

# WMO

## Global Hydrometry Support Facility and Innovation Hub

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WMO OMM

World Meteorological Organization  
Organisation météorologique mondiale

WEATHER CLIMATE WATER  
TEMPS CLIMAT EAU

# The World Meteorological Organization

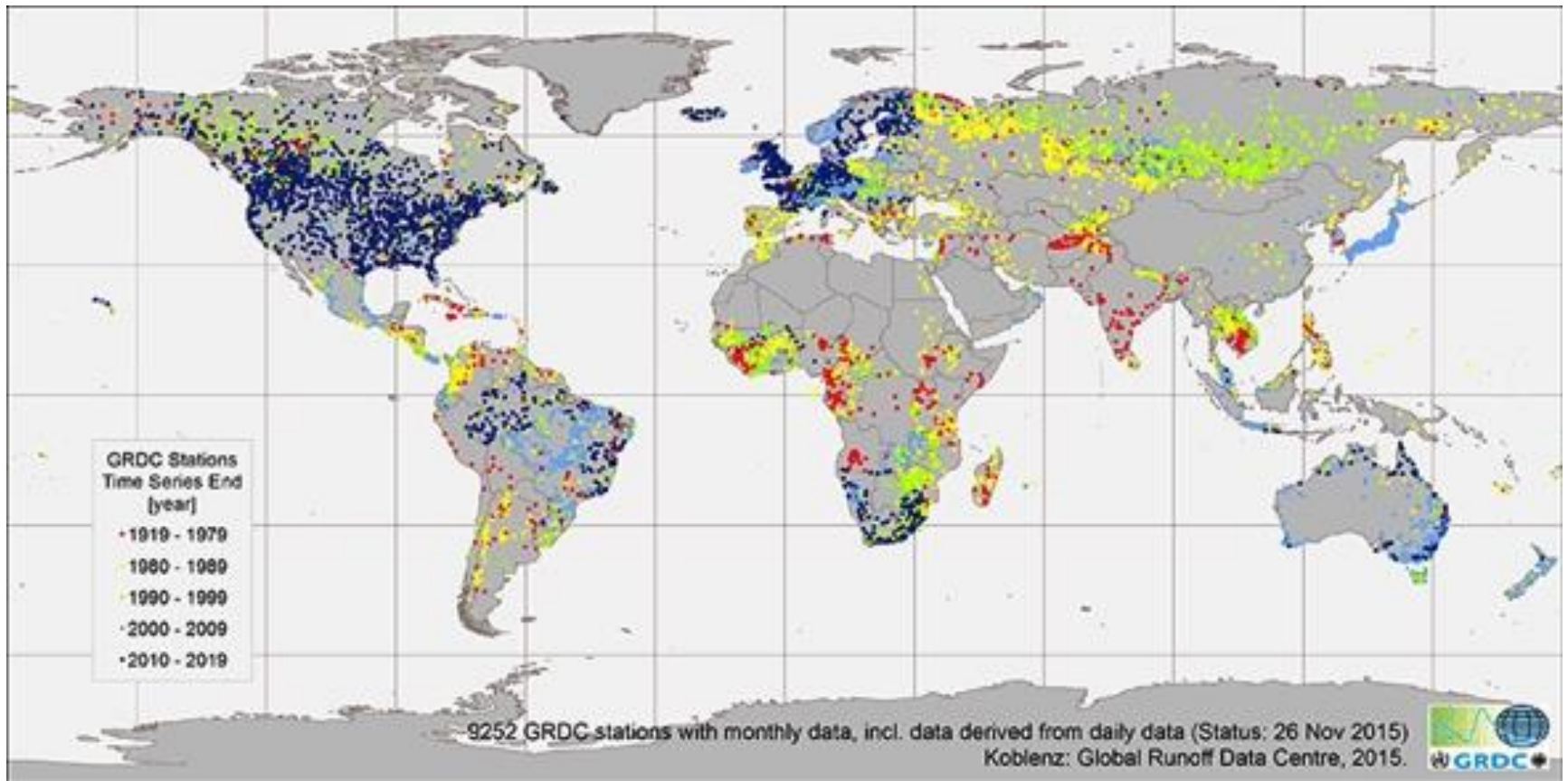
## Weather, Climate, Water

“As a specialized agency of the United Nations, WMO is dedicated to **international cooperation and coordination** on the state and behaviour of the Earth’s atmosphere, its interaction with the land and oceans, the **weather** and **climate** it produces, and the resulting distribution of **water** resources.”

