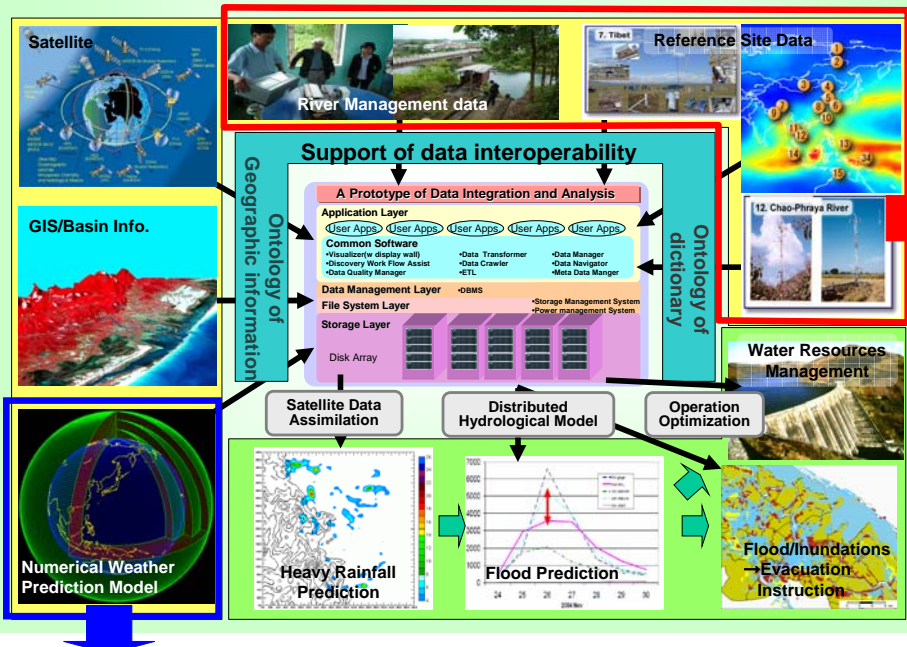# Data Integration & Analysis System (DIAS) data archives and applications

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Data Integration & Analysis System (DIAS)

DIAS was launched in 2006 as one of Japan's National Key Technology projects. It is supported by the Ministry of Education, Culture, Sports, Science, and Technology (MEXT) of Japan. [http://www.editoria.u-tokyo.ac.jp/dias/english/]

The objectives of the **DIAS** mission are:
1. to coordinate cutting-edge information science and technology and the various research fields addressing the environment;
2. to construct data infrastructure that can integrate earth observation data, numerical model outputs, and socio-economic data effectively;
3. to create knowledge enabling us to solve environmental problems and to generate socio-economic benefits.

Satellite · GIS/Basin Info. · Numerical Weather Prediction Model · River Management data · Reference Site Data · 7. Tibet · 12. Chao-Phraya River

Support of data interoperability

A Prototype of Data Integration and Analysis — Application Layer — Common Software — Data Management Layer — File System Layer — Storage Layer — Disk Array

Satellite Data Assimilation · Distributed Hydrological Model · Operation Optimization · Water Resources Management

Heavy Rainfall Prediction · Flood Prediction · Flood/Inundations →Evacuation Instruction

GEOSS/AWCI

Under the framework of Global Earth Observation System of Systems (**GEOSS**), representatives of hydrological and meteorological organizations and science communities in Asia gathered together, and began to discuss about how to address the water-related issues in Asia. This is the GEOSS / Asian Water Cycle Initiative (GEOSS/**AWCI**). GEOSS/AWCI started from 2005 and currently it is in cooperation with the Data Integration and Analysis System (**DIAS**) which was launched in 2006. [http://monsoon.t.u-tokyo.ac.jp/AWCI/]
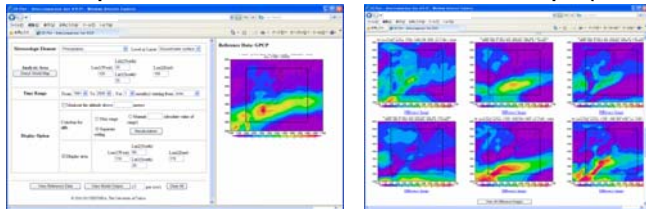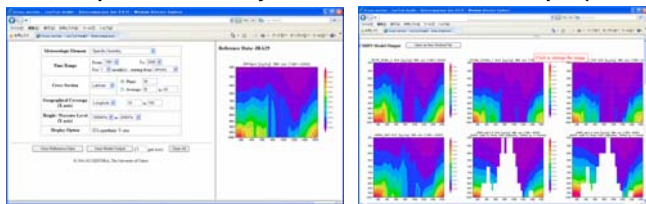

