, Austria
- NERSC (Nansen Environment and Remote Sensing Center), Bergen, Norway
- WMO (World Meteorological Organization), Geneva, Switzerland
- UCPH (University of Copenhagen), Copenhagen, Denmark
- MSU (Moscow State University), Moscow, Russia
- GCRI CAS (Global Change Research Institute, Czech Academy of Sciences), Brno, Czech Republic