CEOS Water Portal

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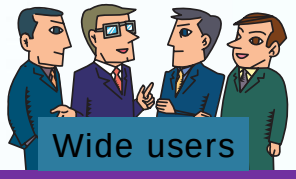
Introduction

- CEOS Water Portal is ;
  - A project under CEOS/WGISS
  - A web based portal system based on ”Distributed Data Integration System Prototype for CEOP”
  - To provide access to a whole variety of hydrological data and water relevant data scattered over the world
  - To retrieve data from distributed data centers on-the-fly (by OPeNDAP etc.) and let users download and see rendered image/plot
- The Portal is **NOT** a system for data distribution.
- The Portal is aimed to become a system that enables data integration.

Problems of Current Approach

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)



Wide users

Ex: decision makers of Watershed Management

DEM data

input

User's model (ex. WEB-DHM)

Scientists

Model output

analysis

Not easy to provide useful information

Not easy to find data and convert data

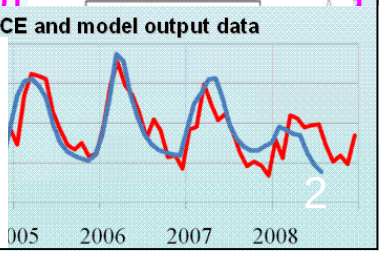
comparison

Useful information

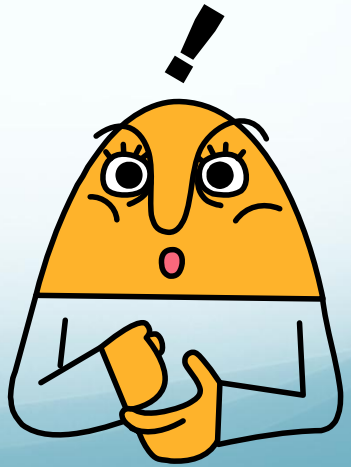
Not easy to compare with ot

Not easy

Find data
Convert data
Compare with other model data
Provide useful information to wide users



Water Portal makes it easier and more efficient to settle those problems.



If you use Water Portal

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Water Portal (JAXA)

DEM data

input

User's model (ex. WEB-DHM)

Scientists

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information

Easy access to data like one stop shopping

If you use Water Portal

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Water Portal (JAXA)

DEM data

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User's model (ex. WEB-DHM)

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Model output

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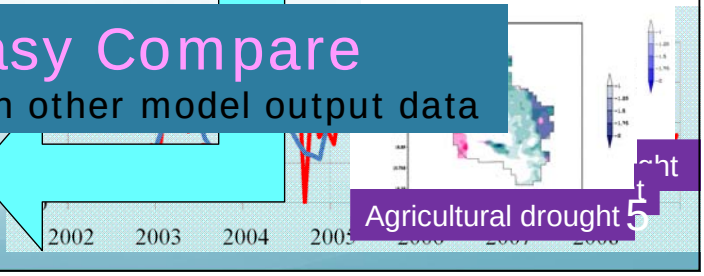
Useful information

Easy Compare
with other model output data



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Water Portal (JAXA)

Get useful information easily

Wide users

Ex: decision makers of Watershed Management

DEM data

input

User's model (ex. WEB-DHM)

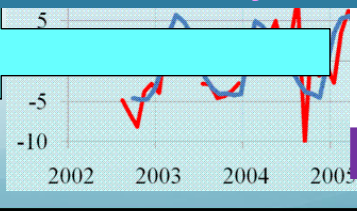
Scientists

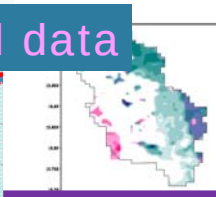
Model output

analysis

Useful information

Feed back analyzed data





Agricultural drought

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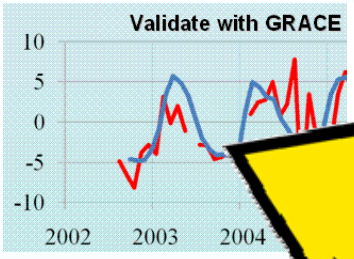
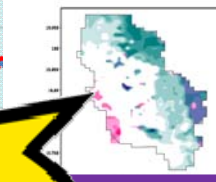
Useful information



