

Whole New WDCGG

Part 2

Redesign WDCGG website & products

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Redesign WDCGG



Public

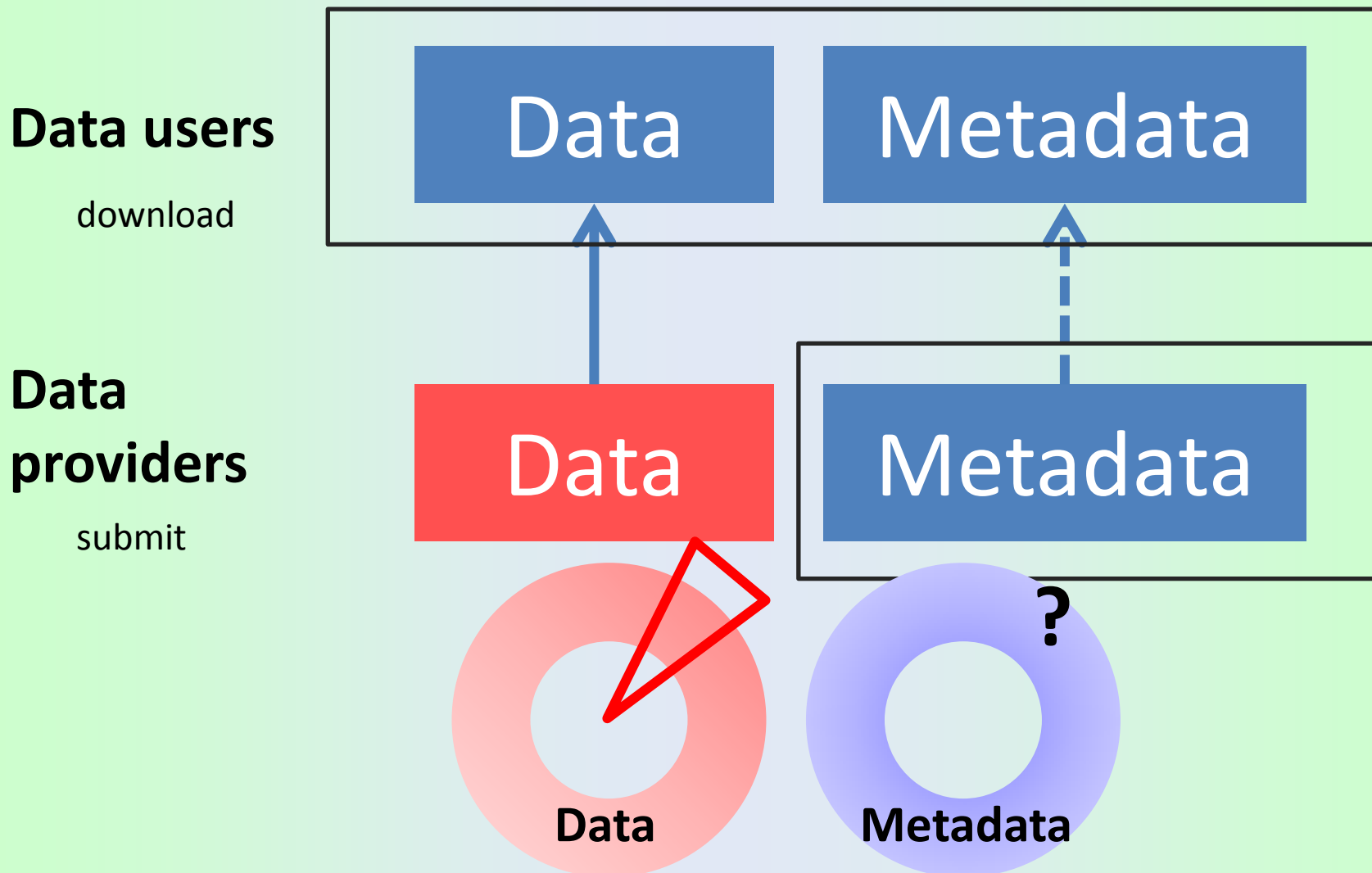


function design

Local

foundation

Current Website



Future Website

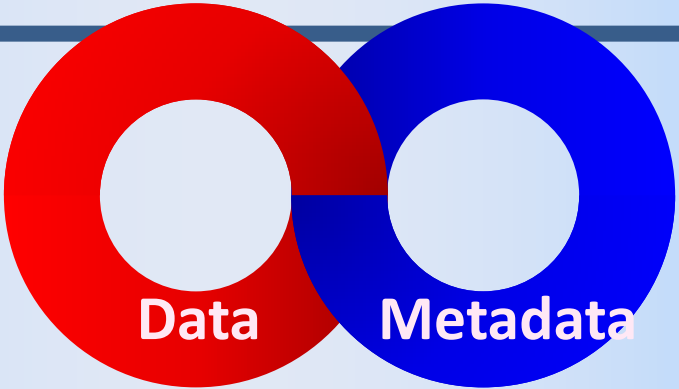
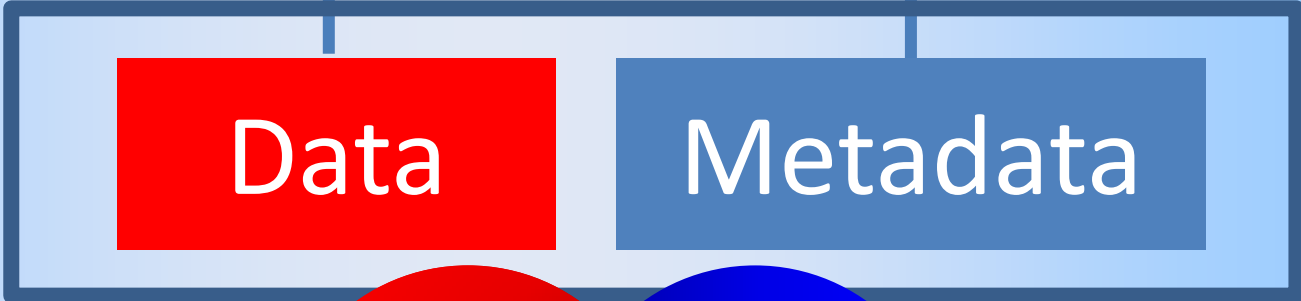
Data users

