

DRAFT AGENDAS FOR PARALLEL SESSIONS

WG1: GEOSS ASIAN WATER CYCLE INITIATIVE (AWCI)

Water is essential for human life and wellbeing. It provides a bridge among atmospheric, oceanic and terrestrial natural sciences and socio-economic benefit areas including agriculture, forestry, health, energy, economy and human settlement. More than 60 percent of the world population lives in Asia. The Asian monsoon brings a rich-water environment. However, the Asian monsoon often causes serious floods, landslides, droughts, water scarcity, and water pollution problems. Climate change is now a fundamental threat in Asia.

To address the Asian water-related issues, the GEOSS Asian Water Cycle Initiative (AWCI) was established in 2005. Responding to the data needs, eighteen GEOSS/AWCI member countries collected and archived hydrological data under the open data policy of the GEOSS. The Data Integration and Analysis System (DIAS) contributes to this data integration. Soil moisture, ground water, inundation, drought, snow- and glacier- melt, vegetation growth, and rice production are simulated and predicted in demonstration river basins in Asia. GEOSS/AWCI supports capacity building through a wide range of training courses for practitioners and policy makers.

GEOSS/AWCI has stepped into the second phase. In November 2013, GEO organized the joint "GEOSS Asia - Africa Water Cycle Symposium" in Tokyo. The members introduced their ideas and the draft Project Design Matrix (PDM) and exchanged knowledge and experience with countries and river basin authorities in Africa, donors, space agencies and other key collaborators.

The objective of this breakout session will focus on the cross-cutting and inter-related nature of challenges in water nexus. By sharing planning and on-going case studies, we would identify benefits obtained by mutual linkages between water and the related socio benefit areas, including climate, agriculture, ecosystem, health and economy, and consider how to promote water-centric inter-linkage as a goal to be more widely pursued.

GEOSS/AWCI is addressing regional water-related problems in Asia as an important component of its sustainable development priority.

Co-Chairs:

Richard Lawford (GEO Water)

S.B. Weerakoon(University of Peradeniya)

Toshio Koike (The University of Tokyo)

- 09:45-10:15** **1. Opening GEOSS/AWCI Breakout Session**
- 1) Opening Address
 - 2) Report on the 1st GEOSS Asia-Africa Water Cycle Symposium
- 10:15-12:00** **2. Introduction to Global and Regional Water-related Activities**
- 1) Integrated Global Water Cycle Observations (IGWCO)
 - 2) Observations from Space
 - Shizuku
 - GPM
 - GSMAp Real-time Correction for Water Resources Management
 - 3) International Centre for Water Hazard and Risk Management (ICHARM)
 - 4) Network of Asian River Basin Organizations (NARBO)
 - 5) Post-MDGs/ SDGs, Hyogo Framework Action 2
- 12:00-13:00** ***Lunch Break***
- 13:00-15:40** **3. Inter-linkage Case Studies**
- 1) Indonesia
 - 2) Pakistan
 - 3) Sri Lanka
 - 4) Vietnam
- 15:40-16:00** ***Break***
- 16:00-17:00** **4. Discussion towards Promoting Inter-linkages**
- 1) Needs, Issues and Benefits
 - 2) Linkage to Regional and Global Coordination Framework
 - 3) Building capacity
 - 4) Planning Strategy
- 17:00-17:30** **5. Closing GEOSS/AWCI Breakout Session**
- 1) Session Summary
 - 2) Concluding Remarks

WG2: ASIA-PACIFIC BIODIVERSITY OBSERVATION NETWORK (AP-BON)

“Integrated observation of terrestrial and aquatic ecosystems and their biodiversity”

Discussions on global biodiversity issue are increasingly activated by recent developments of relevant international frameworks. IPBES has started its first work programme, and CBD-COP12 is about to summarize the interim report of Aichi Biodiversity Target. On the other hand, Future Earth is entering the phase of calling research projects, and the second term of GEOSS is now just around the corner. These opportunities have been enhancing the communication and cooperation within the Asian-Pacific Biodiversity Observation Network (AP-BON) to identify the gaps to be filled in the region.

Through the previous discussions, we identified one of the most important challenges to be made is building an integrated view of linkages between terrestrial and aquatic ecosystems and their biodiversity. Although they are obviously connected with material and hydrological cycles, little attention has been paid for observation strategy or in context of causality. This point of view is of particular importance to achieve Aichi Target 10 that states “By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.”