# Hydrology and Water Resources Programme (HWRP)

- Promotes the effective use of hydrological science and technology:
  - ◆ Measurement (networks, standards);
  - ◆ Data collection, processing, storing, retrieving and publishing (quality control);
  - ◆ Provision of data and information to users;
  - ◆ Integrated management;
  - ◆ Hydrological forecasting systems; and
  - ◆ Integration with meteorology and climatology

# National hydrometry networks



Hydrometry networks are essential BUT insufficiently developed

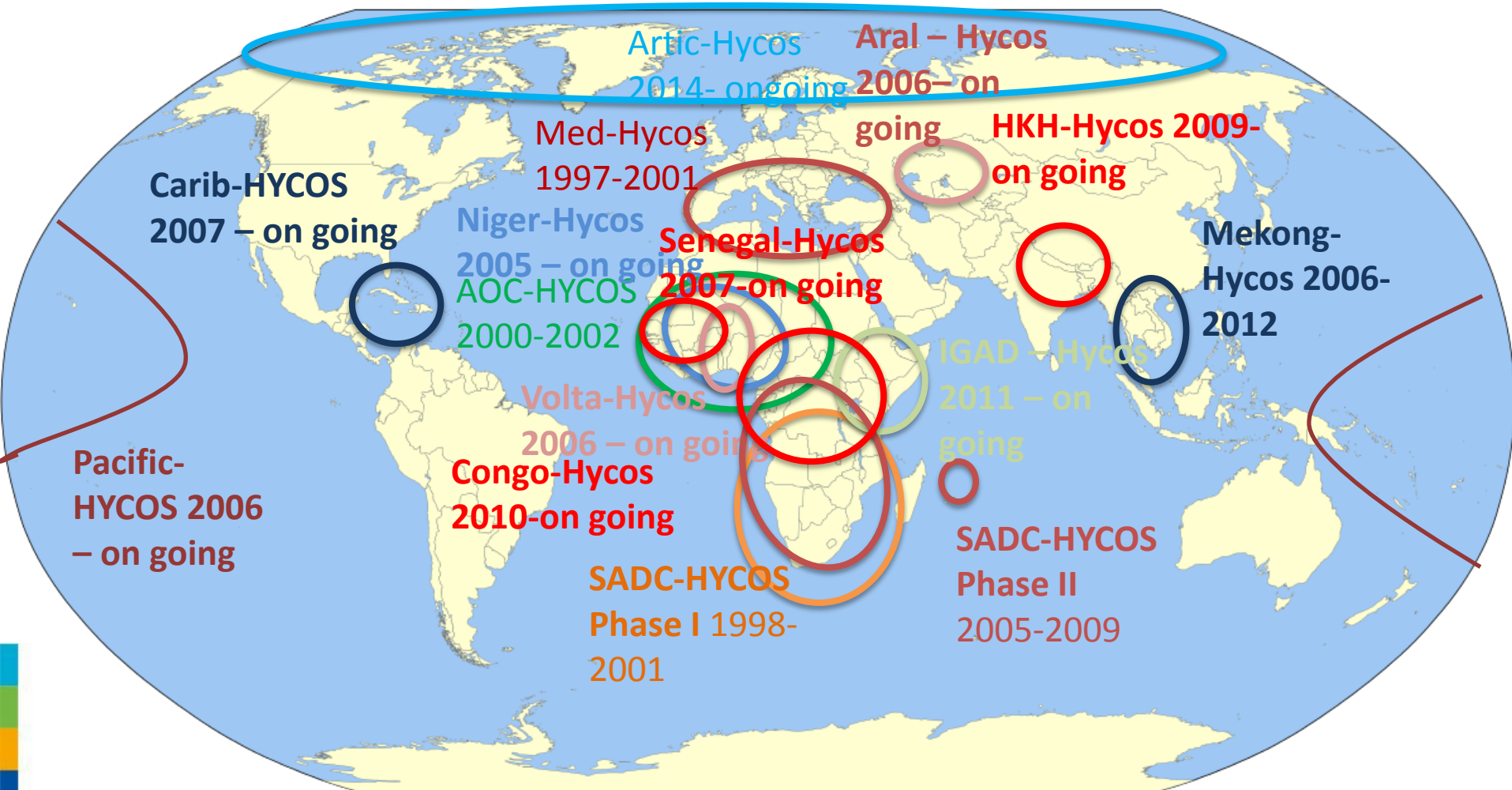
# Main WMO activities in hydrology



DATA PRODUCTION & COLLECTION	DATA PROCESSING & STORAGE	DATA VISIBILITY & AVAILABILITY	DATA RESCUE
<p>World Hydrological Cycle Observing System (WHYCOS)</p> <p>Standardisation and quality management QMF</p>	<p>Meteorological, Climatological and Hydrological (MCH) Database Management System</p>	<p>WMO Hydrological Observing System (WHOS)</p> <p>WaterML 2.0</p>	<p>Global Data Centers: Global Runoff Data Centre (GRDC), International Data Centre On Hydrology Of Lakes And Reservoirs (HYDROLARE) &amp; International Groundwater Resources Assessment Centre (IGRAC)</p>
GLOBAL HYDROMETRY SUPPORT FACILITY			



