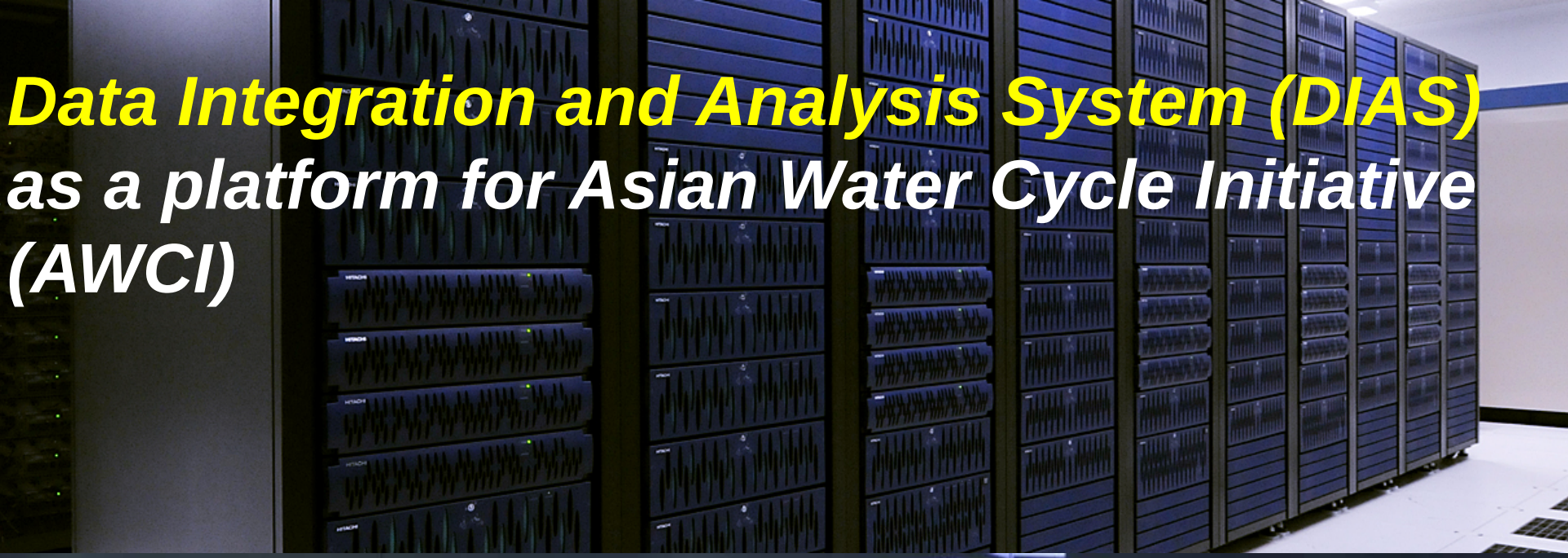
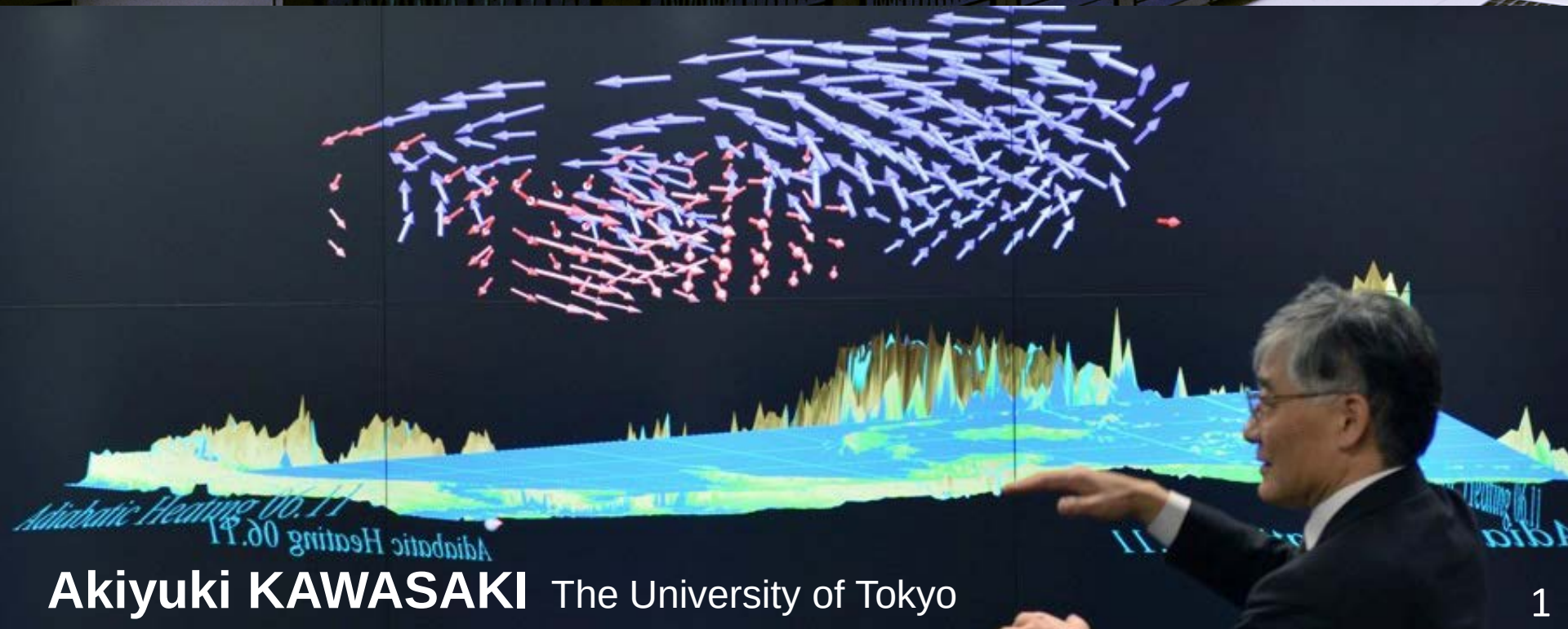
Data Integration and Analysis System (DIAS) as a platform for Asian Water Cycle Initiative (AWCI)





Akiyuki KAWASAKI The University of Tokyo

Agenda

1. Overview of DIAS

1. AWCI Data Archive System

1. Benefit of the use of DIAS as a platform for AWCI

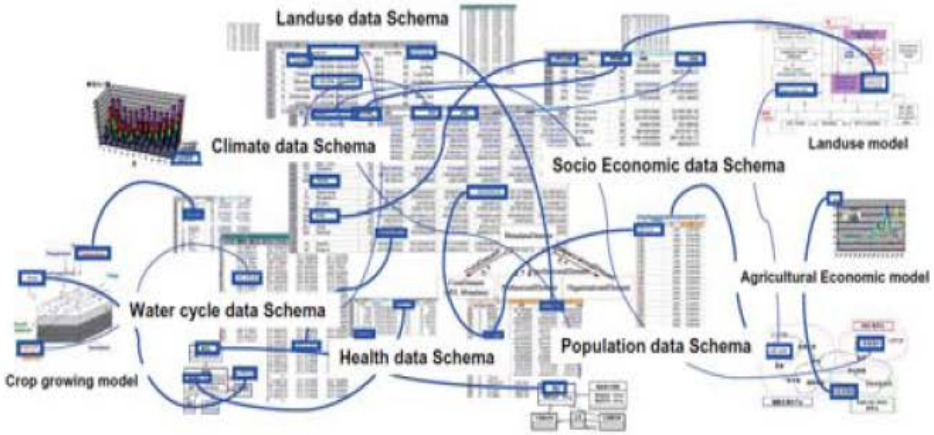
Technical Term Dictionary

Remote Sensing

GIS

Civil Engineering etc.

Reverse Dictionary



Geographical Dictionary

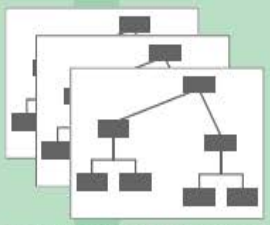
DIAS

Data Integration & Analysis System

Data model Searching System

UML Metadata

XML Schema



Hierarchical Diagram

Data Related information Archive System

OWL Association/Link Knowledge

Database Across Searching System

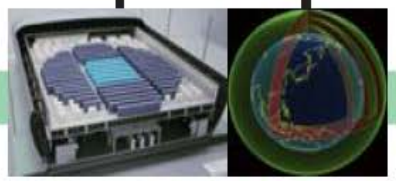
Extra-Large Volume data from various data and information source