download

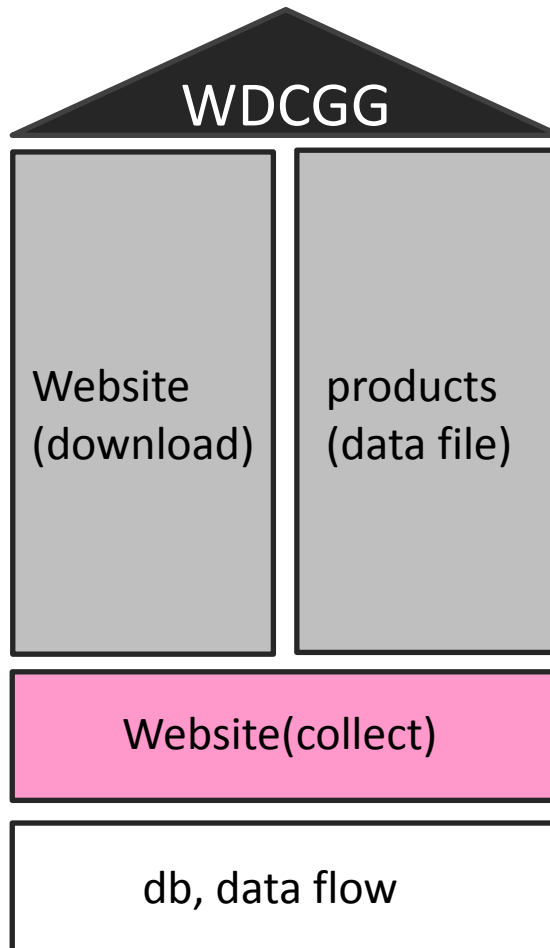


Data providers

submit



Redesign WDCGG



1. Website for data providers
(collect metadata and data)
2. Products
(data file)
3. Website
(download data)

Metadata Edit Form

Current

1. Parameter(s)

Parameter	default data	Parameter (Station)	Data/Quick Plot	Contact Person(s)
CCI4 (continuous)	1	CCI4 (Ryori)	click here	Yukio Fukuyama
CFCs (continuous)	2	CFCs (Ryori)	click here	Yukio Fukuyama
CH3CCI3 (continuous)		CH3CCI3 (Ryori)	click here	Yukio Fukuyama
CH4 (continuous)		CH4 (Minamitorishima) CH4 (Ryori) CH4 (Yonagunijima)		
CH4 (flask)		CH4 (Aircraft Observation of Atmospheric trace gases by JMA)		
CO (continuous)		CO (Minamitorishima) CO (Ryori) CO (Yonagunijima)		
CO (flask)		CO (Aircraft Observation of Atmospheric trace gases by JMA)		
CO2 (continuous)		CO2 (Minamitorishima) CO2 (Ryori) CO2 (Yonagunijima)		
CO2 (flask)		CO2 (Aircraft Observation of Atmospheric trace gases by JMA)		
N2O (continuous)		N2O (Ryori)		
N2O (flask)		N2O (Aircraft Observation of Atmospheric trace gases by JMA)		
O3 (continuous)		O3 (Minamitorishima) O3 (Ryori) O3 (Yonagunijima)		

Measurement Information Edit Form

The measurement information is submitted for each parameter. Please save the family (including the "New" button) for use at the bottom of the form after you complete each parameter. Please refer to the Appendix 1 under the MET-CG Data Submission and Distribution Guide. If you have any questions, please ask the person in charge of the MET-CG.

Parameter (Station)
 CO2 (Minamitorishima)

Contact Person(s) for measurement
 Contact Person:
 E-mail:
 Address:

Supporting Contribution (optional)

Responsible Investigator (optional)

Category
 Select a suitable category from the following items.
 Air sampling observation (including mobile platform)
 Air sampling observation for a fixed platform
 Air concentration observation
 Surface observation and air sampling observation
 Hydrographic sampling observation

Station
 Select a suitable regional measurement station.
 Ryori
 Minamitorishima
 Yonagunijima

Time zone
 Select a suitable time zone used for displaying the measurement data in the data's browser or "Other" for UTC observation (observation site - UTC).
 UTC
 UTC offset:
 Other:

Sampling height (depth)
 The sampling height (depth) can be entered as a multiple of the ground level. Input a suitable value for height and depth in the input field. Input a suitable value for depth and ground level observation site.
 m

Sampling type
 Select a suitable sampling type from the following items.
 Continuous (including ground-based sampling)
 Flask
 Canister
 Ice core
 Snow (for hydrographic data)

Sampling and analysis frequency
 An interval (period) of the sampling frequency should be described here.

Sampling environment
 An interval (period) of the observation frequency should be described on the measurement site measurement site description here.

Other description for sampling and analysis
 Detailed description concerning sampling and analysis should be described here. For example, observation site sampling height, observation site, sampling instrument, sampling time, etc. The site used for surface observation for air measurement, mobile platform and ground-based air sampling, observation site and conditions for flask sampling, etc. should be described here.

