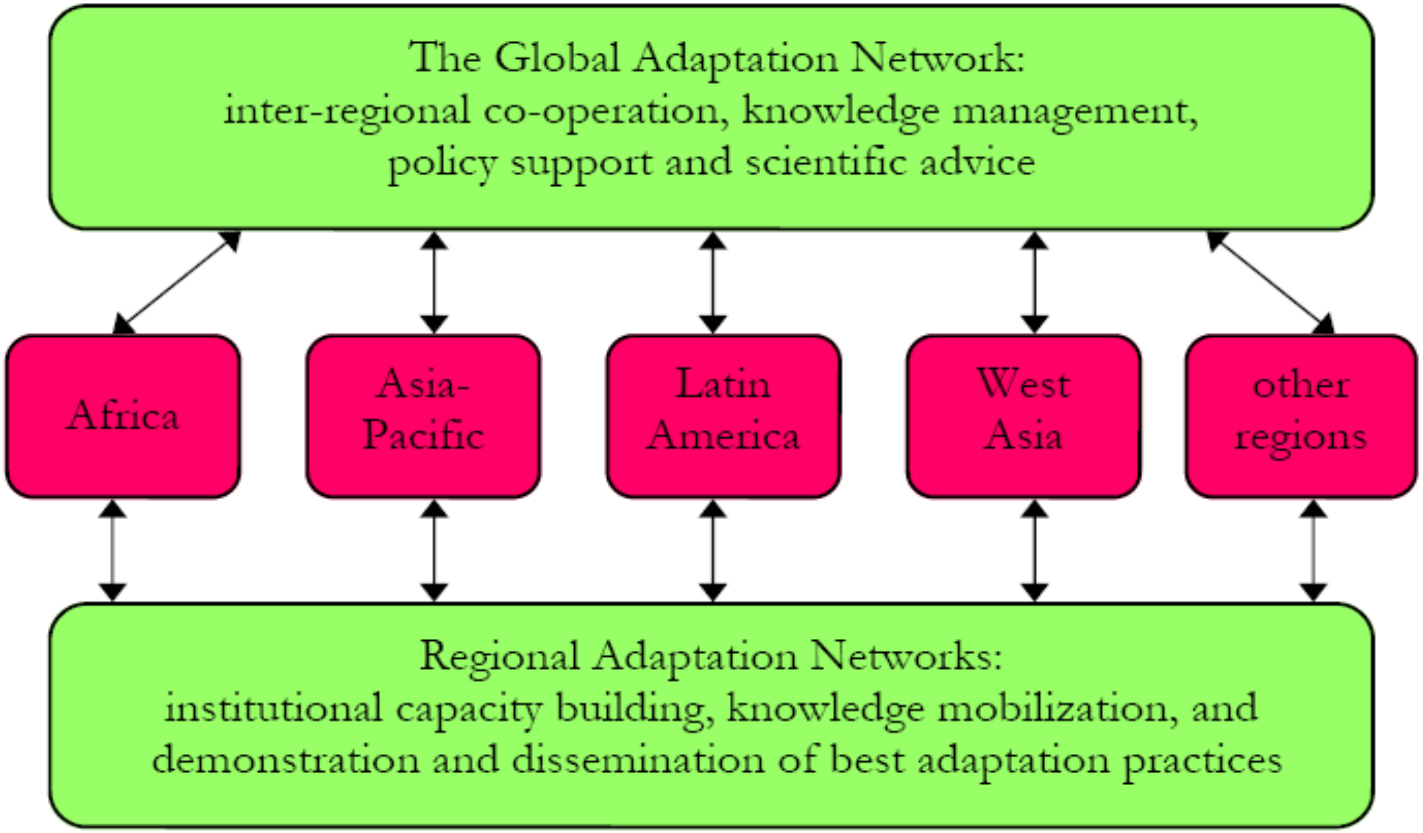
Adaptation Forum in Bangkok October 21-22, 2010

Regional Partnership & Cooperation in Asia

Masataka WATANABE
Keio University, Japan
Chair, the Steering Committee of APAN

Global Adaptation Network (GAN)



Asia Pacific Adaptation Network launched on October 3, 2009 and is piloting the GAN

- inception phase (2009-2010)
- development phase (2011-2012)
- full operation phase (2012-)

Asia Pacific Adaptation Network (APAN)

- Chair: Prof. Masataka Watanabe (Japan)
- Central Asia: Ministry of Nature Protection (Turkmenistan)
  Climate Change Coordination Center (Kazakhstan)
- South Asia: Ministry of Environment and Forest (India)
  Indian Institute of Technology-Bombay (India)
- Pacific: Secretariat of the Pacific Regional Environment Programme
  National Adaptation Research Facility (Australia)
- Southeast Asia: ASEAN Senior Officials (Cambodia)
  Mindanao State University (Philippines)
- Northeast Asia: Korea Environment Institute (Republic of Korea)
  Chinese Academy of Sciences (China)

Steering Committee

Asia Pacific Regional Hub / Bangkok
(UNEP RRC.AP and IGES co-host the Regional Hub)

International Support Group

Northeast Asia sub-regional node

Pacific sub-regional node

Central Asia sub-regional node

South Asia sub-regional node

South-East Asia sub-regional node

Adaptation Platform
(Sub-regional autonomous node for South and South-East Asia

Adapting by building resilience to a changing climate

- Assessing vulnerabilities and adaptation services of ecosystem;
- Promoting ecosystem based-adaptation;
- Building national capacity for undertaking integrated vulnerability and adaptation assessments;
- Supporting countries to integrate adaptation into their national and sectoral development planning processes;
- Providing technical and policy support to major climate change financing mechanisms.

