



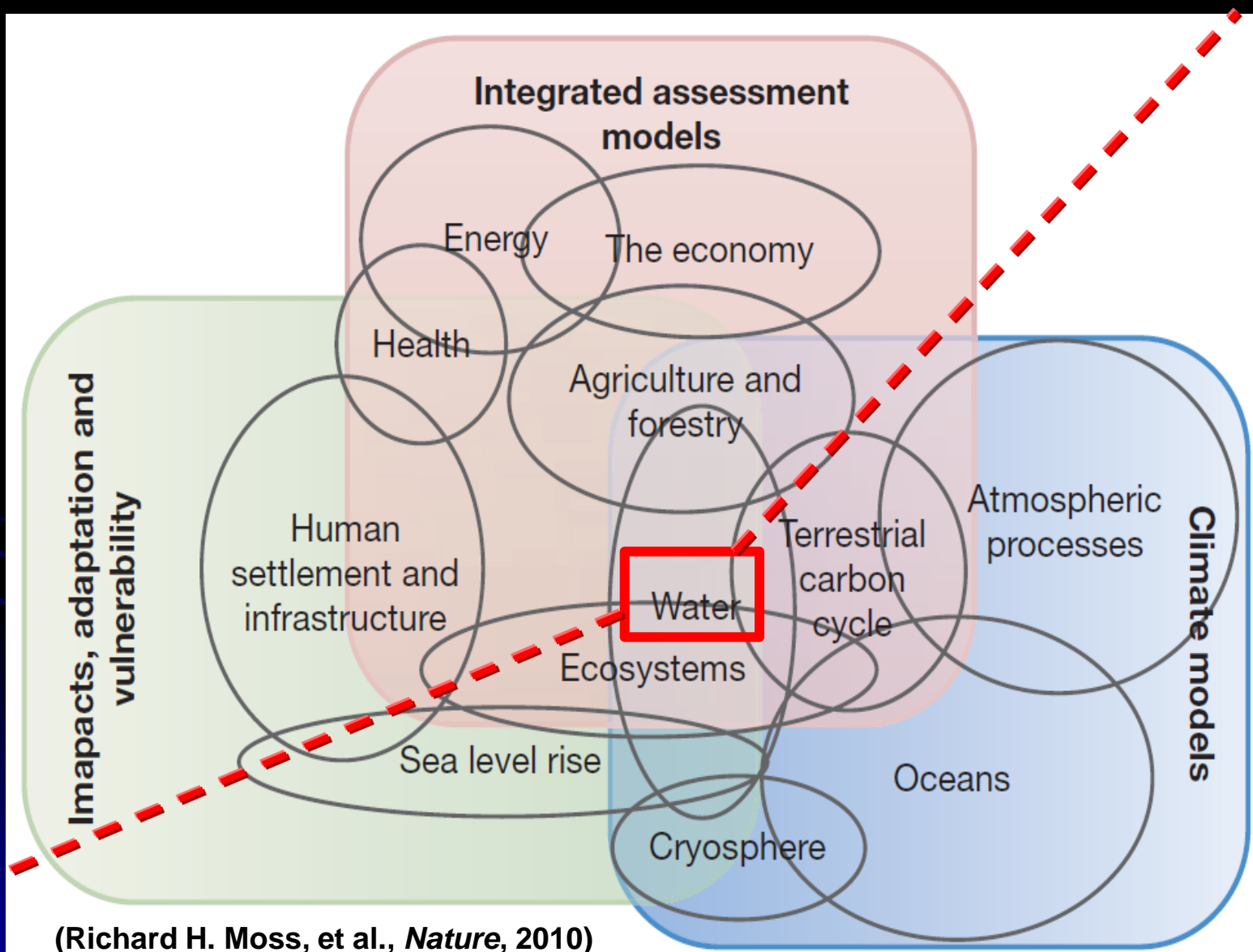
Water Cycle Integrator

Osamu Ochiai, JAXA
CEOS Water SBA Coordinator
On behalf of Prof. Toshio Koike
Univ. of Tokyo

SIT Workshop, Sept 13th 2011



Water is a Key bridging between climate processes and societal benefits.