In-situ Observation

Citizen Observation

Oceanographic Observation

Satellite Observation

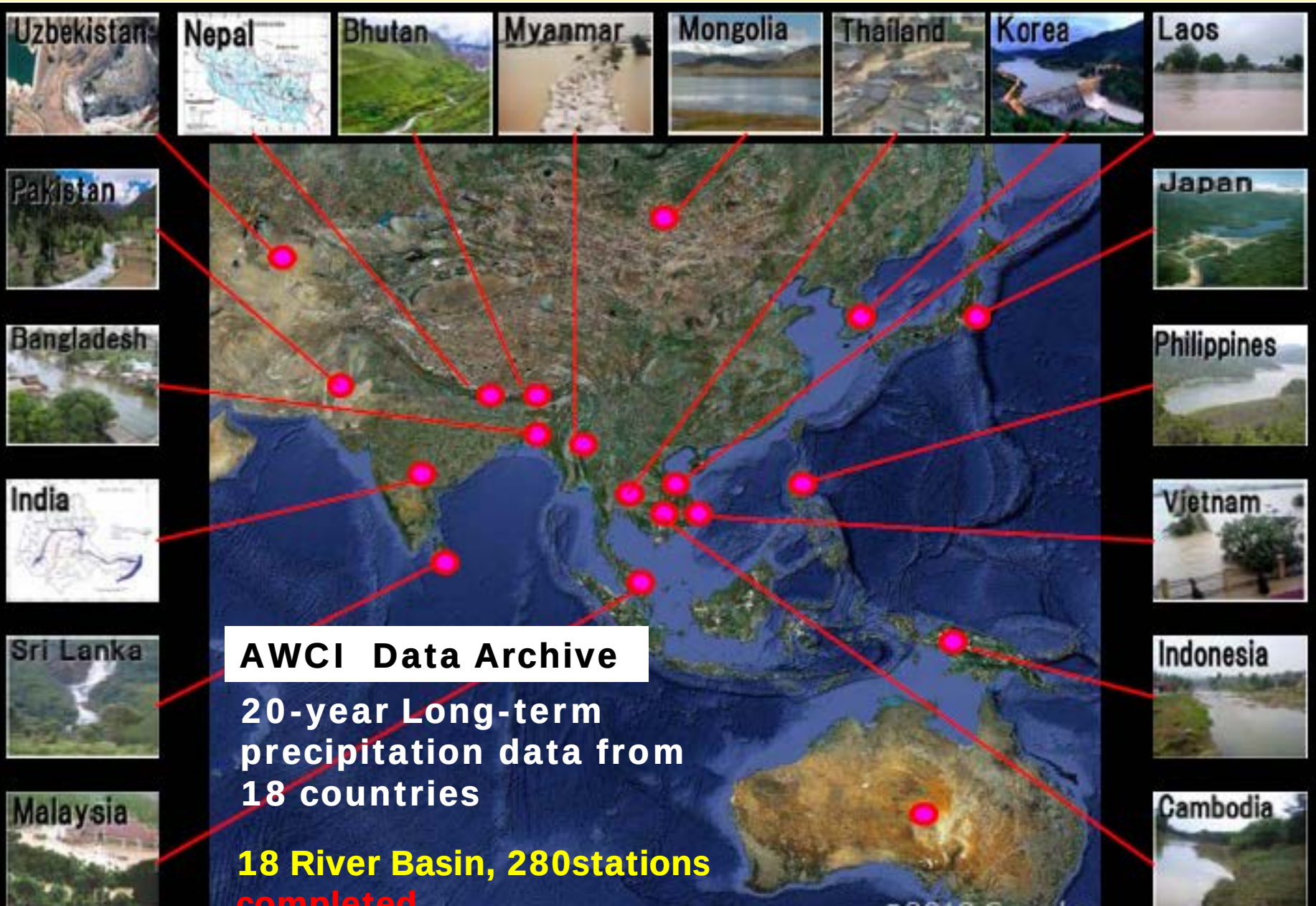


Weather and Climate Model

Operational Observation

Operational Information

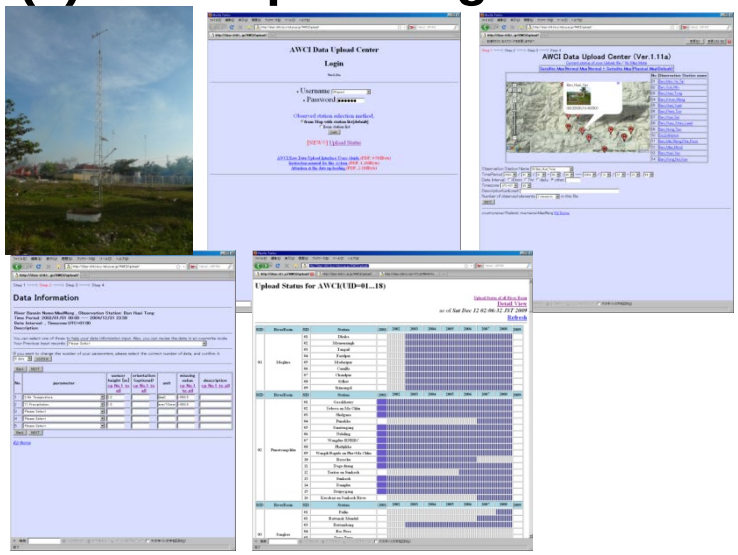
To archive hydro-meteorological dataset, including **data loading, QC** and **metadata registration**



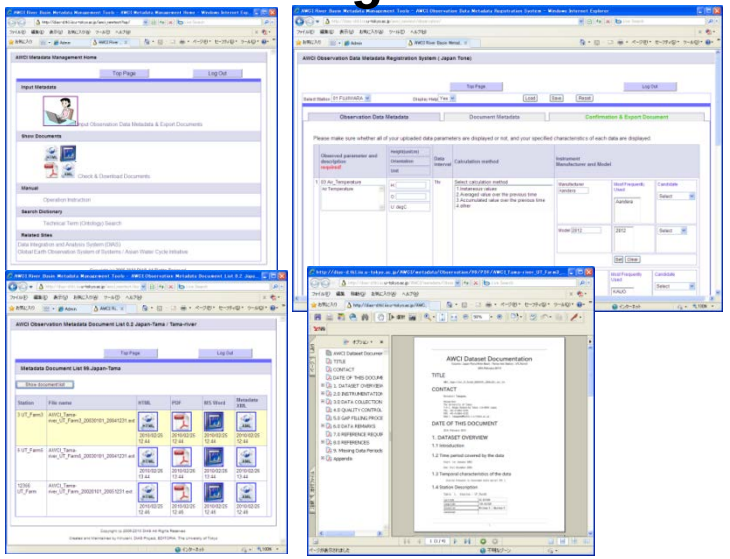
Tool for in-situ data input and management