Measurement Method
 Select a suitable method from the following items.
 Gas Chromatography (GC)
 Gas Chromatography (FGC)
 Gas Chromatography (VGC)
 Gas Chromatography (SBC)
 Gas Chromatography (other)
 Light absorption method (LAP)
 Light absorption method (AL)
 LIDAR observation method (LIDAR)
 LIDAR observation method (DL, multi-pulse)
 GC/MS
 LIDAR observation method (DL, multi-pulse)
 Fluorescence
 Absorbance
 Mass Spectrometry
 Filter
 Gravimetry
 Other

Current value availability of parameters used
 The current value, period, unit and description of the parameter should be described here.

Description of parameter
 The parameter description, including measurement range, units, etc. should be described here.

Current scale unit and other measurement
 The conversion of the current scale unit to the measurement unit should be described here.

Measurement calibration
 The calibration for displaying the measurement data should be described here. Please describe the calibration method and the measurement unit. The measurement unit, conversion factor, standard deviation, and other information should be described here.

Scale and Calibration (optional)
 Detailed description of information on scale, sampling and calibration should be described here. For example, the measurement unit, conversion factor, standard deviation, and other information should be described here. The measurement unit, conversion factor, standard deviation, and other information should be described here.

Measurement Unit
 The measurement unit should be described here.
 Unit
 Unit
 Unit

Data processing
 Details of how to process and exchange output from the observation site should be described here. Please describe the data processing method and the data processing unit should be described here.

Processing for averaging
 Description of how to process, daily, monthly, decadal data exchange on a quarterly basis should be described here.

Processing for hourly data
 The measurement data should be described here.

Processing for daily data
 The measurement data should be described here.

Processing for monthly data
 The measurement data should be described here.

Data Quality Flag
 Because the MET-CG data have a common calibration on data logging, the measurement data should be described here. Please describe the data quality flag and the data quality flag should be described here.

Data Review
 Data reviewers who submit data with observations should provide the list of the data review.

Scientific Aim
 The aim of measurement should be described here.

Reference
 Any reference of the measurement method, the processing, data processing and calibration, or the format number used in data logging should be described here.

26

20

Click

Metadata Edit Form

Current

1. Parameter(s)

Parameter	default data	Parameter (Station)	Data/Quick Plot	Contact Person(s)
CCI4 (continuous)	1	CCI4 (Ryori)	click here	Yukio Fukuyama
CFCs (continuous)		CFCs (Ryori)	click here	Yukio Fukuyama
CH3CCI3 (continuous)		CH3CCI3 (Ryori)	click here	Yukio Fukuyama
CH4 (continuous)		CH4 (Minamitorishima) CH4 (Ryori) CH4 (Yonagunijima)		
CH4 (flask)		CH4 (Aircraft Observation of Atmospheric trace gases by JMA)		
CO (continuous)		CO (Minamitorishima) CO (Ryori) CO (Yonagunijima)		
CO (flask)		CO (Aircraft Observation of Atmospheric trace gases by JMA)		
CO2 (continuous)		CO2 (Minamitorishima) CO2 (Ryori) CO2 (Yonagunijima)		
CO2 (flask)		CO2 (Aircraft Observation of Atmospheric trace gases by JMA)		
N2O (continuous)		N2O (Ryori)		
N2O (flask)		N2O (Aircraft Observation of Atmospheric trace gases by JMA)		
O3 (continuous)		O3 (Minamitorishima) O3 (Ryori) O3 (Yonagunijima)		

Measurement Information Edit Form

The measurement information is submitted for each parameter. Please save the family using the "Save" button at the bottom of the form after you complete each parameter. Please refer the appendix in the METADATA Submission and Distribution Manual for the details of the form and the METADATA.

Parameter (Station)
 CO2 (Minamitorishima)

Contact Person for measurement
 Yukio Fukuyama

Supporting Contributor(s) (optional)
 free

Responsible Investigator(s) (optional)
 free

Category
 Select a suitable category from the following items.
 Sampling observation using mobile platform
 Sampling observation for a fixed point
 Airborne observation
 Surface observation and sampling observation
 Satellite sampling observation
 Other

Station
 Select a suitable station from the following items.
 Ryori
 Minamitorishima
 Yonagunijima
 Other

Time zone
 Select a suitable time zone used in the METADATA from the following items.
 UTC
 JST
 Other

Sampling height (depth)
 The sampling height (depth) of the observation is recorded in the METADATA. Please select a suitable height (depth) from the following items.
 Surface
 Other

Sampling type
 Select a suitable sampling type from the following items.
 Continuous (including ground-based sampling)
 Flask
 Other

Measurement Method
 Select a suitable method from the following items.
 Gas Chromatography (GC)
 Gas Chromatography-Mass Spectrometry (GC-MS)
 Gas Chromatography-Infrared Spectrometry (GC-IR)
 Gas Chromatography-Other
 Other

Measurement Unit
 free

Data processing
 Describe the data processing method for the observation. The observation should be processed as follows.
 free

Processing for averaging
 Describe the processing method for the observation. The observation should be processed as follows.
 free

Scale and Calibration (optional)
 Describe the scale and calibration method for the observation. The observation should be processed as follows.
 free

Measurement Unit
 free

Data processing
 free

Processing for averaging
 free

Click

20

26

Metadata Edit Form

select station ?

contact_person_catalogue_index ?

time_stamp ?

unit ?

scale_short ?

measurement_method ?

sampling_height ?

responsible_investigator ?

supporting_contributor ?

status_of_observation ?

processing ?

processing_hourly ?

processing_daily ?

processing_monthly ?

flag ?

aim_of_observation ?

reference ?

station / parameter

First of all, please select the site(s) you want to change its metadata.