# The World Hydrological Cycle Observing System (WHYCOS)

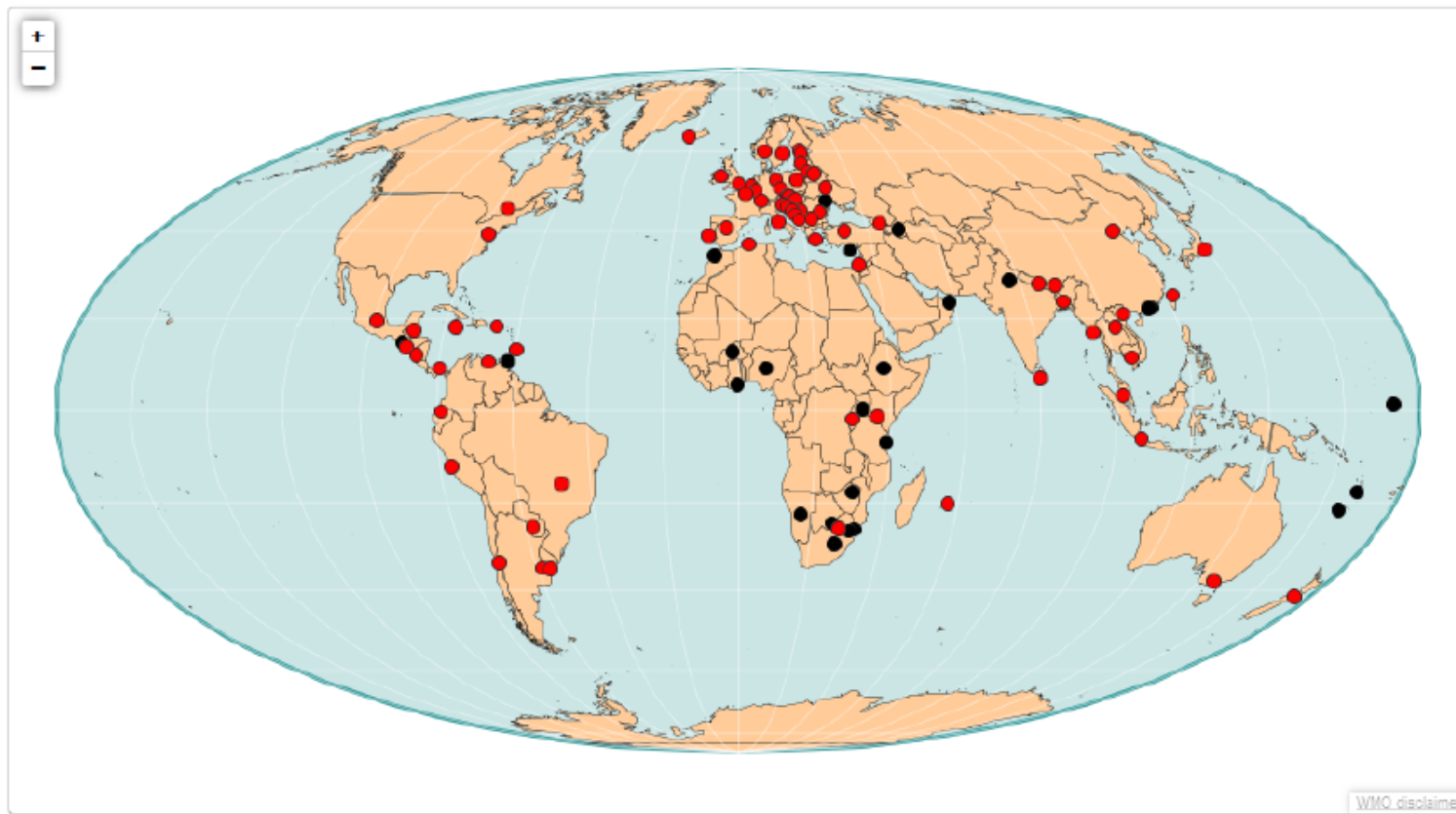


# WHOS WMO Hydrological Observing System

**WHOS** is a portal to the online holdings of National Hydrological Services (NHS) around the world that publish their data without restrictions or cost. It represents the hydrological component of the WMO Integrated Global Observing System (WIGOS).

Access to the data comprising WHOS can be obtained via map-based links on the following map. Red dots appear in countries where the National Hydrological Service makes data available from its website. Black dots appear in countries where the National Hydrological Service has a website, but where hydrological data are not available.

Please note that NHS websites appear in the native language of the country, although some NHSS translate parts or all of their websites into English or other languages.



