# Comments by Rick Lawford for Panel #3

# In-situ Observations

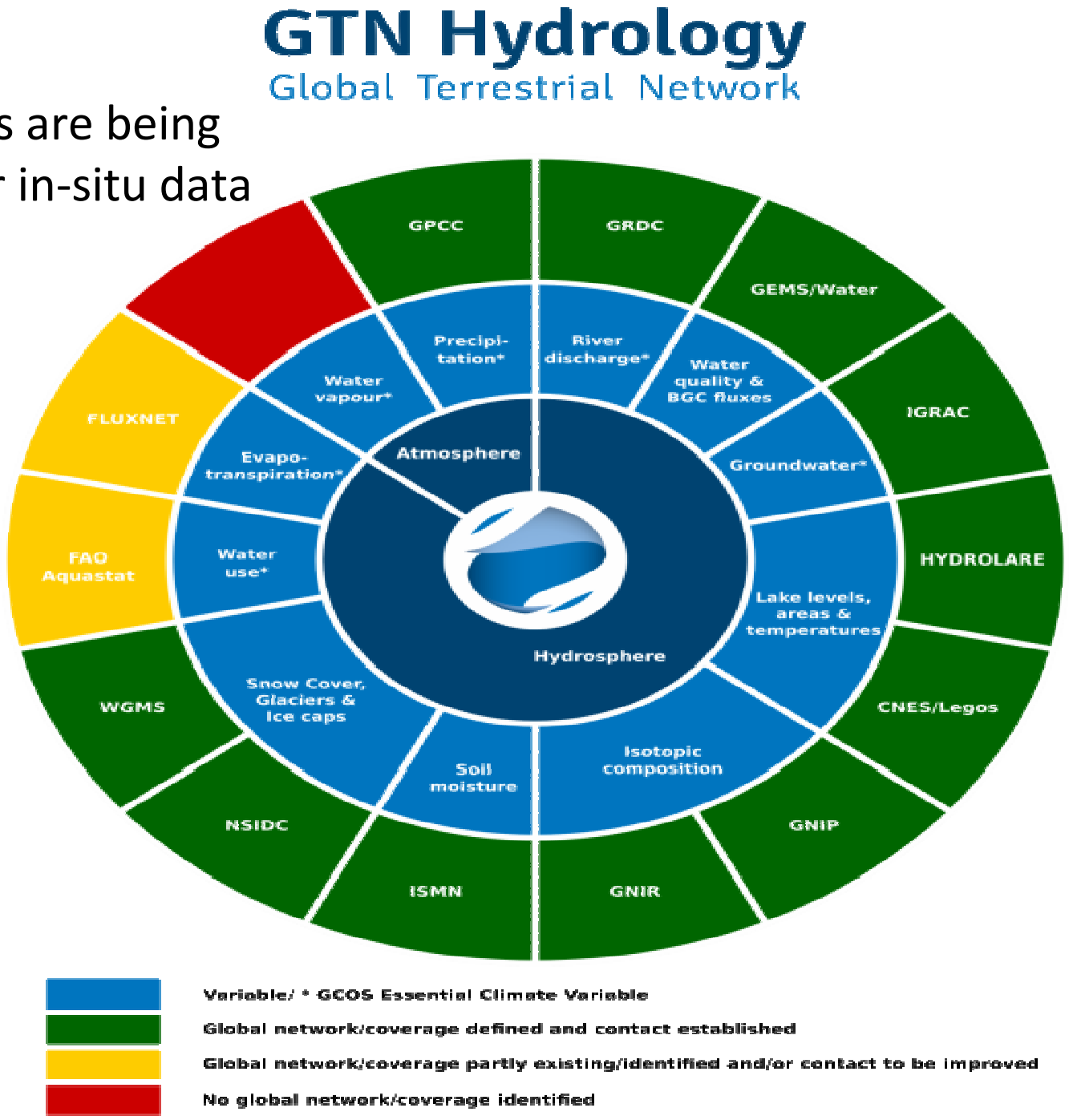
**Why are they important:**

Provide critical inputs into decision making, especially at locations which cannot be measured well from space or modeled well.

