CEOP
Data Upload, Quality Control and
Meta-Data Registration System

Eiji Ikoma*, Katsunori Tamagawa*
Hiroko Kinutani*, Tetsu Ohta***
and
Toshio Koike*,* *,Masaru Kitsuregawa****
The University of Tokyo
*Earth Observation Data Integration and Fusion Research Initiative, UT
**Institute of Industrial Science, UT
***Department of Civil Engineering, UT

Outline

1. Framework of CEOP Data Upload, Quality Control, and Meta-Data Registration System.
2. Introduction of **Data Upload System**
   - Background, User Interface (Demo), Recent Status
3. Introduction of **Data Quality Control System**
   - Background, User Interface (Demo), Recent Status
4. Overview of Meta-Data Registration System

→ cont. Dr. Yasukawa's presentation

Outline of the Data Management

To utilize great variety data for integrated use, it usually requires many processes for the data provider,

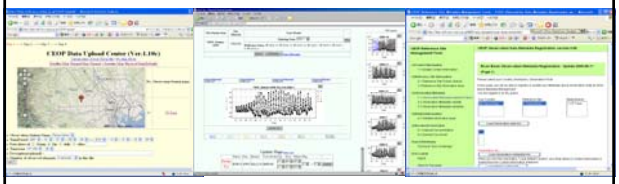
Raw Data pre checking
Quality Controlling,
Unified Format conversion,
Meta data registration,
Dataset documentation,
And so on ..

→Data provider takes a lot of Time and Energy

Outline of the Data Management

To reduce all the work and time for these processes,

- **The UT team has been establishing Web based data upload , Quality Control and Meta Data Registration System that data provider can use through the web.**



No.	Ref. Site Name
1	Eastern Siberian Tundra
2	Eastern Siberian Taiga
3	Mongolia
4	Tongyu
5	Tibet
6	Himalayas
7	Northern South China Sea - Southern Japan
8	Chao-Phraya River
9	North-East Thailand
10	Western Pacific Ocean
11	Mongolia Arvayheer
12	Mongolia Nalaikh
13	Northern Mongolia
14	Lower Yellow River
15	Central Vietnam
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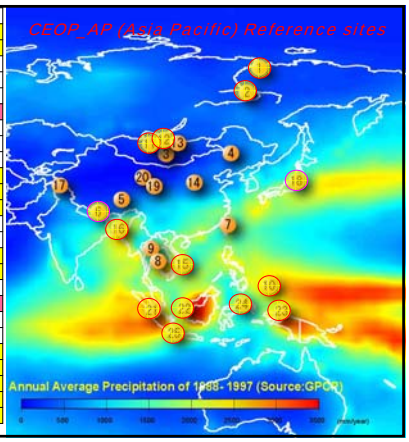
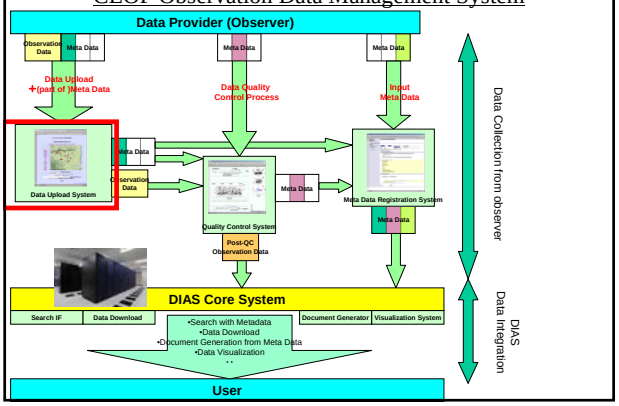


CEOP Observation Data Management System



Observation Data **Upload** System

Eiji Ikoma
Katsunori Tamagawa, Hiroko Kinutani,
Tetsu Ohta, Toshio Koike, Masaru Kitsuregawa

On-line Data Upload

- Observers have sent their own data to data administrators with the means of e-mail or mail before.
- However, by these methods, there were lots of problem, like the point that the file format and meta information are not unified, the point which requires much time and effort to send the data for observers, and also processing take lots of time, etc..
- So, we have started to develop on-line data upload system for CEOP Asia-Pacific data, which is in cooperation with Data Quality Control System, Meta-Data Registration System, and Data Archiving System.

Data Upload System

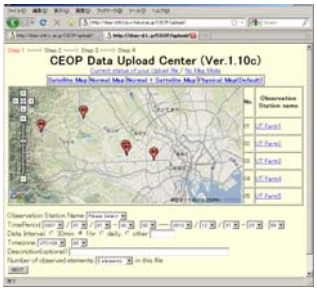
- Observers can upload observation data and input some Metadata on Web Interface consisted of 4 steps.
- On each step, observers need to input some information about the data.
- Easy Operation and Quick Response.
- This system has some function which **reduce** the complicatedness of upload process

Login Page

(Ver3.01c for CEOP)

- Username and Password are required.
- Each observation site manager has it own (unique) username and password.