DIAS
Data Integration & Analysis System

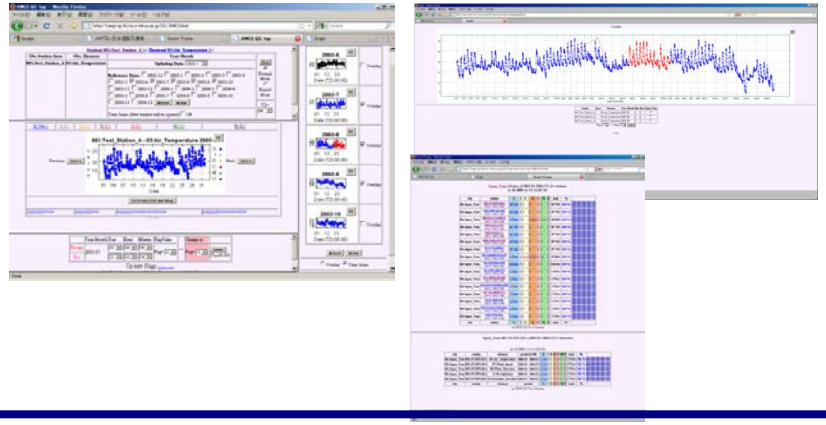
(1) Data Uploading



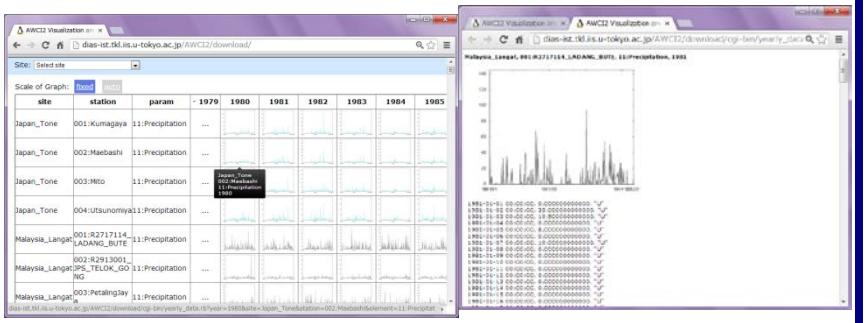
(3) Meta Data Registration



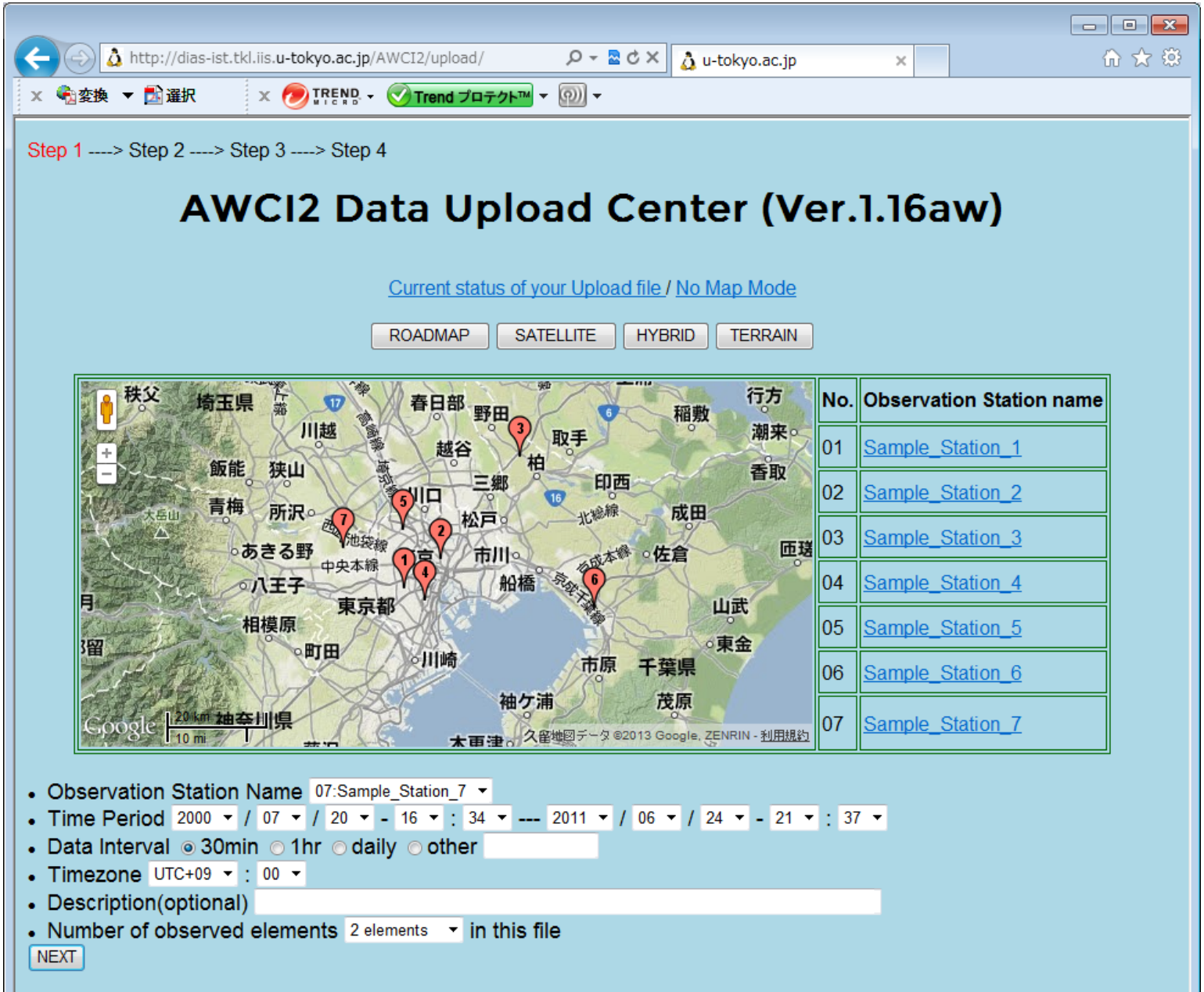
(2) Quality Controlling



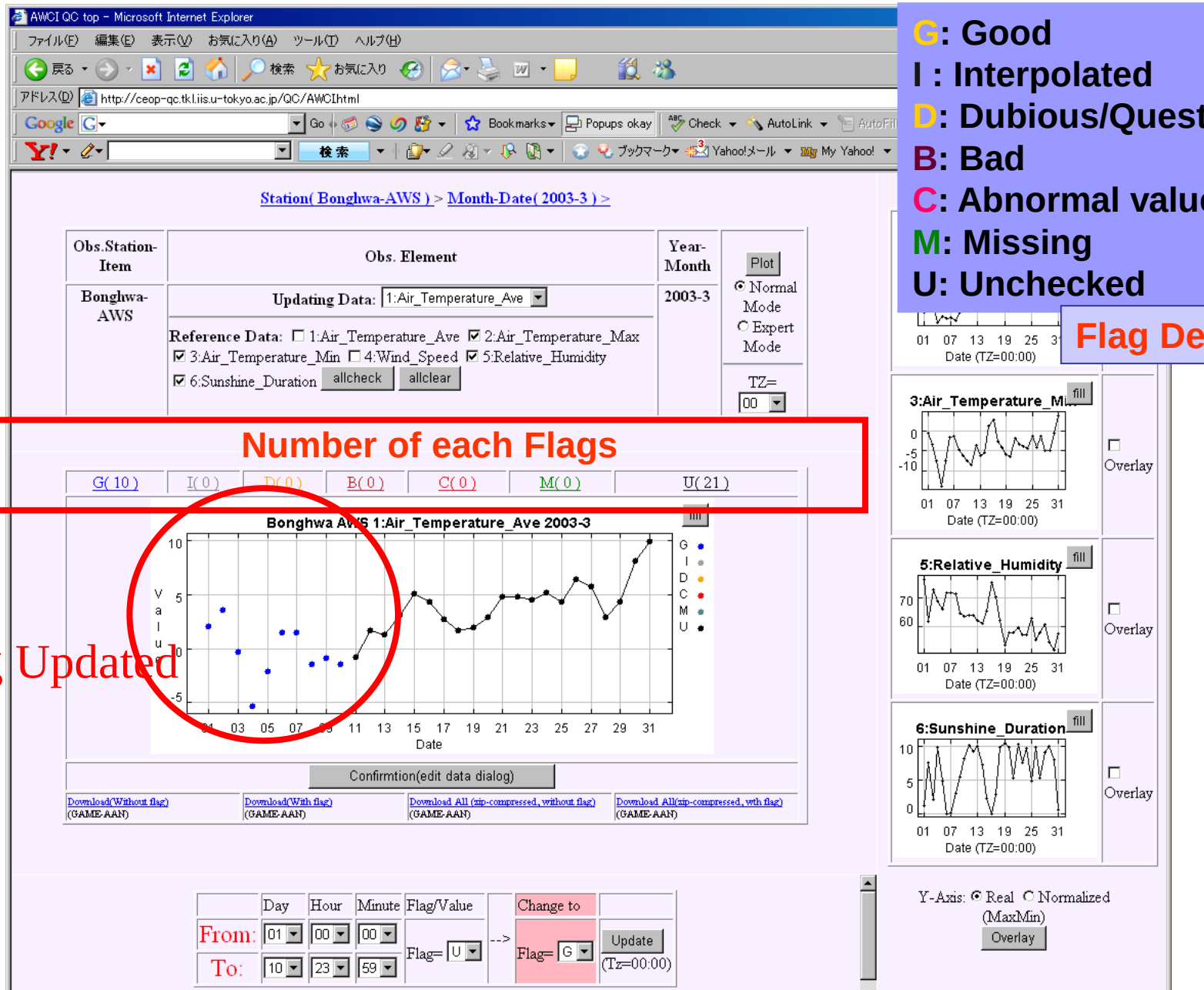
(4) Data Downloading



(1) Data Uploading



(2) Quality Controlling



G: Good
I : Interpolated
D: Dubious/Questionable
B: Bad
C: Abnormal value
M: Missing
U: Unchecked