Asia-Pacific Adaptation Network

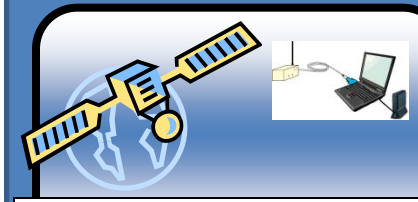
Prediction & Knowledge Bank

Adaptation Alliance

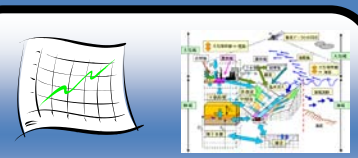
Support for Mainstreaming into development plan

Pilot projects- demonstrating adaptation measures

Good Practice



Data base development



Integrated Assessment Tools

Evaluation of vulnerability

Selection of Adaptation Technology

Government

International Org.

Hub Center

UNEP Adaptation Network

University

Research Institute

Generating and sharing knowledge to enhance adaptive capacity

Knowledge Distribution

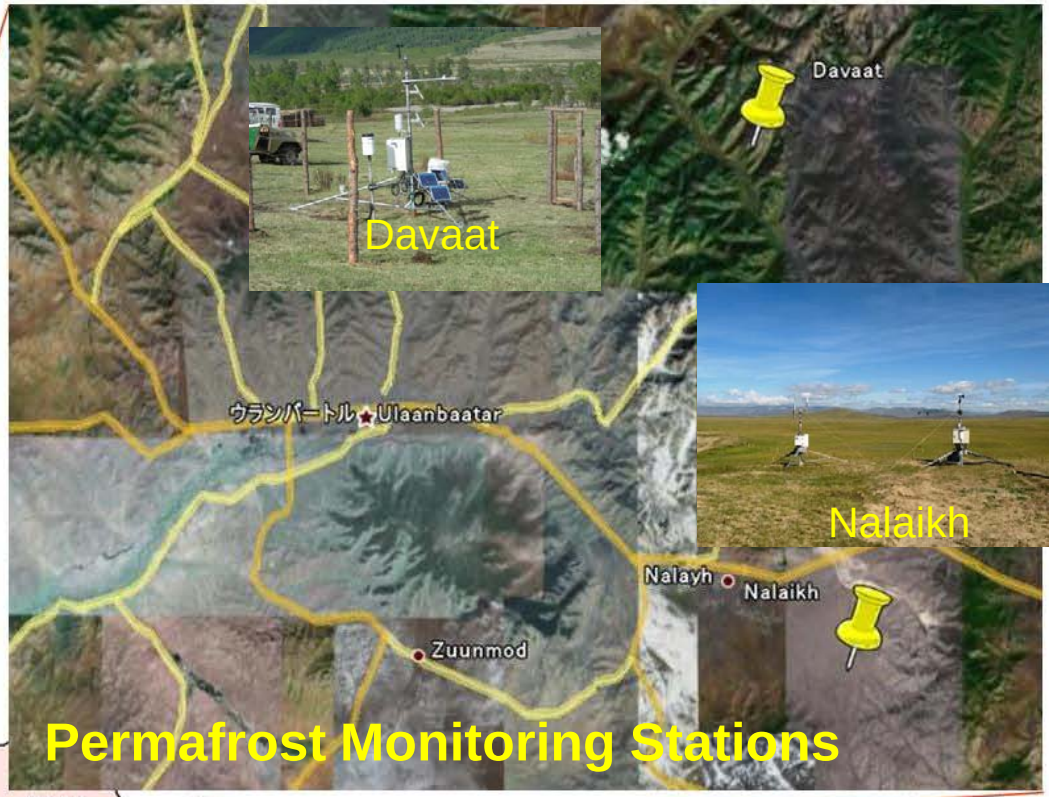
Decision Maker

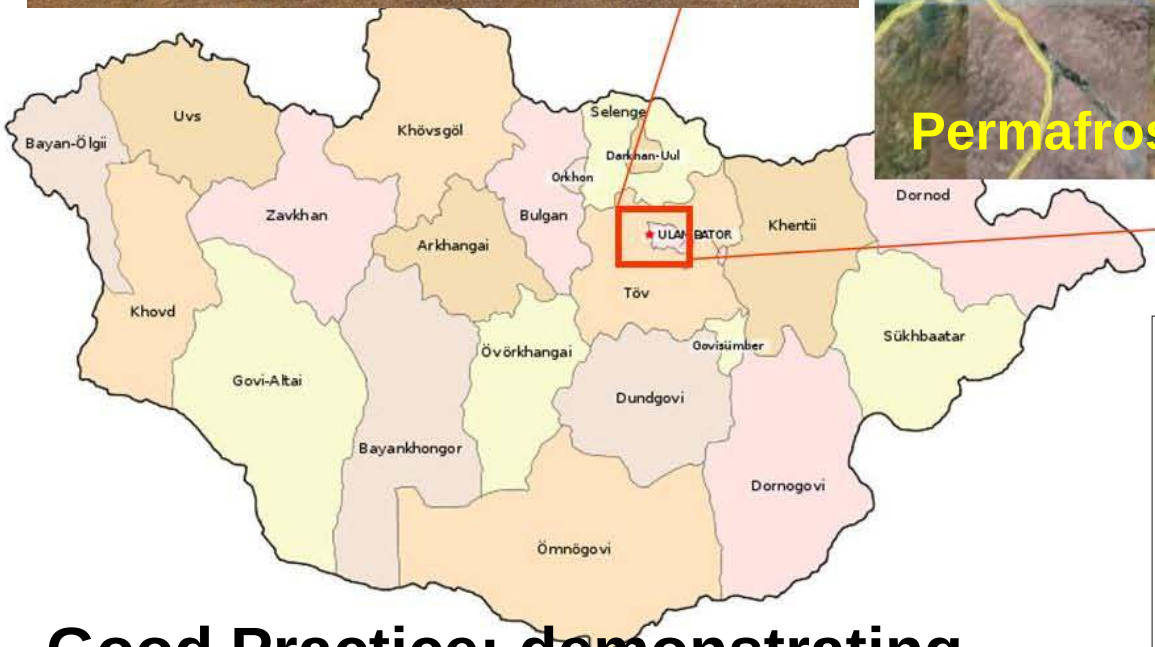
Local Community (through IT technology)

International Organization private sector

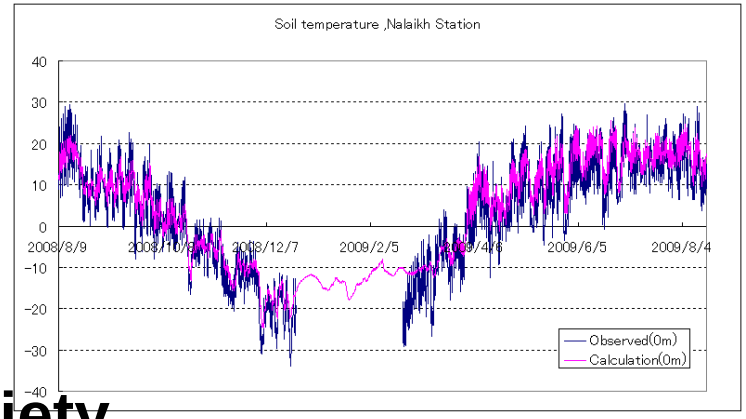
First Activity

Consultation Meeting in Mongolia, June 2010





Soil temperature（ Nalaikh ）



