31st Session of the GEWEX Scientific Steering Group (SSG), 26 February 2019

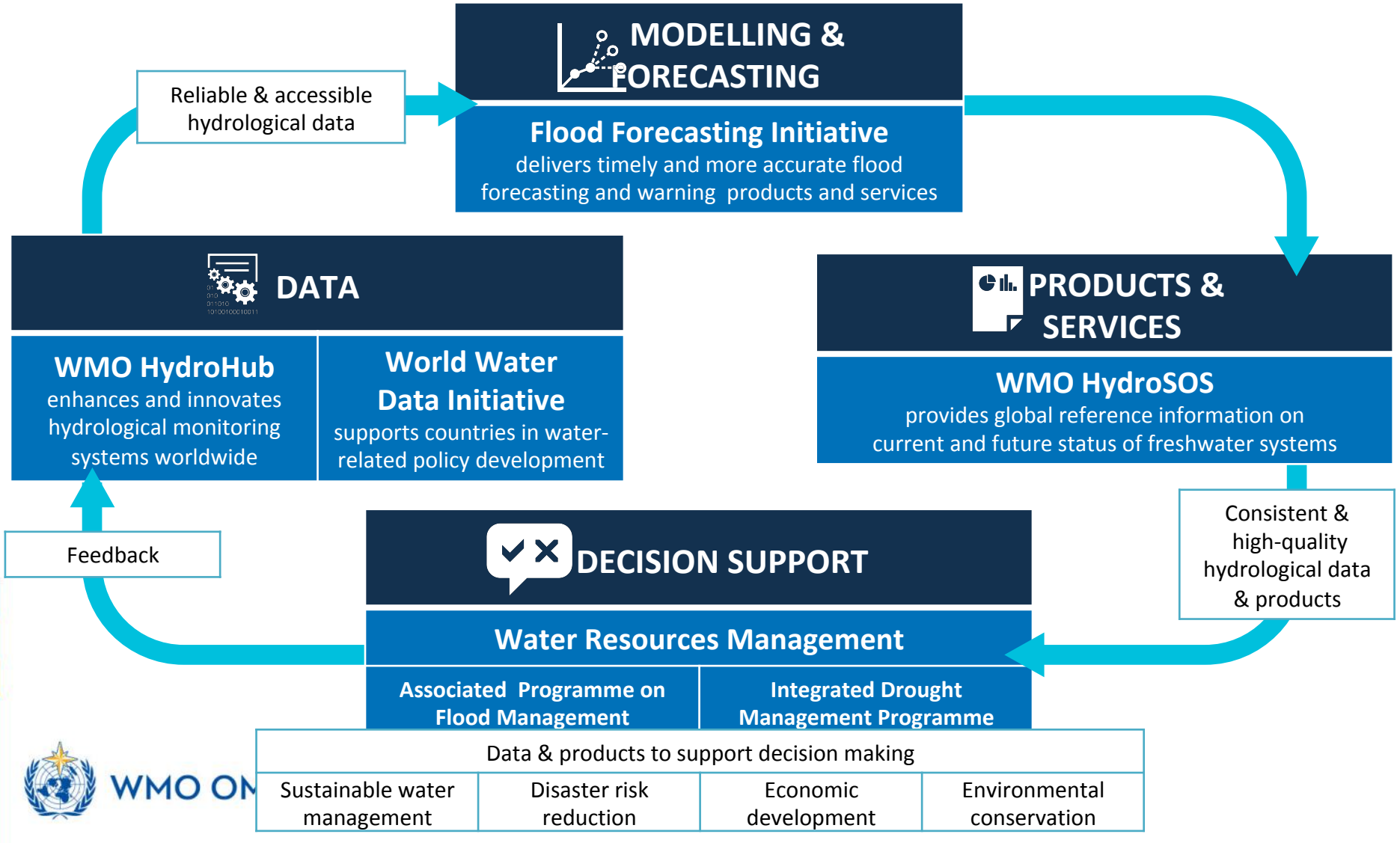
WMO Hydrological activities

WEATHER CLIMATE WATER
TEMPS CLIMAT EAU

WMO OMM

World Meteorological Organization
Organisation météorologique mondiale

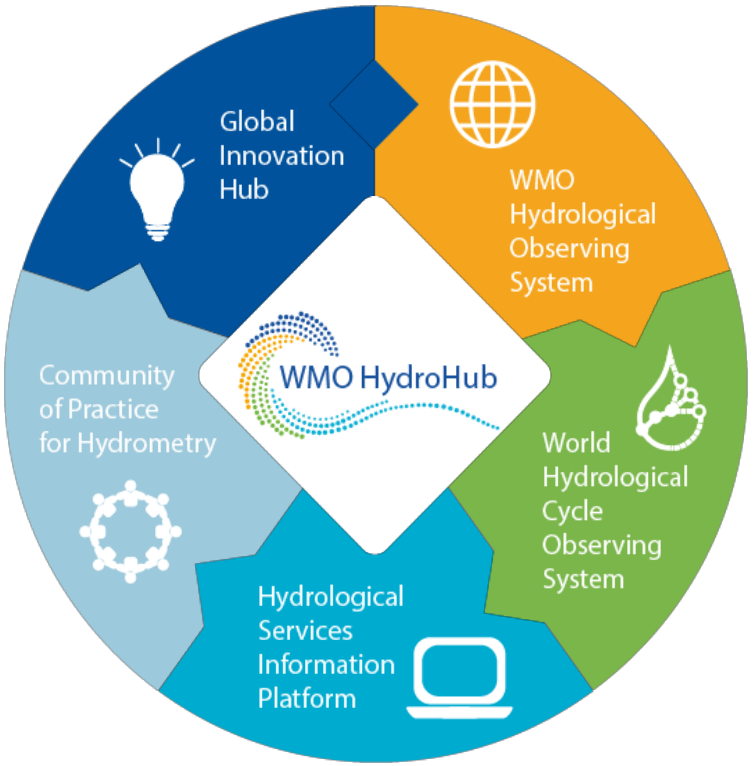
The WMO Hydrological Value Chain Initiatives



WMO ON

The WMO HydroHub : Water monitoring, from data collection to data sharing

