

DIAS CEOS Water Portal

<http://waterportal.ceos.org/>

Japan Aerospace Exploration Agency (JAXA)

Satoko Horiyama MIURA, Shinichi SEKIOKA

RD-MOS@jaxa.jp

Remote Sensing Technology Center of Japan (RESTEC)

Kaori KUROIWA, Yoshiyuki KUDO

rd@restec.or.jp

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1. Concept

- CEOS Water Portal is :
 - A distributed data system component of DIAS (Data Integrated Analysis System)-Program
 - To provide "[Easy to Access](#)" service to users
 - To provide access to a whole variety of hydrological data and water relevant data **scattered over the world**
 - To [connect the existing components](#) like data centers, scientists and wide users.
- Multiple types of data are available:
 - In-situ data
 - Satellite data
 - Model output data



2. Services

1. Dataset Search

- Category Search/Map Search
- Connecting to 11 data centers

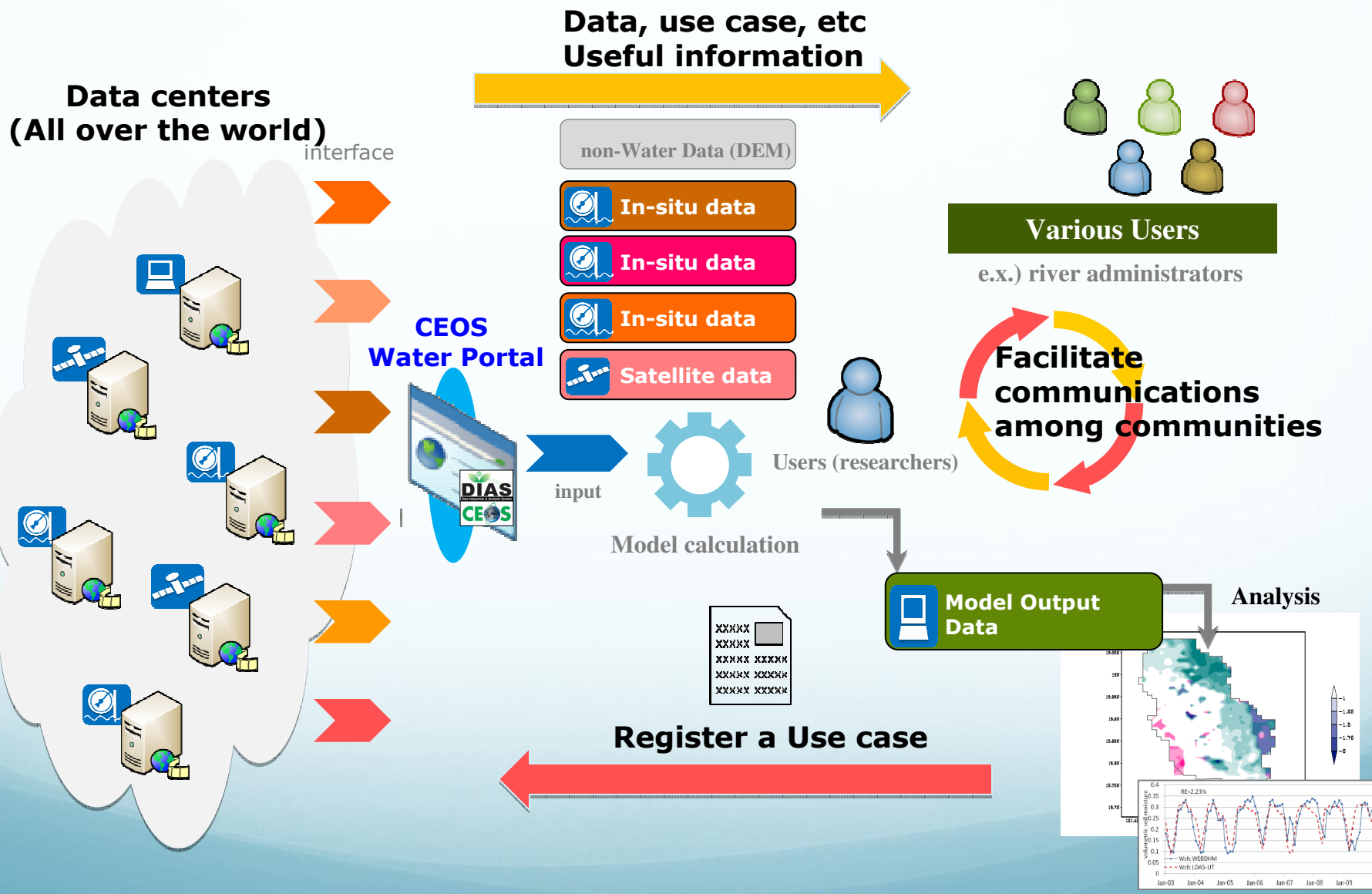
2. Dataset Access

- Data Subset (time, variables)
- Data Visualization (GIF image)
- Data Download/Format conversion
(NetCDF, ascii, GRIB (MOLTS only))