Flag Definitions

Number of each Flags

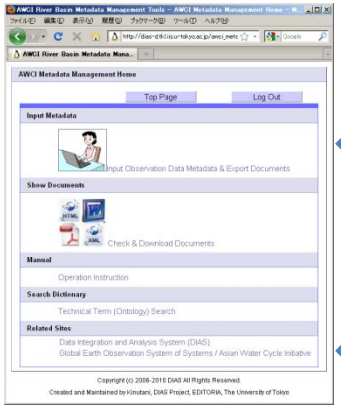
Flag Updated data

(3) Meta Data Registration

Role of Metadata & Dataset Documents

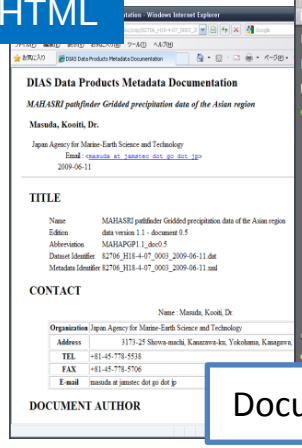
Data provider

Manual input

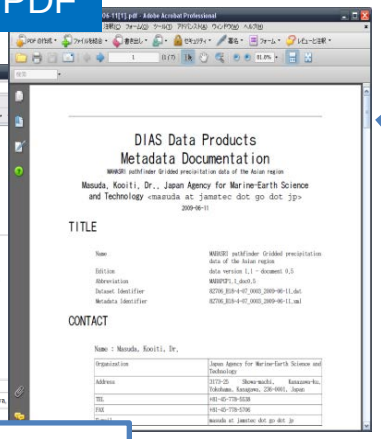


Publishing

HTML



PDF



Document

User

DIAS Core System
Metadata Management

API

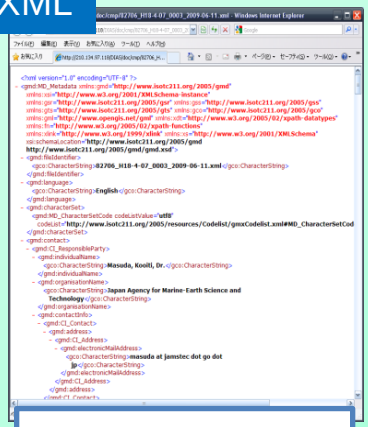
Automatic extraction

Quality Control

Metadata registration interface

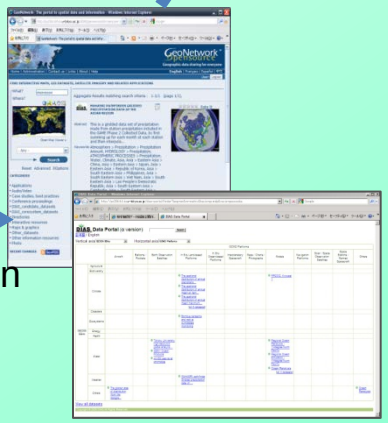
Storing to database

XML



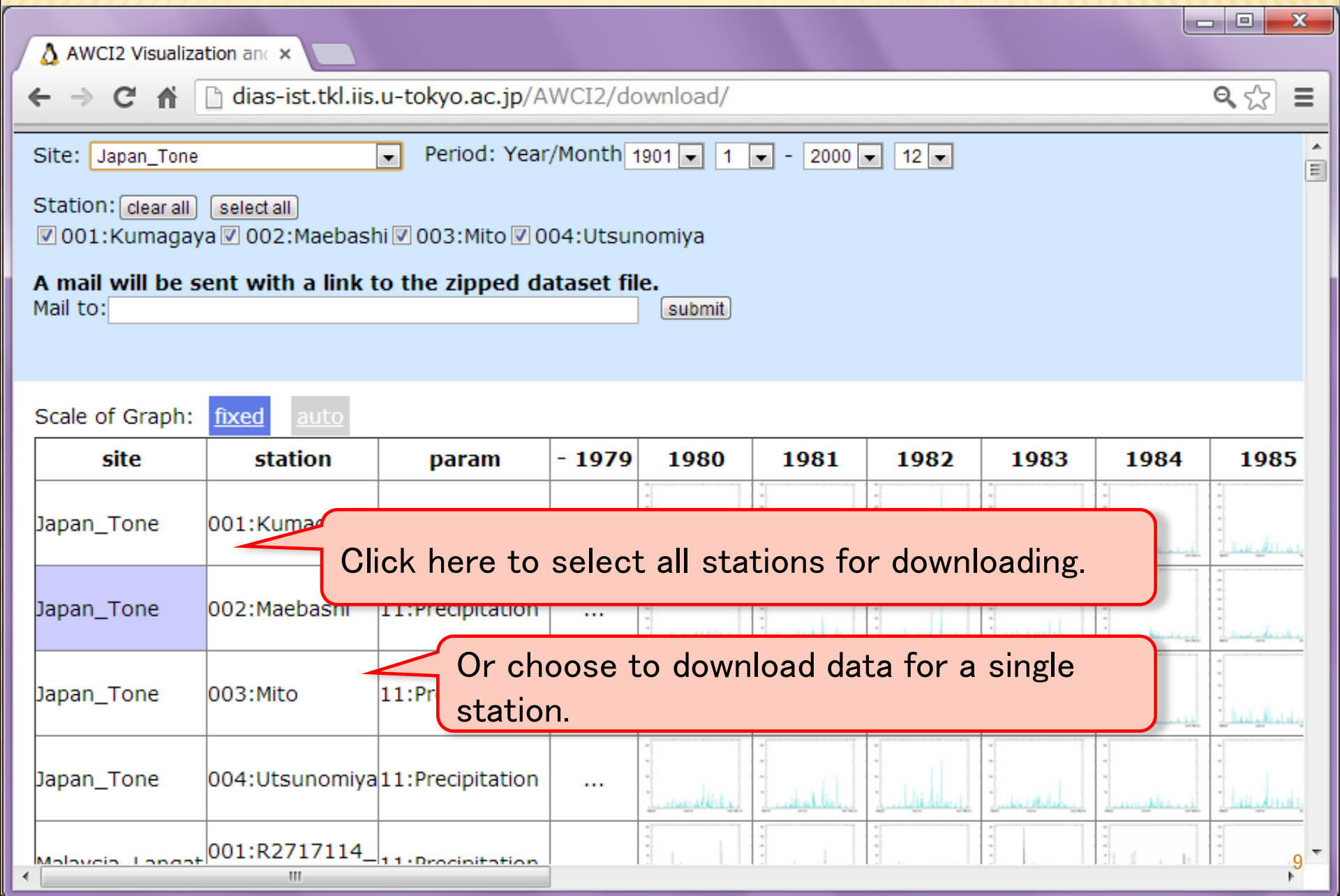
Metadata

Application

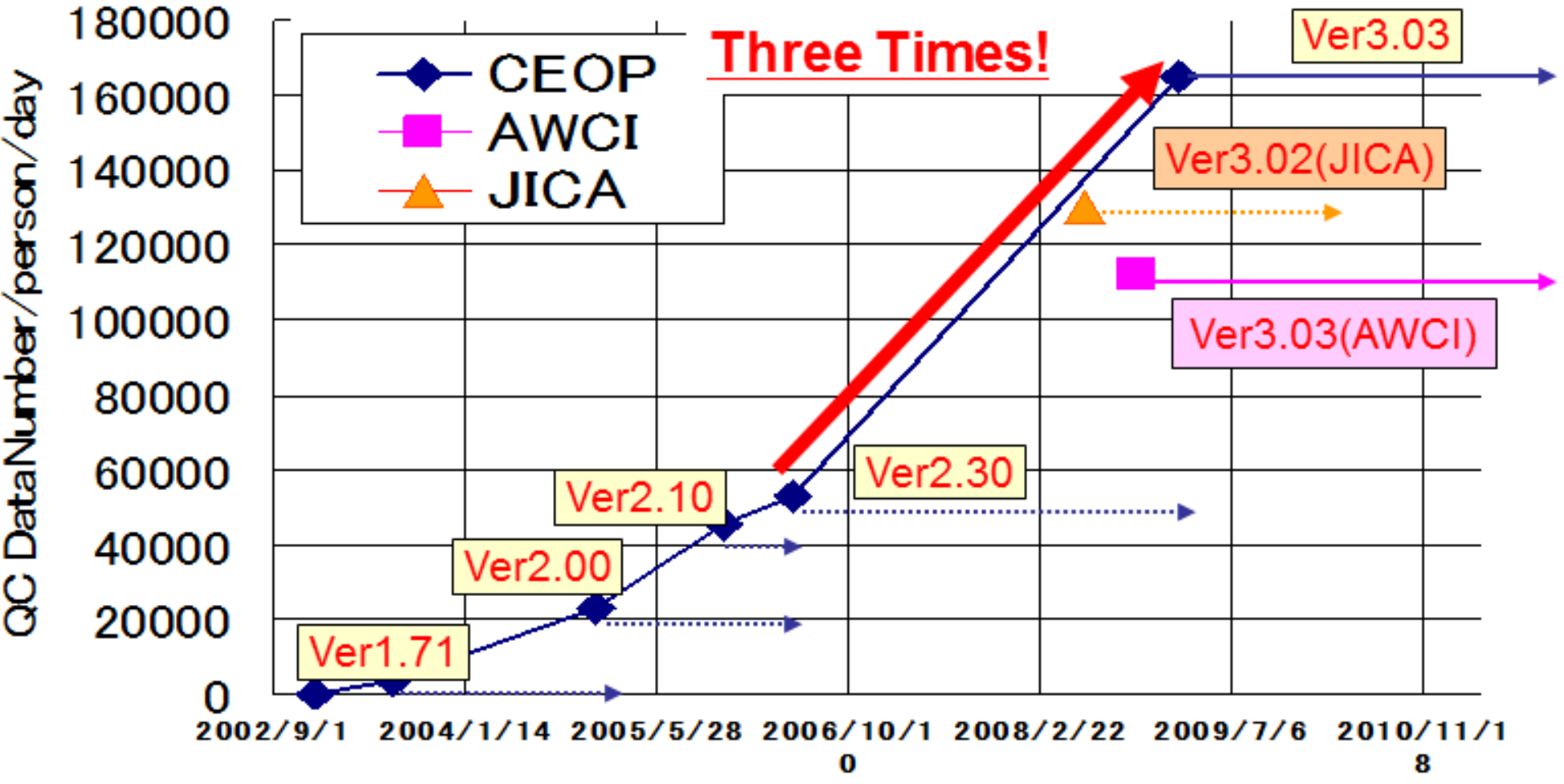


Search & browse Interface

(4) Data Downloading



Effect of the System !