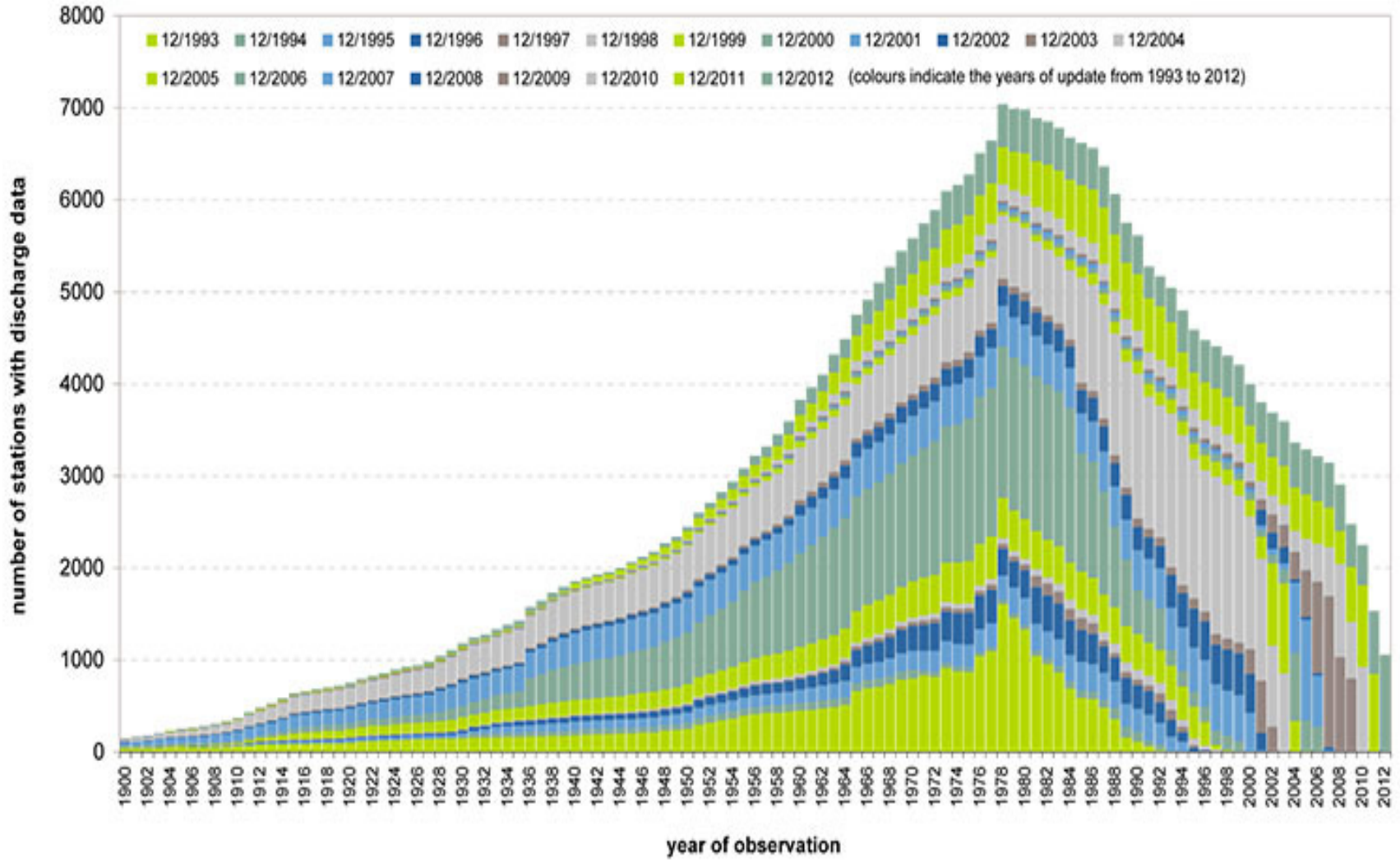
Provide important inputs for calibrating satellite data and for the development of integrated data products.

Provide essential long-term records for monitoring climate change and other types of changes.

Advances are being made for in-situ data archival.



# Global Runoff Data Base: temporal distribution of river discharge data

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## Why are in-situ networks diminishing in capability?

National budget constraints result in decisions to reduce funding spent on maintaining in-situ networks in order to support other national priorities.

The importance of in-situ measurements is not fully understood by nations (including some GEO members) which do not recognize the need to support stations for the benefit of the global community.

The value of in-situ measurements and the benefits of upgrading local technologies to maintain the information services are not fully recognized by international agencies who could support such networks in developing countries.

## What can AWCI and AfWCCI do about it?

Many countries in Africa and Asia have the most to lose if in-situ measurements are not maintained. (They experience some of the extreme climate conditions and these experiences must be part of the data used in satellite data and model calibration.) A special effort is needed to document the use, value and difficulties associated with in-situ water observations in Asia and Africa.

As part of the plan to work more closely together, AWCI and AfWCCI could form a small working group to explore ways to interact with the UN and Development agencies to raise the profile of in-situ observations and to advance an agenda that will document and make recommendations on the issues of in-situ networks.

# Status of the IWRM Concept

The concept of IWRM remains valid today because it provides a framework for integration within river basins. It is of particular importance for Earth observations because it strengthens the rationale for global mapping and free data exchange.

Earth observations can provide a platform for strengthening IWRM since satellite data products are spatially consistent and are not constrained by borders.

IWRM is difficult to implement in transboundary basins because of national or state differences, priorities and related issues of trust. Can the benefits of Earth Observations provide a reason for nations to lower their barriers and work together for a common goal?

In areas where Basin authorities exist it is important for GEO to support their efforts to implement IWRM.

IWRM has implications for water use for a number of sectors, many of which may resist the implementation of IWRM. Where basin authorities do not exist, it is better to start small with a Nexus like the WEF Nexus to see if a coordinated effort for a transboundary basin can begin for water in this set of sectors and then be broadened to a wider rage of sectors.