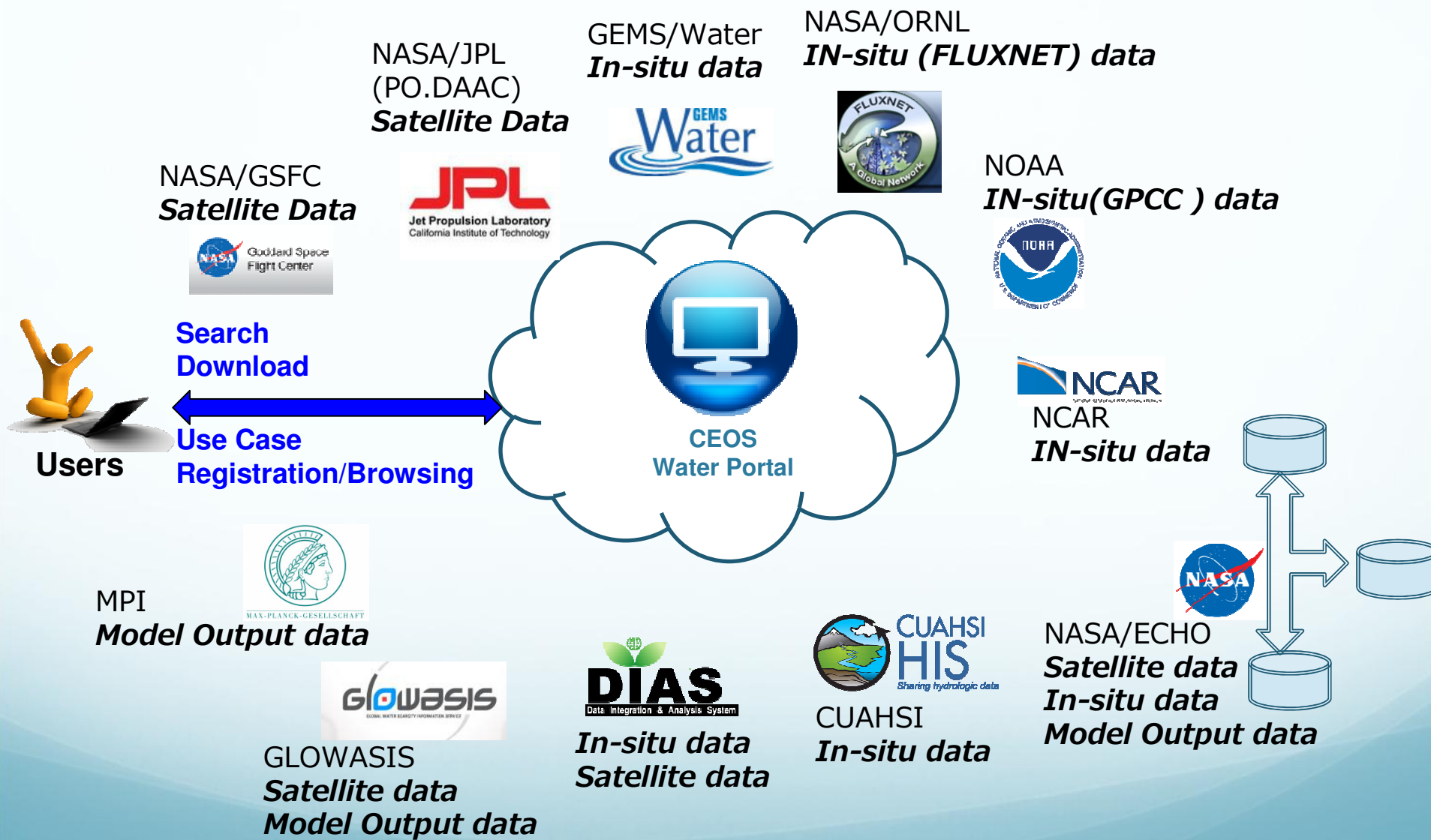
3. Sharing Use Case

- Use Case registration/browsing

3. Goal



4. Data Partners



5. Available Data List (1/2)

Data Partners	Data Types	Variables	Server type	Server Locations
CEOP	Satellite	PR, TMI, AMSR, AMSR-E, MODIS, GLI, SSMI, VISSR	Hyrax	University of Tokyo (Japan)
	Model (MOLTS)	surface pressure, skin temperature, precipitation amount in hour, brightness temperature surface, specific humidity, u-component of wind, v-component of wind, etc	THREDDS	MPI (Germany)
	Model (Gridded)	Air pressure, surface air pressure, air temperature, precipitation rate, snowfall amount, etc	Jblob	MPI (Germany)
	In-situ	Surface Meteorological and Radiation Data Set Flux Data Set Soil Temperature and Soil Moisture Data Set Meteorological Tower Data Set	http link	NCAR (USA)
AWCI	Model (MOLTS)	surface pressure, skin temperature, precipitation amount in hour, brightness temperature surface, specific humidity, u-component of wind, v-component of wind, etc	THREDDS	MPI (Germany)
	In-situ	Precipitation amount, River discharge, River water level, etc	Hyrax	University of Tokyo (Japan)

5. Available Data List (2/2)

Data Partners	Data Types	Variables	Server type	Server Locations
NASA	Satellite	Airs level 3 data	Hyrax	NASA (GSFC)
NOAA (GPCC)	In-situ	Precipitation data	THREDDS	NOAA (USA)
NASA	Satellite	GRACE Level 3 data	THREDDS	NASA/JPL(PO .DACC)
FLUXNET	In-situ	FLUX data Fluxes of carbon dioxide, water vapor, and energy exchange, etc	THREDDS	NASA (ORNL DAAC)