In this AP-BON session, we review the current situation of biodiversity observations of these different types of ecosystems in Asian-Pacific region in comparative and connected ways featuring the cutting-edge techniques for observation and modelling. We thus try to clarify what are needed as observing efforts for the studies of this field in the region, and to find sound and feasible ways towards the global goals.

At the end of meeting, we will have a discussion on “integrated study in Cambodia”, which is a cross-cut theme of 7th GEOSS AP. It is to show what we could make influence on policy makers through GEOSS activities in Cambodia as a case study.

Program

09:30-09:45	Registration - Morning Coffee
09:45-09:55	Opening remarks (Dr. Yahara, Co-chair of WG2)
09:55-14:05	Session 1: What we could know with current observation techniques
09:55-10:00	Session introduction (Dr. Ishii, Co-organizer WG2)
10:00-10:40	Dr. Yimnang Golbuu " <i>In situ</i> observation of Cora reef ecosystems"(TBD)
10:40-11:05	Dr. Hiroya Yamano "Coral reef observation by satellite and robot"(TBD)
11:05-11:30	Dr. Eko Siswanto "Satellite remote sensing application for monitoring marine ecosystem in the Asia-Pacific marginal seas"
11:30-12:00	Dr. Takanori Nakano "A new earth observation tool using multiple stable isotopes : an example of eutrophication diagnosis in Lake Biwa, Japan "
12:00-13:00	-Lunch Break-
13:00-13:25	Dr. Masafumi Fujita "Coastal pollution and its control strategy in Funafuti atoll, Tuvalu"
13:25-14:05	Dr. Jon.Brodie "Catchment Management and Coral Reef Conservation"(TBD)
14:05-15:15	Session 2 Country/Regional Reports
14:05-14:15	Dr. Sheila Vergara
14:15-14:25	Dr. Eun-Shik Kim
14:25-14:35	Dr. Dedy Darnaedi
14:35-14:45	Dr. Edwino S. Fernando
14:45-14:55	Dr. Yu-Huang Wang
14:55-15:05	Dr. Keping Ma
15:05-15:15	Mr. Mangal Man Shakya
15:15-15:35	-Coffee Break-
15:35-16:35	Discussion for the integrated study in Cambodia
16:35-17:25	General discussion of WG2
17:25-17:30	Closing remarks (Dr. Nakashizuka, Co-chair of WG2)

WG3: GLOBAL FOREST OBSERVATION INITIATIVE (GFOI)
TOWARDS LONG-TERM CARBON MANAGEMENT

1. Overview :

The Global Forest Observations Initiative (GFOI) is an international collaborative initiative under the Group on Earth Observations (GEO) which aims to facilitate access to long-term satellite and in-situ data, and to assist countries in the development of their national forest carbon MRV systems. This session brings together related representatives from Asia-Pacific countries to update on the recent progress and future plans in the activities associated with the implementation of the GFOI tasks and beyond focusing on the regional coordination of sustained and long-term forest carbon monitoring in Asia-Pacific.

The first session will report on recent developments within the GFOI.

The second and third sessions will focus on issues related to remote sensing-based forest carbon monitoring and observation-modeling integration for forest carbon budget quantification in various ecosystems in Asia-Pacific countries, and to exchange ideas for enhancing data access, capacity building and interdisciplinary collaborations.

The last session is a panel discussion on country plans and expectations to GFOI towards long-term carbon management, and associated future R&D requirements.

The expected goal of the session would be focused on following;

- Introduction to GFOI concept and activities in the Asia-Pacific region.
- Inform about national programmes and international collaboration activities in the region
- Understand the needs for long-term GFOI development.

2. Date: May 26-28, 2014 (26th Plenary, 27th WG session, 28th Plenary)

3. Location: Kokusai Fashion Center (KFC) Hall / Dai-ichi Hotel Ryogoku
1-6-1 Yokoami, Sumida-ku, Tokyo, Japan

4. Co-Chairs:

- Dr. Alex Held (CSIRO, Australia)
- Dr. Nobuko Saigusa (Yoshiki Yamagata (NIES, Japan))
- Dr. Ake Rosenqvist (for JAXA, Japan)

5. Working Group Session Draft Agenda

Session 1: 9:30-10:50

Opening remarks and introduction to the GFOI session, Co-chairs

- ① Osamu Ochiai (GEO Secretariat) GFOI and REDD+ and IPCC processes
- ② Alex Held (CSIRO) Regional coordination of GFOI activities in Asia-Pacific
- ③ Ake Rosenqvist (for JAXA) Space Data Coordination and GFOI Priority R&D topics
- ④ Masanobu Shimada (JAXA) ALOS/ALOS-2 contribution to GFOI