Good Practice: demonstrating adaptation measures in pasture society

Second Activity

Central Asia Regional Consultation Meeting
was held on September 29,2010
as a side-event to the 6th Ministerial Conference
on Environment and Development in Asia and the Pacific

Theme
Integration of Climate Change Adaptation
into Sustainable Development in Central Asia

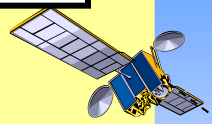
Assessment of Environmental Resources

Grand Observation Station

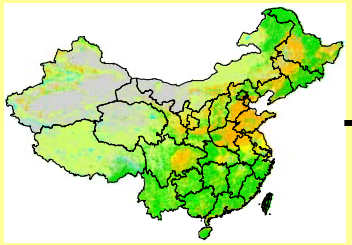
Paddy land, Dry land, Grass land, Semi-arid Land

Satellite Data (MODIS)

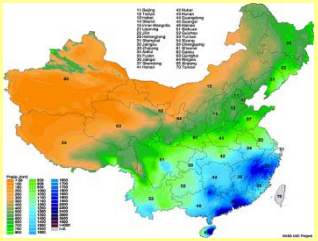
Stations at Beijing and Urumuqi



GIS Data-base



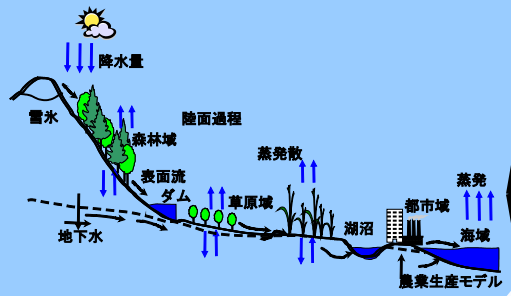
Land Use



Hydrological Meteorological Data

Water/Heat/Element Cycle Model

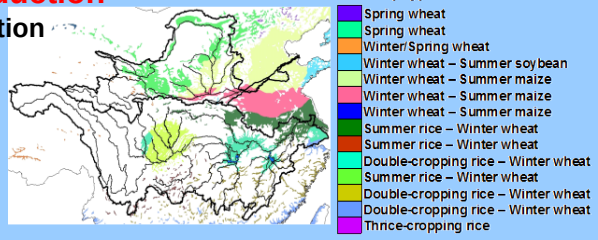
- Land Process Model SiB2
- Saturated-Unsaturated Soil Model
- Ground-flow Model MODFLOW
- River-flow Network Model
- Carbon Cycle-BCG Model