GEMS/Water	In-situ	Instantaneous Discharge , Dissolved Oxygen , Temperature, etc	WFS	GEMS/Water (CANADA)
GLOWASIS	Satellite Model (Gridded)	Precipitation, Air temperature	THREDDS	Deltares (Netherland)

The screenshot shows the CEOS Water Portal interface. At the top, there is a navigation menu with items: About, Registration, Documents, link, Sign In, and contact us. The main content area is divided into several sections:

- Variables:** A list of categories including Atmospheric Surface, Atmospheric Upper-Air, Atmospheric Composition, Oceanic, Terrestrial, and Other.
- Use Cases:** A section with options for 'No Variable Selected' and 'Share my Use Case'.
- Locations Matched:** A world map showing various locations marked with colored circles and numbers, representing data points.
- Map Legend:** A section titled 'Satellite Data' and 'In-situ Data' with checkboxes for various datasets like Reference Sites, Monsoon Regions, NASA AIRS, NASA GRACE, GLOWASIS, AWCI, CEOP, CUAHSI, FLUXNET, GEMS/Water, and GPCC.
- Model Output Data:** A section with checkboxes for 'AWCI (Time Series)', 'CEOP (Time Series)', 'CEOP (Grid Data)', and 'GLOWASIS'.
- More Datasets Matched:** A section with a search icon and the text 'Real time search result from remote services' and 'No Variable Selected'.
- Summary:** A table at the bottom showing 'Datasets Matched' (No Site Selected) and 'Granules Matched' (No Datasets Selected).

