| |
|---|
| 1，Organizer<br>Professors Mitsuru OSAKI and Yukihiro TAKAHASHI, Hokkaido University |
| 2．Title<br>Workshop on "Evaluation of the high-carbon reservoirs by integrated MRV system" |
| 3．Theme<br>To discuss about "Evaluation of the high-carbon reservoirs by integrated MRV system" and to share our experience related to the JST-JICA Project on "Wild Fire and Carbon Management in Peat-Forest in Indonesia" |
| 4．Agenda and speakers<br>JAPAN Pavilion (Level 1 Zone D Room 47), Warsaw, Poland, 13th November, 2013<br><br>1) Mapping on Carbon Stock and Carbon Flux in Tropical Peatland by Integrated MRV System (Prof. Mitsuru Osaki, Japan)<br>2) Introduction to Indonesia Japan - Project for Development of REDD+ Implementation Mechanism (IJ-REDD+ Project) (Dr. Gun Gun Hidayat, Indonesia)<br>3) Innovation in Wide-ranged Ecology Research by Hyper-sensor (Mr. Kazuyo Hirose, Japan)<br>4) Innovation in Earth/Climate Changing Observation by LCTF (liquid crystal tunable filter) on Microsatellite (Prof. Yukihiro Takahashi, Japan) |
| 5．Outline of presentations and discussions<br>1) Mapping on Carbon Stock and Carbon Flux in Tropical Peatland by Integrated MRV System (Prof. Mitsuru Osaki, Japan)<br>　We reported a worldwide first in that our study which established the MRV of the TIER 3 level, a measure which UNFCCC and COP (COP15) have recommended for assessments of $CO_2$ emitted from ecosystems. As it has become possible to evaluate groundwater levels and peat depths with the model which integrates long-term monitoring data and satellite data, the mapping of $CO_2$ emitted from peatlands (emissions due to biodegradation and fires) and carbon storage is possible by using satellite data exclusively.<br><br>2) Introduction to Indonesia Japan - Project for Development of REDD+ Implementation Mechanism (IJ-REDD+ Project) (Dr. Gun Gun Hidayat, Indonesia)<br>　The project of IJ-REDD was started by JICA and Ministry of Forestry of the Republic of Indonesia, and covers the peatlands and forests in West Kalimantan and Central Kalimantan. The carbon volume and flux in the peatlands will be measured by introducing |

the results of SATREPS of Hokkaido University.

3) Innovating on Wide-ranged Ecology Research by Hyper-sensor (Mr. Kazuyo Hirose, Japan)

Measurements from the air (from airplanes) to evaluate ecosystems in tropical peat forests by using HayMap sensors showed the innovative Hyper-sensor to be a highly effective sensor. This hyper sensitive system enables to identify tree species, estimate biomass, measure CDOM, and analyze the moisture state of trees, demonstrating its efficiency in high precision analysis of plant phenology. It also has potential for wider use in real-time mapping as the analysis of plant phenology makes it possible to analyze the signals emanating from under the peat. Further, this system may be further applied to simpler plant ecosystems in mineral rich soils as it was successful to analyze the plant phenology of the peat ecosystem. Therefore, for future research, we are planning to work on the analysis of global plant phenology using the hyper sensing system.

4) Innovating on Earth/Climate Changing Observation by LCTF (liquid crystal tunable filter) on Microsatellite (Prof. Yukihiro Takahashi, Japan)

Hokkaido University developed LCTF (liquid crystal tunable filter) camera which can select the center wavelength of the narrow band filter within 0.3 sec in order to monitor the Earth/Climate change. This camera will be onboard a micro-satellite which will be launched in 2014. The LCTF camera and micro-satellite enable the detailed spectral measurement for identification of tree species and estimation of the depth of peat and groundwater level, which determine the amount of carbon stock and emissions, at an extremely low cost. Participants are strongly interested in this technology and discussion on how to establish the international collaboration was enhanced.

6．Photograph