

6<sup>TH</sup> W O R L D W A T E R F O R U M

## Data and information sharing WMO global systems



TIME FOR SOLUTIONS

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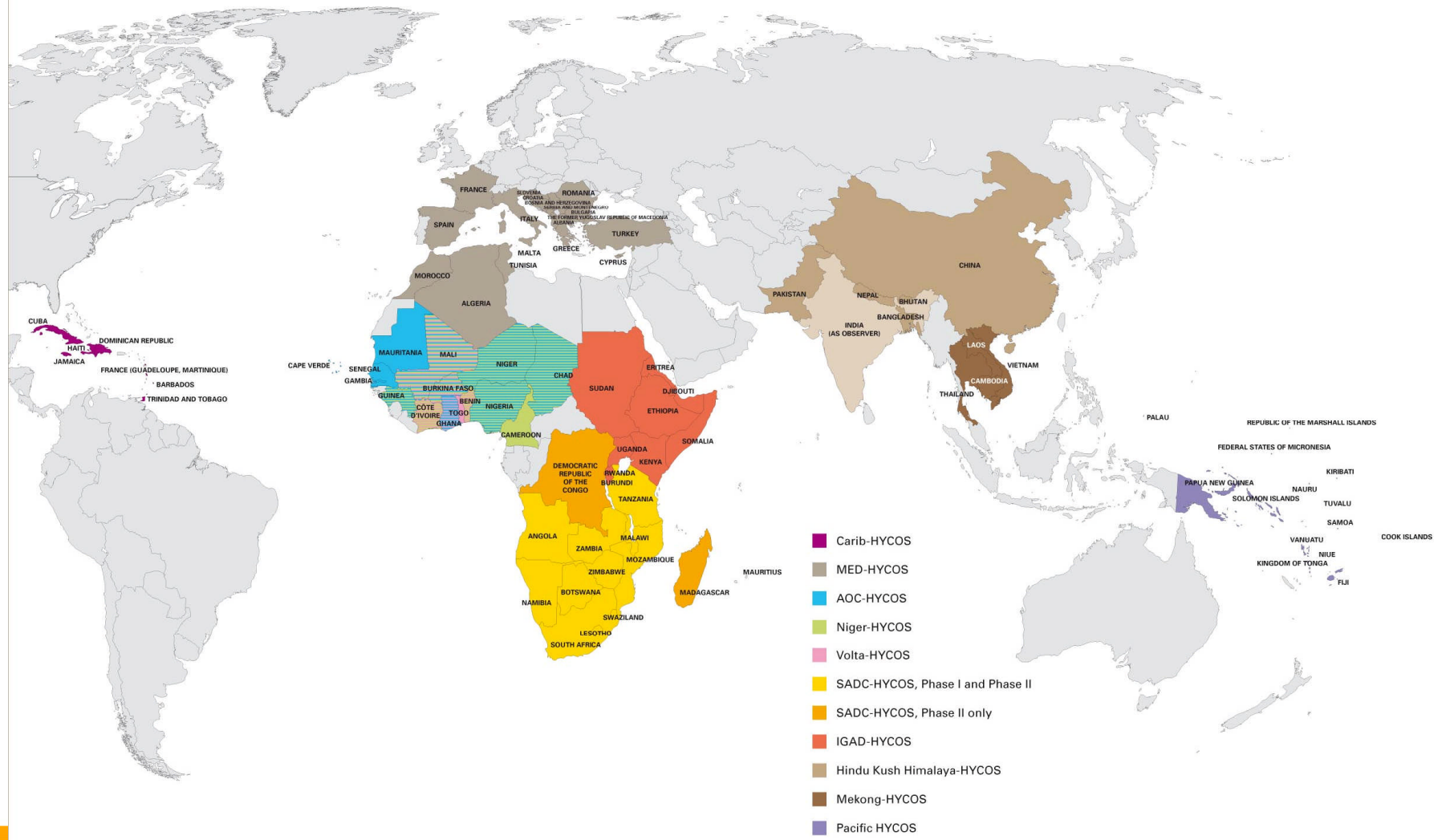
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13 March, 2012