STEP1



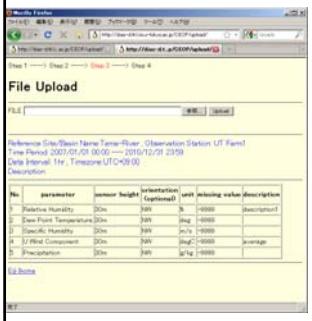
- Observation Point(Map/List)
- Time Period
- Data Interval
- Timezone
- Description (optional)
- Num. of observed elements

STEP2

- Observation Data
  - Choose from pulldown menu
- Sensor height
- Orientation(op.)
- Unit
- Missing value
- Description(op.)

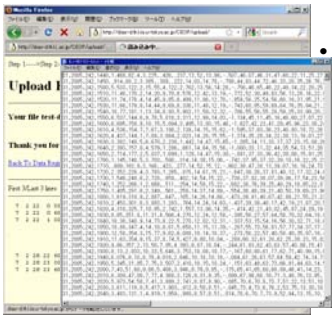
1. **Copy from No.1 to all**
2. **Unit = Input Automatically when you choose observation data**
3. **Copy from former inputted data**
4. **Modify the num of observation data**
5. **Upload from prepared csv file**

STEP3



- Upload observation Data(File).
- Confirmation of metada inputted at STEP1,2.

STEP 4

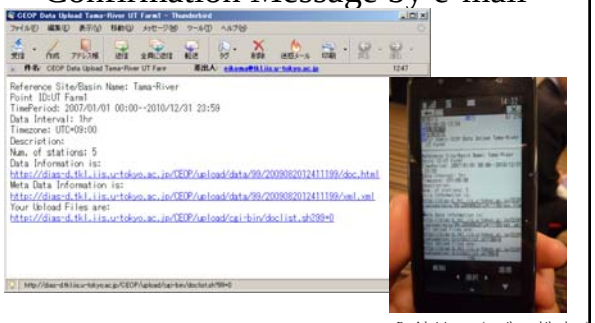


- Confirmation of
  - local path of uploaded file
  - contents of the file (first/last 3lines and all lines when you require)
  - All metadata inputted at STEP1,2,3

After STEP 4

- Our system send the confirmation message to observer by e-mail.
- Inputted metadata are stored in our Upload system --- Observer can use at next time.
- Observation data is loaded to Quality Control System

Confirmation Message by e-mail



For Administrators (e-mail to mobile-phone)

After STEP 4

- Our system send the confirmation message to observer by e-mail.
- Inputted metadata are stored in our Upload system --- Observer can use at next time.
- Observation data is loaded to Quality Control System

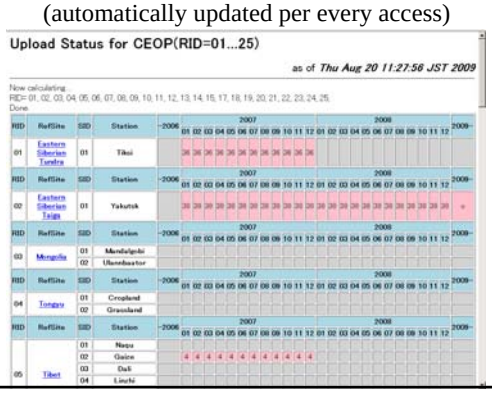
List of uploaded file

You can check your uploaded file here.

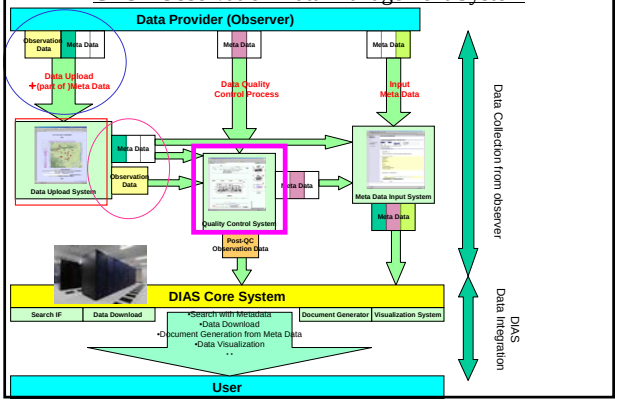
- Data Download
- Check metadata
- Delete uploaded data

Upload Status of All CEOP Data

(automatically updated per every access)



CEOP Observation Data Management System



CEOP Observation Data Quality Control (QC) System

Eiji Ikoma, Katsunori Tamagawa,
Tetsu Ohta, Kenji Taniguchi,
Toshio Koike, Masaru Kitsuregawa

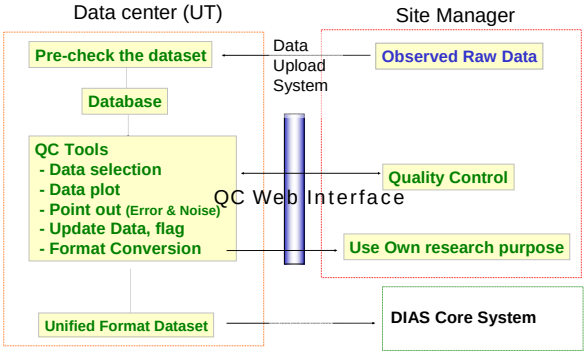
Our QC System

- First version of our QC System was developed for CEOP Data in 2004.
- Ver.1(2004-2005) for → Ver.2(2005-2006) → Ver.3(2007-)
- 13site(Ver.1)→ 25site(Ver.2)→Ver.3.xxx
  - *Ver3.00(for JICA=3 sites, 12 stations.,),*
  - *Ver3.01a(for AWCI=18 sites, 291 stations.),*
  - *Ver3.01c(for CEOP=25 sites, 76 stations.) are now running*
- We are operating QC-V3(Ver.3.01c) system for CEOP Phase2 Data.

