



Asia-Pacific  
Environmental Innovation Strategy Project



中国科学院  
CHINESE ACADEMY OF SCIENCES



# APEIS Capacity Building Workshop on Integrated Environmental Monitoring of Asia-Pacific Region

20-21 September 2002, Beijing, China

## Sponsored jointly by

*Ministry of the Environment, Government of Japan  
State Environmental Protection Administration (SEPA), Government of China  
Chinese Academy of Sciences (CAS)  
The Asia-Pacific Network for Global Change Research (APN)*

## Organized jointly by

*National Institute for Environmental Studies (NIES), Japan  
Institute of Geographical Science & Natural Resources Research (IGSRR), CAS  
Centre for Remote Imaging, Sensing and Processing (CRISP), National University of Singapore  
China National Environmental Monitoring Center, SEPA*

## Purpose

Rapid economical developments in Asia and Pacific region have caused serious environmental degradation, such as forest area decrease, desertification, salinization, water resources depletion, and soil loss. They become serious constraint factors to the balanced and sustainable economic development in the region. Under this situation, it is necessary to scientifically grasp the present condition and changes in natural resources in order to take countermeasures for their depletion and degradation.

The project of Asia-Pacific Environmental Innovation Strategy (APEIS), launched with endorsement of Asia-Pacific Environmental Ministers and senior officials at the 10<sup>th</sup> Environment Congress for Asia and the Pacific (ECO ASIA) in October 2001, aims to develop scientific knowledge-based tools such as an integrated monitoring system and innovative strategy options to promote informed decision-making for sustainable development, to promote environmental cooperation and capacity building in the Asia-Pacific region, to propose an "Asia-Pacific model" for sustainable development. The integrated monitoring system are being developed by National Institute for Environmental Studies (NIES), Japan, Institute for Geographical Sciences and Natural Resources Research (IGSNRR), Chinese Academy of Science, China and Centre for Remote Imaging, Sensing and Processing (CRISP), National University of Singapore (NUS), Singapore.

The purpose of this workshop is to address the following issues:

1. Capacity building on the development of integrated monitoring system
  - a. Satellite-based monitoring

- Current situation and problems at the MODIS data receiving stations
  - Advances in the development of MODIS Processing System
  - b. Ground-based monitoring
    - Current situation and maintenance of ground-truth observation sites for various ecosystems
  - c. Integration of satellite-based and ground-based systems
    - Data use policy for both MODIS data and ground-truth observation data
    - Methodology for integrated monitoring of environmental degradation and disasters
    - Integrated modeling of land-surface processes and ecological functions at watershed scale
2. Exploration of monitoring network expansion

## **Program**

### **Day 1 (20 September)**

**Morning: 9:00-9:45      Opening Ceremony**

**(Speech: 15 minutes)      Chair: Prof. Jiyuan LIU**

#### **Greetings from official leaders of Japan and China**

**9:00** Mr. Panqin Chen, Deputy Director General of Bureau of Science and Technology for Resources and the Environment, China

**9:15** Mr. Kazuyoshi OKAZAWA, Director-General of Global Environment Bureau, Ministry of the Environment, Japan

**9:30** Director-General of International Cooperation Bureau, SEPA, China

**Morning: 9:45 – 12:00      Keynote Speeches**

**(Presentation: 20 minutes,      Chair: Dr. Robert Wolfe**

**Question:5 minutes)**

**9:45** *APEIS Integrated Environment Monitoring Network: Objective of the Project (Prof. Masataka WATANABE, NIES)*

**10:10** *Current situation of MODIS data receiving stations:*

*Beijing Station, (Prof. Jiyuan LIU, CAS)*

*Urumqi Station (Prof. Xiaolei ZHANG, Prof. Xi CHEN, CAS)*

**10:35** *MODIS Land Discipline and Validation: Ecosystem Variables and Vegetation Cover Conservation ( Prof. John Townshend, Maryland Uni., USA, PI of NASA MODLAND TEAM)*

**11:00** *Current Situation of the MODIS Data Acquisition, Processing and Applications in Australia (Dr. David L B Jupp, CSIRO Earth Observation Centre )*

**11:25** *Group Photo*

**12:00** *Lunch*

**Afternoon: 14:00 - 18:00**    **MODIS Data Processing System**  
(Presentation: 20 minutes,    Chair: Dr. Shogo MURAKAMI,  
Question:5 minutes)

**14:00**    ***Current Situation and Progresses in Processing MODIS High-Level Products*** (Dr. Robert Wolfe, NASA)

**14:25**    ***Current Situation of the MODIS Data Acquisition, Processing and Applications in Singapore*** (Dr. KWON, Leong Keong, Director, Centre for Remote Imaging, Sensing and Processing)