Food Production Model/DSSAT

DSSAT Model coupled with Water Cycle Model estimates food production

- Meteorological condition
  - DEM data
  - Evapo-transpiration
  - water intake



Crop types in the agricultural regions (1990s)

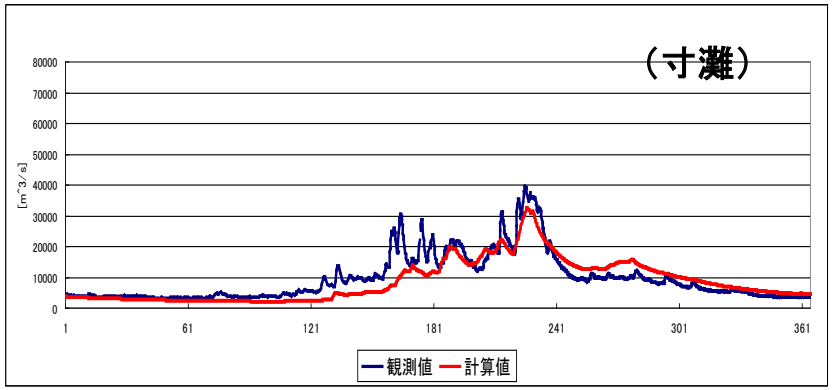
Water Stock

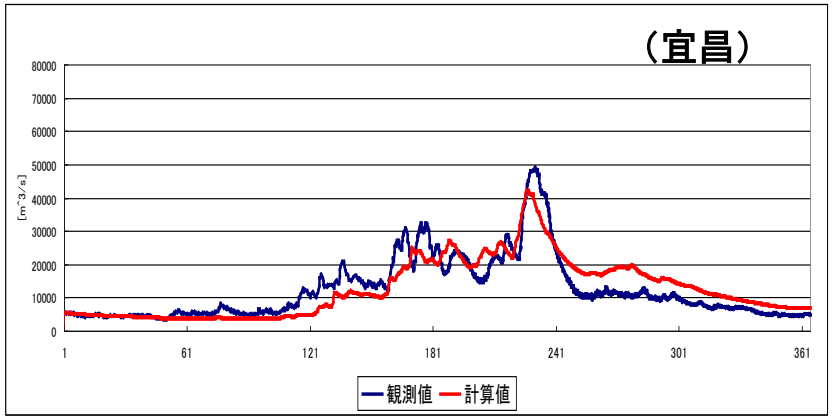
Carbon Sequestration

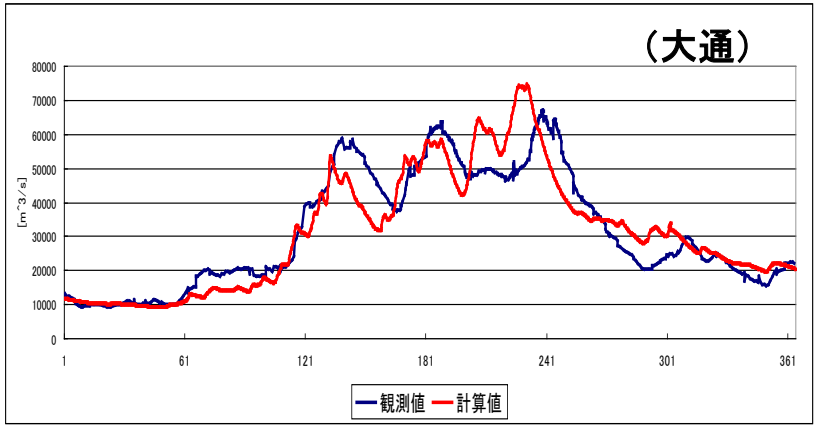
Environmental Loads

Agriculture Production

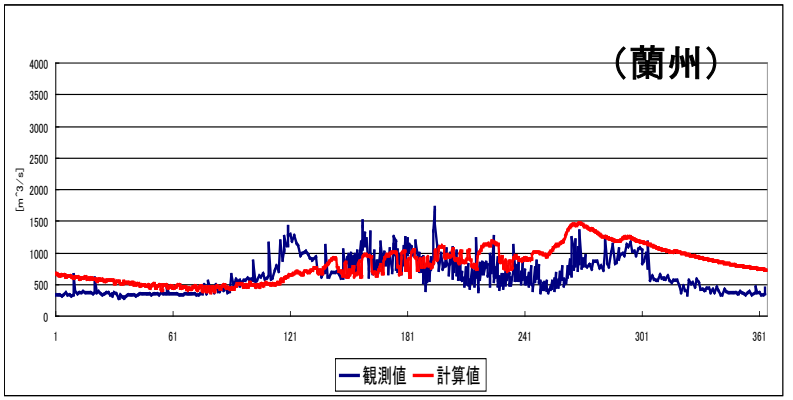
Changjiang flow rate in 2002