Features of our QC system

- Web-based UI (required only Web browser)
- Easy-to-use and light operation
- Data management mechanism for each user authority
- Post-QC Data download support system
- Progress Management system for Data Manager

Outline of QC Process



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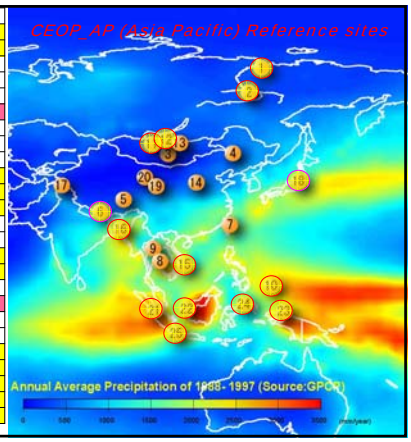
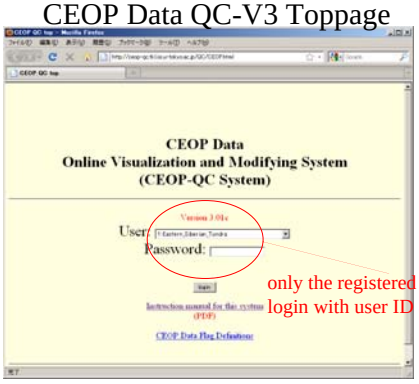
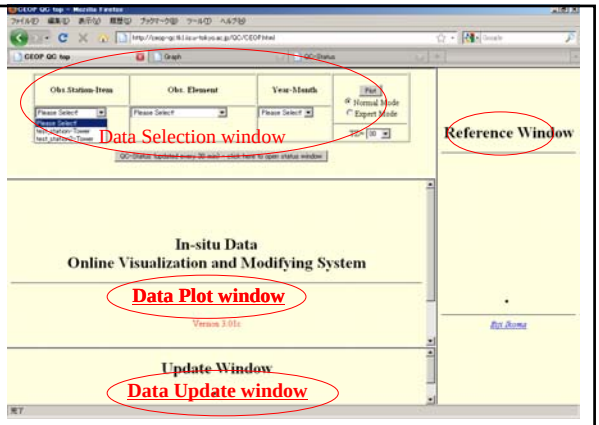
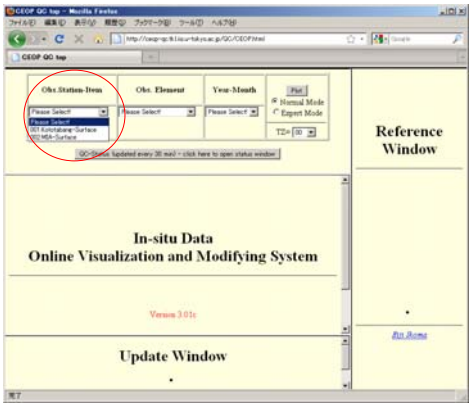


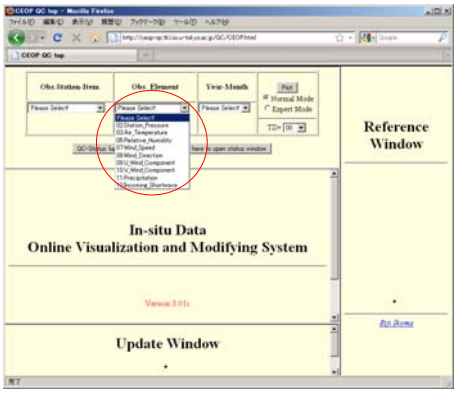
CEOP Data QC-V3 Toppage

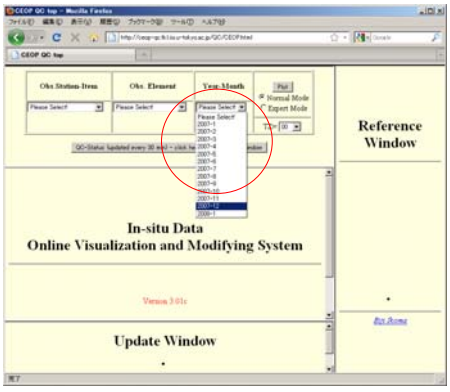


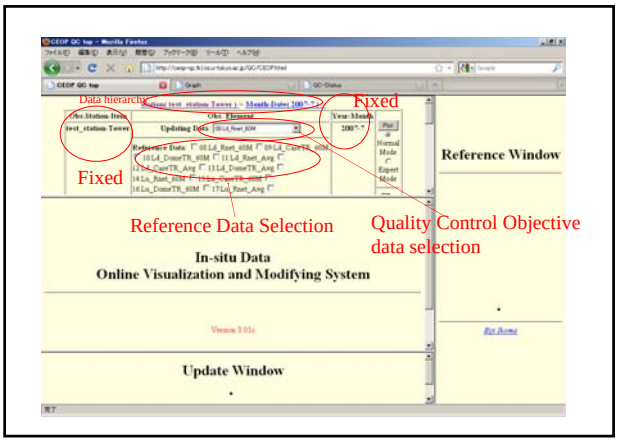
only the registered member can login with user ID and password

