

## Japan 2014

Project title	Contact	Institution - lead	Institution - oth	Country - Lead	Country - other	Project leader	Other participar	Project Period	Investigated are	Description/abstract
GRENE Arctic climate change research project: Change in the terrestrial ecosystems of the pan-Arctic and effects on climate	Atsuko SUGIMOTO Faculty of Environmental Earth Science, Hokkaido University sugimoto@star.dti2.nie.jp t.c.maximov@ibpc.yasn.ru	National Institute of Polar Research	Hokkaido University Tohoku University National Institute for Environmental Studies Forestry and Forest Products Research Institute Japan Agency for Marine-Earth Science and Technology Nagoya University Kyoto University Institute for Biological Problems of Cryolithozone, SBRAS Northeastern Federal University Melnikov Permafrost Institute, SBRAS	Japan	Russia	Atsuko SUGIMOTO	Mamoru ISHIKAWA Takeshi YAMAZAKI Masaki UCHIDA Masao UCHIDA Yojiro MATSUURA Rikie SUZUKI Kazuyuki SAITO Yoshihiro IJIMA Hotaek Park Takeshi OHTA Tetsuya HIYAMA Akira OSAWA Takeshi ISE T. C. Maximov A. Fedorov	2011-2015	Yakutia (central and eastern Siberia)	Observations on terrestrial ecosystem on permafrost are conducted at Yakutsk, Ust'Maya, Tura, Tiksi, and Chokurdakh, to investigate energy, water, and C fluxes, biomass, and fluxes of GHG. Permafrost monitoring network in Siberia is also established. Cooperation between observation and modeling work is challenged for future prediction and global influence. Scientific works for Russian Arctic in this project is important part of the whole project for pan-Arctic. Purposes of this project are (1) understanding role of terrestrial ecosystem of Arctic for polar amplification, (2) understanding material cycle in Arctic for global climate system and future change, (3) understanding current status of Arctic terrestrial ecosystem under rapidly changing Arctic climate.
GRENE Arctic climate change research project: The role of Arctic cryosphere in global change	Hiroiyuki ENOMOTO National Institute of Polar Research enomoto.hiroiyuki@nipr.ac.jp sugiura@sci.u-toyama.ac.jp	National Institute of Polar Research	Toyama University Meteorological Research Institute Kitami Institute of Technology Cryolithozone, SBRAS Melinikov Permafrost Institute, SBRAS	Japan	Russia	Hiroiyuki ENOMOTO	Konosuke SUGIURA Naohiko HIRASAWA Masahiro HOSAKA Shuhei TAKAHASHI T. C. Maximov A. Fedorov	2011-2015	Yakutia (central and eastern Siberia)	Field and remote sensing observations on snow and glacier are conducted for eastern Siberia, to investigate glacier, precipitation, snow-cover and aerosol variations.
Global Warming and the Human-Nature Dimension in Siberia: Social Adaptation to the Changes of the Terrestrial Ecosystem, with an Emphasis on Water Environments	hiyama@chikyu.ac.jp	Research Institute for Humanity and Nature	Nagoya University Tohoku University Hokkaido University Institute of Biological Problems of Cryolithozone, Siberian Branch of the Russian Academy of Sciences Melinikov Permafrost Institute, Siberian Branch of the Russian Academy of Sciences Institute of the Humanities and the Indigenous Peoples of the North, Siberian Branch of the Russian Academy of Sciences	Japan	Russia	HIYAMA Tetsuya	YAMAGUCHI Yasushi OHTA Takeshi TAKAKURA Hiroki SUGIMOTO Atsuko YAMAZAKI Takeshi OKUMURA Makoto TATSUZAWA Shirow MAXIMOV Trofim C. FEDOROV Alexander N. BOYAKOVA Sardana IGNATYEVA Vanda	2008-2014 (6 years)	Eastern Siberia	This project uses multiple satellite and surface systems to track changes in water and carbon cycles and the cryosphere, and to assess their likely interactions and significance for human inhabitants of the region. The project is jointly conducted by Japanese and Russian universities and research institutes. This research project takes natural and social science perspectives on three aspects of climate-associated environmental change. It is designed to: 1) describe current variation in water and carbon cycles and predict likely variation in the near future; 2) make field observations of the effect of carbon and hydrologic variability in Eastern Siberian landscapes, and identify key exchanges or driving forces; and 3) examine the capability of the multi-ethnic Siberian peoples, and their distinct social economies, to adapt to predicted change in their climate and terrestrial ecosystems.

