

Japan-Russia Scientific Forum

Online Workshop “Japan-Russia Collaboration for Ecosystem Monitoring”

- Date and time:** 15 September 2021 (Wed), 19:00-20:30 (Japan time) / 13:00-14:30 (Moscow time)
- Organizers:** Hokkaido University, Moscow State University, Association of Institutions of Higher Education of Russian Federation and Japan
- Co-organizers:** Hokkaido University Faculty of Environmental Earth Science, Moscow State University Faculty of Geography, Human Resource Development Platform for Japan-Russia Economic Cooperation and Personnel Exchange (HaRP, Hokkaido University)
- Target audience:** Scholars and students from Russia, Japan and other countries
- Format:** Online (via Zoom)
- Languages:** English (with simultaneous interpretation into Japanese and Russian)
- Outline:** This workshop is one of the 4 sessions of the Japan-Russia Scientific Forum held with the aim of promoting Japan-Russia academic collaboration for the achievement of Sustainable Development Goals (SDGs). It draws on the results of the following conferences which were co-organized by the Japanese participants of the specialized section “SDGs: Environment, Resource Development and Multicultural Education” and their Russian counterparts:
1. “Cold Lands Seminar. Arctic and Asia. Session 3 ‘Environmental Monitoring’” held on 26 September 2019 in conjunction with the Cold Land Seminar/Northern Sustainable Development Forum, 2019, Yakutsk.
<https://russia-platform.oia.hokudai.ac.jp/en/report/3573>
 2. Japan-India-Russia Symposium on Geospatial data for Environmental Monitoring (JIRSGEM)-2019 held on 16-18 October 2019, Sapporo.
<https://russia-platform.oia.hokudai.ac.jp/en/report/2993>
 3. Panel discussion “North for work and life. Session 4. ‘Long-term monitoring of the environment state in the Norilsk industrial region and adjacent territories. Efficient nature

management, ecology” held on 16 November 2019 as part of the WWCAM -2019 (World Winter Cities Association for Mayors) Working Meeting at Norilsk.

<https://russia-platform.oia.hokudai.ac.jp/en/report/3424>

4. “Cold Lands Seminar. Arctic and Asia. Session 1 ‘The Northern environment’” held online on 30 September 2020 in conjunction with the Cold Land Seminar/Northern Sustainable Development Forum, 2020.

<https://russia-platform.oia.hokudai.ac.jp/en/report/4027>

5. Knowledge Sharing Symposium on Machine Learning and Deep Learning in Geoinformatics held online on 30 November - 3 December 2020

<https://russia-platform.oia.hokudai.ac.jp/en/report/4469>

These conferences and the current workshop share the common purpose to strengthen cooperation between Japanese and Russian universities to achieve the SDGs and contribute to ecosystem monitoring.

The main aim of this seminar is to develop algorithms to process multi-sensor remote sensing satellite data (PALSAR, Sentinel-1, Sentinel-2, Landsat) to monitor the boreal ecosystem, as the boreal ecosystem is one of the largest terrestrial biomes and plays a major role in the global carbon cycle. Recently, forest fires, decay of the damaged forest and deforestation activities in the boreal ecosystems cause increased CO₂ emissions. The use of multi-sensor remote sensing data can provide precise information about changes in the ecosystem, which can help us to manage the forest sustainably. This session will be devoted to the discussion of how multi-sensor remote sensing data can be used to find evidence-based solutions for sustainable forest management and implementation of SDGs#13 (Climate action) & 15 (Life on earth).

How to register: Please register by sending an email to the organizer at: ram@ees.hokudai.ac.jp

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Draft program (as of 8 September 2021)

Time (Japan)	Program
	Moderator: Dr. Olga Tutubalina (Moscow State University)
19:00-19:15	<u>Invited Lecture</u> : Prof. Gareth Rees (Cambridge University) “Estimation of boreal forest Growing Stock Volume in Russia from satellite imagery and derived products”

19:15-19:30	<u>Presentation 1</u> : Prof. Trofim Maximov (The Yakut Scientific Centre of the Siberian Branch of the Russian Academy of Sciences) “Study of Permafrost-Dominated Ecosystems of North-Eastern Eurasia Under the Conditions of Global Warming and Increasing Anthropogenic Pressure in the Late XX - Early XXI Centuries”
19:30-19:35	Q&A (5 min.)
19:35-19:50	<u>Presentation 2</u> : Dr. Ayumi Kotani (Nagoya University) “Russian-Japanese collaborative study of ecosystem monitoring in eastern Siberia”
19:50-19:55	Q&A (5 min.)
19:55-20:10	<u>Presentation 3</u> : Dr. Olga Tutubalina (Moscow State University), “Remote sensing for monitoring forests in northern Russia, results and current challenges”
20:10-20:15	Q&A (5 min.)
20:15-20:25	<u>Presentation 4</u> : Dr. Ram Avtar (Hokkaido University), “Modelling Arctic Coastal Plain Lake Depths Using Machine Learning and Google Earth Engine”
20:25-20:28	Q&A (3 min.)
20:28-20:30	Closing remarks (2 min.)