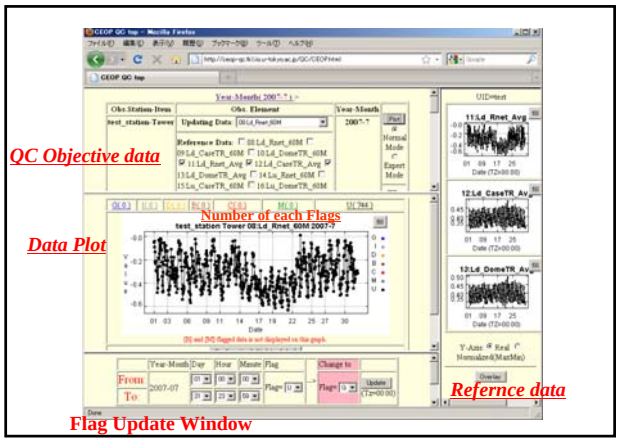


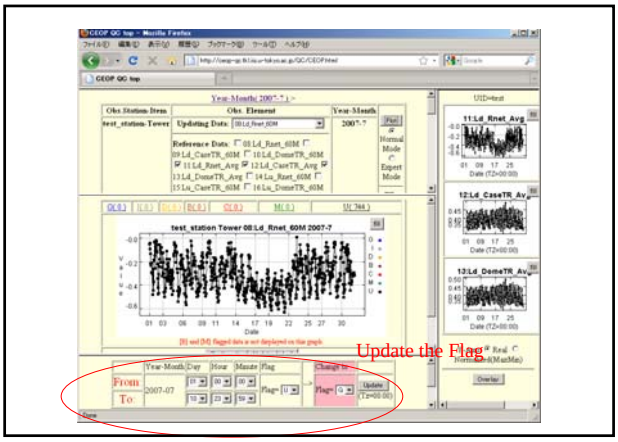


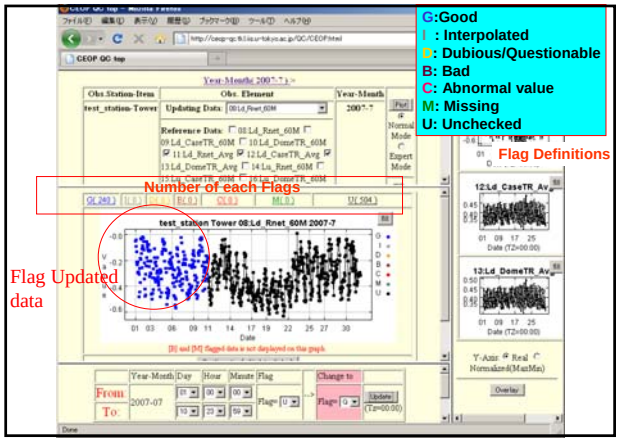


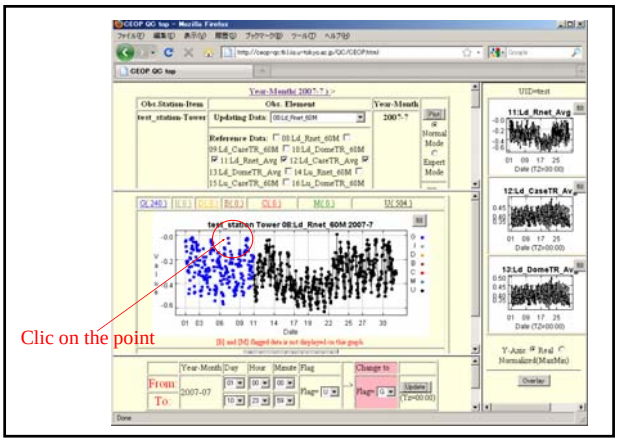


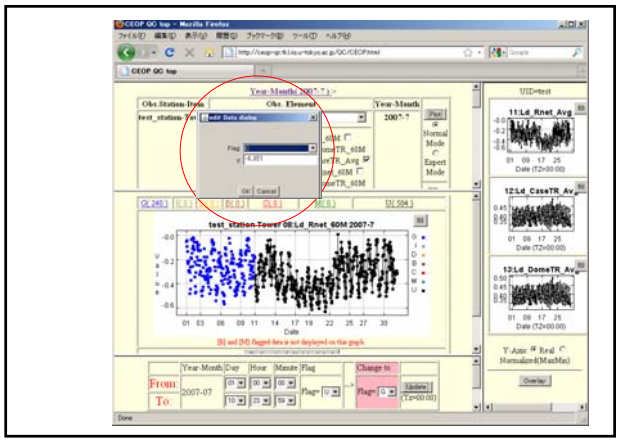

Data hierarchy
Fixed
Fixed
Reference Window
Reference Data Selection
Quality Control Objective data selection
In-situ Data
Online Visualization and Modifying System
Update Window

