World Meteorological Organization Information System
Global Information System Center Washington

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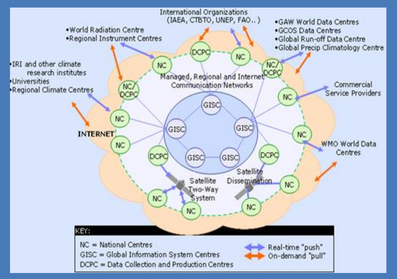
Introduction

The World Meteorological Organization Information System (WIS) was declared operational by the World Meteorological Organization (WMO) on January 31, 2012. Central to WIS are fifteen (15) Global Information System Centers (GISC) which form the WIS core. These centers are located within the six (6) WMO Regional Associations (RA) with GISC Washington representing WMO RA IV. GISC Washington provides a mechanism for the management of weather, water and climate data to allow for global benefits in the areas of safety, risk reduction, health, energy, agriculture, ecosystems and biodiversity.

WIS Infrastructure



The WMO Information System (WIS) is a global infrastructure responsible for managing and moving weather, climate and water information.

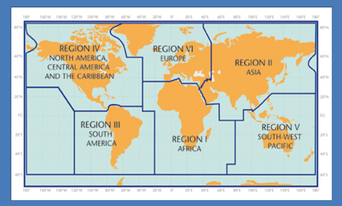
WIS consists of three types of centers

- National Centers (NC): collect and provide observational data and products for global or regional distribution to their responsible GISC or DCPC and distributing data on a national basis.
- Data Collection or Production Centers (DCPC): collect and produce information intended for dissemination to NCs and Provide information intended for global exchange to their GISC.
- GISC: receive observational data and products that are intended for global exchanges from NCs and DCPCs within their area of responsibility, exchange information for global dissemination with other GISCs, maintain a 24 data cache and DAR (Discovery, Access and Retrieval) catalogue. GISCs form the core infrastructure of WIS.

Functions of GISC Washington

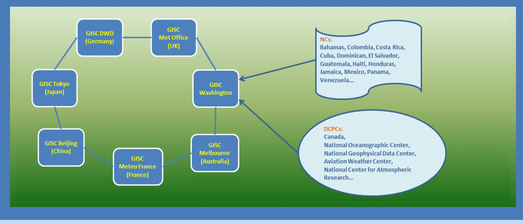
Area of responsibility (WIS region IV)

- North America
- Central America
- The Caribbean



Functions

- Collects and delivers observed data and products from DCPCs and NCs for global distribution.
- Maintains and synchronizes metadata DAR catalogue with other GISCs
- Maintains 24 hours data cache for routine global exchange.
- Provides access to the metadata DAR catalogue.



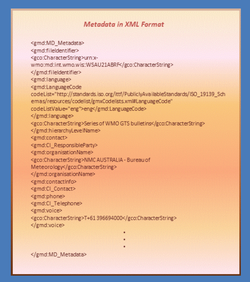
Observed Data VS. Metadata

Observed Data

- The weather and climate data being routinely collected and distributed to the authorized end users and centers.
- Text and binary data.
- 24 hours data available.

Metadata

- The data describes the observed data.
- Major elements of metadata are identifier, title, content description, geographic and temporal extents and responsible party.
- In XML format
- Uses ISO 19115 and ISO 19139 standard for the description of metadata.

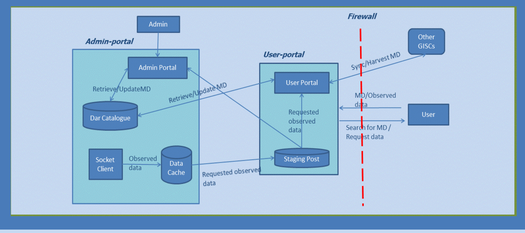


DAR (Discovery, Access and Retrieval) Catalogue

Contents

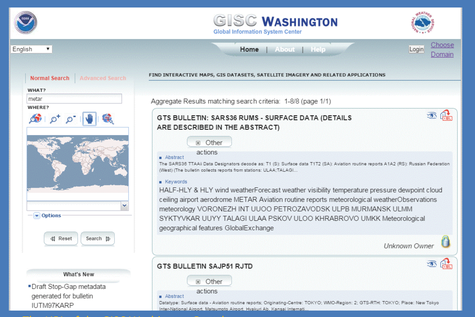
- A collection of metadata describing the observed data (synop, grib, Imagery…)
- Contains categories of metadata records from each GISC.

Architecture



Accessing DAR Catalogue Via User Portal

- The User Portal provides access to DAR Catalogue for the public to search for metadata and download observed data.



The URL of the GISC Washington Portal:
http://giscportal.washington.weather.gov/openwis-user-portal/srv/en/main.home

Image References

- Marc Averette (2005, flood)
- tamutimes.tamu.edu/ (2013, tornado)
- GreenHousePhotoGallery.com (2009, cloud)
- www.nbcnews.com (2014, snow)
- www.wmo.int/pages/prog/www/WIS/ (infrastructure)