



World Meteorological Organization

Weather • Climate • Water

Progress and future directions of the WMO Information System

Peiliang SHI

WMO

18/11/2013, Reading



Topics

- Introduction to WIS
- Status of WIS
- Exploiting WIS
- Future directions



Introduction to WIS

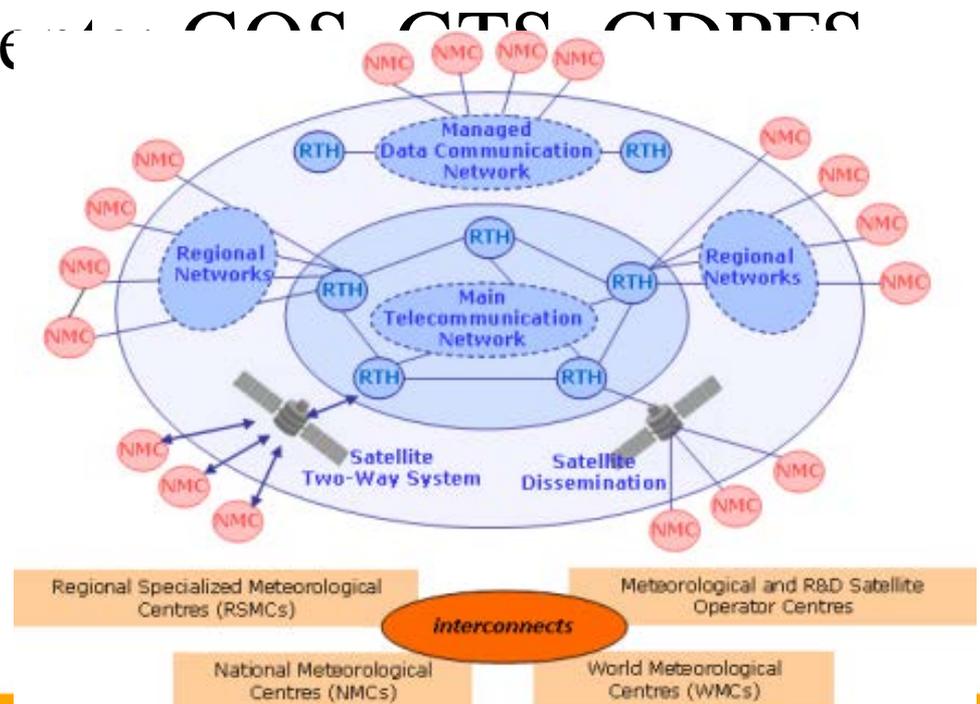


World Weather Watch

- Launched in 1963, to support global collaboration in operational weather forecasting and weather research

- Three core components

GTS - the Global Telecommunication System: collects, exchanges, and distributes observational data and forecasting products





Limitations of GTS

- **GTS is Reliable But...**
 - Difficult to know what is there
 - Need special connections
 - Hard to set up routine delivery
 - “WWW club”



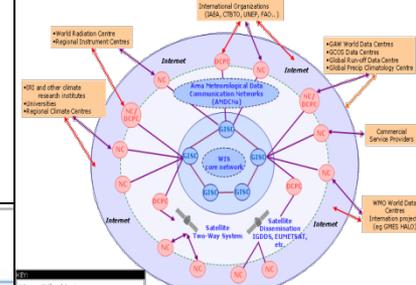
WMO Information System (WIS) aims to...

- Add to GTS
- Make it easier to
 - *find* data
 - *fetch* data
 - *publish* data
- Serve *whole* WMO community
- Allow migration to new technologies



WIS

International Organizations
(IAEA, CTBTO, UNEP, FAO..)



National Centre:

- contributes information to WIS
- distributes WIS information to national users



Data Collection or Production Centre:

- Collects, prepares or analyses information, *or*
- Manages sub-regional exchange of information

Commercial Service Providers



Global Information System Centre:

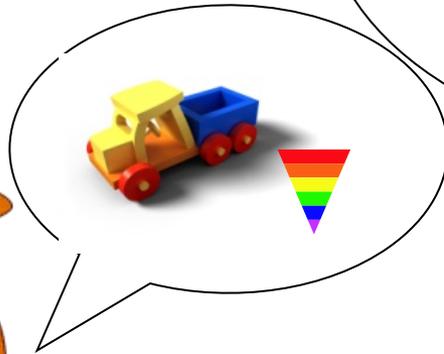
- Holds catalogue of all information available through WIS
- Manages global exchange of information