# World Hydrological Cycle Observing System (WHYCOS)





# WHYCOS – The goals

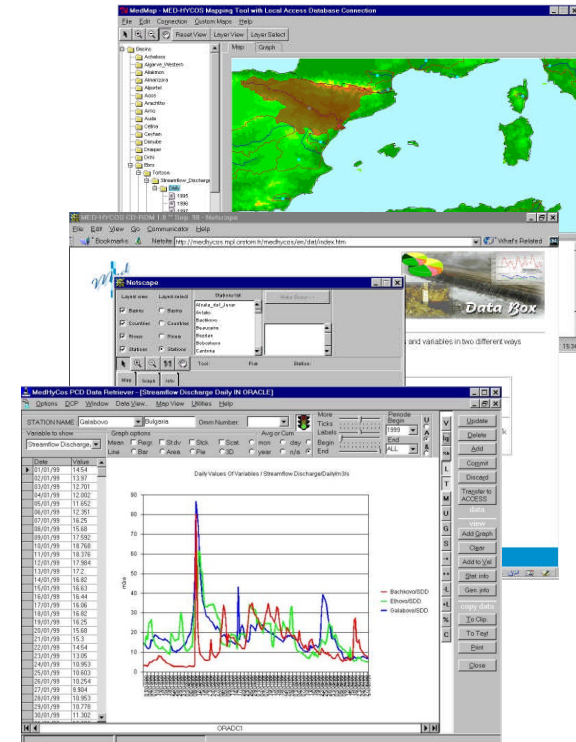
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- Building the **capacity** for water resources assessment and management
    - **Data** collection and management
    - Key national **stations**
    - **Information** products development and dissemination
  - Promoting regional and international **cooperation** in the collection, transmission, processing and archiving of hydrological data and information
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# WMO Data Exchange Policy

Committed to broadening and enhancing, whenever possible, the free and unrestricted international exchange of hydrological data and products, in consonance with the requirements for WMO's scientific and technical programmes





# WMO resolutions 40 and 25

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- **Res. 40 (Cg-XII)** - WMO policy and practice for the exchange of meteorological and related data and products.  
“Members shall provide on a free and unrestricted basis essential data and products which are **necessary for the provision of services in support of the protection of life and property and the well being of all the nations...**”
  - **Res 25 (Cg-XIII)** - Exchange of hydrological data and products.  
“Members shall provide on a free and unrestricted basis those hydrological data and products which are **necessary for the provision of services in support of the protection of life and property and the well being of all the nations...**”
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# Quality Management Framework - Hydrology

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“WMO is dedicated to ensuring optimum affordable quality for all meteorological, climatological, hydrological, marine and related environmental data, products and services, especially those supporting the protection of life and property, safety on land, at sea and in the air, sustainable economic development and protection of the environment.”

Volume IV of the Technical Regulations (WMO-No. 49)

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# The Eight Principles of Quality Management

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- User/customer focus
  - Leadership
  - Involvement of people
  - Process approach
  - System approach to management
  - Continual improvement
  - Factual approach to decision making
  - Mutually beneficial supplier relationships
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# QMF-H

Guide to Hydrological Practices  
Volume I  
Hydrology – From Measurement  
to Hydrological Information

World Meteorological Organization  
Weather • Climate • Water  
WMO-No. 168

QUALITY MANAGEMENT FRAMEWORK

**MANUAL ON  
STREAM GAUGING**

VOLUME I – FIELDWORK

World Meteorological Organization  
WMO-No. 1144

QUALITY MANAGEMENT FRAMEWORK

**MANUAL ON  
FLOOD FORECASTING  
AND WARNING**

World Meteorological Organization  
WMO-No. 1084

Manual on Estimation of  
Probable Maximum Precipitation (PMP)