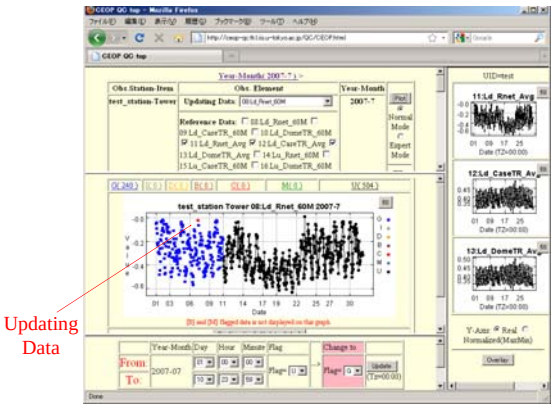

QC Objective data
Number of each Flags
Data Plot
Refernce data
Flag Update Window


Update the Flag

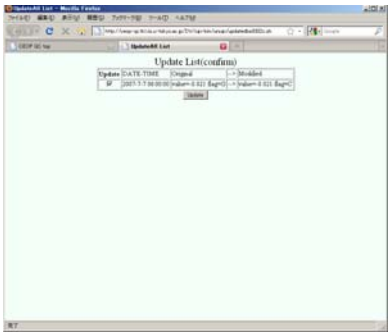

G:Good
I : Interpolated
D: Dubious/Questionable
B: Bad
C: Abnormal value
M: Missing
U: Unchecked
Flag Definitions
Number of each Flags
Flag Updated data

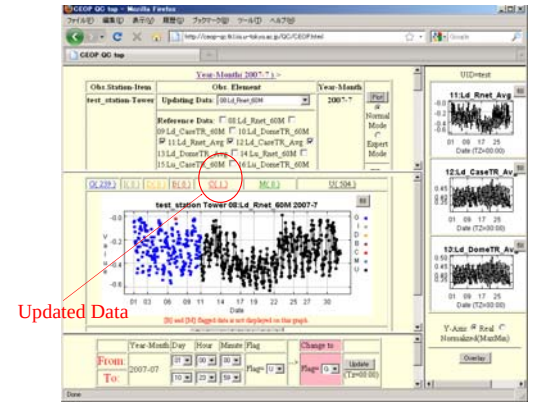

Clic on the point

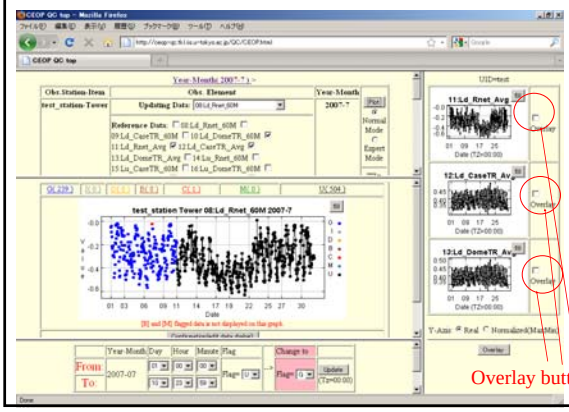


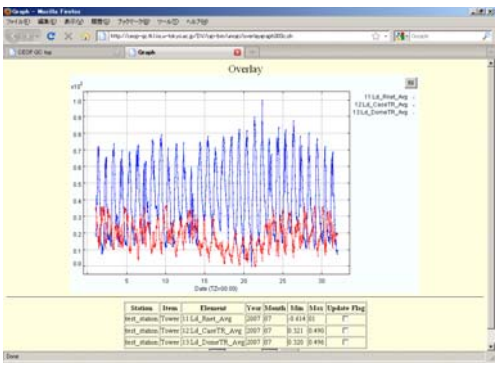


Confirmation for update

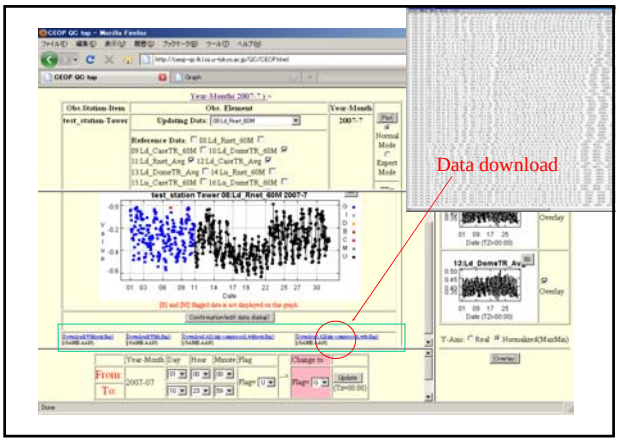


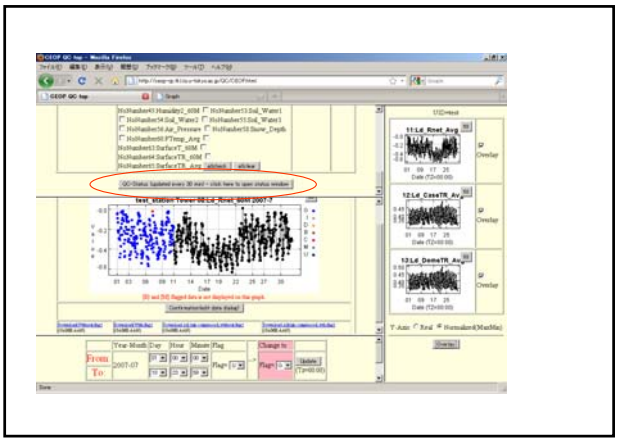




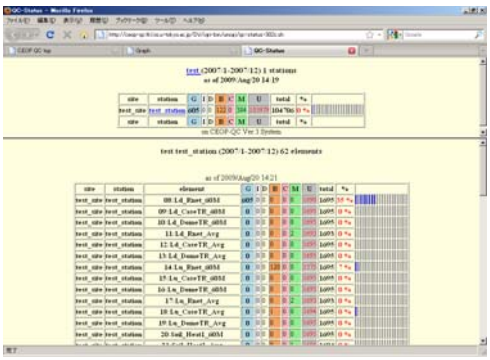


Normalized (Y-Axis)

