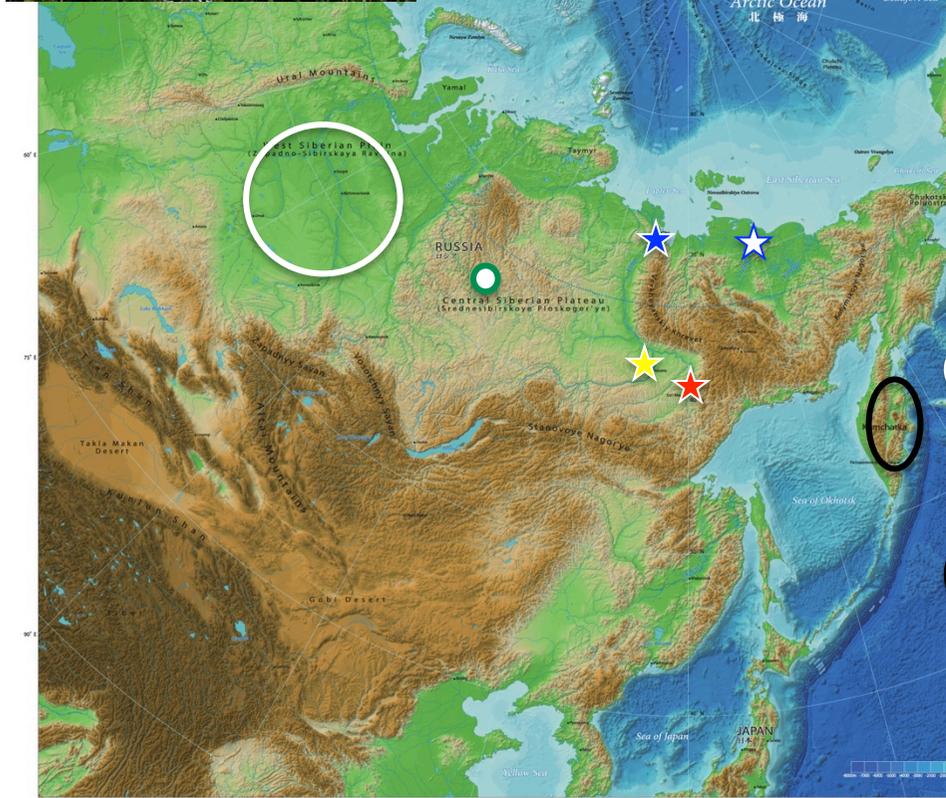
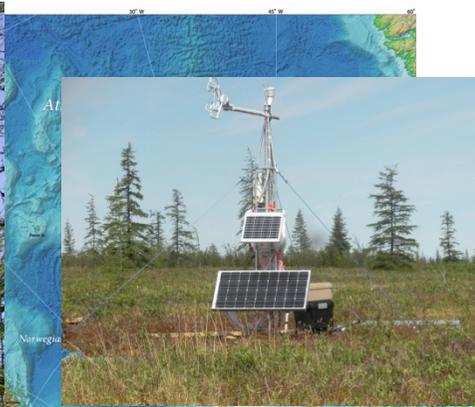


ISIRA National Report Japan 2015

by A Sugimoto



- ★ Tiksi (1997~): GRENE, Land Surface Observation (NIPR, JAMSTEC, etc with MPI)
- ★ Chokurdakh (2009~): GRENE (HokkaidoUniv with IBPC)
- ★ Yakutsk (1997~): GRENE, , Land Surface Observation, GW and H-N (Nagoya Univ, Hokkaido Univ, JAMSTEC, RIHN with IBPC)
- ★ Ust'Maya (2009~): GW and H-N (Nagoya Univ, RIHN with IBPC)
- Tura (1994~): Forest dynamics (FFPRI, Kyoto Univ with Sukachev Institute of Forest)
- YK, Surgut, Novosibirsk (1993~): Aircraft Obs for GHG
- Western Siberia (2001~): JRstation 8 sites tower GHG obs (NIER with Institute of Atmospheric Optics, MPI, Institute of Microbiology)
- Far East, Kamchatka : Geodynamics and Eruption dynamics obs (Hokkaido Univ with Geophysical Survey etc)

GRENE Arctic Climate Research Program

GRENE (Green Network of Excellence):
Program of the Ministry of Education,
Culture, Sports, Science & Technology
of Japan (MEXT)

**GRENE Arctic Climate Research
Program: Rapid Change
of the Arctic Climate System
and its Global Influences**

Period: Oct 2011 – Mar 2016
(4.5 years: FY2011-2015)

- Research activities in Russia:
Permafrost, snow, carbon and
water cycle, forest biomass,
glacier