World Meteorological Organization  
WMO-No. 1045







# WIGOS

## WMO Integrated Global Observing System





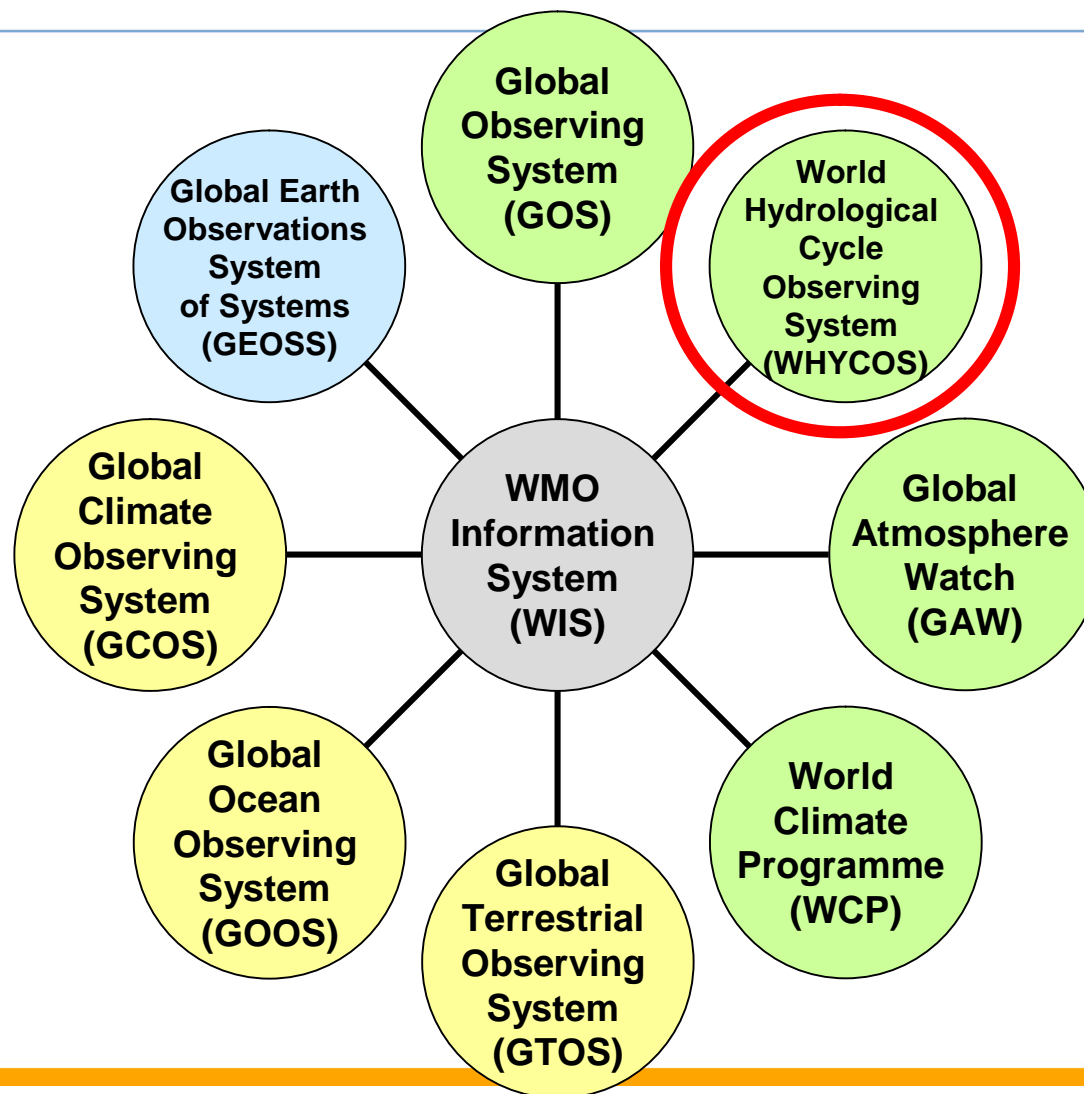
# WIGOS - Objectives

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- Better utilize existing and emerging observing capabilities (WWW-GOS, GAW, WHYCOS),
  - Guarantee systems interoperability,
  - Meet standards for data quality;
  - Design of cost-effective composite observing systems;
  - Develop strategies to satisfy observing requirements;
  - Develop a strategy for the production, editing and management of metadata, and data discovery;
  - Promote exploitation of existing platforms and employment of the multi-sensor platform concept to the maximum possible extent; and
