



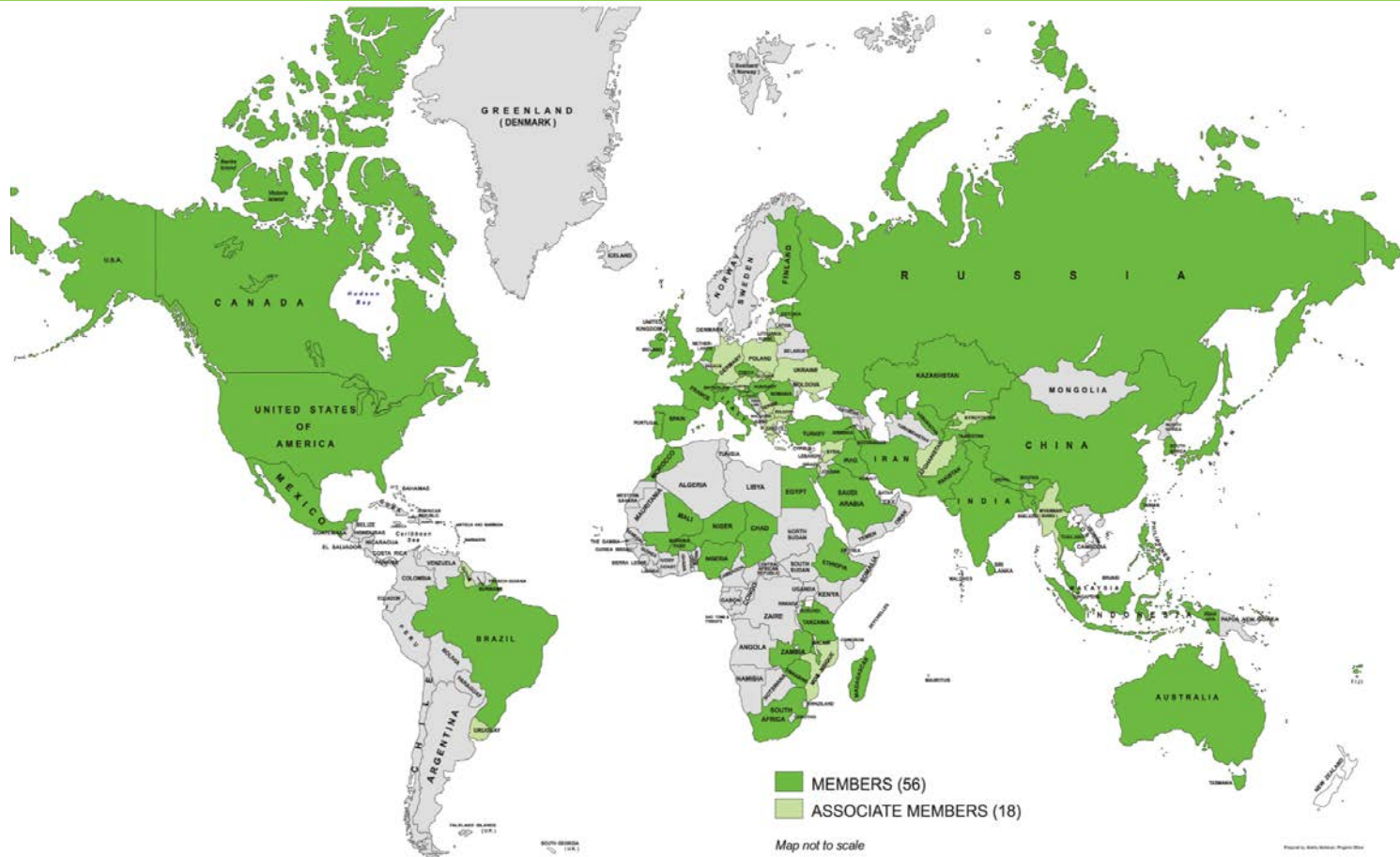
Requirements of climate services in South Asian Region: A GWP Perspective

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the Third Pole Region**
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ICID Membership Network



ICID and GWP-SAS have been associated with GFCS activities in the region

- **GWP-SAS together with IWMI is working to develop a Drought Monitoring System for South Asia under IDMP**
- **ICID and GWP-SAS have been associated with the CSUF-Water for the last three years and coordinated the Water User Forums in Pune(2014), Dhaka (2015) and now proposed in Colombo (2016) along with SASCOFs**

Decision making process requiring climate services

(From GFCS Water Exemplar)