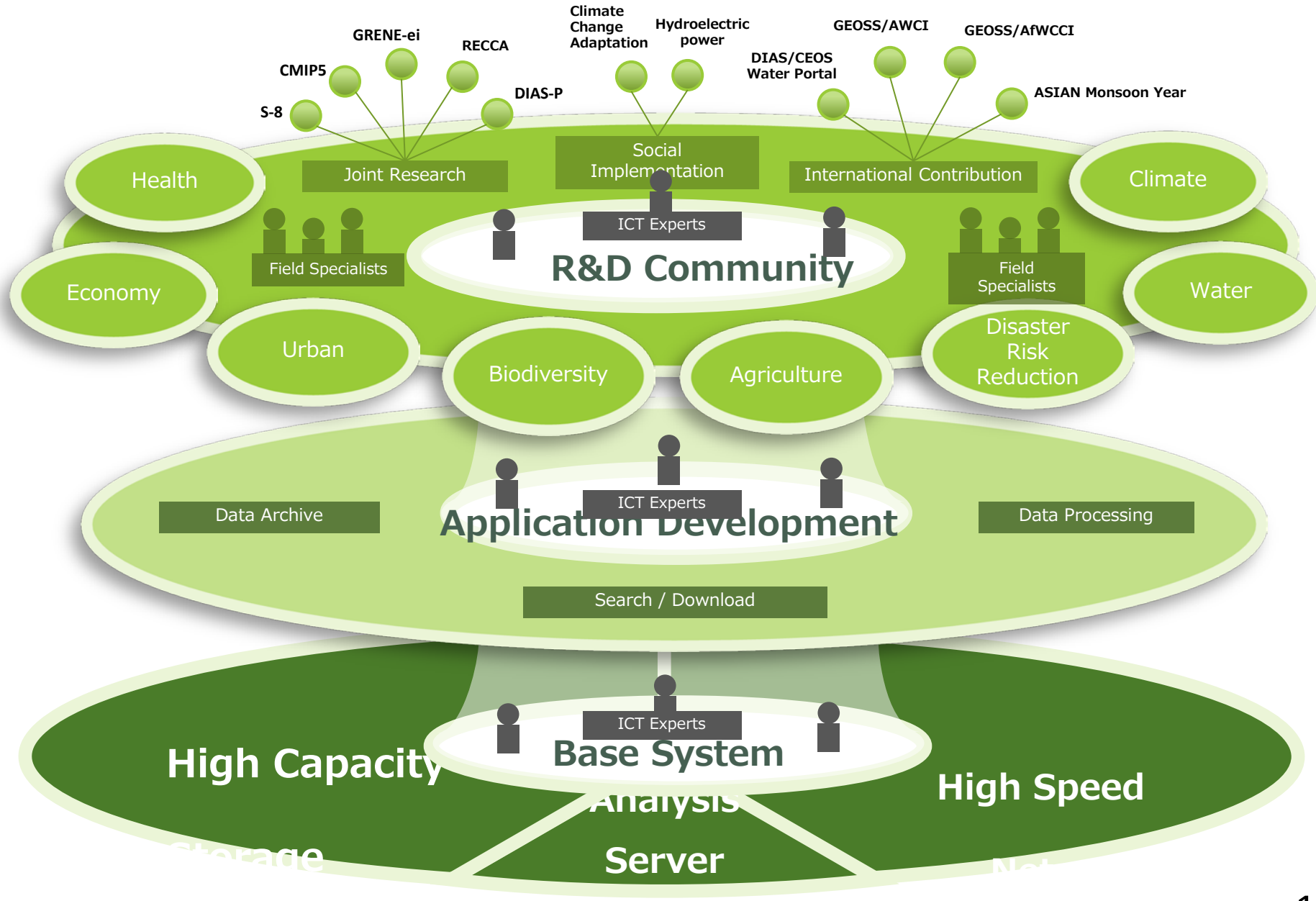
Agenda

1. Overview of DIAS

1. AWCI Data Archive System

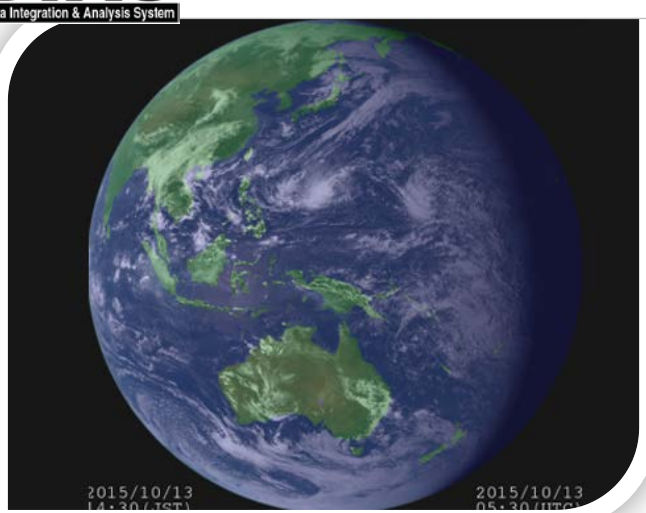
1. **Benefit of the use of DIAS as a platform for AWCI**

DIAS: Structure



35 Applications and tools

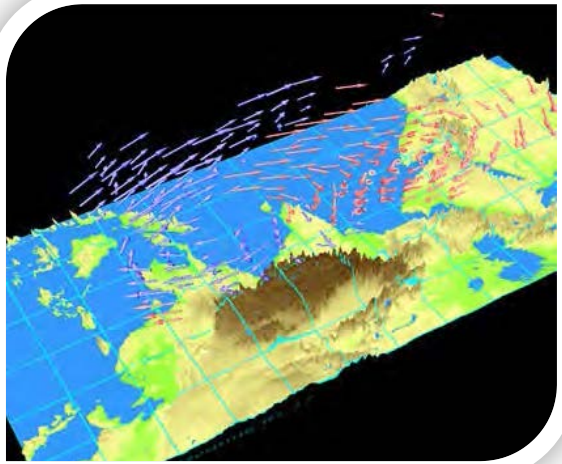
< http://www.diasjp.net/en>



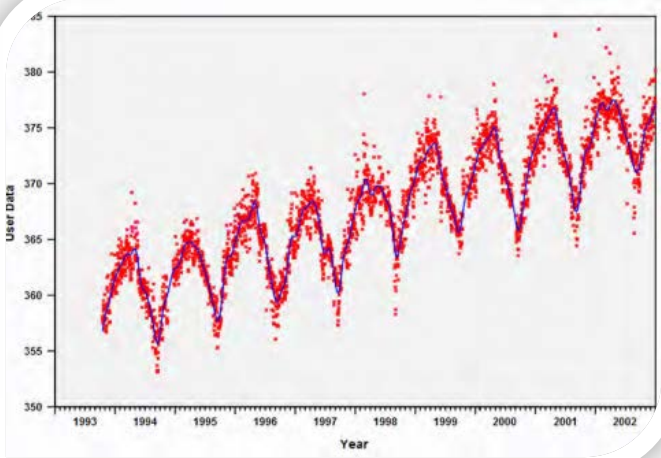
Himawari 8 (GMS) Real-time Visualization Tool

Radar Rain Real-time Visualization Tool

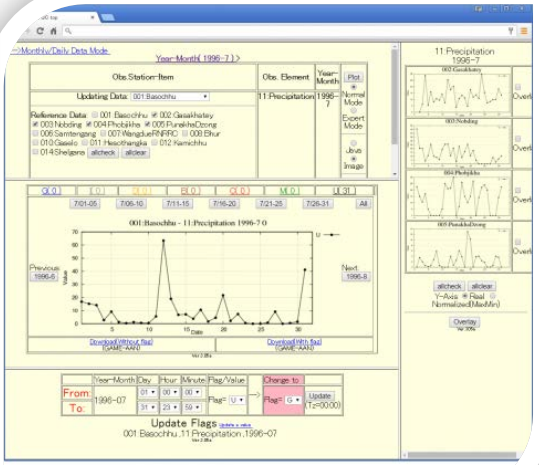
Simulation Model for RIce-Weather relations