Sustainable Development

Climate Change

MDGs

Biodiversity

Coordinated Integrated Efforts for Work Together

mitigation

adaptation

Regime Shift

Extremes

Flood/Drought

Climate System

Water Cycle

Water Resources Management System

Land Use/Forest/Carbon

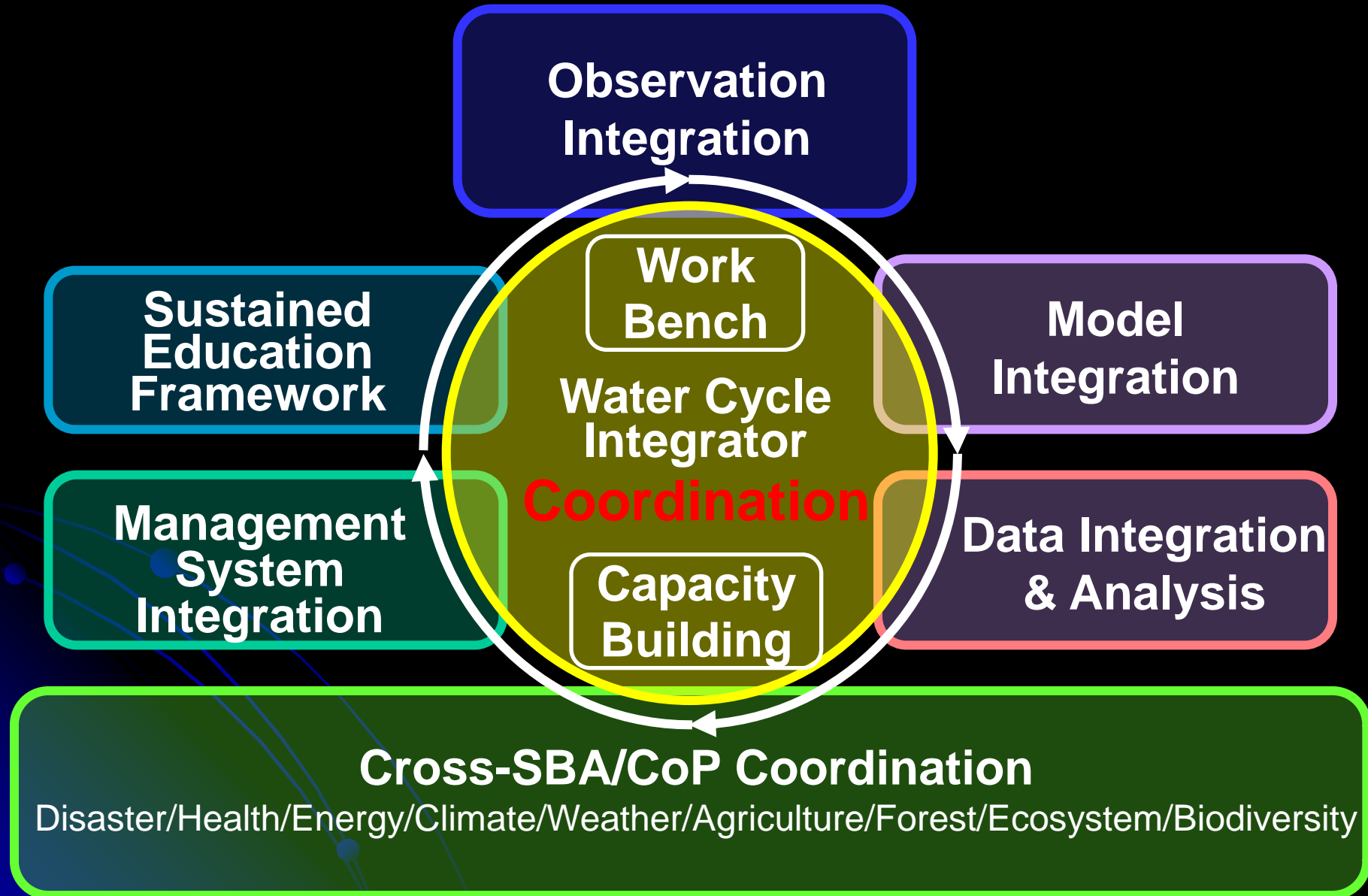
Biodiversity/Ecosystem

Agriculture/Food

Health

Energy

Integrated & Coordinated Approach



Satellite Observation Integration



CEOS Leadership on Data Integration and Analysis: WGISS Water Community of Practice Portal