Break 10:50-11:00

Session 2: 11:00-12:20

- ⑤ JICA collaboration activities in the Asia-Pacific (Title TBC), JICA, Japan
- ⑥ NCAS and collaboration in the Asia-Pacific (Alex Held for Nikki Fitzgerald), Dept. of Environment, Australia
- ⑦ REDD+ project case studies (TBD), (Mitsuo Matsumoto) REDD Research and Development Center, FFPRI, Japan
- ⑧ Integration of observation and modeling (Nobuko Saigusa) NIES, Japan

Lunch 12:20-13:30

Session 3: 13:30-15:30

- ⑨ Indonesia: Orbita ROSWINTIARTI, LAPAN
- ⑩ Cambodia: Sophyra SAR, Forest Covers Assessment Office
- ⑪ Myanmar: San WIN, Myanmar University of Forestry
- ⑫ Papua New Guinea: Elizabeth KAIDONG, REDD & Climate Change Branch, Forest Policy & Planning Directorate

Break 15:30-15:50

Session 4: 15:50-17:30

- ① Panel Discussion
Discussions on country plans and expectations to GFOI towards long-term carbon management and future R&D needs. Panelists: country representatives, moderator: session co-chairs.
- ② Session Summary

WG4: OCEAN OBSERVATION AND SOCIETY
(toward realization of “Blue Planet” in AP region)

In the Asia and Pacific, approximately 70 percent of the total population of the regions relies on coastal areas for habitation and economic activity. Hence, monitoring and assessing the health of coastal waters, including their ecosystems, have become ever-increasingly important for Asia-Pacific regions to attain sustainable development of food, economy and health security. In spite of these increasing need and importance of coastal management for human society, efforts in systematic collection and dissemination of the ocean data in coastal or jurisdictional water have not sufficiently realized in Asia-Pacific region.

In order to address societal benefits from ocean, a new task of “Oceans and Society: Blue Planet Initiative” was established in 2012. In the scope of the task, data collection and dissemination are thought to promote by three types of coordination. They are local, regional and global coordination, respectively. Through each type of coordination, any ocean observation can have a possibility to meet the variety of social requirements. The wide area of the sea in the Asian-Pacific region is occupied with jurisdictional waters of neighboring countries. As the result, even local coordination of ocean observation including data integration seem to be insufficient to realize regional and global coordination of ocean observation to secure social benefits widely all over Asia-Pacific region.

In this context, the first and second WG sessions “Ocean Observation and Society” in the past AP Symposiums reviewed the data sharing mechanism in the regions and recognized it as fundamentals of GEOSS. Thus, this session aims to discuss further on:

- (i) To share possible contributions or good practice of data collection, dissemination and integration to societal benefits by assessing the status and difficulties of data collection and dissemination in regional programs including regional GOOS;
- (ii) To discuss on how to enhance efforts in data collection, dissemination and integration of coastal or jurisdictional water regions.

The prospected goals of this session are to identify concrete actions towards the integration meta-data and its dissemination in coastal or jurisdictional water regions, such as a possible mechanism of Asia-Pacific ocean meta-data exchanges.

Co-Chair (Japan): Masao Fukasawa (JAMSTEC), Kentaro Ando (JAMSTEC)

Co-Chair (Asia): V.V.V.S. Sarma (NIO)

Provisional AGENDA

09:45-10:00: Session-1: Purpose of this session (K. Ando)

- Review of difference in the status between open ocean and coastal and jurisdictional regions
- Common recognition of the importance of coastal or jurisdictional ocean data sharing, and needs for development of meta-data for GEO
- Objectives of this WG: to articulate possible mechanism for sharing of coastal and jurisdiction waters data towards societal benefits of GEOSS

10:00-15:00 Session-2 (including 90minutes lunch): Review the Current Status of Meta-data Collection and Management in the Asia-Pacific regions

- Show examples of data sharing and meta-data management
 - 1) NEAR-GOOS (Ito, JMA)
 - 2) FRA-Uploader (Seto, FRA)
 - 3) Societal impact of FRA-ROMS data (Seto, FRA)
 - 4) Societal impacts of NEARGOOS data and others (Ando)
- Ongoing observations, data managements in particular exchange with other countries, and needs and benefit of data sharing in the Asia-Pacific regions
 - 5) India (Sarma, National Institute of Oceanography)
 - 6) Malaysia (Idham Khalil, Insitute of Oceanography and Environment, University of Malaysia Terengganu, Malaysian Oceanograhly Data Aggregation and Archibing System)
 - 7) Thai (Kongkiat Kittwattanawong, Phuket Marine Biological Center Department of Marine and Coastal Resources)
 - 8) Vietnam (Vu Van Tac, Ocean Data Department, Vietnam Institute of Oceanography)
 - 9) Discussion on importance of data sharing (Ando)