**14:50**    ***Atmospheric Correction of MODIS Data*** (Dr. Shunlin Liang, Maryland Uni. USA)

**15:15**    ***Progresses in Processing MODIS Data in China*** (Prof. Zhuang Dafang, CAS)

**15:40**    ***Coffee Break***

**16:05**    ***Identification of land-use & land-cover changes in East-Asia*** (Dr. Masayuki TAMURA)

**16:20**    ***KoFlux: A New Tool to Study the Biosphere-Atmosphere Interactions in Asia*** (Prof. Joon Kim, Yonsei University, Korea)

**16:45**    ***Discussion***

**Evening    18:30-21:00    Banquet**

**Day 2 (21 September)**

**Morning    9:00 – 12:00    Panel 1 : Report from Ecological Stations**  
(Presentation: 15 minutes,    Chair: Prof. Changming LIU  
Question:5 minutes)

**9:00**    ***Simulation on water and energy transfer in the agro-ecosystem***  
(Prof. Zhu OUYANG, CAS)

**9:20**    ***The mechanism of productivity formation of alpine meadow ecosystem*** (Prof. Xinquan ZHAO, CAS)

**9:40**    ***The transferring and management of water and nutrients, and the mechanism of the productivity in rice paddy ecosystem*** (Prof. Keling WANG)

**10:00**    ***The Water Transfer Processes in Salinized Oasis Ecosystem*** (Prof. Yan LI, CAS)

**10:20**    ***Heat, Water and Carbon Fluxes at Different Ecological Systems***  
(Dr. Qinxue WANG, NIES)

**10:40** *Coffee Break*

**10:55** *Progresses in China Flux Researches Project (Prof. Guirui YU)*

**11:15** *Progresses in China MA Research Project (Prof. Jiyuan LIU, Prof. Shidong ZHAO)*

**11:35** *Integrated modeling of land-surface processes and ecological functions at watershed scale (Dr. Seiji HAYASHI, NIES)*

**12:00** *Lunch*

**Afternoon: 14:00-18:00** **Panel 2 APN Network Capacity Building: Proposals from Different Countries in Asia Pacific Region**  
**(Presentation: 15 minutes, Question:5 minutes)** **Chair: Masataka WATANABE**

**14:00** *Satellite Data and Water Resources Management ( Prof. Liu Changming, CAS)*

**14:20** **The Management System of Central Asia Territories on the Basis of the Spatial Data in GIS Technologies Format** (Prof. Alexandr Nikolayenko, The Regional Environmental Centre for Central Asia, Republic of Kazakhstan)

**14:40** **Remote Sensing Application for Coastal Environment Study in Viet Nam,** (Prof. Tran Dinh Lan, Hai Phong Institute of Oceanography, Viet Nam)

**15:00** **Unknown** (Prof. Yanbo HE, Remote Sensing Application and Agrometeorology, National Meteorological Center, China Meteorological Administration)

**15:20** **Unknown** (Prof. Gennadiy Verovets, Far Eastern Center for Sensing and Processing of Satellite Data, Russia)

**15:40** **Unknown** (Prof. Oyuntuya Beltreg, Mongolian)

**16:00** *Coffee Break*

**16:15** **Discussion:**

- 1) *Establishment of Monitoring Network System among Beijing, Urumuqi, Singapore, Australia and Japan.*
- 2) *Establishment of Research Collaboration with NASA*
- 3) *Future Collaboration with APN*
- 4) *Next Workshop*

**17:15 Workshop Closing Ceremony**

*Concluding Remarks: ( Prof. John Townshend, Maryland Uni., USA)*

**Evening    18:30-21:00    Dinner**

**Call for papers and MS PowerPoint Presentations**

Papers and MS PowerPoint Presentations covering the topics of the workshop are invited. **It will be very appreciated if you can provide your PowerPoint Presentation File in a CD during workshop, which will be published after meeting.**

**Working language**

Working language of the workshop will be English.

**Hotel and Meeting Room**

The APEIS workshop will be hold at **Friendship Hotel** ( You Yi Bin Guan, at Zhongguancun Nandajie No.1, Beijing. Web: <http://www.bjfriendshiphotel.com>, Fax: 86-10-68499168, Tel: 86-10-68498880) at Sep.20-21 in Beijing. The following is the map of Hotel location and guide in it. Organizer will meet you at the Beijing International Airport exit, and so please tell Dr. Liu Mingliang your airplane information as soon as possible. If we unsuccessfully receive you at the airport, please take the Taxi with the map I give you. At Building No.2(Jing Bin Lou) we secretariat have reception desk during Sep.19 to Sep.22 and we will arrange the room for you. All participants from outside Beijing will live at Building No.2 and the meeting room is in Friendship Palace (Meeting room No.1 and No.2).

Here is the address of Dr. Liu Mingliang:

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