<http://www.wmo.int/pages/prog/hwrp/chy/whos/index.php>



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# Difficulties and setbacks



**Poor  
maintenance**



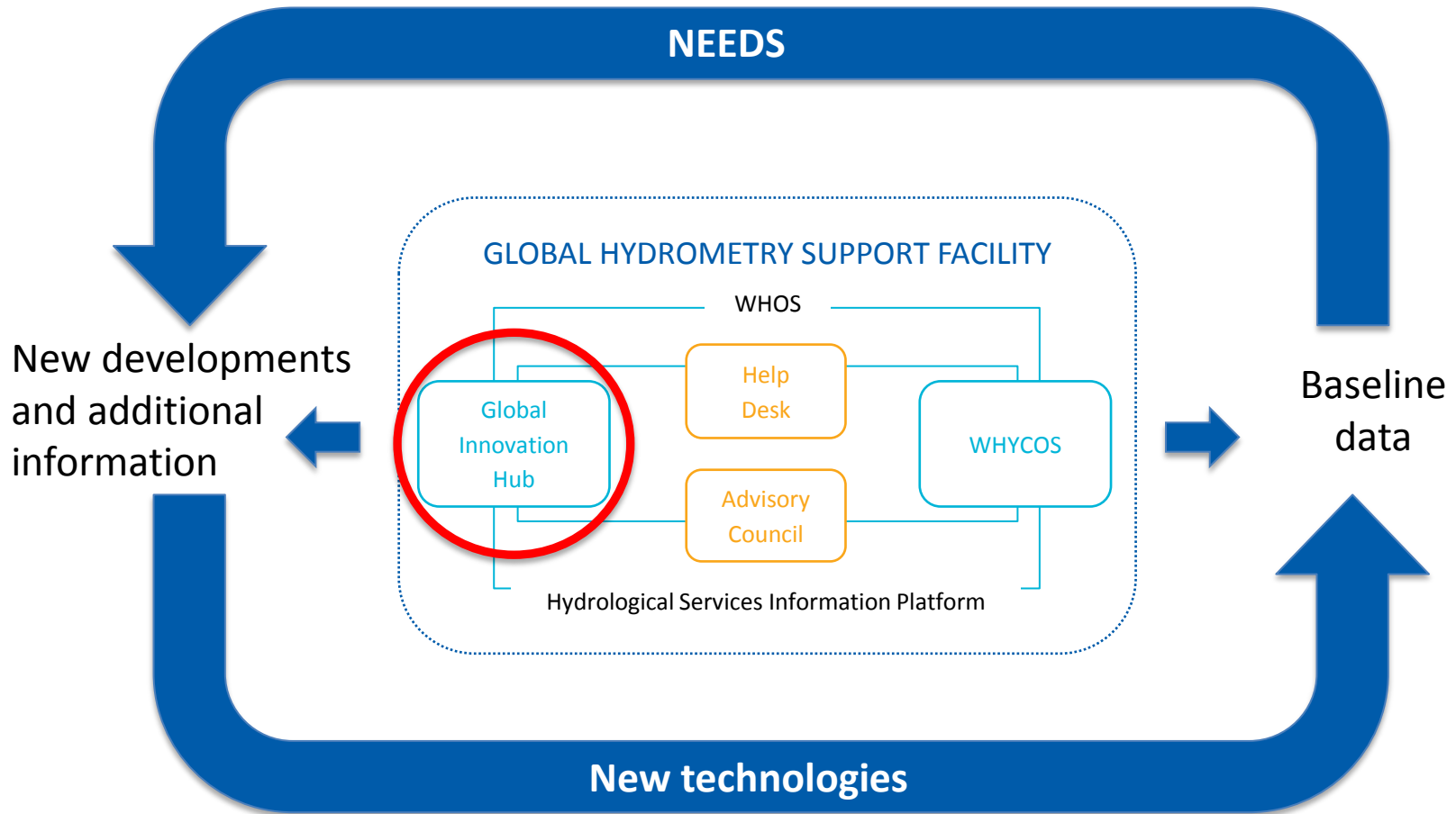
**Data loss**

**Insufficient  
information  
for decision  
making**





# Innovation as a support for Water Monitoring



# Innovation Hub

Focus on innovation and research leading to improved, fit-for-purpose and sustainable monitoring capabilities **globally**



# Innovation domains

- Sensors
- Citizen observatories
- Information systems
- Transforming data and information into knowledge for decision makers
- Open data policy and transboundary data sharing



# The way ahead

- **Calls**

- ◆ Tools, Software, ...
- ◆ Concept development, operationalization
- ◆ University, private sector, government bodies, ....

- **Stakeholders meetings**

- ◆ 25 October 2016: Innovations in water data crowdsourcing
- ◆ Spring 2017



# Status of GHSF

- Endorsed by EC 68 June 2016
- 3 new staff members at WMO as of January 2017
- Overall budget ca 16 M\$ over 4 years including WHYCOS projects, Switzerland provides initial funding of 2.7 M\$ for the 4 years.
- 1-2 innovation calls / year, start in 2017
- Funds to be found for innovation calls

# Conclusions

- Water is a complex system: no good decision without good information: data are central
- WMO supports global, regional and national efforts in hydrology, **innovation** is a key
- Open to partnership and collaboration with different stakeholders

Thank you  
and **come with new bright ideas!**



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