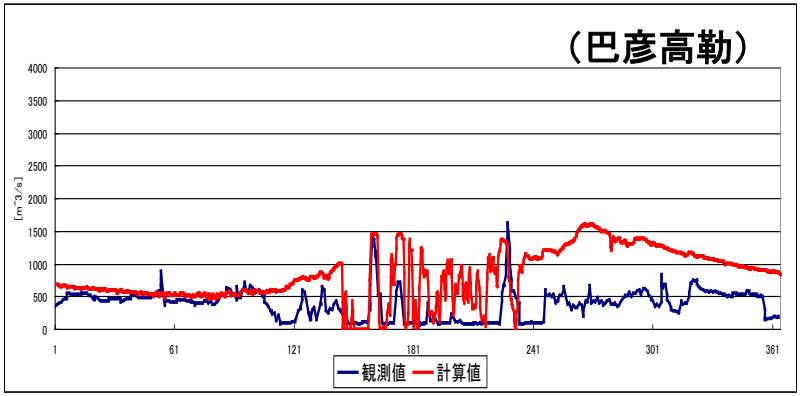


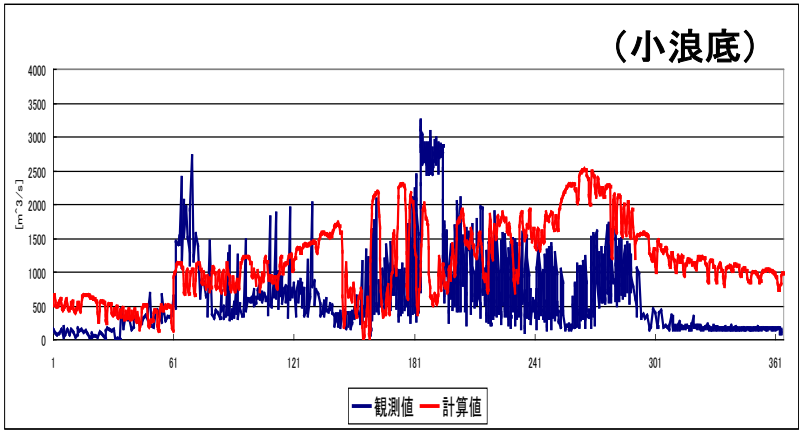


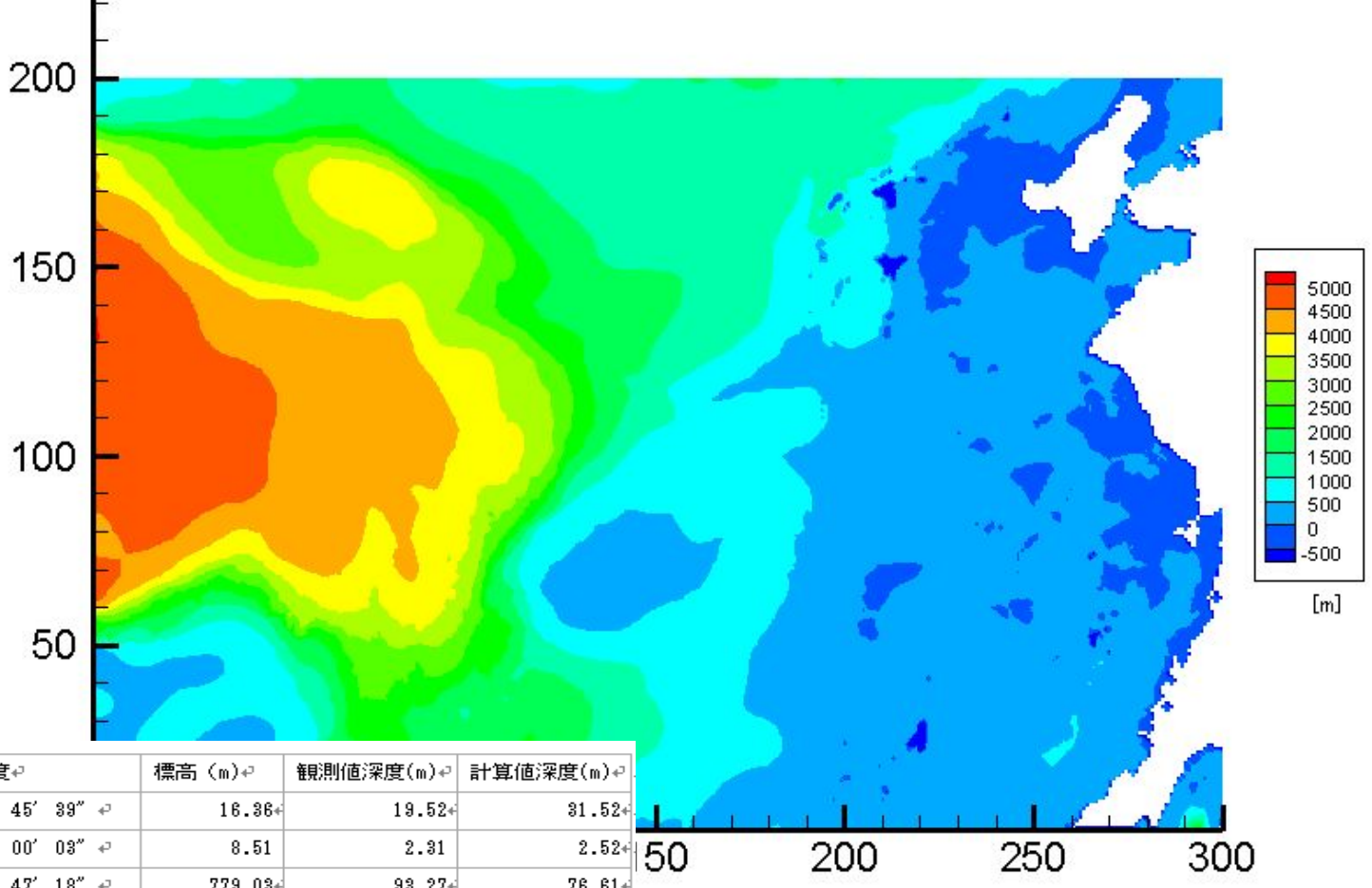


Yellow river flow rate in 2002



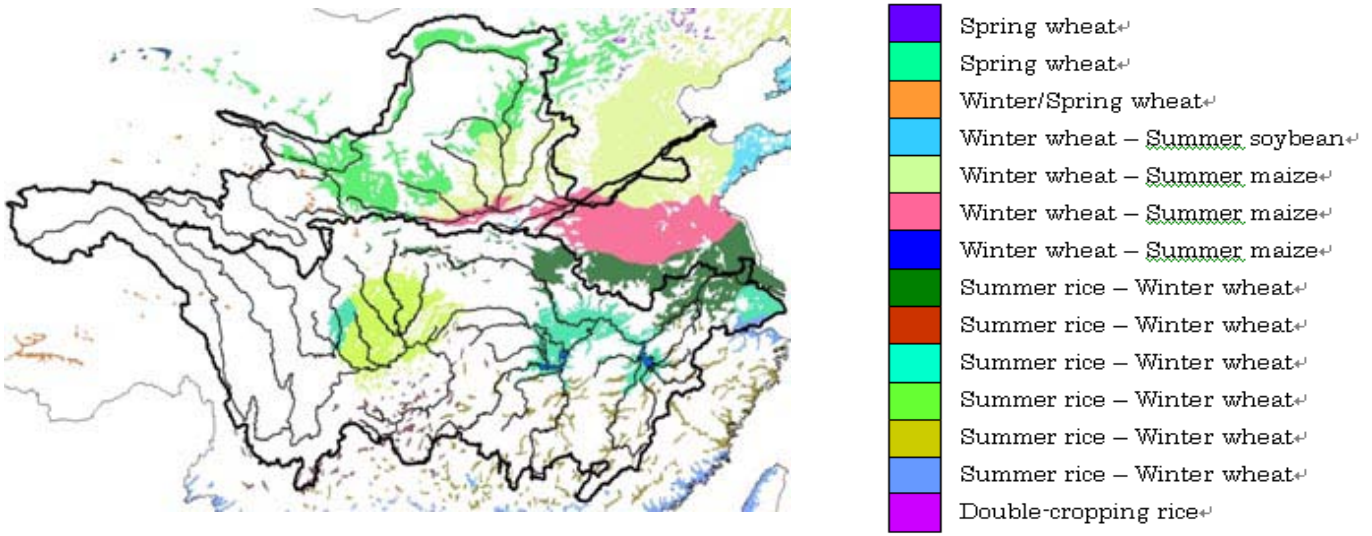




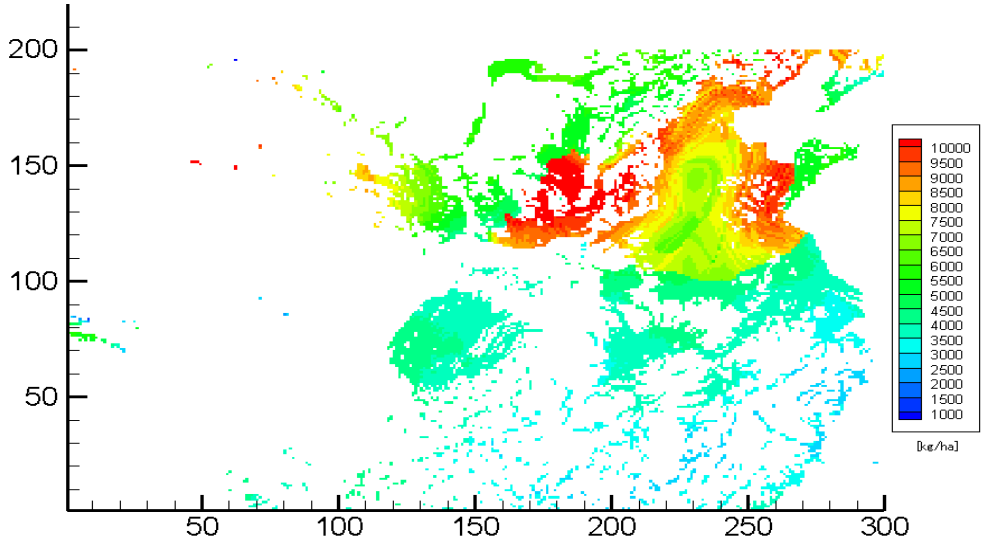


観測地点	經度	緯度	標高（m）	観測値深度(m)	計算値深度(m)
A:北京市	116° 49′ 41″	39° 45′ 39″	16.36	19.52	31.52
B:河北省	116° 50′ 47″	38° 00′ 03″	8.51	2.31	2.52
C:山西省	112° 30′ 48″	37° 47′ 18″	779.03	93.27	76.61
D:内蒙古自治区	106° 47′ 28″	39° 40′ 12″	1085.70	19.72	24.05
E:江苏省	118° 56′ 43″	33° 26′ 01″	7.96	23.05	23.02
F:浙江省	120° 43′ 31″	30° 38′ 25″	2.7	14.92	14.96
G:安徽省	116° 59′ 02″	33° 36′ 32″	25.62	5.60	4.28
H:福建省	117° 02′ 38″	25° 06′ 09″	349.42	29.90	49.62
I:江西省	113° 45′ 27″	27° 38′ 45″	74.69	5.11	5.82
J:山东省	119° 35′ 05″	37° 05′ 20″	2.71	11.12	12.98
K:河南省	114° 30′ 10″	35° 45′ 00″	62.00	18.99	18.90
L:湖北省	114° 57′ 58″	30° 10′ 45″	34.12	12.11	24.48
M:湖南省	113° 01′ 35″	28° 14′ 33″	30.90	4.10	10.24
N:陕西省	107° 27′ 07″	34° 27′ 09″	713.30	43.23	9.65