  - Coordinate the response to requirements, plans and activities with all WMO technical commissions, regional associations and Programmes.
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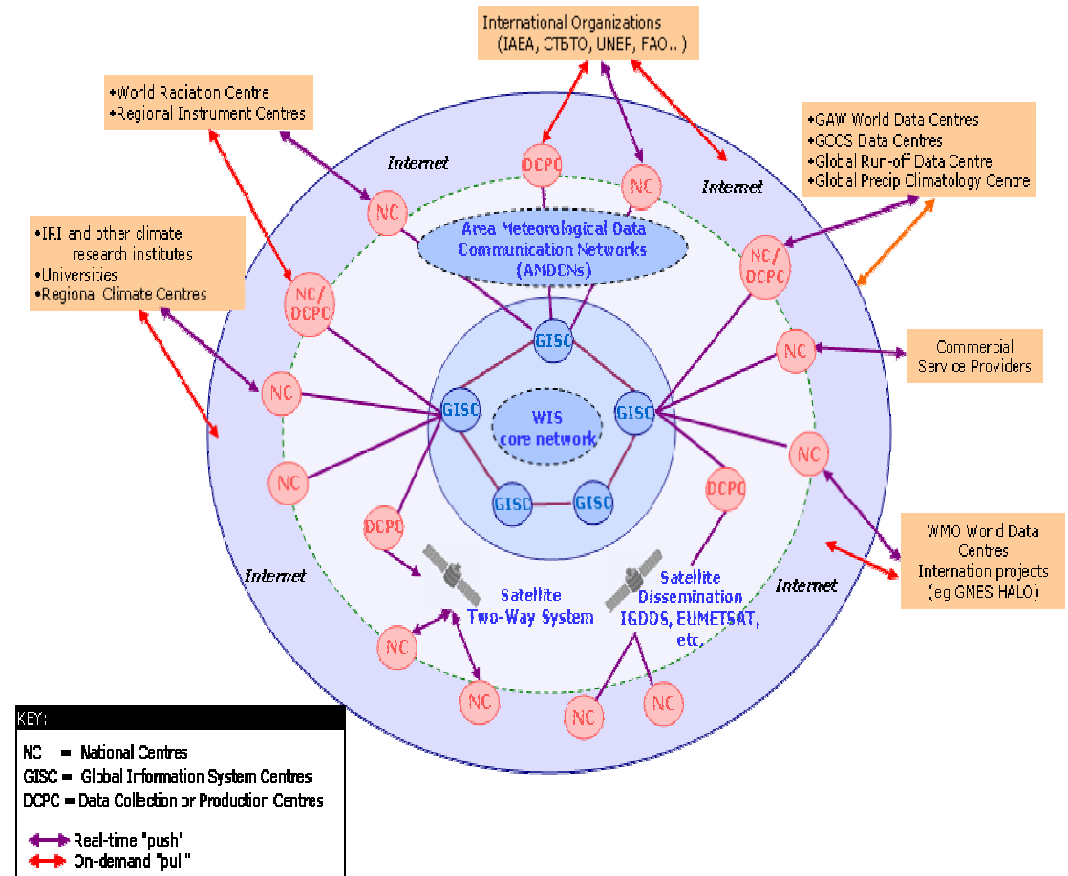
# WIS and Selected WMO Observing and Data Exchange Systems





# WMO Information System WIS

- Make available data from existing global hydrological observation networks and enhance their value through integration
- Generation of datasets suitable for:
  - Research in the areas of global and regional climate change
  - Environmental monitoring, and
  - Hydrology and water resource management