Aircraft Observation of Atmospheric trace gases by JMA
(AOA999900-JMA)

- CH4(flask,CRD,NOAA2004 scale)
- CO(flask,VURF,WMO CO scale)
- CO2(flask,NDIR,WMO X2007 scale)
- N2O(flask,CRD,NOAA2006A scale)

Minamitorishima
(MNM224N00-JMA)

- CH4(continuous,Gas Chromatography (FID),NOAA2004 scale)
- CO(continuous,Gas Chromatography (RGD),WMO CO scale)
- CO2(continuous,NDIR,WMO X2007 scale)
- O3(continuous,Light absorption analysis (UV),NIST SRP)

Ryori
(RYO239N00-JMA)

- CCl4(continuous,Gas Chromatography (ECD),The gravimetric standard gas of ppt order concentration)

Yonagunijima
(YON224N00-JMA)

- CCl4
- CFCs
- CH3CCl3
- CH4
- CH4
- CO
- CO2
- O3

Future
SAMPLE

##This is subject to a major change.##

Click

Yonagunijima
(YON224N00-JMA)

Parameter **Minamitorishima**
(MNM224N00-JMA)

Parameter **Yonagunijima**
(YON224N00-JMA)

Parameter	Additional info	Current	Updated
<input type="checkbox"/> CH4	continuous Gas Chromatography (FID) NOAA2004 scale <input type="button" value="header"/>	Gas Chromatography (FID)	Gas Chromatography (FID)
<input type="checkbox"/> CO	continuous Gas Chromatography (RGD) WMO CO scale <input type="button" value="header"/>	Gas Chromatography (RGD)	Gas Chromatography (RGD)
<input type="checkbox"/> CO2	continuous NDIR WMO X2007 scale <input type="button" value="header"/>	NDIR	NDIR
<input type="checkbox"/> O3	continuous Light absorption analysis (UV) NIST SRP <input type="button" value="header"/>	Light absorption analysis (UV)	Light absorption analysis (UV)

Metadata Edit Form

time_stamp

Future

SAMPLE

Select a suitable time zone used in a timestamp of the measurement data.

In the case of "Local time", the UTC offset should be selected.

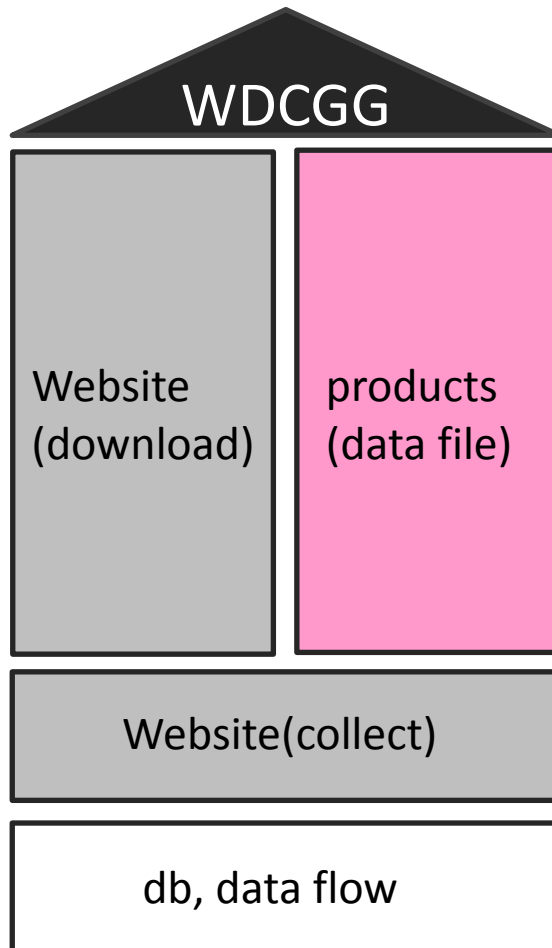
UTC + 0

##This is subject to a major change.##

CO2

Station	Additional info	Current	Updated
<input type="checkbox"/> Aircraft Observation of Atmospheric trace gases by JMA (Mobile, Aircraft)	flask NDIR WMO X2007 scale <input type="button" value="header"/>	Local time +9	UTC 0
<input type="checkbox"/> Minamitorishima (Stationary, Ground base)	continuous NDIR WMO X2007 scale <input type="button" value="header"/>	Local time +9	UTC 0
<input type="checkbox"/> Ryori (Stationary, Ground base)	continuous NDIR WMO X2007 scale <input type="button" value="header"/>	Local time +9	Local time +9
<input type="checkbox"/> Yonagunijima (Stationary, Ground base)	continuous NDIR WMO X2007 scale <input type="button" value="header"/>	Local time +9	Local time +9

Redesign WDCGG



1. Website for data providers
(collect metadata and data)
2. Products
(data file)
3. Website
(download data)

Products

Current

```
C01 TITLE: CO2 hourly mean data
C02 FILE NAME: ryo239n00.jma.as.cn.co2.nl.hr2013.dat
C03 DATA FORMAT: Version 1.0
C04 TOTAL LINES: 5120
C05 HEADER LINES: 32
C06 DATA VERSION: 201307
C07 STATION NAME: Ryori
C08 STATION CATEGORY: Regional
C09 OBSERVATION CATEGORY: Air sampling observation at a stationary platform
C10 COUNTRY/TERRITORY: Japan
C11 CONTRIBUTOR: JMA
C12 LATITUDE: 39.03
C13 LONGITUDE: 141.82
C14 ALTITUDE: 260
C15 NUMBER OF SAMPLING HEIGHTS: 1
C16 SAMPLING HEIGHTS: 20
C17 CONTACT POINT: y-fukuyama@met.kishou.go.jp
C18 PARAMETER: CO2
C19 COVERING PERIOD: 2013-01-01 2013-07-31
C20 TIME INTERVAL: hourly
C21 MEASUREMENT UNIT: ppm
C22 MEASUREMENT METHOD: NDIR
C23 SAMPLING TYPE: continuous
C24 TIME_ZONE: Local time UTC+9
C25 MEASUREMENT SCALE: WMO X2007 scale
...
C30 COMMENT:
C31
C32 DATE TIME DATE TIME CO2 ND SD F CS REM
2013-01-01 01:00 9999-99-99 99:99 401.78 105 0.119 -7 0 -99999999
2013-01-01 02:00 9999-99-99 99:99 401.20 101 0.195 -7 0 -99999999
```