(1) Search Options by Variable Category

(5) Use Cases

(3) Observations on Sites matched by Selected Options (1)

Menu

(2) Dataset List for Selected Search Options (1)

(4) Search Other Portal systems (ECHO, etc)

(5) Details of Selected data by (2) & (3)

Category Search

(Terrestrial -> River Discharge)

The screenshot shows the CEOS Water Portal interface. The browser address bar displays 'waterportal.ceos.org'. The page header includes the CEOS Water Portal logo and navigation links: About, Registration, Documents, link, Sign In, and contact us. On the left, a 'Variables' menu lists categories: Atmospheric Surface, Atmospheric Upper-Air, Atmospheric Composition, Oceanic, Terrestrial, and River Discharge (circled in red). Below this is a 'Use Cases' section (circled in red) with the title 'Towards Managing Droughts In A Changing Climate: A Study Of Southeast Asian Watersheds'. The main content area features a world map titled 'Locations Matched' with a red border, showing data points across various continents. To the right of the map is a 'Map Legend' (circled in red) with sections for Satellite Data (No Data Matched), In-situ Data (listing AWCI, CUAHSI, and GEMS/Water), and Model Output Data (No Data Matched). Below the legend is a 'More Datasets Matched' section with links to NASA ECHO and CUAHSI HIS. At the bottom, there are two summary boxes: 'Datasets Matched' (No Site Selected) and 'Granules Matched' (No Datasets Selected). The footer contains the text '(c) 2011 JAXA. ALL RIGHTS RESERVED.'

CEOS Water Portal
waterportal.ceos.org

CEOS Water Portal

About Registration Documents link Sign In contact us

Use Cases

Towards Managing Droughts In A Changing Climate: A Study Of Southeast Asian Watersheds

- Registration date**
2013/02/27 15:42:06
- Name**
Patricia Ann JARANILLA-SANCHEZ
- Organization/Company**
Dept. of Civil Engineering, University of Tokyo
- Data Used**
 - Terrestrial River_Discharge AWCI_In-situ Streamflow(m3/s) Malaysia/Langat 1day
 - Terrestrial River_Discharge AWCI_In-situ Streamflow(m3/sec) Indonesia/Mamberamo 1day
 - ASTER DEM from USGS LPDAC, 1km x 1km grid size
 - Soil hydraulic characteristics from the Food and Agriculture Organization(FAO) global dataset (saturated moisture content, residual soil moisture content, saturated hydraulic conductivity for soil surface and van Genuchten parameters)
 - Land use data from USGS global land cover dataset
 - Leaf Area Index (LAI) and fraction of photosynthetically active radiation absorbed by the green vegetation canopy (FPAR) from NOAA AVHRR PAL 16-km LAI and FPAR satellite dataset
 - Meteorological forcing data from JMA Japan Reanalysis (JRA) data JRA fstc_phy2m dataset for air temperature, specific humidity, air pressure, wind speed, downward solar radiation and long wave radiation
 - Precipitation of APHRODITE data
 - Discharge from the National Water Resources Board (NWRB)
- Work/Research Abstract**
Droughts commonly occur at the regional scale but their effects trickle down to the local level. In Southeast Asia, drought is commonly overshadowed by other pressing issues. However, their effects are economically significant and occur for extended periods of time. They usually affect agriculture - the primary means of livelihood of the most vulnerable stakeholders, the farmers and local folks. The objectives of this study are: 1) to identify drought-prone areas in the pilot watersheds; 2) to identify future trends of climate change on the basins and 3) to determine an integrated drought management strategy at the basin scale to enhance adaptation to climate change in the near future. Using a distributed hydrological model (the Water and Energy Budget-Based Distributed Hydrological Model), drought quantification at the basin scale was done using available historical data from 1982-2007. Future trends were identified using SRESa1b global circulation model ensemble projections from 2046-2064 in four basins in Southeast Asia. These basins are the Damayan river basin, Philippines' west watershed,