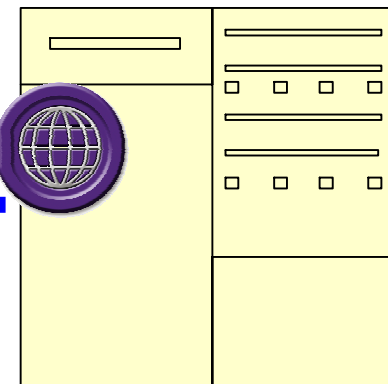




### Search Request

marine warnings in area bounded by 40W to 10W and 45N to 70N

GISC – DAR service



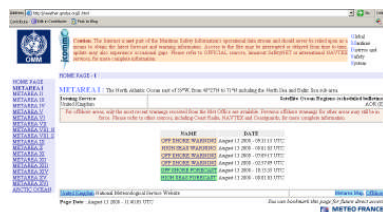
### Search Results

User searches for metadata then retrieves information from data custodian

### Information request to custodian

<http://weather.gmdss.org/I.html>

Centre publishes metadata to GISC DAR catalogue



### Retrieve information

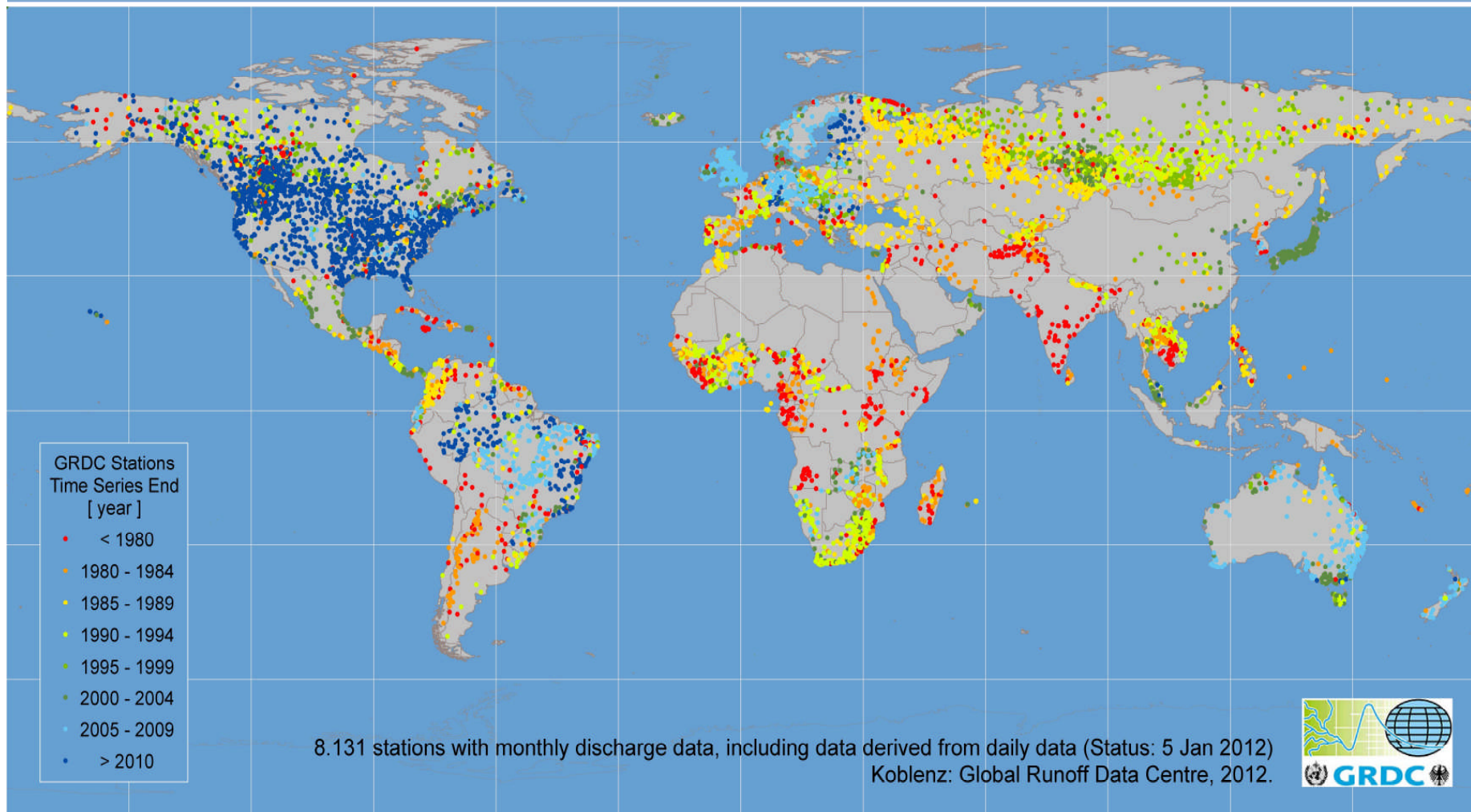
Security/authentication/authorization and even charging is managed by each service provider