If you use a water portal

Distributed data center

In-situ hydrological data (CEOP)

In-situ hydrological data (AWCI)

MODEL output (CEOP)

MODEL output (CMIP3)

Satellite data (CEOP, AWCI)

Satellite data (NASA)

Precipitation (NOAA/GPCC)

River discharge (GRDC)

Water Portal (JAXA)

Get the useful information easily

DEM data

input

User's model (ex. WEB-DHM)

Scientists

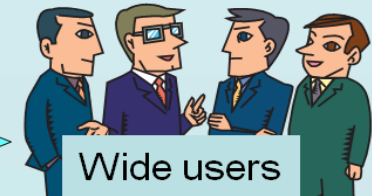
Model output

analysis

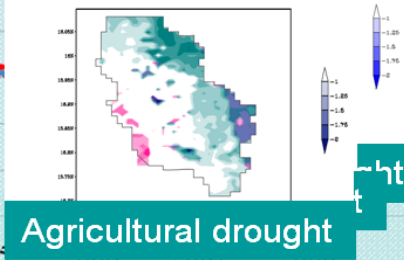
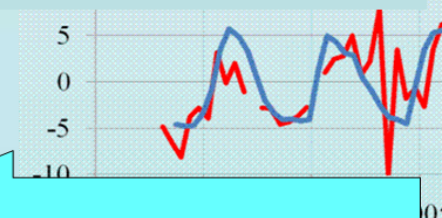
Input analyzed data