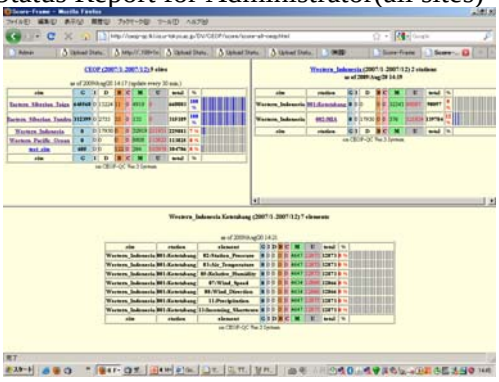




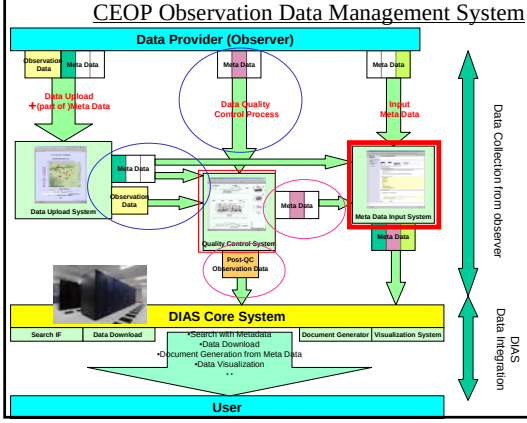
QC-Status of each site



Status Report for Administrator(all sites)



CEOP Observation Data Management System



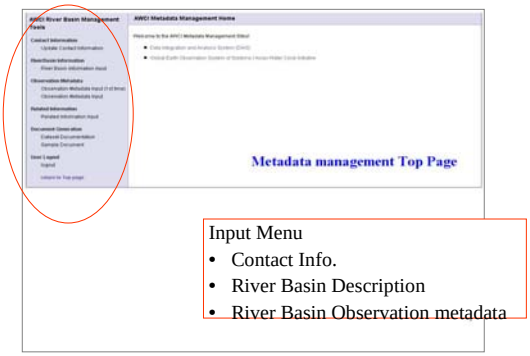
Observation Data Metadata Registration System

Hiroko Kinutani, Eiji Ikoma,
Katsunori Tamagawa
Tetsu Ohta, Toshio Koike
Masaru Kitsuregawa

Metadata Input System

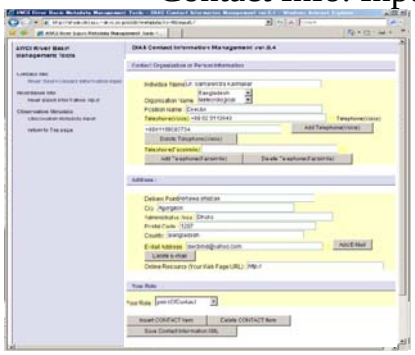
- Observers can input metadata information related to observation data on Web Interface.
- This metadata is defined as an extension of ISO19115, ISO19139 metadata standards.
- The operation on this system is much easier than other similar system.

Top Page



Input Menu
- Contact Info.
- River Basin Description
- River Basin Observation metadata

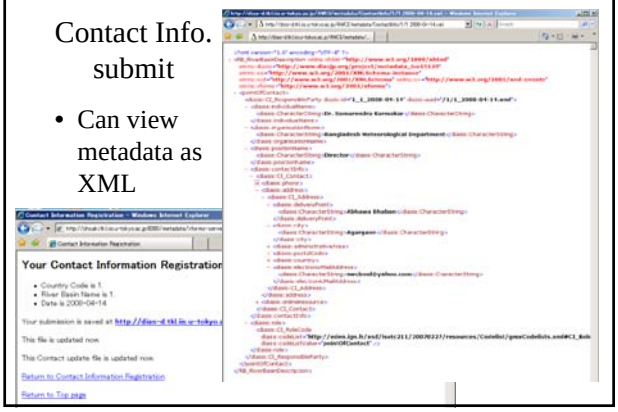
Contact Info. Input



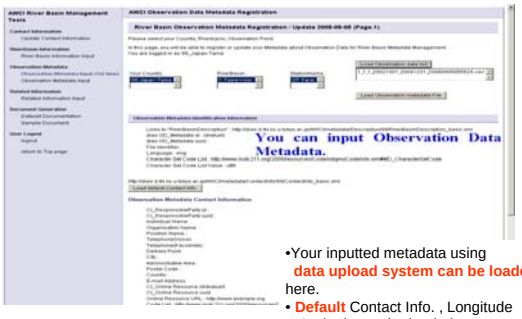
- Contact Info. is often required to input.
- Name, Address, etc.
- Once input, Use many times