# Data access and retrieval

NC/DCPC information access service

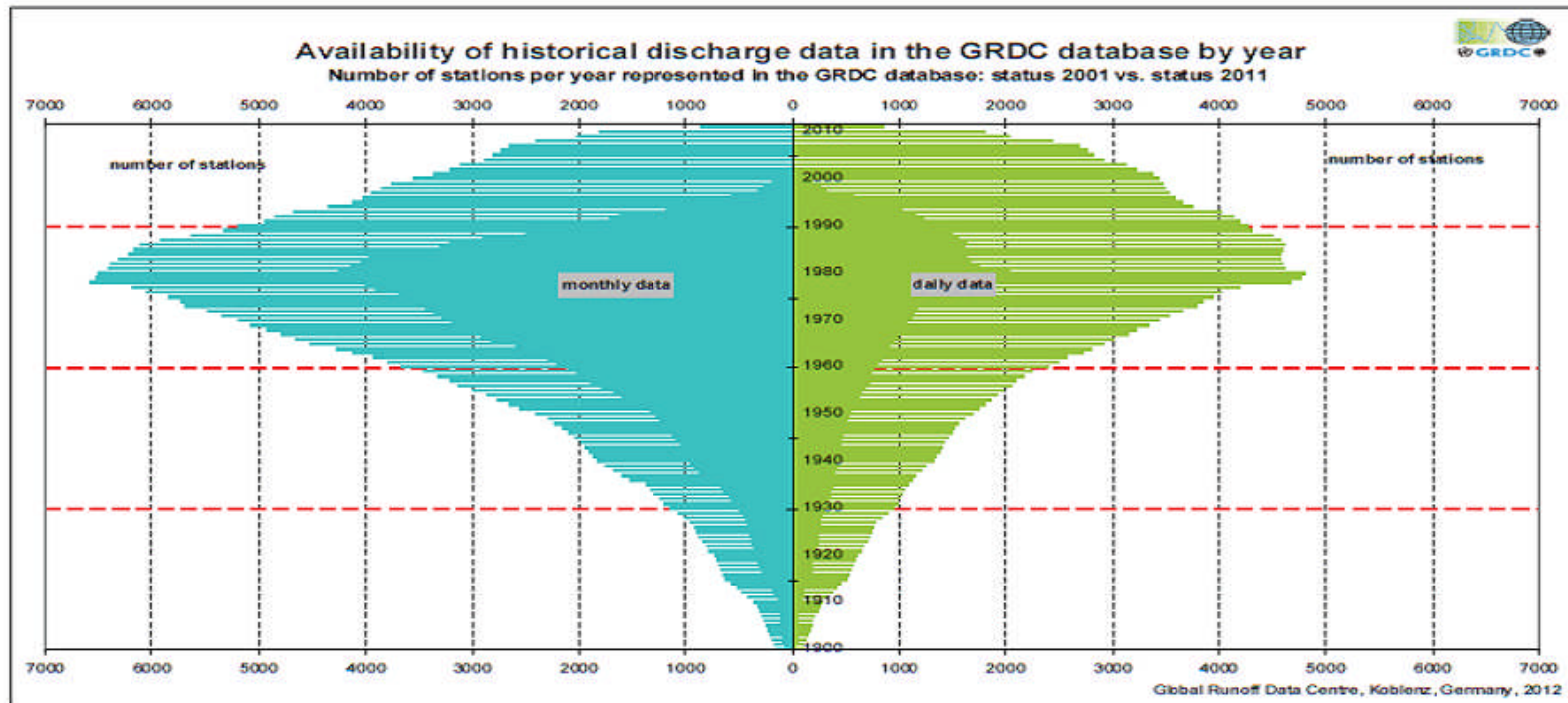


# Global Runoff Data Centre Database





# Availability of Historic Discharge Data in GRDC





MARSEILLE - FRANCE

TIME FOR *SOLUTIONS*

MERCI / THANK YOU

[worldwaterforum6.org](http://worldwaterforum6.org)  
[solutionsforwater.org](http://solutionsforwater.org)