1. Building Hydrological **Monitoring Capacity**
2. Embedding **Innovation** in Hydrometry
3. Enabling Hydrological **Data Sharing**
4. Connecting the **Global Water Monitoring Community**
5. Providing a **Global Focal Point for Hydrometry**



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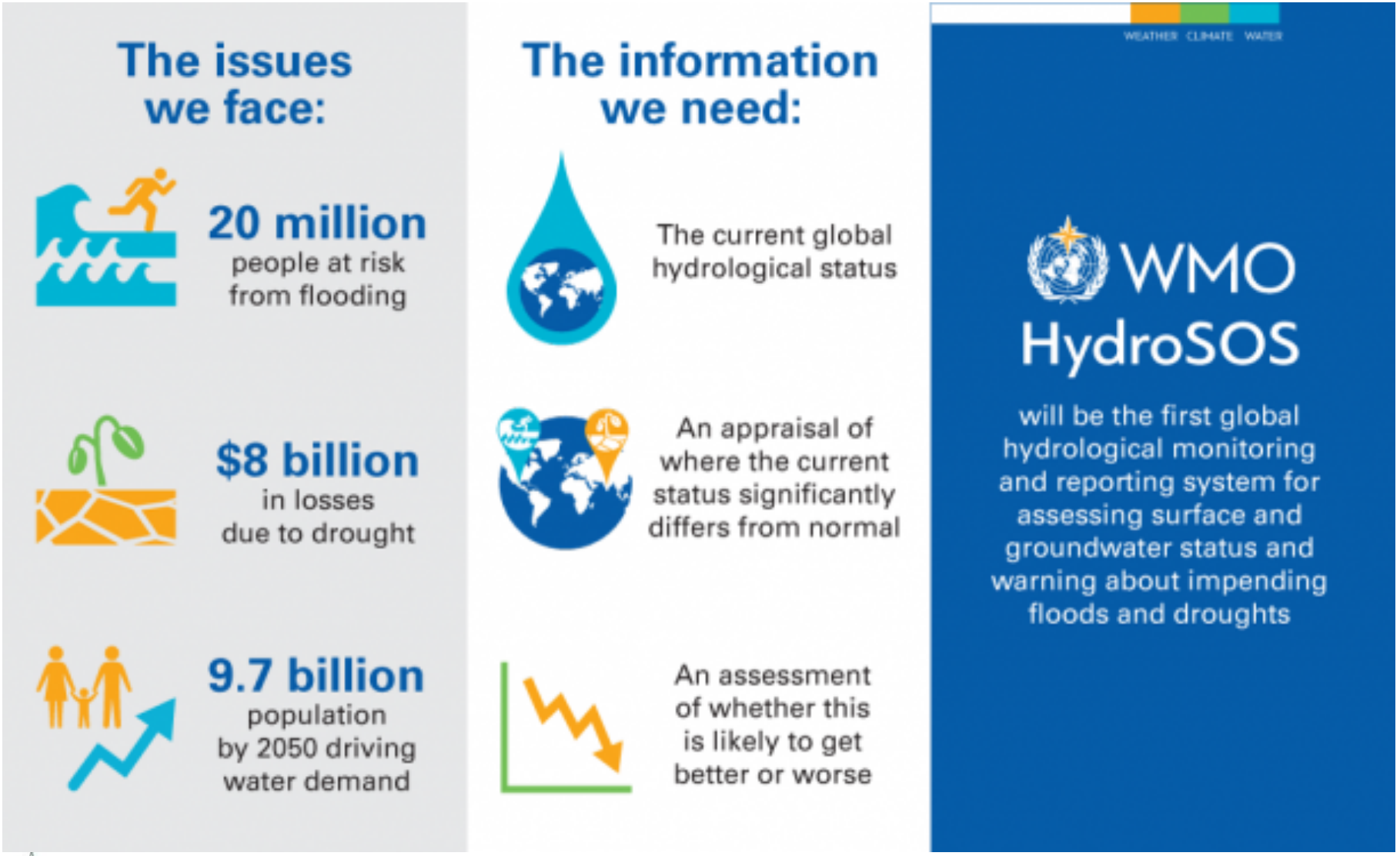
WMO answer: the Global Hydrological Status and Outlook System HydroSOS