Useful information

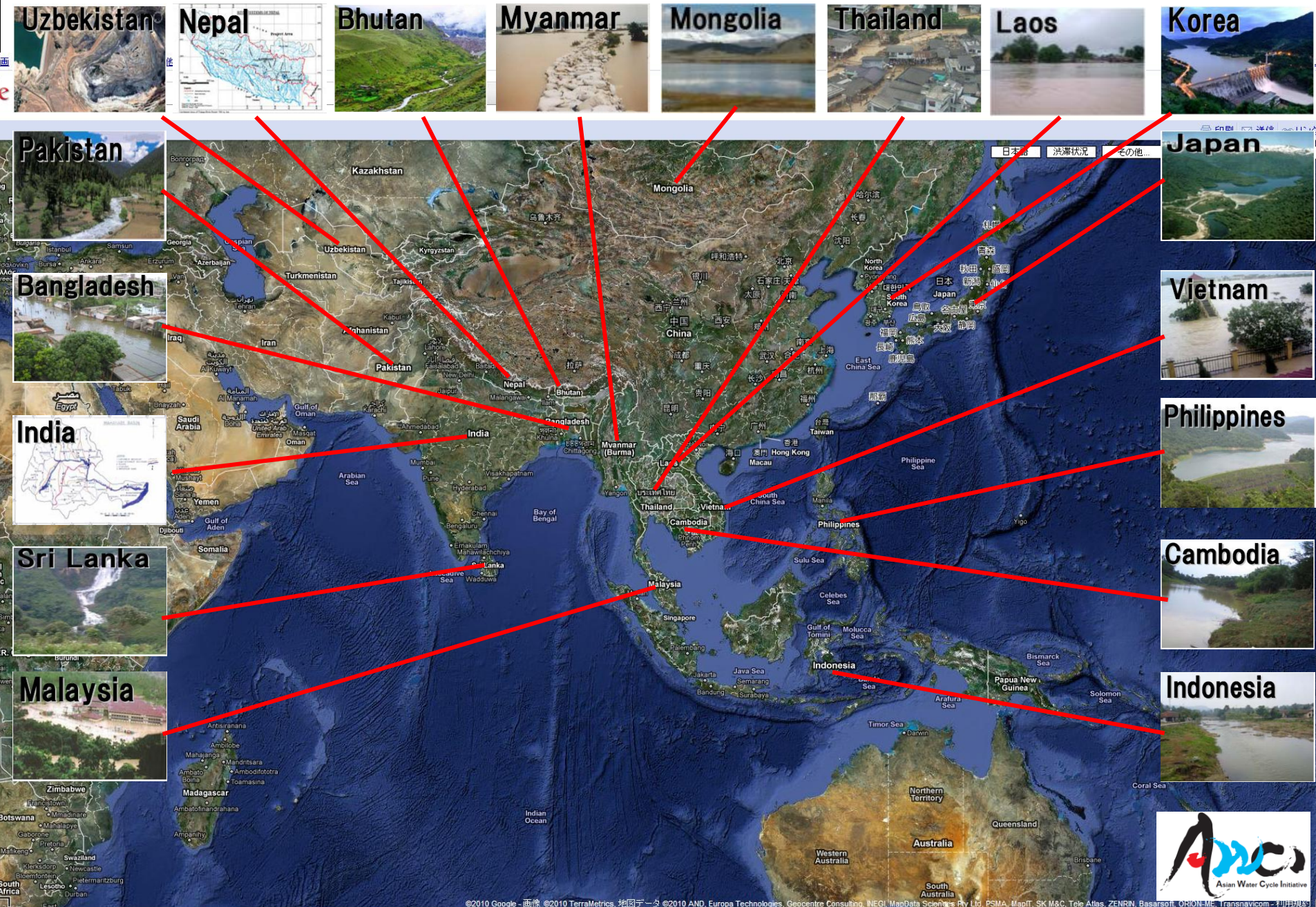
Agricultural drought



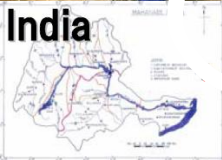
Ex: decision makers of Watershed Management



GEOSS Asia Water Cycle Initiative (AWCI)



Data Integration and Analysis



Weather Prediction

7. Tibet
Research Obs.

Satellite

Climate Projection

Operational Obs.

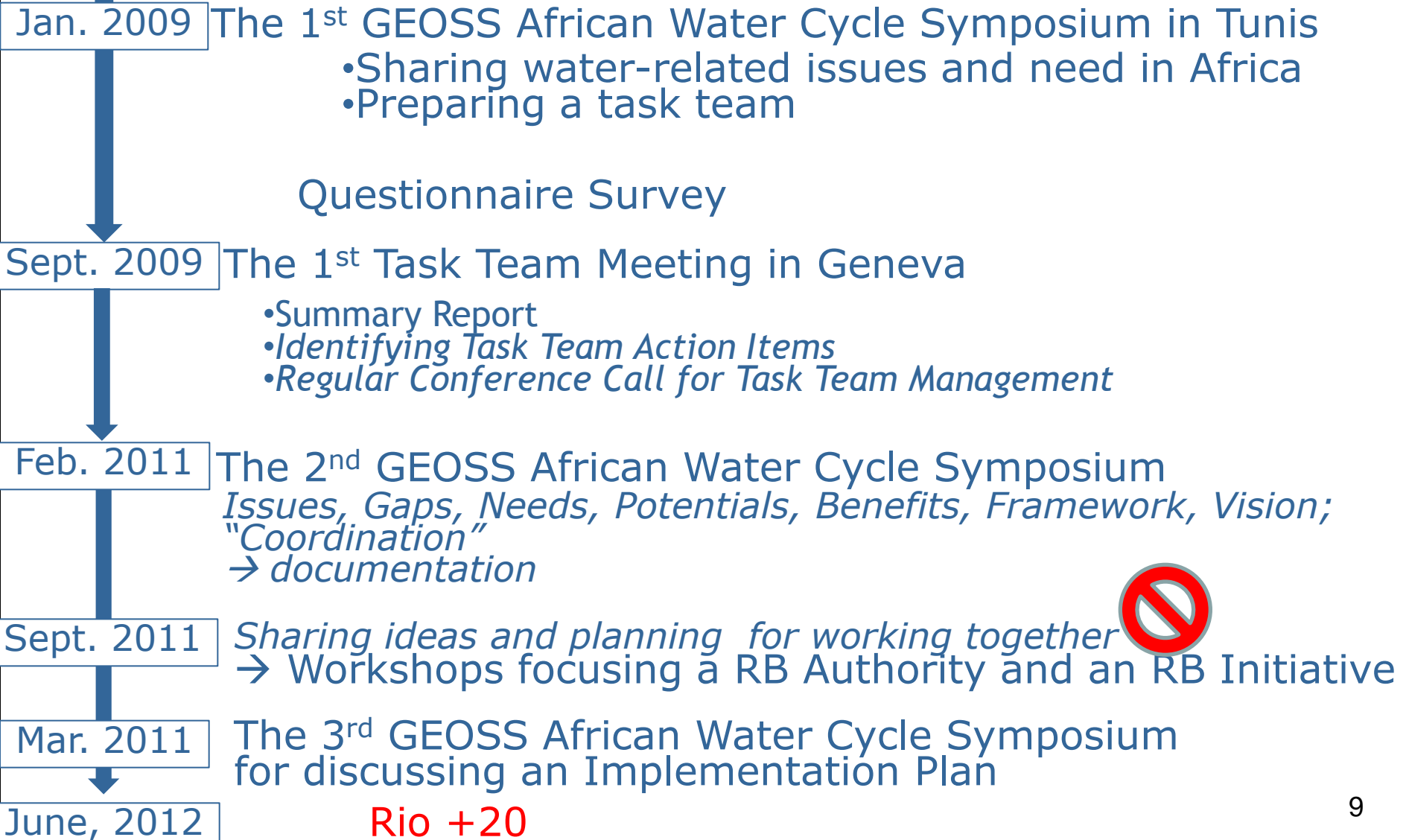
Research Obs.