Adding data to WIS

WMO Pizza Programme



DCPC





Discovery, Access, Retrieval GISC



GISC

User

- Searches catalogue at GISC
- Asks GISC/DCPC for product

2



DCPC

1

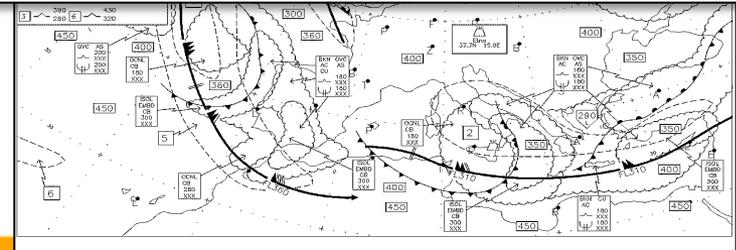
DCPC

Passes WIS metadata to GISC

DCPC

Passes product to user

3





Status of WIS implementation

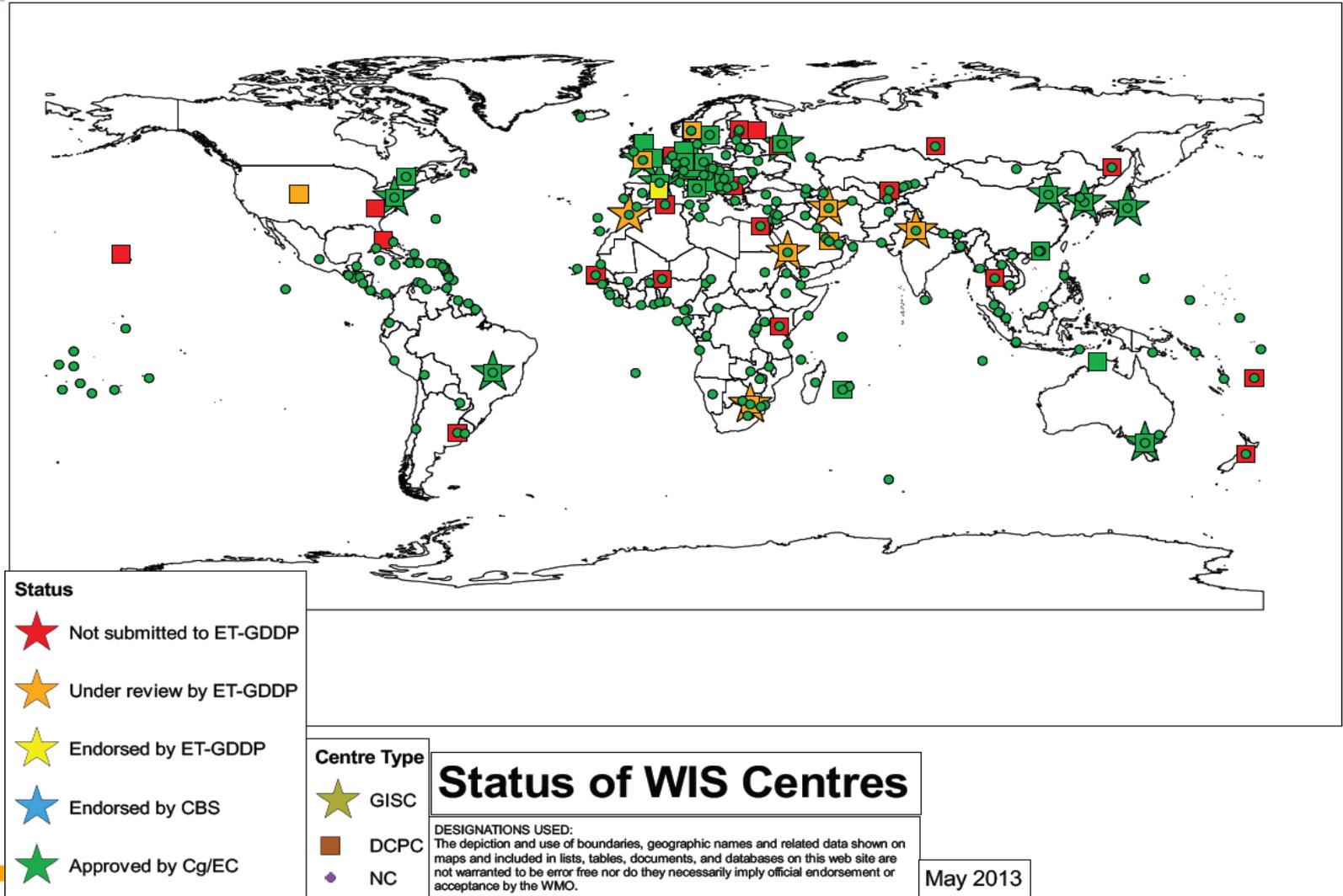
WIS became operational in Jan. 2012

There are now

- 15 GISCs
- 130 DCPCs
- 230 NCs
- 150,000 metadata records in the global catalog, and increasing...



WIS Centres – May 2013





Some well known DCPCs

- ECMWF
- EUMETSAT
- NCAR
- NESDIS-NCDC/NODC/NGDC
- GRDC
- WDCs for GHG, Ice
- ...



Exploiting WIS



Find the information

Visit a GISC Listed on
<http://www.wmo.int/giscs>

Search box
e.g.
Tsunami Pacific

English

Home | Register | About | Help

Login | Choose Domain

Normal Search | Advanced Search

WHAT?
Tsunami Pacific

WHERE?

Options

Reset Search

FIND INTERACTIVE MAPS, GIS DATASETS, SATELLITE IMAGERY AND RELATED APPLICATIONS

The WIS

The World Meteorological Organization (WMO) has been working for several years towards upgrading its global infrastructure to support all of its international programmes of work, both operational and research-based, to collect, share and disseminate information. The new infrastructure is called the WIS, the WMO Information System, and identifies three top level functions. These are:

- GISC: Global Information System Centre
- DCPC: Data Collection and Production Centre
- NC: National Centre

Meteo-France GISC-DCPC-NC portals

Meteo-France portals, based on the **OpenWIS software** and coupled with the existing systems, perform the three functions required by the WMO Information System.

All three functions contribute to the circulation of priority data, system wide security, monitoring and implementation of WMO data policies. GISCs and DCPCs allow the Discovery Access and Retrieval of data, products and services offered by WIS Centres, but GISCs offer a global view of this information and provide distributed and resilient access to critical data and product.