- **Identification of water-related risks due to extreme weather and climate hazards;**
- **Identification of populations vulnerable to weather and climate hazards;**
- **Allocation and re-allocation of water resources;**
- **Design of infrastructure and personnel (i.e. water management organizations, structures and facilities);**
- **Implementation of risk management practices and procedures;**
- **Dissemination of information to users, including the public, i.e. Public Service forecasts and alerts;**
- **Development and implementation of water and environmental policies, including flood management policies and strategies;**
- **Development and implementation of water management regulations**

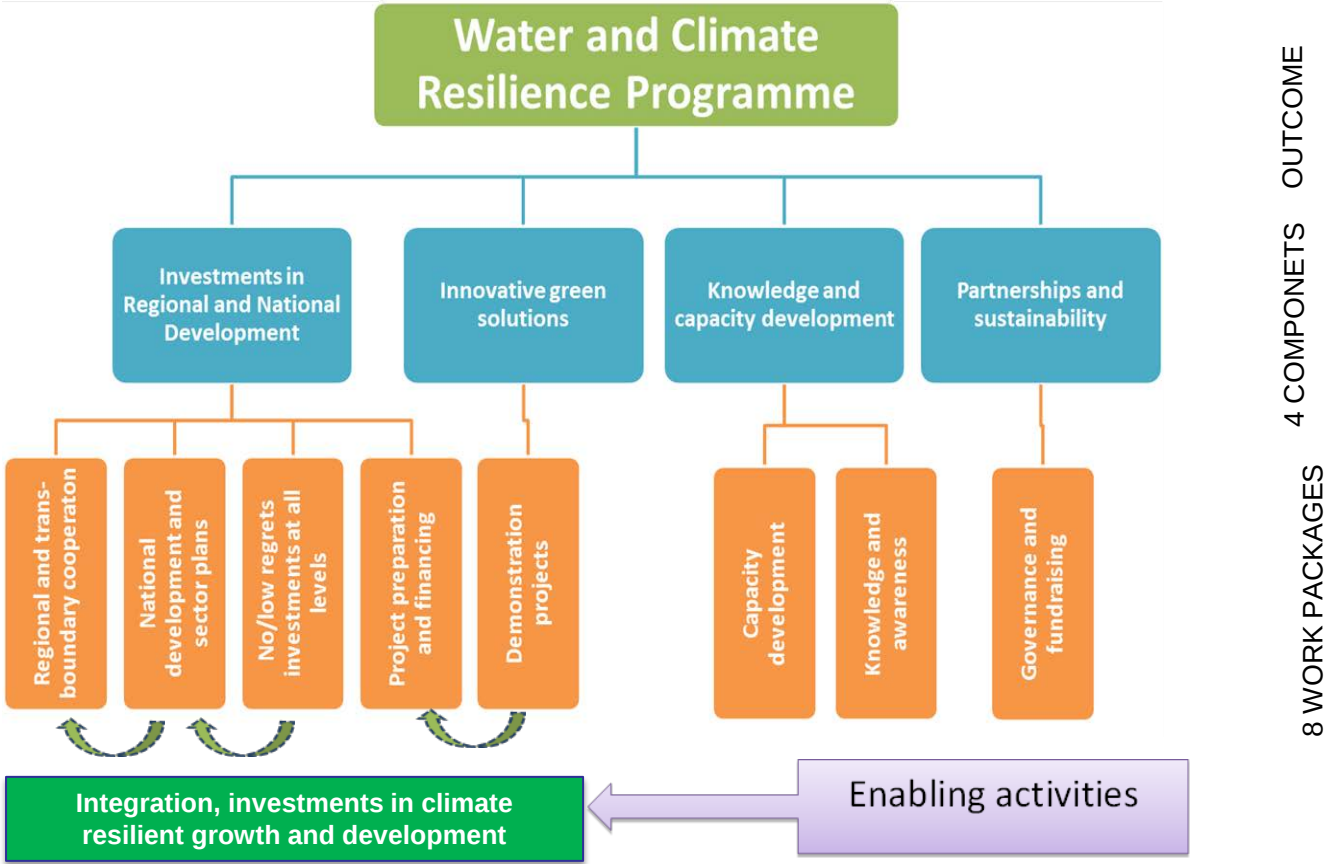
Third Pole regional consultation aims

- Enhanced understanding of the needs for climate services in the priority sectors
- Improved knowledge of the existing interface mechanisms and recommendations for improvements where needed;
- **Clear understanding of capacity development needs to implement the GFCS at regional and national levels;**
- Agreement on the necessary steps to develop a robust plan for the development of climate services for the Third Pole and other high mountain regions; and
- Strategic guidance on **institutional arrangements, partnerships and processes required to operationalize the GFCS** at the regional and national level.