3D Visualization Tool



Earth Observation data Analysis Tool



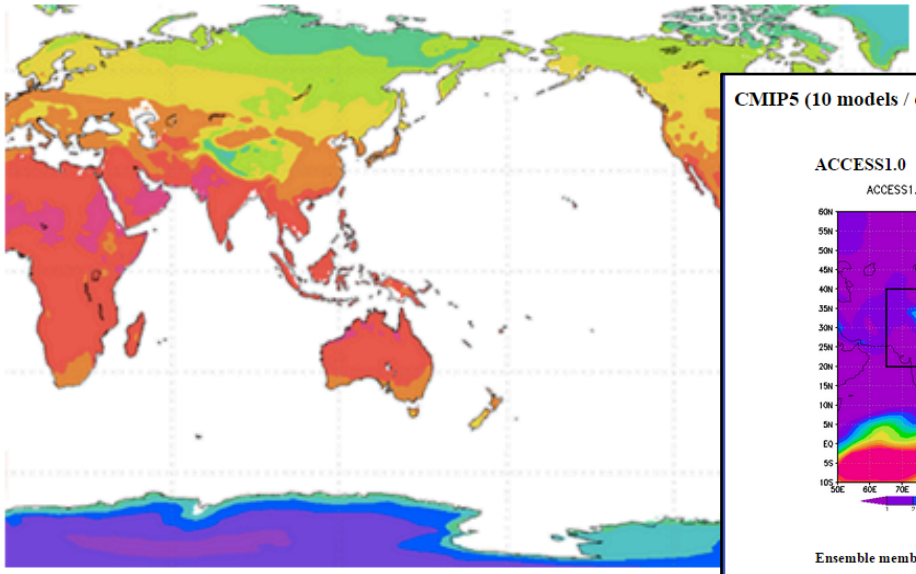
In-situ data Quality Control Tool

DIAS
Data Integration & Analysis System

Data Integration and Analysis System Program

Home About Data & Apps Research

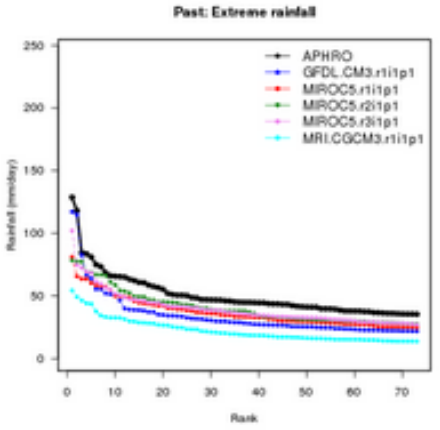
CMIP5 Data Analysis System

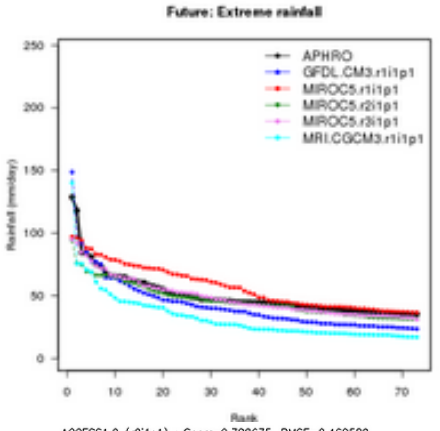


This system is comprised of a set of tools that provide the
Intercomparison Project Phase 5 (CMIP5), which has wide-
reanalysis data as reference data for comparison with CMI
reproducibility of climate models.

HOW TO USE

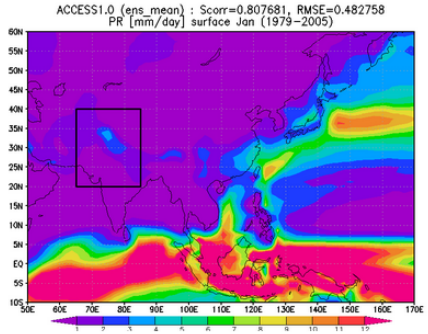
A common web application account is necessary.
Please contact the DIAS Office for details:





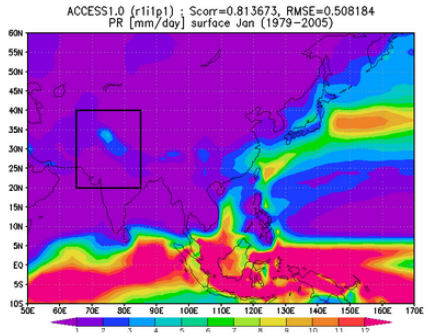
CMIP5 (10 models / 66 ensemble members): Open in New Ta

ACCESS1.0

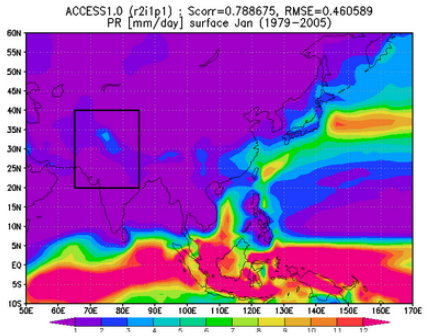


Difference Image

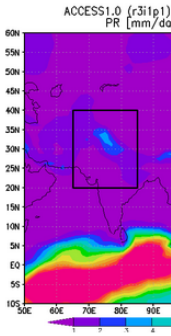
Ensemble member (3)