Can search
by area



Select which record is of interest

GISC
Global Information System Centre, DWD

Deutscher Wetterdienst
Wetter und Klima aus einer Hand

Deutscher Wetterdienst (DWD) logo

Navigation icons: Home, Help, UK, Germany, RSS

Login

Data / Products

- Search
- Search for experts
- SRU Search
- Product packages

Registration

Miscellaneous

Product ID	Title	Product	Metadata	XML	Example
urn:x-wmo:md:int.wmo.wis::SZPA01AMMC	SZPA01 CREX bulletin available from AMMC	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	-
urn:x-wmo:md:int.wmo.wis::SZPS01AMMC	SZPS01 CREX bulletin available from AMMC	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	-
urn:x-wmo:md:int.wmo.wis::WEPA40PHEB	WEPA40 bulletin available from PHEB (HONOLULU/EWA BEACH, HI (PACIFIC TSUNAMI WARNING CENTER))	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	-
urn:x-wmo:md:int.wmo.wis::WEPA40RUHB	WEPA40 bulletin available from RUHB (KHABAROVSK)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	-
urn:x-wmo:md:int.wmo.wis::WEPA40RUPK	WEPA40 bulletin available from RUPK (PETROPAVLOVSK-KAMCHATSKI)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	-
urn:x-wmo:md:int.wmo.wis::WEPA40RUSH	WEPA40 bulletin available from RUSH (YUZHNO-SAKHALINSK)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	-
urn:x-wmo:md:int.wmo.wis::WEPA40RUVV	WEPA40 bulletin available from RUVV (VLADIVOSTOK)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	-
urn:x-wmo:md:int.wmo.wis::WEPA41PAAQ	WEPA41 bulletin available from PAAQ (PALMER)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	-
urn:x-wmo:md:int.wmo.wis::WEPA42PHEB	WEPA42 bulletin available from PHEB (HONOLULU/EWA BEACH, HI (PACIFIC TSUNAMI WARNING CENTER))	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	-

© DWD 2012 Release 1.0.25
Imprint | Data Protection | Disclaimer | You need help?

Logos: ibl, DWD, and a stylized 'k' logo.

Look at metadata



Check that it is what you need

WIS Portal - GISC Tokyo

Welcome to Tokyo Global Information System Centre!