Contact Info. submit

- Can view metadata as XML



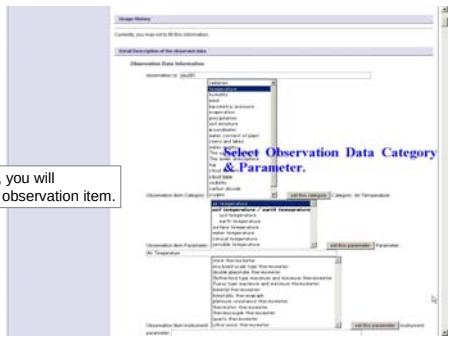
Observation metadata input(automatically)



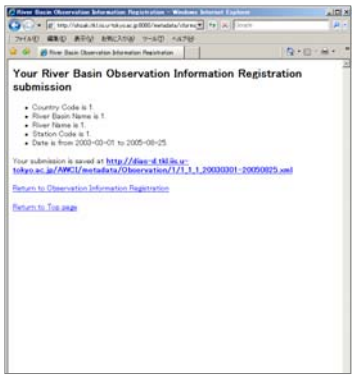
•Your inputted metadata using **data upload system can be loaded** here.
• **Default** Contact Info. , Longitude , Latitude can be loaded **automatically**.

Observation metadata input(manually)

In this area, you will input about observation item.

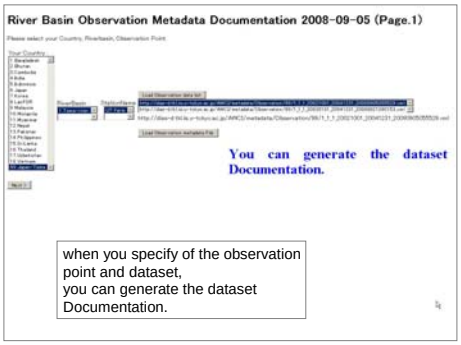


Metadata Access

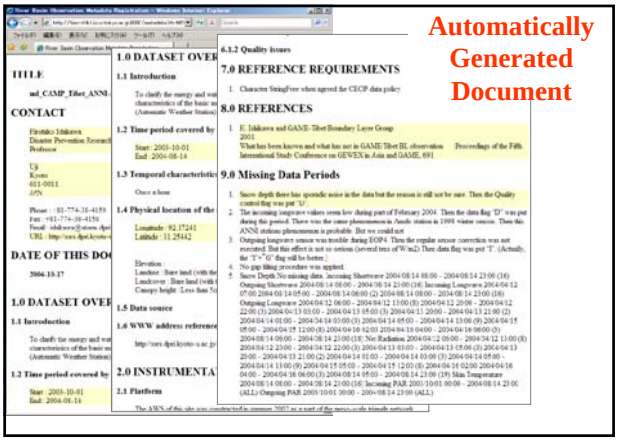


When the input process is finished, the metadata XML file is stored at the displayed URL.
You can always see this file.

Document Generation



when you specify of the observation point and dataset,
you can generate the dataset Documentation.



Automatically Generated Document

Status of CEOP-AP Data Upload, QC

CEOP_AP Data Management Status (as of 2009/08/21)

	Reference Site Name	Basic Info.	Data Uploading (Data Period)	Compile DB	Quality Control	Convert CEOP Format	Submit to NCAR	Remark
01	Eastern Siberian Tundra	O	2007/01/01 - 2007/12/31	O	O			
02	Eastern Siberian Taiga	O	2007/01/01 - 2007/12/31	O	O			
03	Mongolia	O						
04	Tongyu	O						
05	Tibet	O	2007/06/15 - 2008/11/25	O	△			
06	Himalayas	O	Managed by own system					
07	Northern South China Sea - Southern Japan	O	2005/01/01 - 2008/12/31	O				
08	Chao-Phraya River	O						
09	North-East Thailand	O						
10	Western Pacific Ocean	O	2007/01/01 - 2007/12/31	O				
11	Mongolia Arvayheer	O						
12	Mongolia Nalaikh	O						
13	Northern Mongolia	O						
14	Lower Yellow River	O						
15	Central Vietnam	O						
16	Northeast Bangladesh	O						
17	Pakistan Karakorum	O						
18	Tsukuba	O	Managed by own system					
19	Lanzhou	O						
20	Heihe River Basin	O	2007/01/01 - 2008/12/31					
21	Western Indonesia	O	2007/01/01 - 2007/12/31	O				
22	Central Indonesia	O						
23	Eastern Indonesia	O						
24	Northern Indonesia	O						
25	Southern Indonesia	O						

O: Finished , △: Partially finished

CEOP_AP Data management Status for Each stations (1/2)