Text

Future

```
#
# STATION INFORMATION
#
# STATION_NAME: Ryori
# WDCGG_ID : RYO239N00-JMA ##This is subject to a major change.##
# (WMO)_STATION_CATEGORY: Stationary
# COUNTRY/TERRITORY: Japan
# LATITUDE: 39.03
# LONGITUDE: 141.82
# ALTITUDE: 260
# PLATFORM: Ground base
#
# CONTACT PERSONS
#
# CONTACT_NAME_1: Yukio Fukuyama
# CONTACT_POINT(EMAIL)_1: y-fukuyama@met.kishou.go.jp
...
#
# PARAMETER INFORMATION
#
# PARAMETER: CO2
# OBSERVATION_CATEGORY: Air sampling observation
# SAMPLING TYPE: continuous
# MEASUREMENT_METHOD: NDIR
# MEASUREMENT_UNIT: ppm
# TIME_ZONE: Local time UTC+9
# MEASUREMENT_SCALE: WMO X2007 scale
#
# DATA
#
## year month day hour minute second value value_sd nvalue latitude longitude
altitude intake_height flask_no cs obs_flag
```

SAMPLE

Text / **NetCDF**

Products

Current

```
C01 TITLE:  
C02 FILE NAME:  
C03 DATA FORMAT:  
C04 TOTAL LINES:  
C05 HEADER LINES: 32  
C06 DATA VERSION:  
...  
C21 MEASUREMENT UNIT:  
C22 MEASUREMENT METHOD:  
C23 SAMPLING TYPE:  
C24 TIME ZONE:  
C25 MEASUREMENT SCALE:  
...  
C31  
C32 DATE TIME DATE TIME CO2 ND SD F CS REM
```

Text

Future

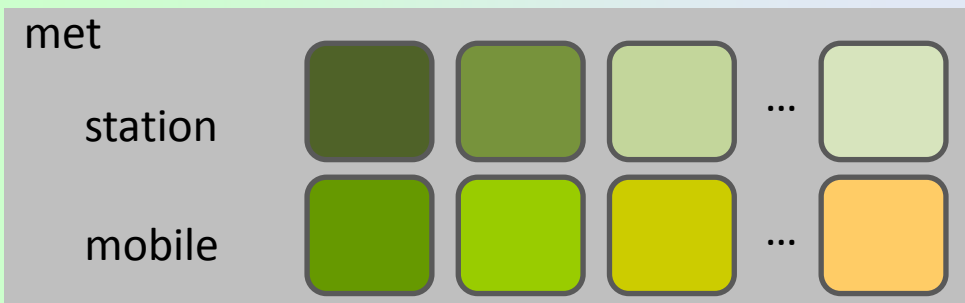
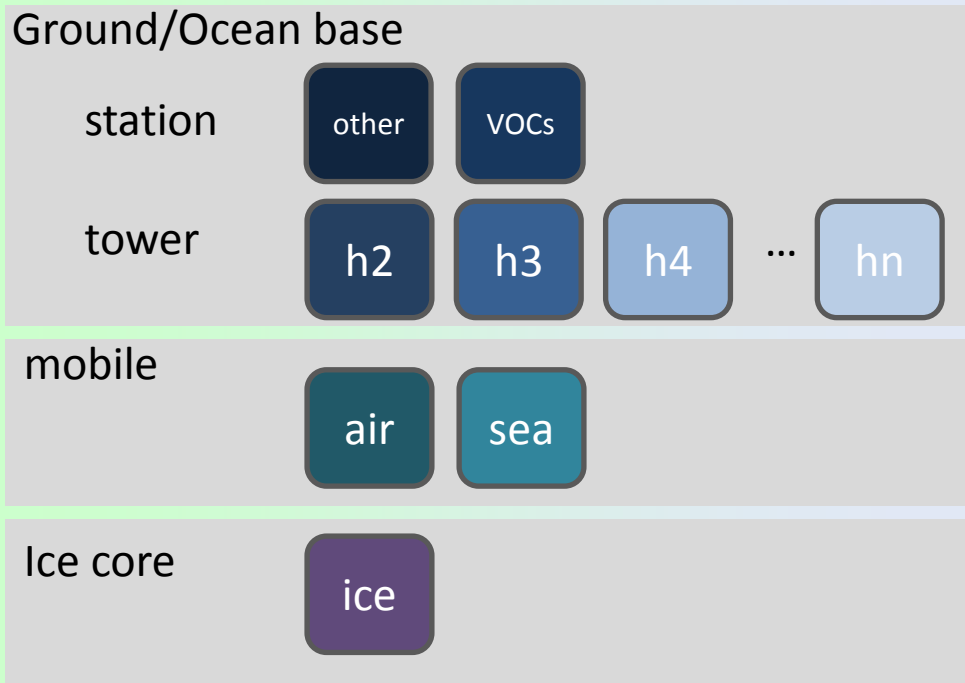
```
#  
# STATION INFORMATION SAMPLE  
#  
# ##This is subject to a major change.##  
# MEASUREMENT INFORMATION  
#  
# CONTACT PERSONINFORMATION  
#  
#  
# DATA  
#  
## year month day hour minute second value  
value_sd nvalue latitude longitude altitude  
intake_height flask_no cs obs_flag
```

```
#  
# new metadata  
#
```