Water and Climate Development Program

- The programme **aims** to integrate water security and climate resilience in development planning processes, build climate resilience, and support countries to adapt to a new climate regime through increased investments in water security.
- The **goal** of the programme is to promote water as a key part of sustainable regional and national development and contribute to climate change adaptation for economic growth and human security.
- The **objectives** of the programme are to support countries in:
 - the integration of water security and climate resilience in development planning processes
 - the development of partnerships and capacity of institutions and stakeholders to build resilience to climate change through better water management
 - the development of “no regret” financing and investment strategies for water security and climate change adaptation.

Program Organization



Country Water Partnership activities under WACDEP

- **PWP: organize capacity development workshops in climate change adaptation and proposals formulation for implementation in climate change impacted areas.**
- **IWP: Climate Resilient Development- A case study of Mashi sub-basin, Rajasthan**
- **SLWP: CCA programme for agency staff/FO Leaders/farmers in irrigated agriculture**
- **SLWP: Film/Clips (2) on CCA, Radio & TV Talk Shows, (4) posters, Flyers, Road Shows, (2) Street Drama for youth/schools, (3) and media events/tours (2).**
- **GWP NEPAL: Assessment of water focused climate adaptation action/s & its integration into local planning process in a selected districts.**

Drought Monitoring Needs Assessment in South Asia

	1 Existence of Drought Early Warning System	2 Capability to contribute to Drought Monitor/ Early Warning	3 Requirement for infrastructural support	4 Rating of usefulness of Drought Monitor/Early Warning System
Afghanistan	No	Very Low – No prediction capability	Very High – Technical and Training Support needed	“Very essential” ✓
Bhutan	No	Very low – daily and seasonal rainfall prediction	Very high – satellite images of moisture contents, hydrological models, forecast products	“Important” ✓
Bangladesh	No	Medium – experience in flood warning, usage of drought prediction tools	High – Technical support and training needed	“Very essential to ensure food security” ✓
Maldives	No	Medium – Experience in flood & rainfall early warning	High – Technical support and training needed	“Very essential to ensure drinking water” ✓
Nepal	No	Low – experience in collecting post-drought information	Very high – more hydro-met stations required	“One of the best initiatives in the region and my country” ✓
India	Yes – especially powerful in certain regions	Very high – experience in usage of different drought indices	Medium – nationalized institution needed who can run a Drought Early Warning System	“Extremely useful and essential” ✓
Pakistan	Yes	Very high – weather radar and GIS spatial integration systems capability to identify drought	Medium – information for specific drought prone areas needed	“Moderate in own country” ✓ “Strong in South Asia” ✓
Sri Lanka	No	Low – capacities exist, but need improvement	Very high – information tailored to the area is needed	“Very useful” ✓

Table: Overview of the responses. Colour scale indicating country capacity:



Outcomes of Needs Assessment Survey SA DMS

- There is a need to shift emphasis from disaster response to risk management: to improve drought forecasting; to establish early warning systems and to improve communication flow
- **No validated system of DM** that could meet the requirement for a high spatial resolution in any of the surveyed countries
- **Challenges** that the countries face at present in drought monitoring are
 - missing access to satellite data
 - insufficient rainfall prediction capability
 - lack of hydrological / meteorological measurement stations
 - shortage of well-trained staff
- **Development of an institutional mechanism** of functional collaboration across ministries and departments at the sub-national, national and **regional/ international level is essential**

SA DMS Approach and Data

1. Development and calibration/testing of the monitoring method, using most advanced drought indices, and multiple (climate, hydrology, RS, in-situ data) data sources: **Phase I**
2. Development of the operational online prototype drought monitoring system: **Phase II**
3. Capacity building (development of detailed Training Manual), customization for national needs and dissemination of the monitoring product in the region: **Phase III**
4. DMS installed in national center(s), - subject to interest and necessary facilities or / and in identified regional Hub: **Phase III**

Concluding comments

- 1. GFCS activities in SA Region has definitely brought general awareness of about climate services and the potential that climate science can bring in the decision making process in water sector**
- 2. There are number of water institutions in the region that have the capacity to put the CSs to operational**
- 3. There is however need for a coordinated mechanism to undertake user interface activities in the region on a regular basis**
- 4. The pilot projects need to be taken to fruition and need to be graduated to operational level**
- 5. Need to have framewro at the regional level**
- 6. A comprehensive capacity development program needs to be started in the region**



Thank you