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What does HydroSOS provide?

The current global hydrological status including groundwater, river flow and soil moisture

An appraisal of where the current status is significantly different from 'normal,' for example indicating drought and flood situations

An assessment of whether this is likely to get better or worse over coming weeks and months

What data/models does HydroSOS use?

Local scale ground based data
River flow, soil moisture, lake levels and water table depths

Global scale remotely sensed satellite data
Precipitation, soil moisture, groundwater and snow cover/depth

Global/regional weather and climate forecast models
Temperature and rainfall

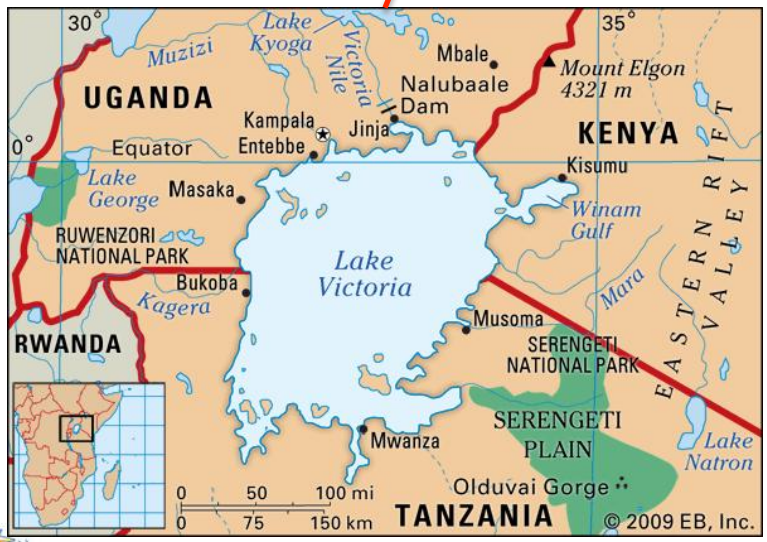
Hydrological models
River flow, soil moisture, groundwater

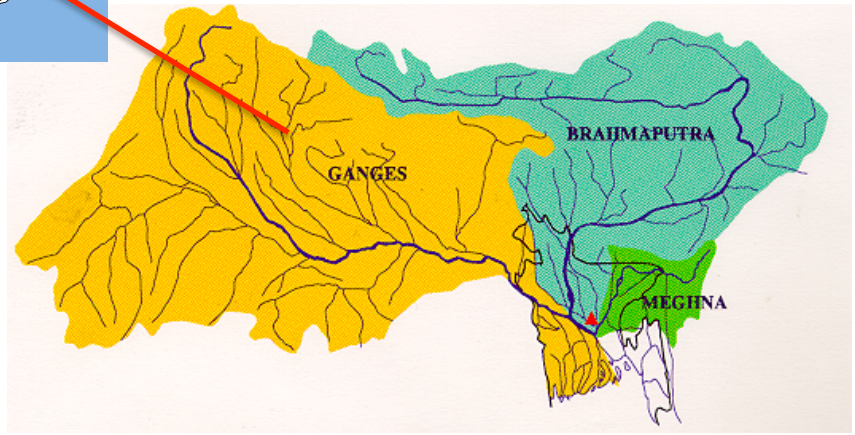
HydroSOS Key principles

- For National HydroMet Services, by HydroMet services
- Leveraging existing WMO activities
- Leveraging existing Data Platforms and Models
- Practical and tailored products and services