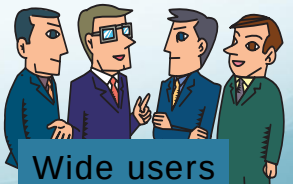


ltural drought

tists

Easy access & integrate data

Communication is encouraged



Wide users

Ex: decision makers of Watershed Management

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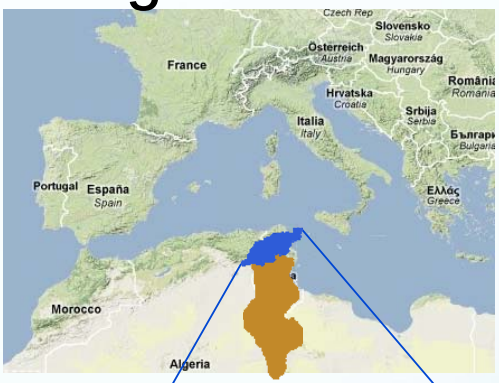
Use Case Example #1

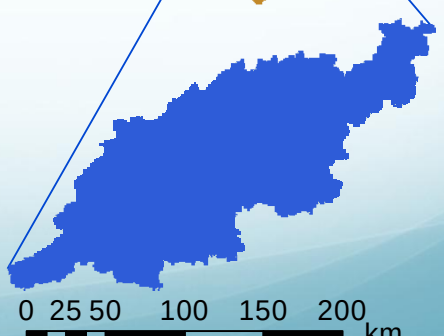
- Drought monitoring in Philippines
  - Model analysis is being carried out by river basins.
  - The model results help observe agricultural and economic losses.



Use Case Example #2

- Ground water monitoring in Tunisia
  - Model analysis is being carried out for the Medjerda River.
  - Annual and long-term charges of groundwater in storage and groundwater flow will be determined.