Research Obs.





GEOSS African Water Cycle Coordination Initiative (AfWCCI)





PROPOSED STRUCTURE FOR THE WC COMMUNITY OF PRACTICE



April 2004
An international partnership for cooperation in Earth observations

Water Cycle Community of Practice (WCCOP) Coordination



Regional Water Cycle COP's (deployment)

- WaterNET
- Asian Water Cycle Init. (AWCI)
- TIGER

IGWCO (development)

- Precipitation
- Soil moisture
- Runoff
- Water Quality
- Ground water
- CEOP
- E2E projects

Water Cycle Applications (demonstration)

Coordination by various international and national Bodies.

(e.g. IEEE Water Study)

Water Cycle Capacity Building (dissemination)

- Asian Capacity Building
- TIGER followon
- "Water" CB in the Americas

Expected Roles of CEOS in GEOSS/WCI

1. Supports to Satellite Data Archive

- Subset Data Production
- Meta Data Production

2. Supports to Satellite Data Integration Function

- CEOS/WGISS Water Portal
- CEOS Precipitation Constellation Portal

3. Supports to Coordination Meetings

- GEOSS/Asia Water Cycle Initiative (AWCI) Workshop in Seoul, 6-8 October, 2011
- GEOSS/Africa Water Cycle Coordination Initiative (AfWCCI) Workshop in Nairobi, January, 2012
- GEOSS/AfWCCI Symposium, March, 2012
- IGWCO Planning Meeting, February-March, 2012

New CEOS Action for Water SBA

1. GEOSS/WCI has been proposed in GEO WP 2012-2015
 - WA-01 (Integrated Water Information), C1 (Integrated Water Cycle Products and Services)
 - Leads (tentative)
Japan (JAXA, University of Tokyo), USA (NASA, NOAA, USGS), CEOS, WMO
3. CEOS Supports to Coordination Meetings for developing a CEOS action by the end of 2012
March
 - GEOSS/Asia Water Cycle Initiative (AWCI) Workshop in Seoul, 6-8 October, 2011
 - GEOSS/Africa Water Cycle Coordination Initiative (AfWCCI) Workshop in Nairobi, January, 2012
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