Presentations in ISAR-4



Ministry of Education, Culture and Sports, Science & Technology in Japan (MEXT)
GRENE (Green Network of Excellence)

**Field of Arctic Climate Change
Rapid Change of the Arctic Climate System and
its Global Influences
2011 -2016**



To the Arctic
where you can see the future of the Earth

Core Institute
National Institute of Polar Research (NIPR)

Associated Institute
Japan Agency for Marine-Earth Science and Technology (JAMSTEC)

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Succeeding program
ArCS: Arctic Challenges for Sustainability Project
FY2015-2019



Ministry of Education, Culture and Sports, Science & Technology in Japan (MEXT)
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Field of Arctic Climate Change
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To the Arctic.....
where you can see the future of the Earth

ch (NIPR)

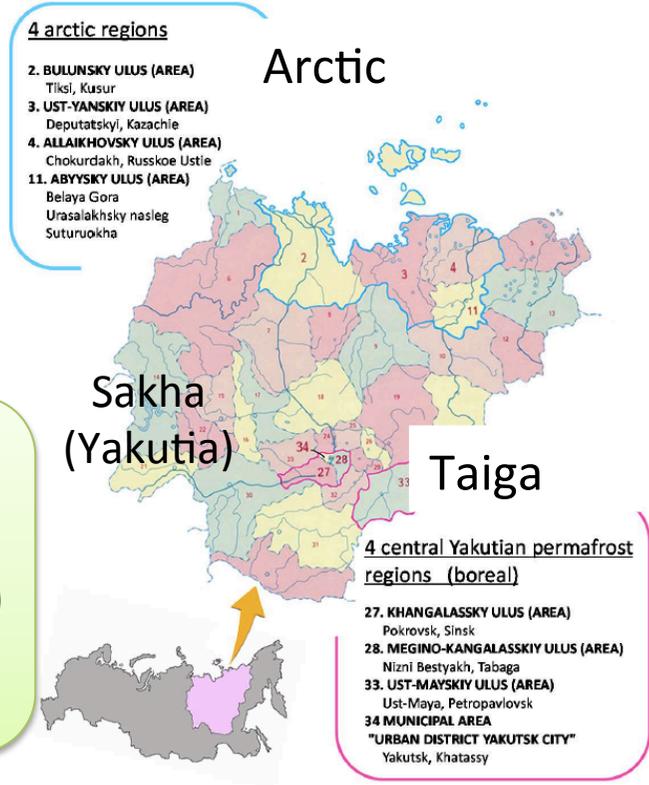
Science and Technology (JAMSTEC)

Belmont Forum

Arctic observing and research for sustainability

C budget of ecosystems and cities and villages on permafrost in eastern Russian Arctic (COPERA)

Main investigators: Japan (Sugimoto, Tabata), Russia (Prisyazhny, Maximov), USA (Yoshikawa)



Task 1 observation

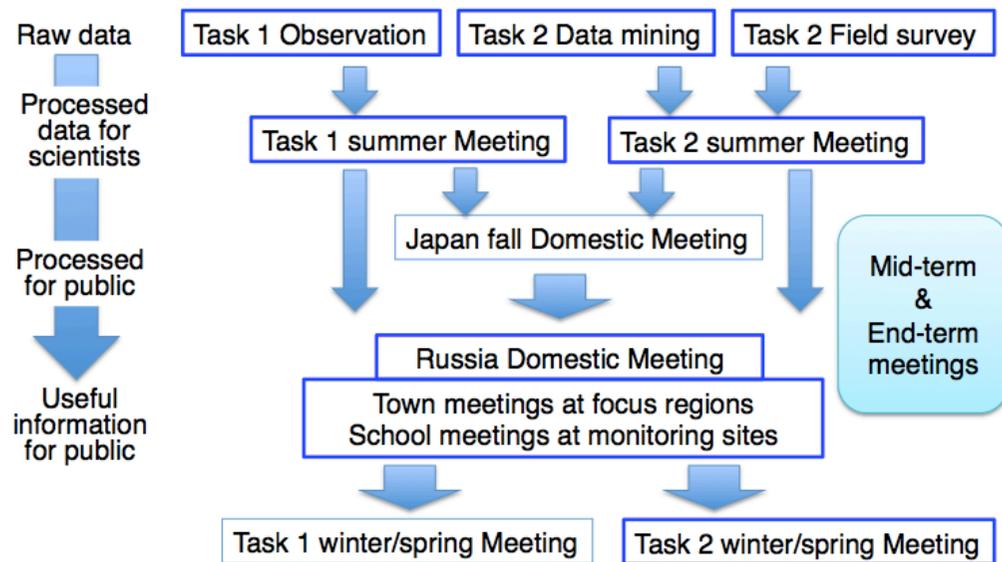



Areal budget estimation by satellite data and modeling

C budget estimate for Sakha (Yakutia) Scenario on permafrost and ecosystem changes