Text / **NetCDF**

Products

Current



Text

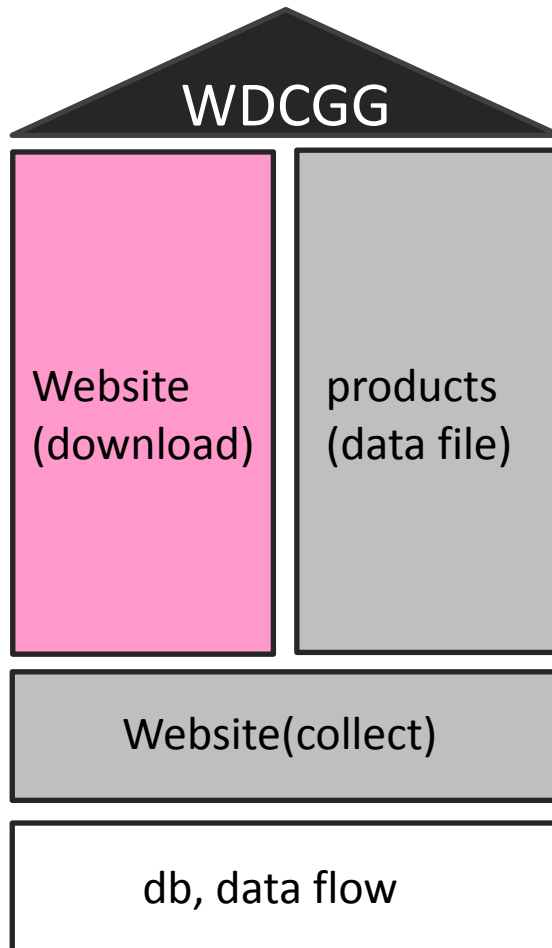
Future



?

Text / **NetCDF**

Redesign WDCGG



1. Website for data providers
(collect metadata and data)
2. Products
(data file)
3. Website
(download data)

User Registration

Current

Future

N/A

NO
MISCHIEVOUS
USER
REGISTRATION

WDCGG Registration Form

Name **Name**

Organization **Organization**

Country **Country**

E-mail address **E-mail**

Purpose of the use of the data

Verification of Data
(Such as Computer Simulation and Satellite Measurement)

Data Analysis

Educational Materials

Other


Purpose

SAMPLE

##This is subject to a major change.##

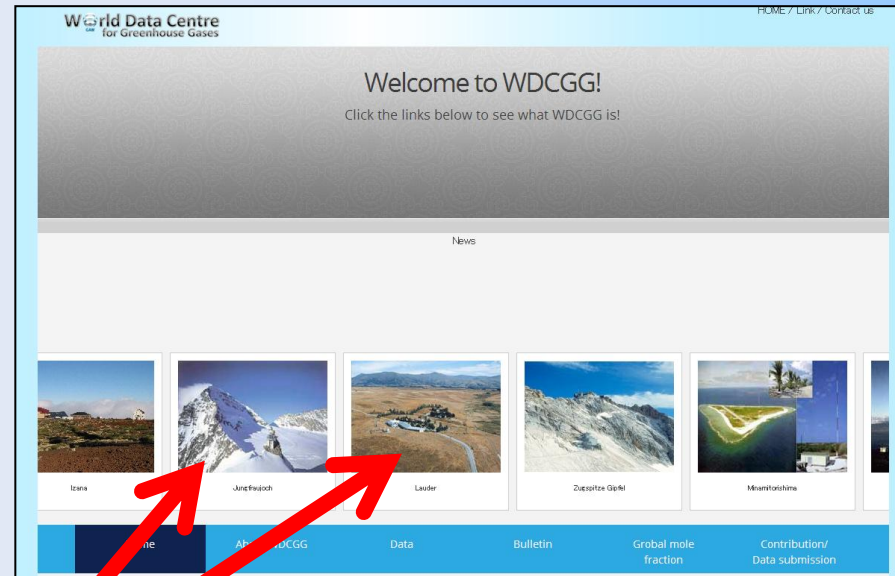
Front page

Current



The screenshot shows the current website layout. At the top left is the GAW WDCGG logo. Below it is a vertical navigation menu with links: Introduction, Contributors, Data/Quick Plot, Publications, Related Links, Update Note, and Home. A 'Site Map' link and a '日本語版' (Japanese version) link are also present. The main content area features the title 'World Data Centre for Greenhouse Gases' and a 'Welcome to the WDCGG Web Site' heading. The text describes the center's role in gathering and providing data on greenhouse gases. A note mentions that global mean mole fraction data are now available as of July 17, 2013. At the bottom, there is a world map with colored dots indicating data collection sites.

Future



The screenshot shows the proposed future website layout. It features a clean, modern design with a 'Welcome to WDCGG!' heading and a prompt to click links below. A 'News' section is visible. Below the news section are five image-based cards for different locations: Izaña, Jungfraujoch, Lauder, Zweisimmen/Gipfel, and Muntlachhöhe. At the bottom, a navigation bar includes links for Home, About WDCGG, Data, Bulletin, Global mole fraction, and Contribution/Data submission. Two large red arrows point from the 'Future' section towards the 'SAMPLE' text below.

SAMPLE

Thanks,
GAWSIS!