CEOS DIAS

Sign In contact us

Use Cases

It is recommended that further studies on the selection, against droughts at the pilot Southeast Asian watersheds be in the drought-prone areas.

Category	Past (%)	Near Future (%)
R	~5	~5
Q	~18	~15
SMS	~5	~10
SMR	~18	~80
ET	~15	~50

Category	Past (%)	Near Future (%)
R	~18	~22
Q	~2	~5
SMS	~18	~18
SMR	~20	~65
ET	~18	~32

Category	Past (%)	Near Future (%)
R	~100	~100
Q	~100	~100
SMS	~100	~100
SMR	~100	~100
ET	~100	~100

Category	Past (%)	Near Future (%)
R	~48	~48
Q	~48	~48
SMS	~48	~48
SMR	~48	~48
ET	~48	~48

Search

(Pakistan -Stream flow)

Variables

- Atmospheric Surface
- Atmospheric Upper-Air
- Atmospheric Composition
- Oceanic
- Terrestrial**
 - River Discharge (1)**
 - Ground Water
 - Water Use
 - Snow Cover
 - Albedo
 - Leaf Area Index
 - Land Cover
 - Fraction of Absorbed Photosynthetically Active Radiation (FAPAR)
 - Soil Moisture

Locations Matched

Map Legend

- Satellite Data
 - No Data Matched
- In-situ Data
 - AWCI
 - CUAHSI
 - GEMS/Water
- Model Output Data
 - No Data Matched

More Datasets Matched

Real time search result from remote services

- [NASA ECHO](#)
- Or, You may find more related data from...
 - [CUAHSI HIS](#)

(Select a station & data set)

Variables

- Atmospheric Surface
- Atmospheric Upper-Air
- Atmospheric Composition
- Oceanic
- Terrestrial
- River Discharge
- Ground Water
- Water Use
- Snow Cover
- Albedo
- Leaf Area Index
- Land Cover
- Fraction of Absorbed Photosynthetically Active Radiation (FAPAR)
- Soil Moisture
- Glacier and Ice Caps
- Other

Locations Matched

Map data ©2014 AutoNavi; Google

Map Legend

- Satellite Data
 - No Data Matched
- In-situ Data
 - AWCI
 - CUAHSI
 - GEMS/Water
- Model Output Data
 - No Data Matched

More Datasets Matched

Real time search result from remote services

[NASA ECHO](#)

Or, You may find more related data from...

[CUAHSI HIS](#)

(1) Select one of the green balls.

(2) Click!

AWCI In-situ Dataset in Gilgit at Gilgit River Basin

[Show Datasets](#)

Variables

- Atmospheric Composition
- Oceanic
- Terrestrial
- River Discharge
- Ground Water
- Water Use
- Snow Cover
- Albedo
- Leaf Area Index
- Land Cover
- Fraction of Absorbed Photosynthetically Active Radiation (FAPAR)

Locations Matched

Map data ©2014 AutoNavi; Google

Map Legend

- Satellite Data
 - No Data Matched
- In-situ Data
 - AWCI
 - CUAHSI
 - GEMS/Water
- Model Output Data
 - No Data Matched

More Datasets Matched

Real time search result from remote services

[NASA ECHO](#)

Or, You may find more related data from...