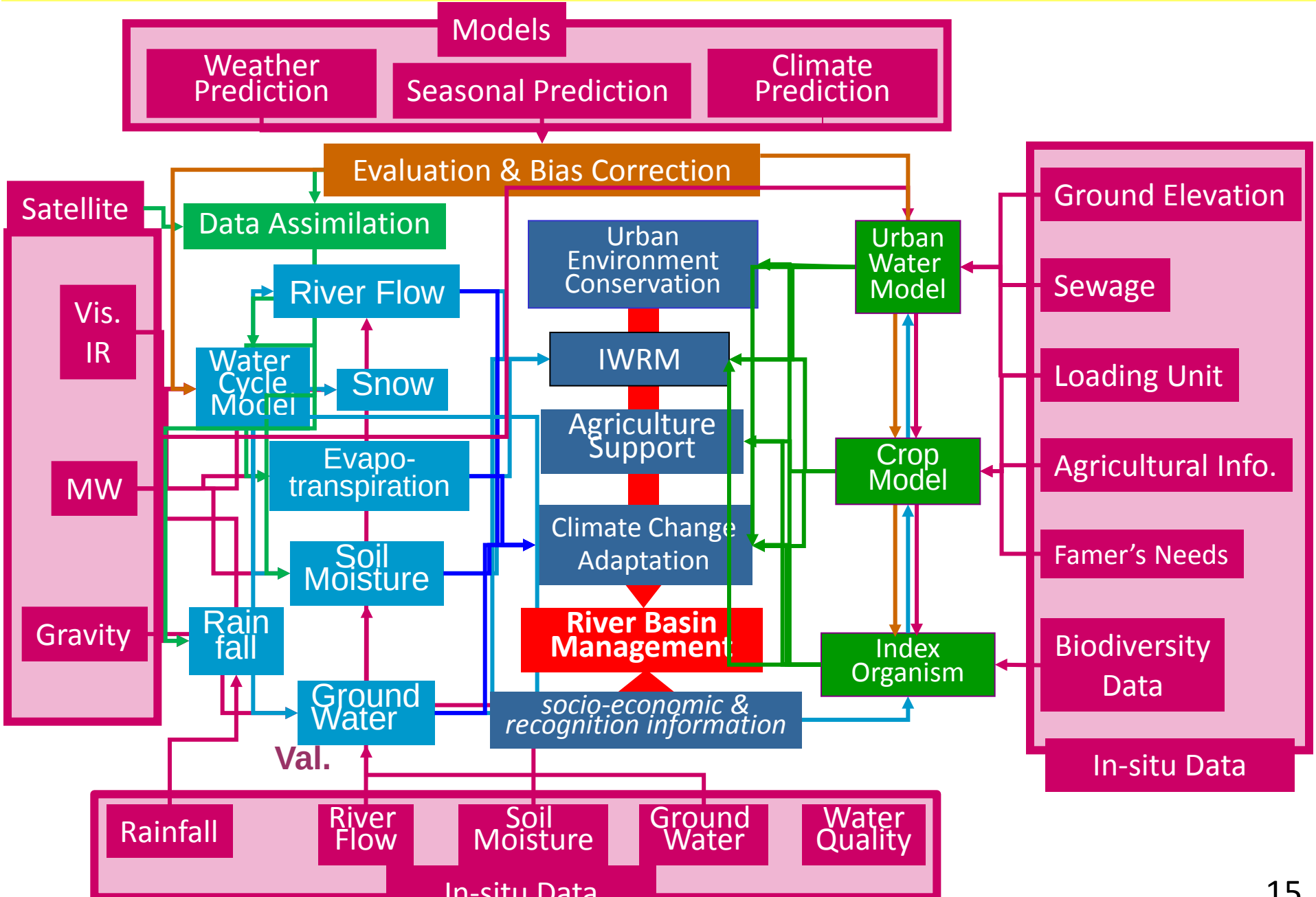
Difference Image



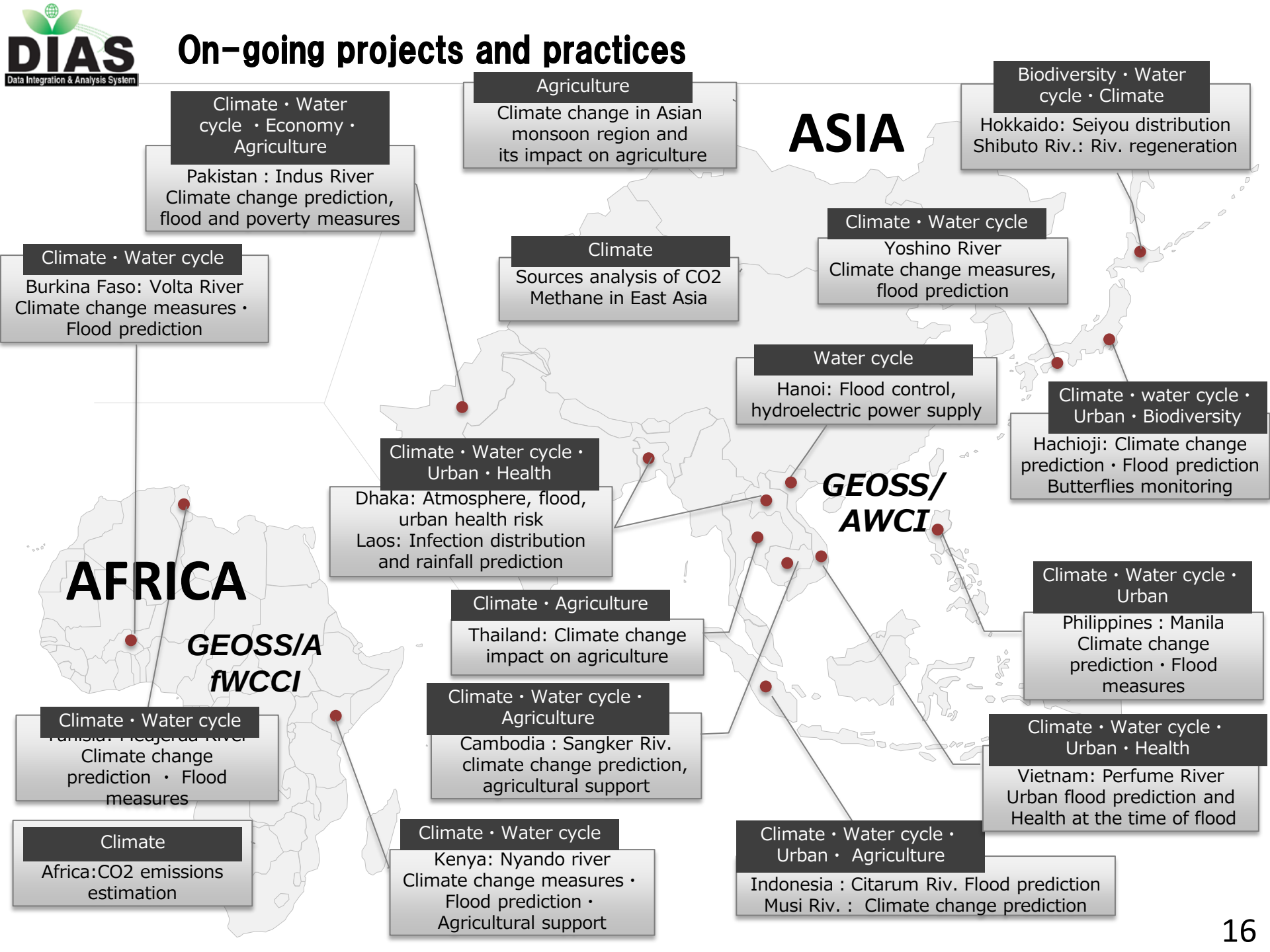
Difference Image



Water Cycle Integrator (model)

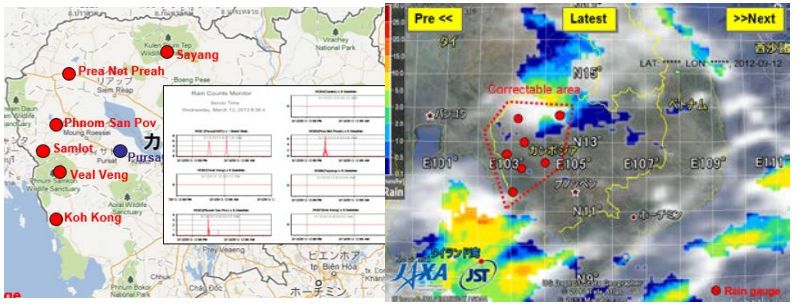


On-going projects and practices



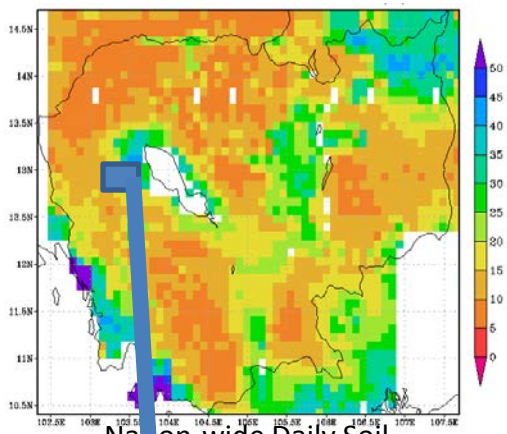
Water-Climate-Agriculture Workbench in Cambodia

Stakeholder Meeting

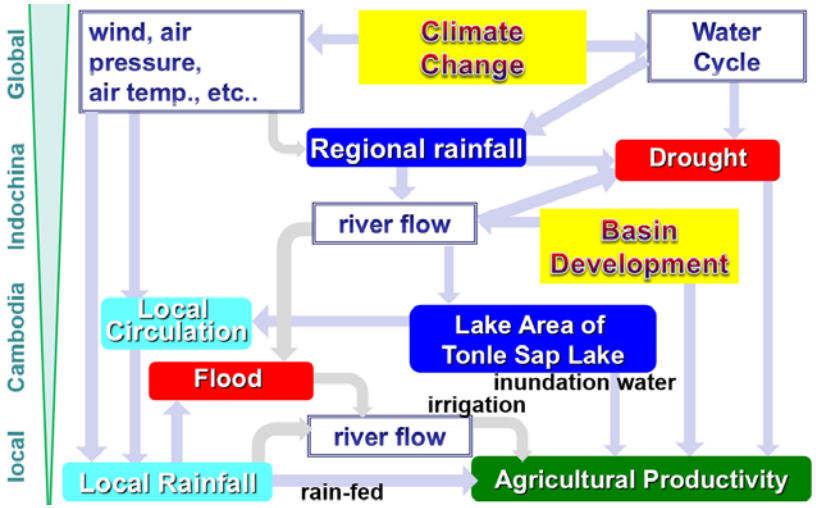


Real-time Rain Gauge → Satellite Data Correction
→ Wide Data Dissemination

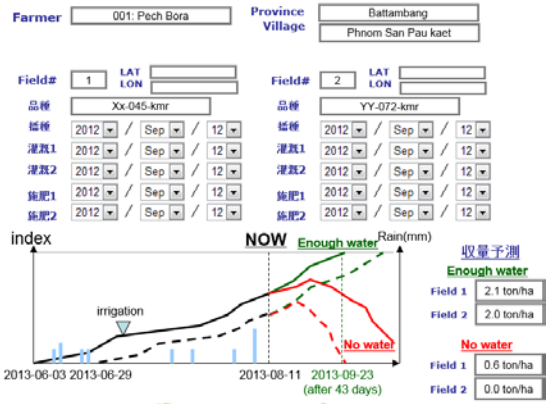
Famers' Needs & Experiences



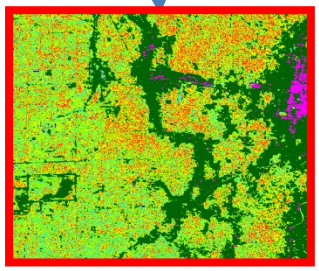
Nation-wide Daily Soil Moisture from Satellite



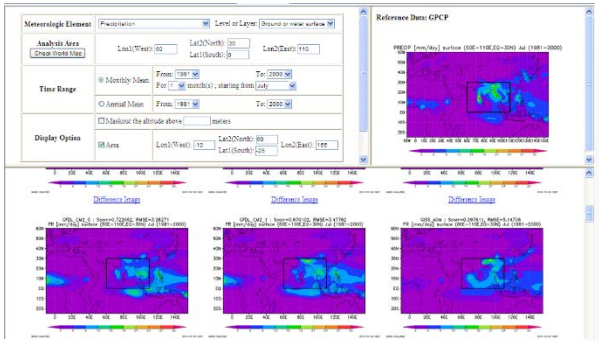
Holistic View of Water-Climate-Agriculture Problems