15:00-15:30 Break

15:30-17:30 Session-3: Discussion for developing scheme towards coastal and jurisdictional meta-data sharing in the Asia-Pacific regions (Ando)

WG5: AGRICULTURE AND FOOD SECURITY (GEO GLAM)

The food demand is still increasing in the 21st century under rapid population growth, diet transition from grain to meat, use of crops for bio-fuel, etc., while facing the shortage of arable land and water resource for sufficient food production, and frequently occurring extreme weather conditions under global warming which are terrifying stable productivity of food. Moreover, we have to break the dependency of agricultural production on excessive use of chemicals which causes serious environmental impact and food safety issues. Namely, we need to simultaneously accomplish both high productivity and sustainability against several constraints.

Realizing that global/local scale earth observation is one of the most important key factors to address those issues by optimizing complex conditions, several groups have been involved in providing satellite observations and ground level observations and trying to apply such data with some model for agriculture including crop yield forecast and agriculture damage assessment. In spite of the importance of merging data from different platforms such as satellite observations and ground observations for better decision support, there are just few good applications of such multi-platform data integration.

In this working group, participants representing different observation platforms and decision support system developments will interact to learn about the present status and perspectives of multi-platform observations, and discuss how to provide multi-platform observation environment to achieve sustainable food production particularly focusing on the utilization of wide range of the observations from different domains such as water management, biodiversity, forest management etc., in order to fulfill the above constraints, while clarifying the short-term and long-term goals of the observations. The results of the discussion will lead us to the Input to GEO GLAM (Global Agriculture Monitoring) project for G20 action plan, especially Asia rice crop activity in GEO GLAM and other international projects including FAO AFSIS, etc.

Co-Chairs:

- Prof. Seishi Ninomiya, Professor, University of Tokyo
- Dr. Doan Minh Chung , VAST , Vietnam

- 9:30-12:00

I. GEOGLAM status and perspectives

- | | | |
|----|------------------|--|
| 1. | GEO GLAM | Dr. Doan Minh Chung , VAST , Vietnam |
| 2. | Asia Rice status | Dr. Jai S. Parihar, ISRO, India
Dr. Shinichi Sobue, RESTEC/JAXA |

3. Introduction to Asia Rice technical demonstration sites I. Thailand
Dr. Preesan Rakwatin, GISTDA, Thailand
4. Introduction to Asia Rice technical demonstration sites II. Japan, Indonesia, Vietnam
Dr. Kei Oyoshi, JAXA, Japan
5. Discussion

- 13:00-15:30

II. Integrated use of satellite observations and ground observations

1. Collaborative strategy with GEOSS from WMO/CAgM perspective
Dr. Shinichi Sobue, RESTEC/JAXA
Prof. Byong Lyol Lee, Seoul National U., WMO/CAgM
2. APAN perspective on multi-platform data integration
Takuji Kiura, NARO
3. AFSIS crop productivity prediction based on satellite observation
Dr. Toshio Okumura, RESTEC, Japan
4. Agricultural decision support system by multi-scale sensing and modeling
Prof. Kiyoshi Honda, Chubu U.
5. RECCA: Decision support system for optimal agricultural production under global environment changes
Prof. Seishi Ninomiya, U. Tokyo
6. GRENE: Climatic Changes and their effects on agriculture in Asian monsoon region
Prof. Masaru Mizoguchi, U. Tokyo

- 16:00-17:30

III. Panel Discussion: Interdisciplinary collaboration for sustainable food production

Chair Prof. Seishi Ninomiya, U. Tokyo

- Topics to be discussed
 - ✓ Sustainable food production
 - ✓ Multi-platform observation
 - ✓ Needs for interdisciplinary collaboration
 - ✓ Development and collaboration scheme
 - ✓ Capacity building
- Panelists
 - ✓ Dr. Doan Minh Chung Dr. Jai S. Parihar, VAST, Vietnam
 - ✓ Dr. Shinichi Sobue, RESTEC/JAXA
 - ✓ Dr. Preesan Rakwatin, GISTDA, Thailand
 - ✓ Prof. Byon-Lyol Lee, CAgM/WMO
 - ✓ Prof. Kiyoshi Honda, Chubu U.