Concept

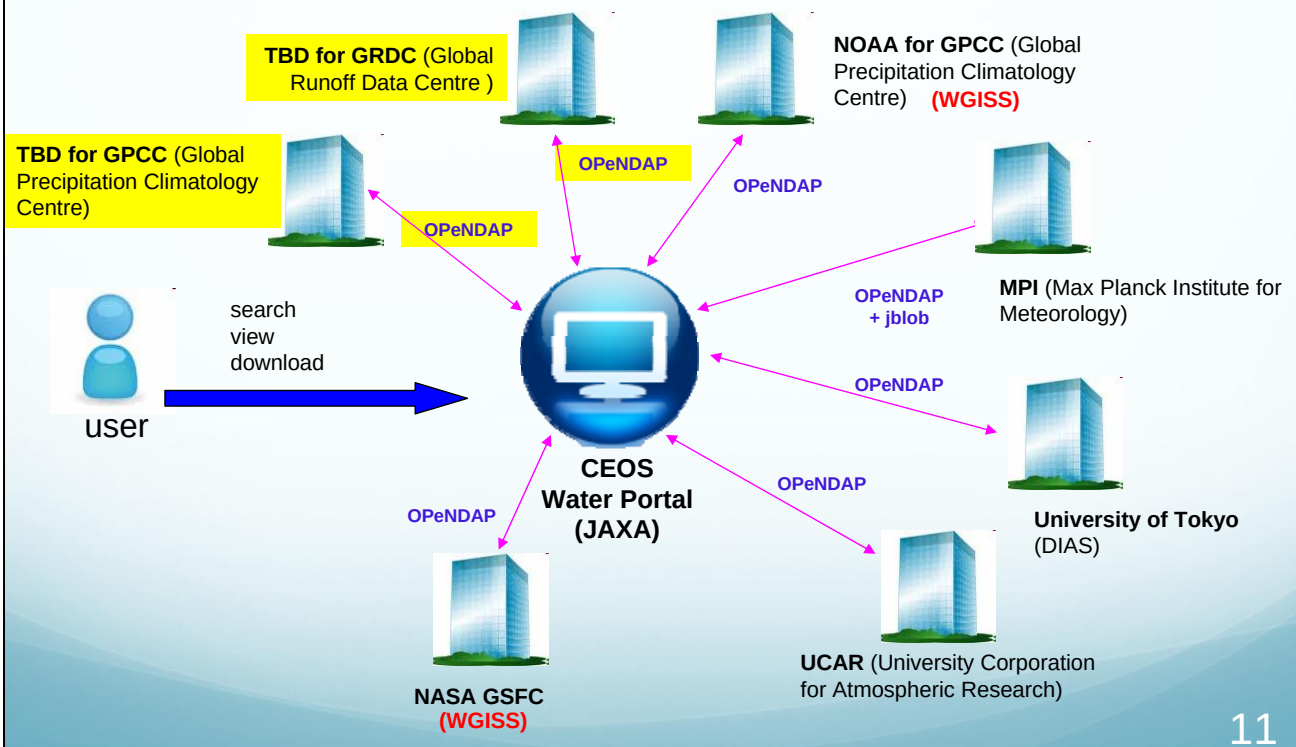
Data Integration

- Multiple types of data is available such as;
  - In-situ data
  - Satellite data
  - Model output data
- The portal will provide multiple functionalities and services that are needed to perform data integration.

Portal System Concept

- Provide users “Easy to Access” service.
- Users include;
  - Scientists in hydrological domain
  - Non-researchers or operational users who are dealing with those data in their work

Data Partners



Data Partners List

Currently planned data partners are listed below.

Data Partners	Data Types	Server Locations	Interface Methods
CEOP	Satellite	University of Tokyo (Japan)	OPeNDAP
	Model(MOLTS)	MPI (Germany)	OPeNDAP
	Model(Gridded)	MPI (Germany)	jblob
	In-situ	UCAR (USA)	OPeNDAP
AWCI	Model(MOLTS)	MPI (Germany)	OPeNDAP
	In-situ	University of Tokyo (Japan)	OPeNDAP
	GIS	University of Tokyo (Japan)	TBD
NASA	Satellite	NASA(GSFC)	OPeNDAP
NOAA(GPCC)	In-situ	NOAA(USA)	OPeNDAP
GTN-H			

Possibly more in the future…

Requests(1/5)

1. GPCC

- NOAA has already made GPCC data available through the OPeNDAP Server at :

  http://www.esrl.noaa.gov/psd/data/gridded/data.gpcc.html

- We recently contacted NOAA PSD(Physical Science Division) and got approval to access their data from the portal.
- If there is any problem for the above, please let us know.

Requests(2/5)

2. GRDC

- Data security is seemingly very strict.

=> [Proposal] the portal will only have catalogs of GRDC data and provide links that jumps to GRDC site for data acquisition.

=> [Request to approve] Posting the catalogs and links on the portal.

Requests (3/5)

3. FLUXNET

- Data can be **made available from OPeNDAP Server or any other interface** that allows **access to the data from the portal**?

=> If OK, let's discuss how to proceed

=> If difficult for security or policy reasons, let's discuss and seek alternatives

Requests (4/5)

4. IGRAC

- Data can be **made available from OPeNDAP Server or any other interface** that allows **access to the data from the portal**?

=> If OK, let's discuss how to proceed

=> If difficult for security or policy reasons, let's discuss and seek alternatives

Requests (5/5)

5. Other Data

- More data, the portal will be more useful to users.
- Please let us know any suggestions!

Milestone & Schedule