	Reference Site Name	Station n #	Station Name	Basic Info.	Data Uploading	Compile DB	Quality Control	Convert CEOP Format
01	Eastern Siberian Tundra	01-01	Tiksi	O	2007/01/01 - 2007/12/31	O	O	
02	Eastern Siberian Taiga	02-01	Yakutsk	O	2007/01/01 - 2007/12/31	O	O	
03	Mongolia	03-01	Mandalgobi	O				
		03-02	Ulanmbaator	O				
04	Tongyu	04-01	Cropland	O				
		04-02	Grassland	O				
05	Tibet	05-01	Naqu	O	2008/01/01 - 2008/05/24	O	-	
		05-02	Gaize	O	2007/06/15 - 2008/11/25	O	-	
		05-03	Dali	O	2008/02/01 - 2008/12/01	O	-	
		05-04	Linzhi	O	2008/05/01 - 2008/11/05	O	-	
		05-05	Litang	O				
		05-06	Wenjiang	O	2008/01/01 - 2008/11/30	O	-	
06	Himalayas	06-01	Pyramid	O				
		06-02	Pherich	O				
		06-03	Namche	O				
		06-04	Lukla	O				
07	Northern South China Sea - Southern Japan	07-01	Chuizehu	O	2005/01/01 - 2008/12/31	O		
		07-02	Heinchi	O	2005/01/01 - 2008/12/31	O		
		07-03	Ilan	O	2005/01/01 - 2008/12/31	O		
		07-04	Taichung	O	2005/01/01 - 2008/12/31	O		
		07-05	Hualien	O	2005/01/01 - 2008/12/31	O		
		07-06	Jihyuehtan	O	2005/01/01 - 2008/12/31	O		
		07-07	Alishan	O	2005/01/01 - 2008/12/31	O		
		07-08	Chiayi	O	2005/01/01 - 2008/12/31	O		
		07-09	Chengkung	O	2005/01/01 - 2008/12/31	O		
		07-10	Taitung	O	2005/01/01 - 2008/12/31	O		
		07-11	Kaohsiung	O	2005/01/01 - 2008/12/31	O		
		07-12	Hengchun	O	2005/01/01 - 2008/12/31	O		
		07-13	Pengchiayu	O	2005/01/01 - 2008/12/31	O		
		07-14	Anpu	O	2005/01/01 - 2008/12/31	O		
		07-15	Tanshui	O	2005/01/01 - 2008/12/31	O		
		07-16	Keelung	O	2005/01/01 - 2008/12/31	O		
		07-17	Taipei	O	2005/01/01 - 2008/12/31	O		
		07-18	Suao	O	2005/01/01 - 2008/12/31	O		
		07-19	Wuchi	O	2005/01/01 - 2008/12/31	O		
		07-20	Penghu	O	2005/01/01 - 2008/12/31	O		
		07-21	Yushan	O	2005/01/01 - 2008/12/31	O		
		07-22	Tungchitao	O	2005/01/01 - 2008/12/31	O		
		07-23	Tainan	O	2005/01/01 - 2008/12/31	O		
		07-24	Tawu	O	2005/01/01 - 2008/12/31	O		
		07-25	Lanyu	O	2005/01/01 - 2008/12/31	O		

CEOP_AP Data management Status for Each stations (2/2)

	Reference Site Name	Station n #	Station Name	Basic Info.	Data Uploading	Compile DB	Quality Control	Convert CEOP Format
08	Chao-Phraya River	08-01	Lampang	o				
09	North-East Thailand	09-01	Nakhonrachasima	o				
10	Western Pacific Ocean	10-01	Aimeliik	o				
		10-02	Peleliu	o	2007/01/01 - 2007/12/31	o		
11	Mongolia Arvayheer	11-01	Arvayheer	o				
12	Mongolia Nalaikh	12-01	Nalaikh	o				
13	Northern Mongolia	13-01	Kherlen-Bayan-Ula	o				
		13-02	Forest site	o				
14	Lower Yellow River	14-01	Gaoying	o				
15	Central Vietnam	15-01	Da Nang	o				
16	Northeast Bangladesh	16-01	Sylhet	o				
17	Pakistan Karakorum	17-01	Urdukas	o				
		17-02	Askole	o				
18	Tsukuba	18-01	UT-Mt. Tsukuba	o				
		18-02	NIED	o				
		18-03	UT-TERC	o				
		18-04	JMA-AO	o				
		18-05	MRI	o				
		18-06	NIES	o				
		18-07	NIAES-MASE	o				
19	Lanzhou	19-01	SACOL	o				
20	Heihe River Basin	20-01	Linze	o	2007/01/01 - 2007/12/31			
		20-02	Dayekou	o	2007/01/01 - 2008/07/13			
		20-03	Yeniugou	o	2007/11/05 - 2008/07/16			
		20-04	Dingxin	o				
		20-05	Erjin	o				
		20-06	Arou	o	2007/01/01 - 2008/12/31			
		20-07	Binggou	o	2007/09/25 - 2008/07/12			
		20-08	Yingke	o	2007/01/01 - 2008/12/31			
21	Western Indonesia	21-01	Kototabang	o	2007/01/01 - 2007/12/31	o		
		21-02	Minangkabau Inter	o	2007/01/01 - 2007/12/31	o		
22	Central Indonesia	22-01	Pontianak	o				
23	Eastern Indonesia	23-01	Biak	o				
24	Northern Indonesia	24-01	Manado	o				
25	Southern Indonesia	25-01	Serpong	o				

Summary

- Introduction of Data Upload, Quality Control, and MetaData Registration System – 3 System for CEOP Phase2 are running
- All systems are supporting observers to regist data and information with easy/user-friendly interface..
- Users can check upload/QC status on WEB easily, Administrator can also check all status
- Thank you for your collaboration.