[CUAHSI HIS](#)

(Select a station & data set)

The screenshot displays a search interface with the following sections:

- Variables:** A list of categories including Atmospheric Surface, Atmospheric Upper-Air, Atmospheric Composition, Oceanic, Terrestrial, River Discharge, Ground Water, Water Use, Snow Cover, Albedo, Leaf Area Index, Land Cover, Fraction of Absorbed Photosynthetically Active Radiation (FAPAR), Soil Moisture, Glacier and Ice Caps, Other, and Other.
- Locations Matched:** A map showing the Gilgit River Basin in Pakistan. A pop-up window displays "AWCI In-situ Dataset in Gilgit at Gilgit River Basin" with a "Show Datasets" link.
- Map Legend:** Options for Satellite Data (No Data Matched), In-situ Data (checked for AWCI, CUAHSI, GEMS/Water), and Model Output Data (No Data Matched).
- More Datasets Matched:** A section for real-time search results from remote services, including NASA ECHO and CUAHSI HIS.
- Datasets Matched:** A list of results. The first result is highlighted with a red box and a red arrow. It shows: "Selected dataset: AWCI In-situ, Selected site: Gilgit Category:Terrestrial SubCategory:River_Discharge", Variable: Streamflow : ([UT] The unit was converted from Cusec into m3/s.)(m3/s), Country / River basin : Pakistan / Gilgit, Measurement : surface, Station : Gilgit, Observation time step : 1day.
- Granules Matched:** No Datasets Selected.

To select this dataset, click here !

(Setting a time range)

- River Discharge
- Ground Water
- Water Use
- Snow Cover
- Albedo
- Leaf Area Index
- Land Cover
- Fraction of Absorbed Photosynthetically Radiation (FAPAR)
- Soil Moisture
- Glacier and Ice Caps
- Other
- Other

Granule Search Parameter

Temporal Extent

Select a time range for the requested data.
Available data period: 2001-01-01T00:00:00.0Z to 2005-12-31T00:00:00.0Z

Start Date (yyyy-mm-dd):

End Date (yyyy-mm-dd) :

[View Data](#)

More Datasets Matched

Search result from ES

SA ECHO

may find dated data

AHSI HIS

Datasets Matched

Result 1 to 2 of 2

Selected dataset: AWCI In-situ, Selected site: Gilgit Category: Terrestrial SubCategory: River_Discharge

Variable	: Streamflow : ([UT] The unit was converted from Cusec into m3/s.)(m3/s)
Country / River basin	: Pakistan / Gilgit
Measurement	: surface
Station	: Gilgit
Observation time step	: 1day

Variable	: Streamflow(m3/s)
Country / River basin	: Pakistan / Gilgit
Measurement	: surface
Station	: Gilgit
Observation time step	: 1day

Use Cases

Towards Managing Droughts In A Changing Climate: A Study Of Southeast Asian Watersheds

Share my Use Case

Granules Matched

No Datasets Selected

Download data

CEOS Water Portal

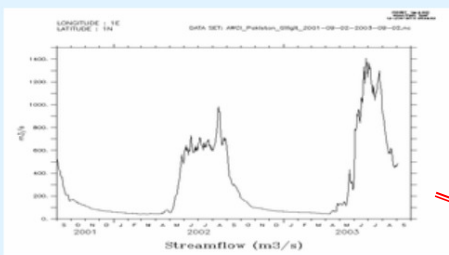


contact us

Search criteria

Project : AWCI
Type : In-situ
Country : Pakistan
Reference site : Gilgit
Variable : Streamflow
Requested time range: 2001-09-02 - 2003-09-02

View images and Download data



To download the data, click a button below.
Please confirm [the data policy](#), before you download the data.

