

International Workshop on Advanced Use of Satellite- and Geo-Information for Agricultural and Environmental Intelligence (MARCO*)

Rationale

Agricultural and Environmental Intelligence (AEI), i.e., monitoring, analyzing, and predicting the dynamics of agro-ecosystems is crucial for food and environmental decision making at local, national and international scales such as precision crop management and carbon sequestration strategies. Geoinformation is the essential basis for agricultural and environmental intelligence, since ecosystems are highly heterogeneous and changing dynamically. Here, remote sensing (RS) and geographical information system (GIS) have vital roles to acquire and integrate such data and information for systematic analysis of ecosystem service, function and sustainability. A great deal of studies have explored and demonstrated the potential of RS for such applications. On the other hand, thanks to GIS tools, a wide range of efforts have been made to integrate geographical data at various scales and resolutions to understand ecosystem processes and services.

Nowadays, many satellites with advanced sensors such as high-resolution, hyperspectral, and SAR sensors are available and/or will be launched in a few years. Standardization of GIS tools and evolution of web-GIS will accelerate the integration and operational use of geoinformation in various environmental and agricultural applications. However, more systematic efforts are required for advanced and operational applications of RS and GIS in AEI.

Purpose of the workshop

1. Review the state-of-the-art in RS and GIS for AEI
2. Exchange the status in use of RS and GIS in various countries
3. Examine the possibility of a common geoinformation system for AEI in monsoon Asia countries.
4. Foster the inter-disciplinary, inter-agency, and international network for monitoring, analyzing, and predicting the ecosystem resources using RS and GIS.

Date and Place

1. Date: 2-4, March, 2011 (2 days for meeting and 1 day for excursion)
2. Place: [Tsukuba International Congress Center](#) (EPOCHAL TSUKUBA), Tsukuba, Ibaraki, Japan
2-20-3, Takezono, Tsukuba, Ibaraki, 305-0032, Japan
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Program committee

Dr. Yoshio Inoue, Dr. Tetsuhisa Miwa (NIAES) and Dr. Jianguo Qi (Michigan State University)

Organizer

[National Institute for Agro-Environmental Sciences](#), Tsukuba, Japan

Co-organizer: Michigan State University, CGCEO

Supporting Institutions: The Remote Sensing Society of Japan, and others [*MARCO: Monsoon Asia Agro-Environmental Research Consortium](#)

Registration

No registration fee is required, but [registration in advance](#) is highly appreciated.

If you wish to participate in the reception (fee ¥5000) and the excursion, please register before Feb.

14. Booking will be made on a first-come-first served basis.

Tentative program

March 2 (Wednesday)

Opening

9:00 **Registration**

9:30 **Opening**

Yohei Sato (President, NIAES, JP)

Welcome Remarks

Session 1: Satellite and Geoinformation for Agriculture, Ecosystem and Environment

9:45 #1 **Yoshio Inoue (NIAES,JP)**

Remote Sensing and Geoinformation for Agricultural and Environmental Intelligence

10:15 #2 **Erling Andersen (University of Copenhagen, DK)**

Some observations from building an integrated geo-database for agricultural and environmental intelligence

10:45 #3 **Ryutaro Tateishi (Chiba University, JP)**

Global Land Cover Mapping and Geospatial Data Sharing/Overlay System

11:15 #4 **Jiaguo Qi (Michigan State University, US)**

Remote Sensing for Ecological Change Analysis in Southeast Asia

11:45 Lunch break

Session 2: Remote Sensing and Geoinformation in Monsoon Asia - Case studies and Status -

13:00 #5 **Masuo Takahashi (JAXA EORC, JP)**

Introduction of "Daichi" (ALOS) and precise land-use and land-cover map production

13:30 #6 **Zhiyun Ouyang (CAS, CN)**

The impact assessment of Wenchuan earthquake on ecosystem

14:00 #7 **Mastura Mahmud (University Kebangsaan Malaysia, MY)**

Biomass burning and air quality: A case study in Kalimantan, Borneo during 2004

14:30 Tea break

15:00 #8 **Yuan Shen (Chung Hsing University, TW)**

Regional Rice Yield Forecasting and Field Management Zone Delineation Using Multispectral Satellite Imagery

15:30 #9 **Wahyunto (ICARD, ID)**

Remote Sensing and GIS Technologies for Sustainable Utilization of Agricultural Land Resources In Indonesia

16:00 #10 **Charlie Navanugraha (Mahasarakham University, TH)**

Remote Sensing and GIS Activities in Thailand

16:30 #11 **Rodelio Bello Carating (BSWM, PH)**

Application of Remote Sensing and Geoinformation on Soil Resources Management - the Philippine Experience

17:00 Adjourn

18:00 Reception

March 3 (Thursday)

- 9:00 #12 **Mai Van Trinh (IAE, VN)**
Applying spatial modelling to simulate the distribution and pathway of dioxin pathway of dioxin remaining from chemical spray from Vietnam War
- 9:30 #13 **Suk-Young Hong (NAAS, KR)**
Use of Remote Sensing and Geoinformation in Korea
- 10:00 #14 **Thavone Inthavong (NAFRI, LA)**
Characterization of growing period for rainfed lowland rice using a GIS-based soil water balance model
- 10:30 Tea break
- 11:00 #15 **Zaw Naing (Myanmar Credent Tech., MM)**
Progress of GIS and Remote Sensing Applications in Agricultural and Environmental sectors in Myanmar
- 11:30 #16 **Giashuddin Miah (BSMRA University, BD)**
Use of GIS and RS in Agriculture of Bangladesh: Present Status and Prospect
- 12:00 Lunch break

Session 3: Towards the Advanced Use of Satellite and Geoinformation for Agriculture and Environment

- 13:00 #17 **Kees de Bie (Univeristy of Twente, NL)**
Improved mapping and monitoring with hyper-temporal imagery
- 13:30 #18 **Toshihiro Sakamoto (NIAES,JP)**
Agro-ecosystem monitoring using high-frequency MODIS observations
- 14:00 #19 **Kazunori Kohyama (NIAES,JP)**
Geographic datasets used as activity data of models for agricultural and environmental problems
- 14:30 #20 **David Sprague (NIAES,JP)**
Geo-data for Agricultural & Historical Environments in Japan
- 15:00 #21 **Taichi Furuhashi (OSGeo Japan/MAPconcierge, JP)**
Use Case of Open Source Geospatial Information Resources for Global Environmental Issues
- 15:30 Tea break

Discussion: Toward a Research Consortium for Advanced Use and Sharing of Geoinformation in Monsoon Asia

- 16:00 All participants
- 17:00 Adjourn

March 4 (Friday)

Excursion (Participant's ID will be required)

- 9:00 Picking up at Daiwa Roynet Hotel Tsukuba
- 9:30 Geospatial Information Authority of Japan(GSI)
- 13:30 Japan Aerospace Exploration Agency(JAXA)
- 15:00 Adjourn

Contact

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