Flood · Drought · Water Quality · Climate Chagnge

WCRP/CMIP3

World Climate Research Programme (**WCRP**) Coupled Model Intercomparison Project Phase3 (**CMIP3**) output from coupled ocean-atmosphere model simulations of 20th - 22nd century climate is collected by the PCMDI in support of research relied on by the 4th Assessment Report (AR4) of the Intergovernmental Panel on Climate Change (**IPCC**). CMIP3 has received model output from the pre-industrial climate simulations and 1% per year increasing-CO_2 simulations of about 30 coupled General Circulation Models (**GCM**s). Through the agreement with PCMDI and DIAS, DIAS archived all the CMIP3 model outputs. [http://www-pcmdi.llnl.gov/ipcc/about_ipcc.php]
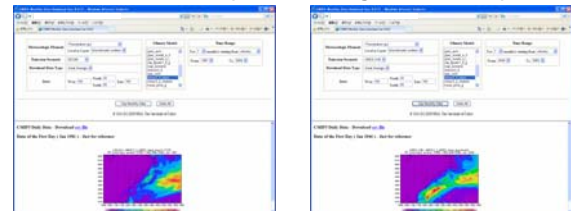
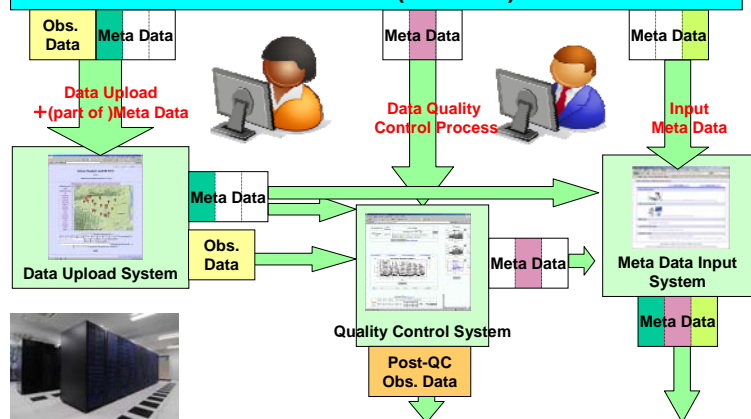**1. Intercomparison : Observation Data vs. CMIP3 Model Output (2D Plot)**

2. Intercomparison : Re-analysis Data vs. CMIP3 Model Output (Cross-section)

3. CMIP3 Data Download (left:20C3M, right: SRES A1B)

Data Provider (Observer)

Obs. Data · Meta Data · Meta Data · Meta Data

Data Upload +(part of)Meta Data · Data Quality Control Process · Input Meta Data

Data Upload System · Meta Data · Obs. Data · Meta Data · Quality Control System · Meta Data · Meta Data Input System · Meta Data
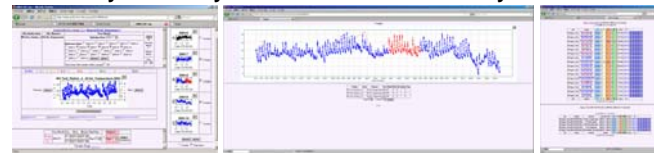
Post-QC Obs. Data

Data Integration and Analysis System (DIAS)

| Search IF | Data Download | | Document Generator | Visualization System |

1. Data Uploading System which can upload observed raw data by observer

2. Data Quality Control System which can make a QC by Observer.

3. Metadata Registration System which can registration metadata.