Save as NetCDF

Save as CSV

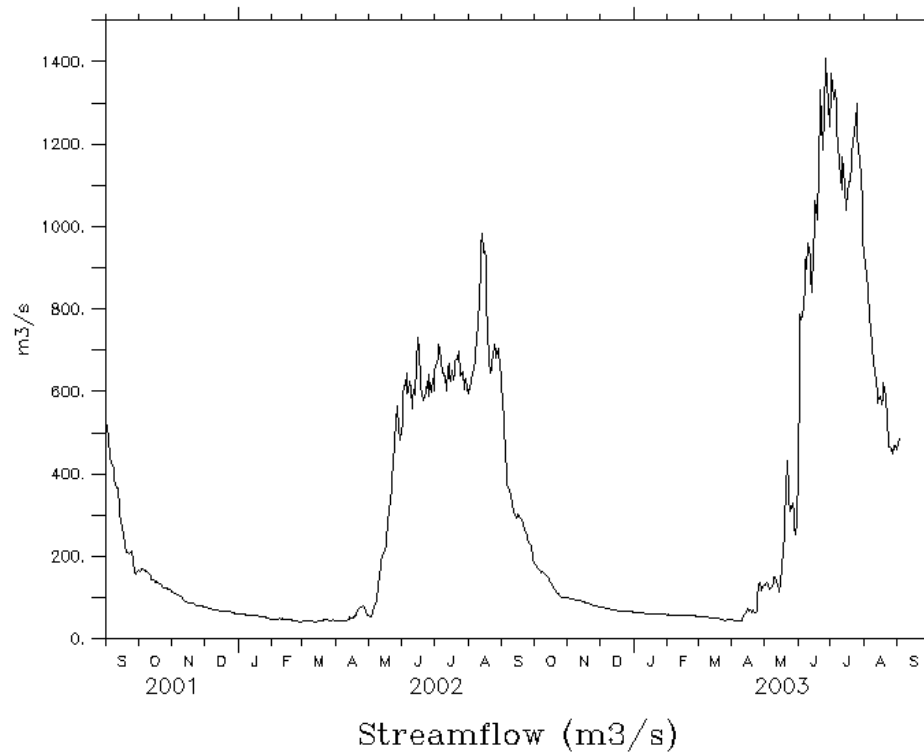
To enlarge, click!

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LONGITUDE : 1E
LATITUDE : 1N

DATA SET: AWCI_Pakistan_Gilgit_2001-09-02-2003-09-02.nc

FERRET Ver.0.842
NINA/FMEL TRAMP
12-JUL-2014 09:49:53



Share your research results

CEOS Water Portal

waterportal.ceos.org/#

Share my Use Case

Share your use case of Water Portal data or any water related data with us. Your post will be shared and exposed to many people using the portal. Specify "hide" for email address below should you be unacceptable getting contacted by other users about your post.

Name

Organization

Email hide Open

Title of your work/research

to Public

Here, let us know what data you used to have your work or research done, followed by the abstract. Optionally, you can provide an attachment (eg. paper, graph image) and URL that are most relevant to the work.

Data Used Specify here if you used data obtained from the water portal.
Category: Subcategory:

Provide brief descriptions of any other data used.

Work/Research Abstract

Share my Use Case

Google Terms of Use

Searching for Datasets from map

Zoom in to your area of interest
(eg. Around Pakistan)
You can find available data as colored points or rectangles on the map.

CEOS Water Portal

Map Legend

- Satellite Data
 - Reference Sites
 - Monsoon Regions
 - NASA AIRS
 - NASA GRACE
 - GLOWASIS
- In-situ Data
 - AWCI
 - CEOP
 - CUAHSI
 - FLUXNET
 - GEMS/Water
 - GPCC
- Model Output Data
 - AWCI (Time Series)
 - CEOP (Time Series)
 - CEOP (Grid Data)
 - GLOWASIS

More Datasets Matched

Real time search result from remote services

No Variable Selected

CEOS Water Portal

Map Legend

- Satellite Data
 - Reference Sites
 - Monsoon Regions
 - NASA AIRS
 - NASA GRACE
 - GLOWASIS
- In-situ Data
 - AWCI
 - CEOP
 - CUAHSI
 - FLUXNET
 - GEMS/Water
 - GPCC
- Model Output Data
 - AWCI (Time Series)
 - CEOP (Time Series)
 - CEOP (Grid Data)
 - GLOWASIS