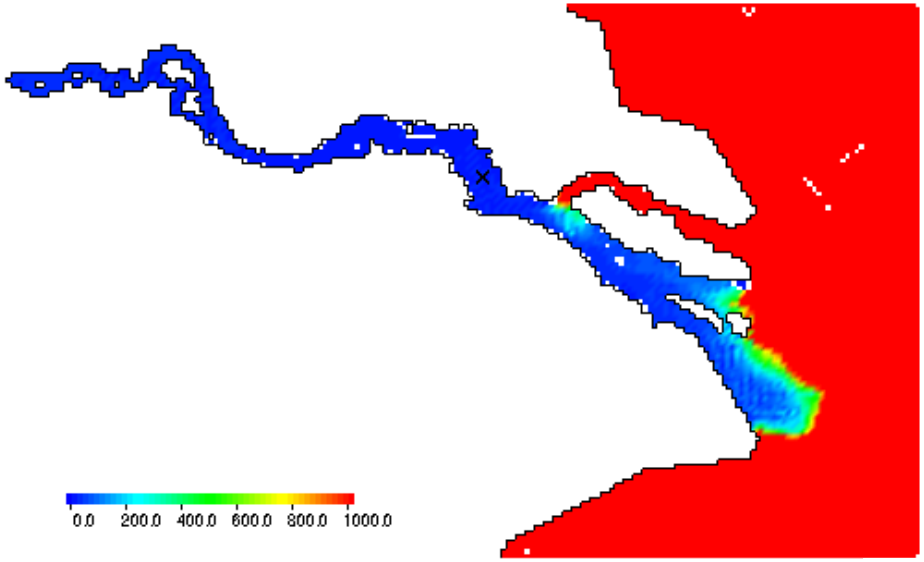
Ground water level



Rice and corn production in 2001

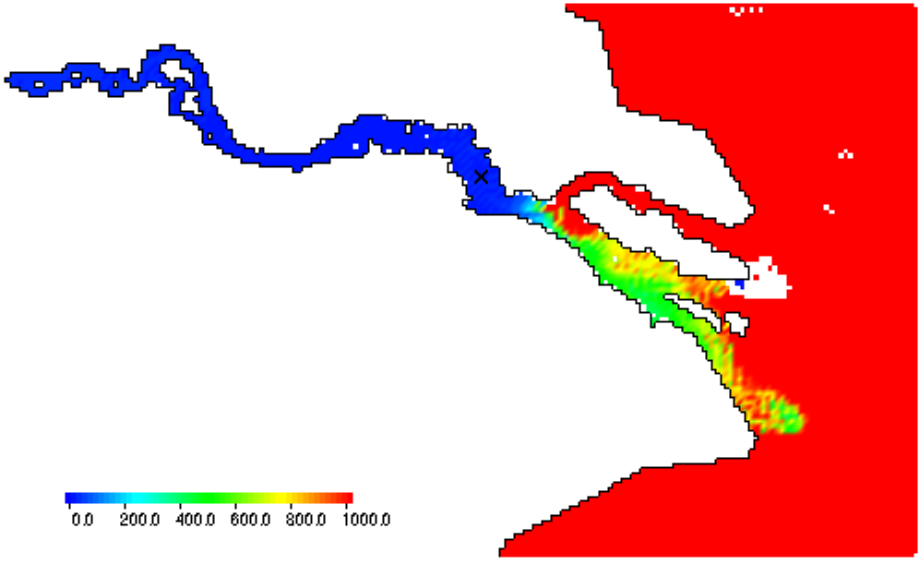


1. Increase in sea level rise of 9cm in the past 40 years (State Oceanic Administration, China）
2. Decrease in Changjiang river flow due to climate change and economic growth



Salinity Intrusion into Changjiang Estuary Feb. 27, 1999

3000m3/sec flowrate decrease



Estimation of Socio-Economic Condition using Economic Model