HydroSOS Demonstrators

Lake Victoria





Ganges, Brahmaputra and Meghna

WMO OMM

Institutions currently involved

WORLD METEOROLOGICAL ORGANIZATION

Centre for Ecology & Hydrology
NATURAL ENVIRONMENT RESEARCH COUNCIL

Australian Government
Bureau of Meteorology

Georgia Water Resources Institute

Ministry of Water and Environment
REPUBLIC OF UGANDA

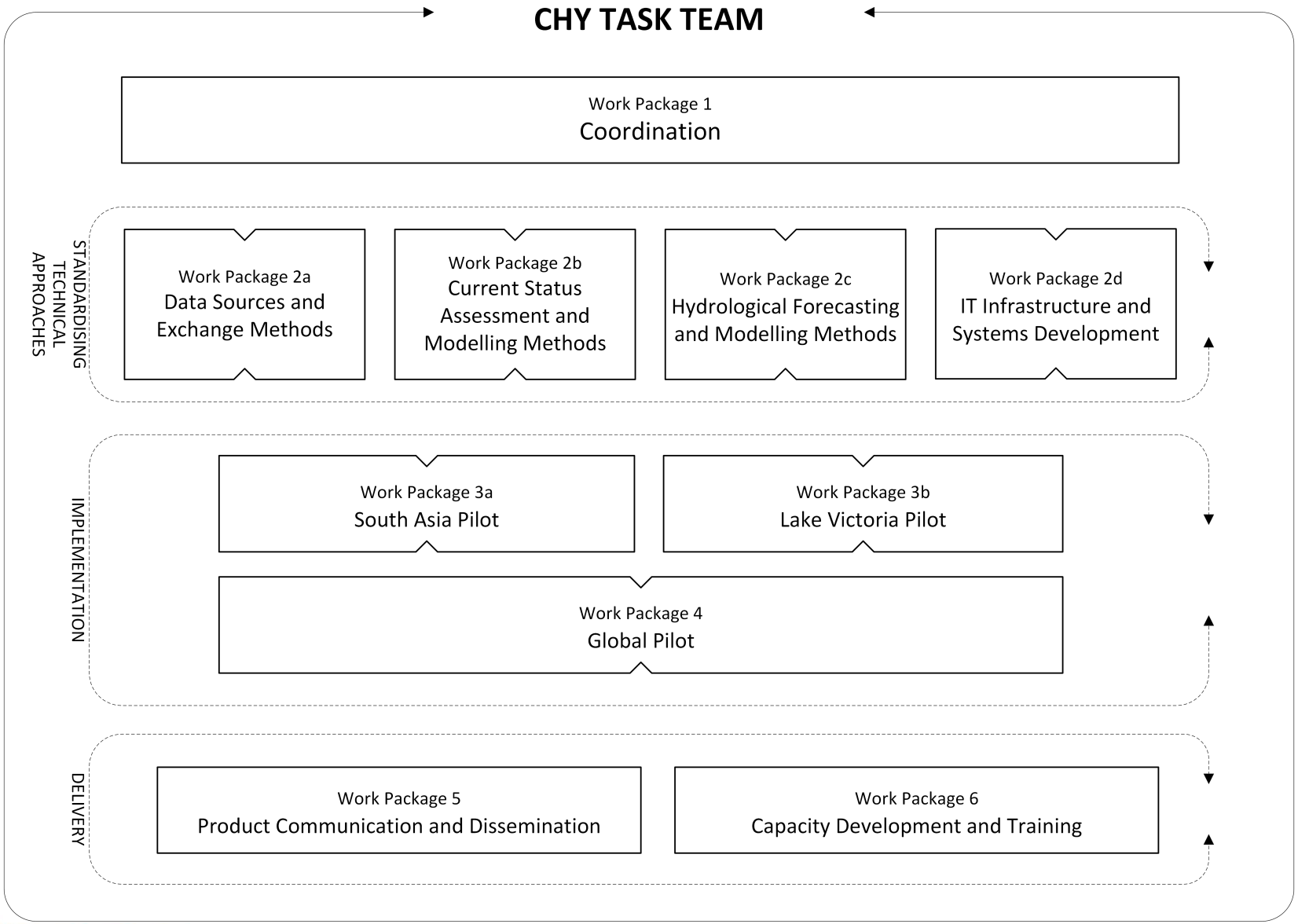
NCAR
NATIONAL CENTER FOR ATMOSPHERIC RESEARCH

NHRI Since 1935
南京水利科学研究院

SMHI

USGS
science for a changing world

HydroSOS Working structure



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HydroSOS Global pilot (UK CEH)

- Proof-of-concept of a global analysis of the hydrological status and outlook
- Quantify the uncertainty depending on different global data products (model, satellite, raingauge) available– past, present, future
- Some possible activities:
  - Analyze past-climate global products
  - Analyze new GEWEX integrated satellite-derived global data product
  - Implementation of status assessment and forecasting techniques
  - IT infrastructure and systems
  - Identify key stakeholders

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Thank you
Merci

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