More Datasets Matched

Real time search result from remote services

No Variable Selected

Note:
A satellite dataset covers large area. Unmark check box(es) of CEOP Satellite data when it blocks point data underneath.

a. Select a point and click "Show datasets"

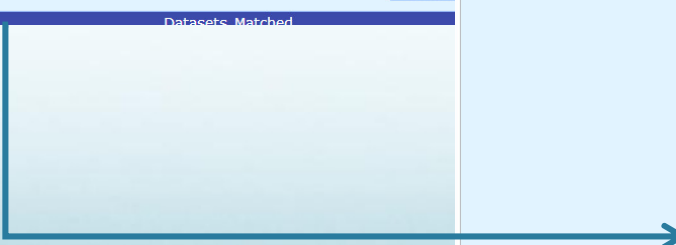
The screenshot shows the CEOS Water Portal interface. On the left, there is a 'Variables' menu with categories like Atmospheric Surface, Oceanic, and Terrestrial. The main area displays a map titled 'Locations Matched' with a point selected at Gilgit. A pop-up window shows 'AWCI In-situ Dataset in Gilgit at Gilgit River Basin' with a 'Show Datasets' button circled in red. A blue arrow points from the text 'a. Select a point and click "Show datasets"' to this button.

c. Click the arrow icon of your desired dataset

This screenshot shows the 'Datasets Matched' panel. It lists two datasets: 'AWCI In-situ' (Atmospheric Precipitation) and 'CEOP (Time Series)' (Air Temperature Max). A blue arrow icon is circled in red on the right side of the first dataset entry. A blue arrow points from the text 'c. Click the arrow icon of your desired dataset' to this icon.

Category	Variable	Country / River basin	Measurement	Station	Observation time step
Atmospheric Precipitation	Precipitation(mm/day)	Pakistan / Gilgit	surface	Gilgit	1day
Atmospheric Air_Temperature	Air Temperature Max : (Max)(degC)	Pakistan / Gilgit	surface	Gilgit	

b. Show the list of datasets at the point



Enter Date and Time ranges for subsetting the data

Specify date either by using the calendar or entering in the text field in YYYY-MM-DD.

After selecting time range, you can download the data as a NetCDF or CSV.

CEOS Water Portal

Search criteria

Project : AWCI
 Type : In-situ
 Country : Pakistan
 Reference site : Gilgit
 Variable : Precipitation
 Requested time range: 2000-01-01 - 2003-12-31

View images and Download data

To download the data, click a button below.
 Please confirm [the data policy](#), before you download the data.

Save as NetCDF Save as CSV

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Note

(if you want to download the data, you need a user account)

Creating a New Account

You can create an account at the following link:

http://waterportal.ceos.org/auto_pass.html

The image shows two browser windows. The left window displays the 'CEOS Water Portal Automated Registration' page with three menu items: 'Registration', 'Change Password or Email Address', and 'Delete (Cancel) Registration'. The 'Registration' link is circled in red. A blue arrow points from this link to the registration form in the right window. The right window shows the 'Application for CEOS Water portal password' form, which includes fields for 'Login name' and 'E-mail Address', and 'Submit' and 'Clear' buttons. The 'Submit' button is also circled in red. A blue arrow points from the 'Submit' button to the text below.

Click the registration menu

Input your login name and your e-mail address.
Then click the submit button.
You will receive an e-mail with your password.

Please feed back

Tell us what you think

- ✓ Do you have any requests about data for your research?
(please tell us what kind of data you need.)
- ✓ Did you easily understand the workflow of the water portal interface to discover and download data?
(please tell us your comments about look & feel, layout etc. of the water portal.)
- ✓ Please add your research summary (any water related research) via "Share my Use Case".