##This is subject to a major change.##

Data Search

Current

WMO Global Atmosphere Watch
World Data Centre
for Greenhouse Gases

Category: Parameter: Country/Territory: Contributor:

Updated in the last 365 days

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Station Name	Country/Territory	Contributor	Parameter
Adnigole	Ireland	AGAGE	CCl ₄ , CFCs, CH ₃ CCl ₃ , N ₂ O ⁺⁺
Aircraft (over Bass Strait and Cape Grim)	Australia	CSIRO	¹³ C ₂ O ₂ , CH ₄ , CO, CO ₂ , H ₂ , N ₂ O ⁻
Aircraft Observation of Atmospheric trace gases by JMA	Japan	JMA	CH ₄ , CO, CO ₂ , N ₂ O
Aircraft-Orleans	France	LSCE	CH ₄ ⁺ , CO ₂ ⁻
Akademik Korolev R/V	United States of America	NOAA/ESRL	CH ₄
Alert	Canada	CSIRO	¹³ C ₂ O ₂ , CH ₄ ⁺ , CO, CO ₂ ⁺ , H ₂ , N ₂ O ⁺⁺
Alert	Canada	EC	¹³ C ₂ O ₂ , C ¹⁸ O ₂ , CH ₄ ⁺⁺ , CO, CO ₂ ⁻ , N ₂ O, SF ₆ , MET
Alert	Canada	NOAA/ESRL	¹³ CH ₄ , ¹³ C ₂ O ₂ , C ¹⁸ O ₂ , C ₂ Cl ₄ , CBrClF ₂ , CBrF ₃ , CCl ₄ , CFCs, CH ₂ Cl ₂ , CH ₃ Br, CH ₃ CCl ₃ , CH ₃ Cl, CH ₄ ⁺⁺ , CO, CO ₂ ⁺⁺ , H ₂ , HCFCs, HFCs, N ₂ O ⁺⁺ , SF ₆ , VOCs, MET
Algoma	Canada	AQRB	O ₃
Alligator liberty, M/V	Japan	Eco-Mo,JMA	CO ₂ , MET
Amsterdam Island	France	LSCE	CH ₄ ⁺⁺ , CO, CO ₂ ⁺⁺ , O ₃ , VOCs, MET
Amsterdam Island	France	NOAA/ESRL	CH ₄ ⁺⁺ , CO ₂ ⁻ , MET
Angra do Heroismo	Portugal	IM	O ₃
Anmyeon-do	Republic of Korea	KMA	CFCs, CH ₄ , CO ₂ , N ₂ O, SF ₆ , MET
Arembepe	Brazil	IPEN	CH ₄ , CO, CO ₂ , N ₂ O

Future

World Data Centre for Greenhouse Gases

MNM224N00-JMA,continuous

Search

o GAWID:

o Site Category:

o WMO Region:

o Country:

o Parameter:

o Sampling type:

o Status:

o Contributor:

data: event, hourly, daily, monthly, Sampling type: continuous

1960 1970 1980 1990 2000 2010 2020 (ppm)

320 330 340 350 360 370 380 390 400

Details: My favorite:

check	favorite	site (GAW ID,country)	contributor	event	hourly	daily	monthly	Sampling type
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Minamitorishima (MNM, Japan)	JMA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	continuous
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ryori (RYO, Japan)	JMA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	continuous
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Yonagunjima (YON, Japan)	JMA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	continuous

SAMPLE

##This is subject to a major change.##

Data & Metadata

Current

Minamitorishima (MNM224N00-JMA)

Parameter (Data Quick Plot)	Category	Period	Types of Data	Update	Parameters included	Number of Data Downloaded
CH ₄ ^{***} continuous (200612120162)	Air sampling observation	1994-01-01 - 2013-03-31	hourly, daily, monthly	2013-11-07		307

Minamitorishima (MNM224N00-JMA)

Parameter Inventory | Parameter Metadata | Station | Contributor

CH₄^{***} continuous (200612120162) | CO₂^{***} continuous (200612120649) | CO₂^{***} continuous (200612120017) | O₃^{***} continuous (200612120574) | MET^{***} (200905270086)

Observation | Processing/Calibration | Contact Person | Reference | Data/Quick Plot

Category: Air sampling observation

Sampling Type: continuous

CO₂
JMA - Minamitorishima
MNM224N00-JMA

Note: On any publication using data from the individual station, the author must contact the data submitters concerning co-authorship or acknowledgments, and make proper descriptions on the data sources in their references.

Type	File Total	Total Size	File Inventory/ Quick Plot	Archive
hourly	21	14.2M	File/Quick Plot	tar+gzip tar+bzip2
daily	1	590.1K	File/Quick Plot	
monthly	1	20.7K	File/Quick Plot	

HOURLY Data Total : 21 (14.2M) ([Top](#))

Parameter	Type	Station	Period	Update	Data	Quick Plot
CO ₂ (continuous) 200702142463	hourly	Minamitorishima	1993-01-01 - 1993-11-31	2013-07-23	xls xlsx	png (>7K) pdf (>250K)

Don't lost!

Future

MNM Minamitorishima Japan Meteorological Agency

Latitude: 24.28N Longitude: 153.66E Altitude: 9 (m) [Read more >>](#)

Parameter(s): CO₂ continuous

Metadata

Time zone	Local time +9
Unit	ppm
Scale	WMO X2007 scale
Measurement method	NDIR
Scale	WMO X2007 scale
Measurement method	NDIR

Read more >>

Contact person(s)

Name: Yukio Fukuyama
e-mail: yfukuyama@met.kishou.go.jp

Read more >>

JMA station(s)

Fix Station(s)

- Minamitorishima (CO₂ continuous)
 - [Read \(CO₂ continuous\)](#)
 - [Yamanaka \(CO₂ continuous\)](#)
 - [Read \(CO₂ continuous\)](#)
 - [Yamanaka \(CO₂ continuous\)](#)

Mobile

- Aircraft Observation of Atmospheric trace gases by JMA (CO₂ flux)