Water Cycle-Rice Production Coupled Model

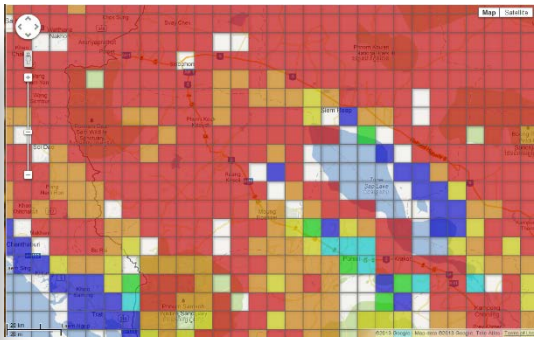


Local Information



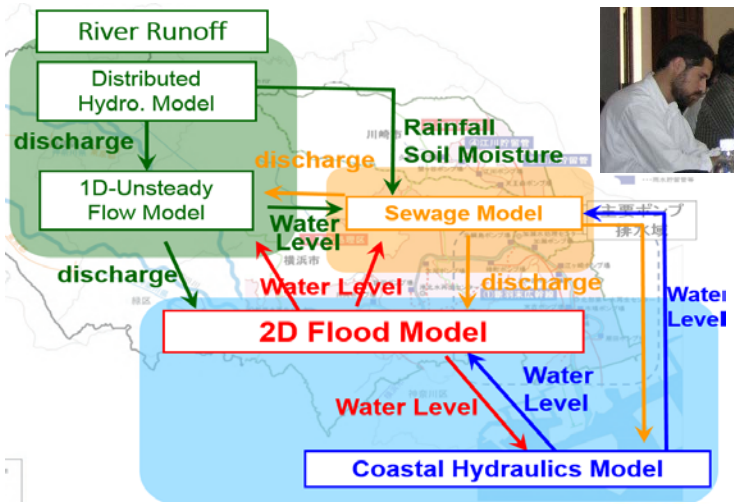
Climate Change Analysis Tools

OJT for Local Practitioners

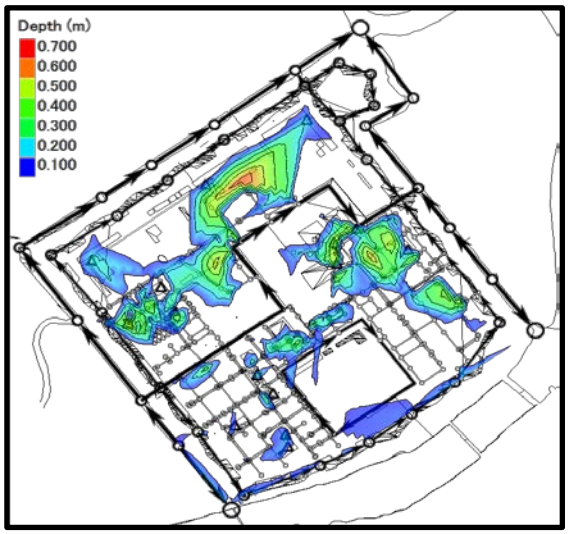


Rice Production Monitoring

Integration of River-Sewage-Public Health in Hue, Viet Nam

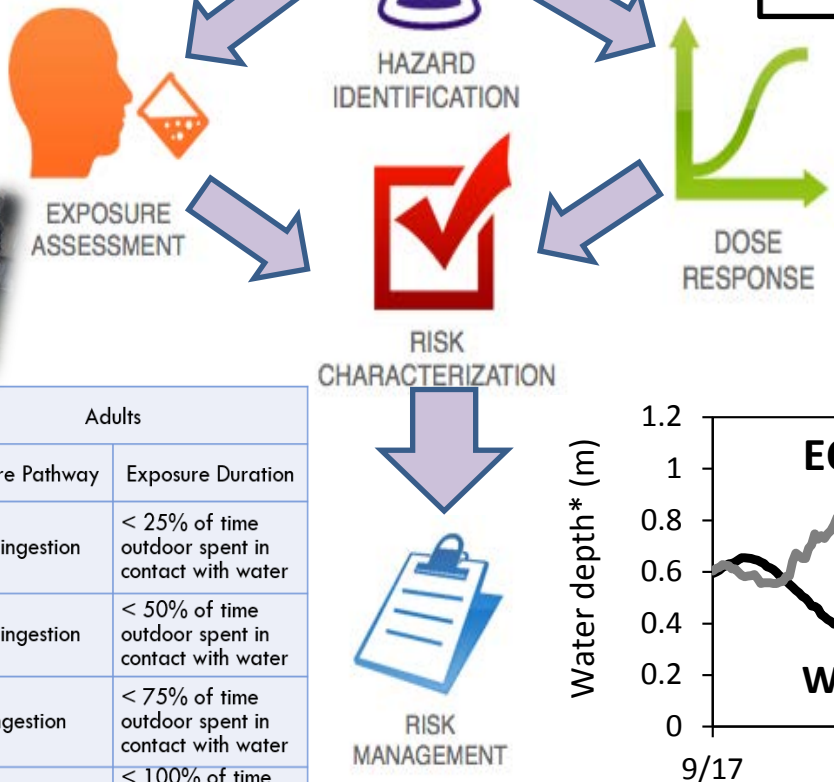


Stakeholder Meeting for Co-design



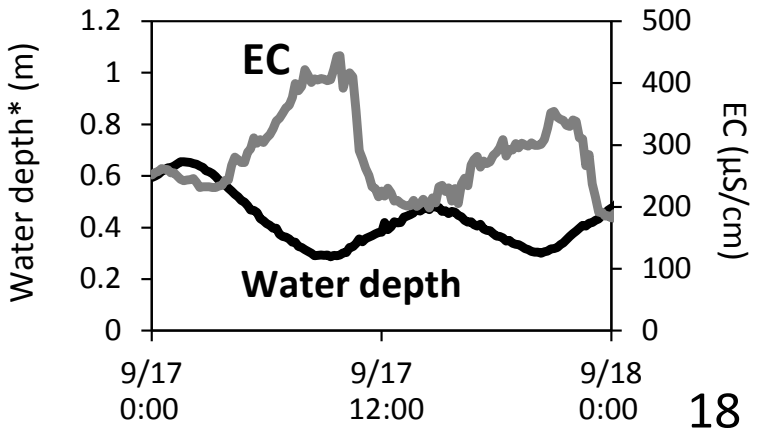
inundation affected by river flood and sea tide.

risks of infection from exposure to pathogens

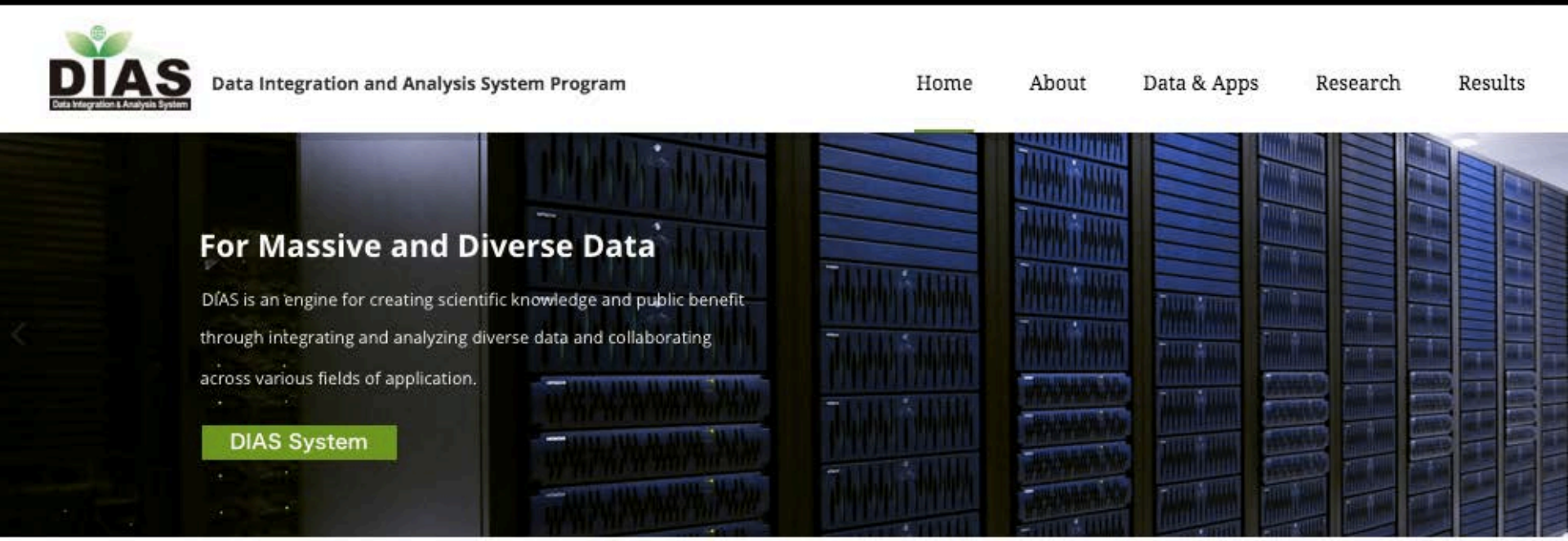


water quality: stagnant or diluted by river water.

Inundation depth (cm)	Non-adults		Adults	
	Exposure Pathway	Exposure Duration	Exposure Pathway	Exposure Duration
10 – 50	Indirect ingestion	< 20% of time outdoor spent in contact with water	Indirect ingestion	< 25% of time outdoor spent in contact with water
50 - 100	Direct ingestion	< 40% of time outdoor spent in contact with water	Indirect ingestion	< 50% of time outdoor spent in contact with water
100 - 200	Direct ingestion	< 60% of time outdoor spent in contact with water	Direct ingestion	< 75% of time outdoor spent in contact with water
> 200	Direct ingestion	< 80% of time outdoor spent in contact with water	Direct ingestion	< 100% of time outdoor spent in contact with water



DIAS Official website <http://www.diasjp.net/en>



Research Area

- Climate/Weather
- Water
- Urban
- Disaster Risk Management
- Agriculture
- Biodiversity
- Health
- Economy

News

03

DIAS-GRENE-ei final report session and workshop

Events

Testimonials

"We have entered the period of Big Data, which recognizes the