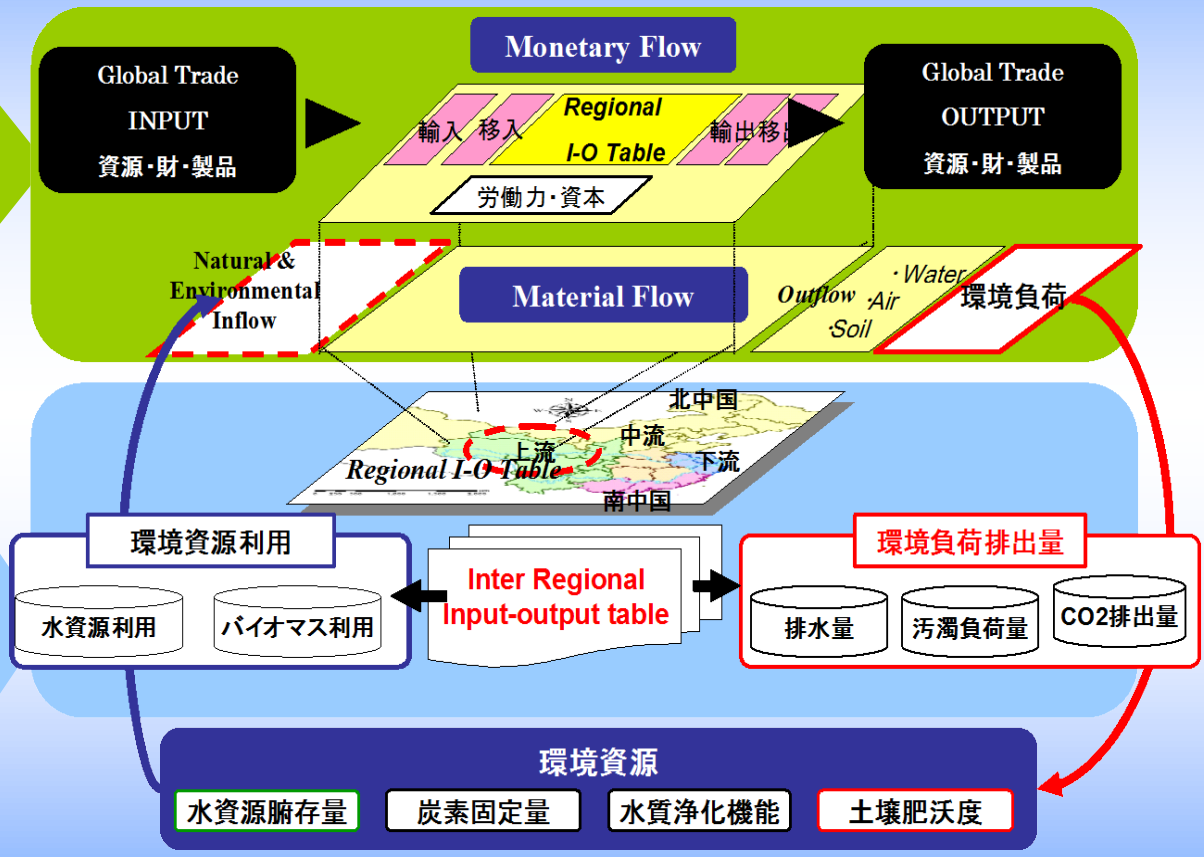
Change in Demand/Supply Balance of Food and Energy due to economic activity

- Food Production
- Demand and Supply Balance in Food and Energy
- General Equilibrium Model in regional scale

(Global trade assistance and production)

Water・Heat・CO2 Inventory

- Input-Output Table in China
- 30 Industrial Sectors
- Environmental Load : water demand, waste water, C/N/P load, CO2 load




UNite to
combat
climate
change