Data

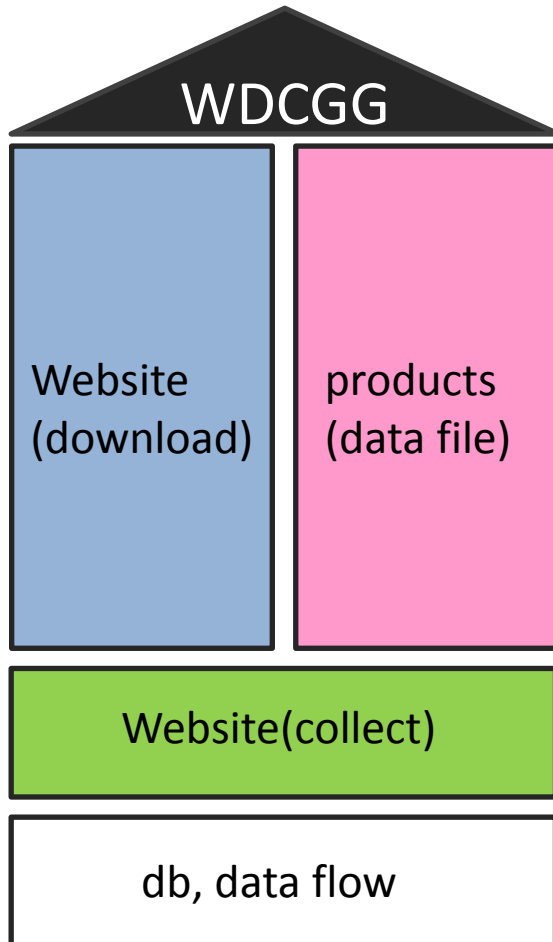
Monthly Data
1993-01-01 - 2013-08-01

Daily data
1993-01-01 - 2013-08-01

SAMPLE

##This is subject to a major change.##

Redesign WDCGG

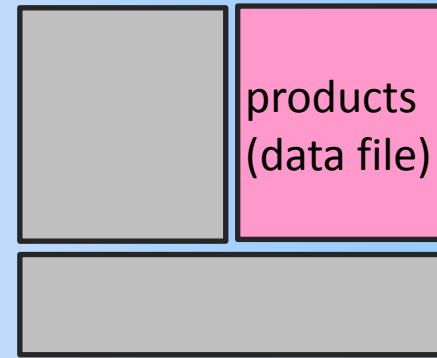


New data submission via WEB

Reliable data and metadata

User Registration

Future plan 1

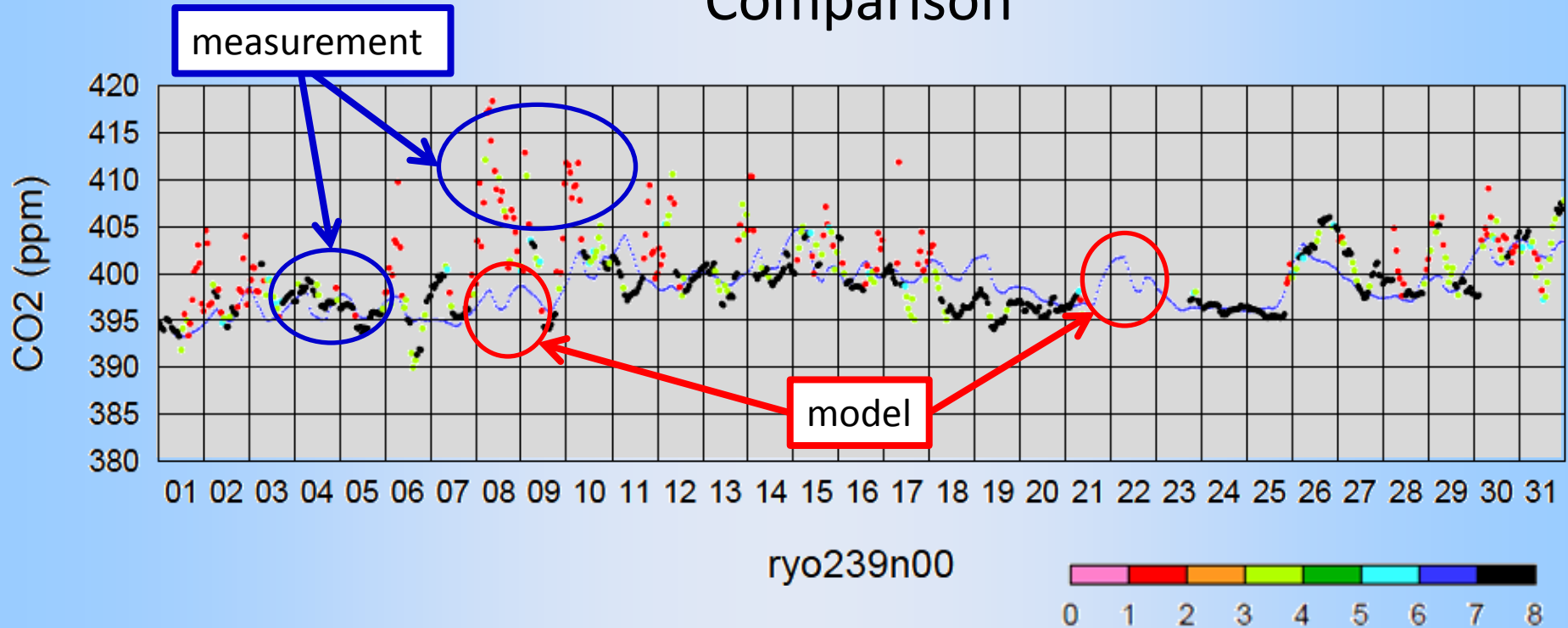


Dr. Kenneth (Ken) Masarie will visit WDCGG in February.

Future plan 2

Website
(download)

Comparison



JMA new model results should be incorporated
in a new function of WDCGG.