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Land Surface Observation of Heat/Water/Vegetation Conditions in the Yakutsk Area	Hironori Yabuki Japan Agency for Marine-Earth Science and Technology yabuki@jamstec.go.jp	Japan Agency for Marine-Earth Science and Technology	Japan Agency for Marine-Earth Science and Technology	Japan	Rusia	Hironori Yabuki	Tetsuo Ohata Yoshihiro IJIMA Hotaek Park Konosuke SUGIURA Mamoru ISHIKAWA Takeshi YAMAZAKI Yuji Kodama T. C. Maximov A. Fedorov Pavel Konstantinov	2001-2017	Yakutsk (Taiga region in central and eastern Siberia)	Observational study of land surface hydrology, heat/water exchange and vegetation conditions on permafrost in Yakutsk region. Data base construction on soil temperature, deep ground temperature, and soil moisture content in Taiga region at Lena river Basin.
Land Surface Observation of Heat/Water/Vegetation Conditions in Yakutia	Hironori Yabuki Japan Agency for Marine-Earth Science and Technology yabuki@jamstec.go.jp	Japan Agency for Marine-Earth Science and Technology	Japan Agency for Marine-Earth Science and Technology	Japan	Russia	Hironori Yabuki	Tetsuo Ohata Yoshihiro IJIMA Hotaek Park Konosuke SUGIURA Mamoru ISHIKAWA Takeshi YAMAZAKI Yuji Kodama A. Fedorov Pavel Konstantinov	2000-2017	Tiksi(Tundra region in Eastern Siberia)	Observational study of land surface hydrology, heat/water on tundra region in Tiksi region. Data base construction on soil temperature, deep ground temperature, and soil moisture content in Tundra region at Lena river Basin.
Study on the forest dynamics in Siberian Taiga.	Sukachev Institute of Forest, SB RAS	Forestry and Forest Products Research Institute	Kyoto University Shinshu University Hokkaido University Okayama University	Japan	Russia	Matsuura Y	Osawa A, Kajimoto T, Morishita T, Noguchi K, Nakai Y, Yasue K, Koike T, Tokuchi N, Hirobe M	1994-2000, 2002-2007, 2008-2009, 2009-2013, 2014-2017	Tura, Central Siberia	forest biomass, CO2 flux, soil carbon storage, litterfall, fine root biomass, CH4, N2O emmission, / see Ecological Studies 209: Permafrost Ecosystems, Siberian Larch Forests, published 2010 Springer
Aircraft Monitoring by NIES	Toshinobu MACHIDA tmachida@nies.go.jp	National Institute for Environmental Studies (NIES)	Institute of Atmospheric Optics, Permafrost Institute, Institute of Microbiology	Japan	Russia	Toshinobu MACHIDA	Motoki SASAKAWA, Mikhael ARSHINOV, Alexey GALANIN, Boris BELAN	1993-present	Surgut, Novosibirsk and Yakutsk	Air samples are collected by aircraft over the 3 sites in Siberia and are analyzed for greenhouse gases in NIES, Japan.
JR-STATION	Motoki SASAKAWA sasakawa.motoki@nies.go.jp	National Institute for Environmental Studies (NIES)	Institute of Atmospheric Optics, Permafrost Institute, Institute of Microbiology	Japan	Russia	Motoki SASAKAWA	Toshinobu MACHIDA, Mikhael ARSHINOV, Alexey GALANIN, Boris BELAN	2001-present	8 sites in west Siberia and 1 site in east Siberia	CO2 and CH4 concentrations are continuously measured using 9 towers.
Geodynamics in Russian Far East	Takahashi Hiroaki Faculty of Science Hokkaido University Sapporo, Japan Hiroaki Takahashi hiroaki@mail.sci.hokudai.ac.jp	Hokkaido University	Geophysical Survey of RAS Institute of Marine Geology and Geophysics of RAS Far Eastern Federal University Institute of Applied Mathematics of RAS Institute of Tectonics and Geophysics of RAS Kagoshima University Yamagata University	Japan	Russia	Hiroaki Takahashi	Alexey Malovichko Yuri Levin Victor Chebrov Larisa Gunbina Evgeny Gordeev Victor Byov Boris Levin Mikhail Gerasimenko Nikolay Shestakov Yuichiro Tanioka Kiyoshi Yomogida Kazunori Yoshizawa Hiroaki Miyamachi Mako Ohzono	1994-	Russian Far East	Seismological and geodetic observation network for tectonics and geodynamics researches in Russian Far East have been operated.