State of data

Meetings



Task 2

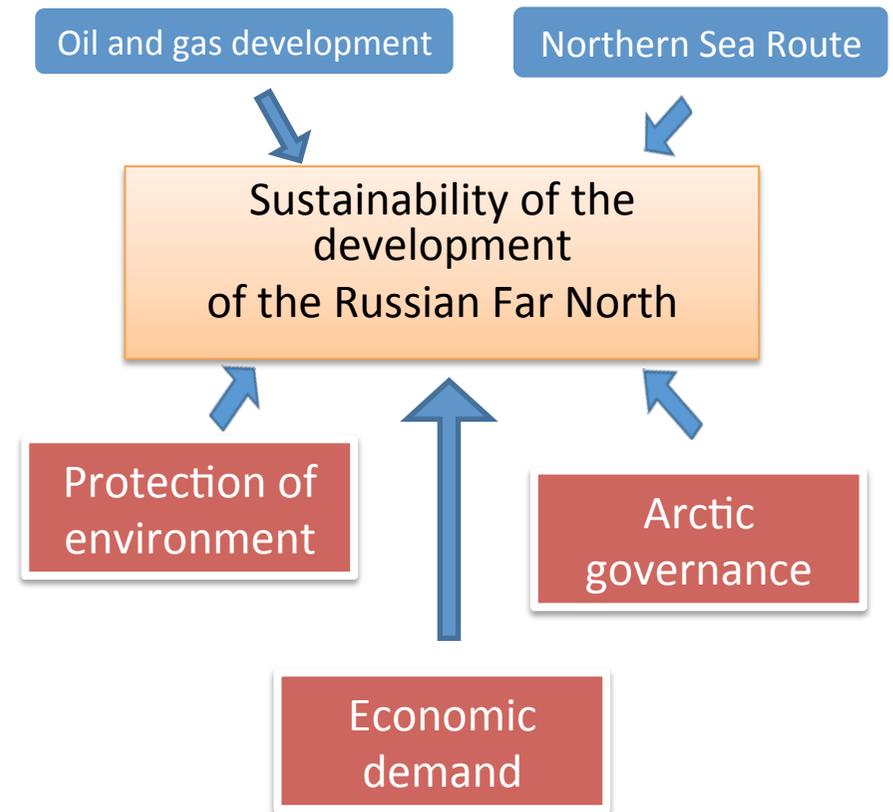
Statistical data analysis on fuel use and price, population, field survey, and analysis of economy

Estimations of fuel use, energy cost and population, and proposing of optimum use of energy

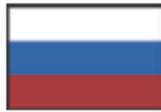
Future scenario

Russia's Final Energy Frontier: Sustainability Challenges of the Russian Far North

- Bilateral Japan-Finland project, funded by JSPS and the Academy of Finland
- Project period: 2014-2016
- Project leaders: Shinichiro Tabata (Hokkaido University) and Veli-Pekka Tynkkynen (University of Helsinki)
- Main participants: Lassi Heininen, Masumi Motomura, Natsuhiko Otsuka, Fujio Ohnishi
- Joint field trip: Murmansk and Arkhangelsk in September 2014; and Yamalo-Nenets region in September 2015



Provided by JOGMEC



Workshops in July and October 2014, Tokyo
(Participants in Oct Japanese 53 Russian 15)

Cooperation on Arctic Research between Japan and Russia

Report is available

Proposed 12 Research Themes

- Climate impacts of black carbon and aerosols in the Arctic (Spitsbergen, Baranov Cape, Tiksi)
- Preliminary joint study in the frame of the Polar Prediction Project
- Reliability and risk estimation for sea-ice navigation along the Northern Sea Route
- Comparative study on carbon and water in the permafrost ecosystem of Siberia
- Glacier research in the Russian Arctic and sub-Arctic
- Contemporary changes of water, heat, and dissolved and suspended organic/inorganic matter fluxes from Siberian rivers into the Arctic Ocean
- Variability of snow cover including blowing snow and snowmelt processes of the permafrost area under Arctic environment change
- Development of space remote sensing technologies to monitor seasonal variations in temperature and moisture in the active topsoil of the Arctic tundra
- Permafrost changes in Siberia in the past and future based on projections of climate warming
- Ecosystems and biodiversity
- Effects of global climate change on commercial fishing and indigenous coastal cultures in Siberia and the North Pacific
- Arctic and global climate change: feedbacks and forecasting dynamics

Research Infrastructures

Human resource development. Research stations, Research networks, Data Archive

Under planning



Russia-Japan Joint symposium (or workshop?)
by Young scientists