[Home](#) [About WIS](#) [Warning](#) [KML](#) [WMO format](#) [Metadata](#) [Help Desk](#) [News](#)

Metadata urn:x-wmo:md:int.wmo.wis::WEPA40PHEB

WEPA40 bulletin available from PHEB (HONOLULU/EWA BEACH, HI (PACIFIC TSUNAMI WARNING CENTER))

[GISC-Cache:WEPA40PHEB](#)

metadata detail

file identifier: urn:x-wmo:md:int.wmo.wis::WEPA40PHEB

language: eng (eng)

character set: utf8 (utf8)

hierarchy level: series (series)

hierarchy level name: Series of WMO GTS bulletins

[+ contact](#)

language: eng (eng)

character set: utf8 (utf8)

hierarchy level: series (series)

hierarchy level name: Series of WMO GTS bulletins

[+ contact](#)

date stamp: 2012-01-20T16:00:00

metadata standard name: WMO Core Profile of ISO 19115

metadata standard version: 1.2 (WMO Core), 2003/Cor.1:2006 (ISO 19115), 2007 (ISO/TS 19139)

metadata extension info: nil (Reason:missing)

[- identification info](#)

[- citation](#)

title: WEPA40 bulletin available from PHEB (HONOLULU/EWA BEACH, HI (PACIFIC TSUNAMI WARNING CENTER))

[- date](#)

date: 1998-09-02

date type: publication (publication)

presentation form: documentDigital (documentDigital)

abstract: ---- The bulletin collects TEXT reports. ---- The WEPA40 TTAii Data Designators decode (2) as: T1 (W): Warnings. T2 (E): Tsunami. A1A2 (PA): Pacific area. (2: Refer to WMO No.386 - Manual on the GTS - Attachment II.5) ---- WMO No.9 - Volume C1 'Remarks' field: TSUNAMI WATCHES AND WARNINGS FOR PACIFIC BASIN ISSUED BY PACIFIC TSUNAMI WARNING CENTER, HONOLULU, HI

[+ point of contact](#)

[- resource format](#)

name: TEXT

version: PLAIN LANGUAGE

specification: <http://www.wmo.int/pages/prog/www/WMOcodes.html>

<http://www.wmo.int/pages/prog/www/WMOcodes.html>



And then download or ask for as routine

Metadata Search

Relation Term Boolean

FullText [all] [tsunami pacific] [and]

Title [] [and]

Abstract [] [and]

Keywords [] [and]

Identifier [] [and]

DataFormat [] [and]

From [] to []

Use geographic search

The metadata: overlaps the search box

long(west) 52.382812 long(east) 157.851562

lat(north) 66.513260 lat(south) -15.284185

Confirm Search

Results for Search:
fullText all "tsunami pacific"

Total Records **11** GOTO Page [1] /1 20/Page First | PageUp | PageDown | Last

1	urn:x-wmo.md:int.wmo.wis::WEPA42PHEB			
2	urn:x-wmo.md:int.wmo.wis::WEPA40PHEB			
3	urn:x-wmo.md:int.wmo.wis::SZPA01AMMC			
4	de.pangaea.dataset760734			
5	de.pangaea.dataset760735			
6	de.pangaea.dataset785461			
7	de.pangaea.dataset785462			
8	de.pangaea.dataset785693			
9	de.pangaea.dataset785694			
10	de.pangaea.dataset785728			
11	de.pangaea.dataset785729			

Total Records **11** GOTO Page [1] /1 20/Page First | PageUp | PageDown | Last



Download now

Subscribe – receive data as they arrive



LINK

National Meteorological Administration
China Meteorological Administration
No.46, Zhongguancun
Beijing, China, 100081
Email:discadmin@cmacast.com



Future directions of WIS

- Assist data providers to make their data discoverable through WIS
- Support the integration of different observing systems
- Support the implementation of climate services
- Improve data discovery interfaces, e.g. integrate basic tools for visualisation



How can you benefit from WIS?

- Have you accessed one of the GISC?
- Do you know the national focal point on WIS in your country?
- Is your centre WIS compliant?
 - Be compliant with WIS technical standards, eg. WMO core metadata profile
 - Choose a GISC as your principal GISC
 - Upload your metadata to your principal GISC, and update them when new data are available



World Meteorological Organization

Weather • Climate • Water

Thank you for your attention

wis-help@wmo.int