

Global Framework for Climate Services (GFCS)



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Background

- Society dealing with climate variability, including extreme weather and climate events, such as droughts, floods, heat waves, etc.
 - Global warming, an added complexity
 - Increasing variability
- Climate services can provide useful information about how climate does and may in the future influence society.
- Effective climate services will facilitate climate-smart decisions:
 - reduce the impact of climate-related disasters,
 - improve food security and health outcome,
 - enhance water resource management,
 - many more.

Climate Services

- To be relevant and useful, climate services should consist of:
- **Products** – user-friendly products concerning climate variability and change that include information about the impact of these phenomena on society;
- **Support** – assistance in interpreting those products and, in collaboration with relevant stakeholders, helping identify a sensible set of decision options;
- **Feedback** – on-going communication among stakeholders so that ways of improving products and support can be identified continually.

World Climate Conference-3 in 2009

- Unanimously decided to establish a Global Framework for Climate Services (GFCS)
- Five key challenges have been identified
 - Access to climate services needs to be established and/or improved in all countries;
 - The capacity to deal with climate-related risks is lacking in many countries;
 - Many countries do not have basic climate services.
 - The availability and quality of climate data are inadequate in many parts of the globe;
 - Data gaps in Africa and South America
 - Users and providers need to interact better;
 - The quality of climate services needs improvement to match user requirements better.

Vision of the Framework

- **The vision of the Framework is to enable society to better manage the risks and opportunities arising from climate variability and change, especially for those who are most vulnerable to climate related hazards.**

Goals of the Framework

- **The Framework has five overarching goals:**
 1. Reducing the **vulnerability of society** to climate-related hazards through better provision of climate information;
 2. **Advancing the key global development goals** through better provision of climate information;
 3. Mainstreaming the use of climate information in **decision-making**;
 4. Strengthening the **engagement of providers and users** of climate services;
 5. **Maximizing the utility** of existing climate service infrastructure.

Eight Principles of the GFCS

1. Priority shall go to **building the capacity** of climate-vulnerable developing countries
2. Ensure **greater availability of, access to**, and use of climate services for all countries
3. **Three geographic domains**; global, regional and national
4. **Operational climate services** will be the core element of the Framework
5. Climate information is primarily an international **public good provided** by governments.
6. Promote **free and open exchange of climate-relevant** observational data while respecting national and international data policies.
7. The role of the Framework will be to **facilitate and strengthen**, not to duplicate
8. **Built on user needs** through user – provider partnerships that include all stakeholders

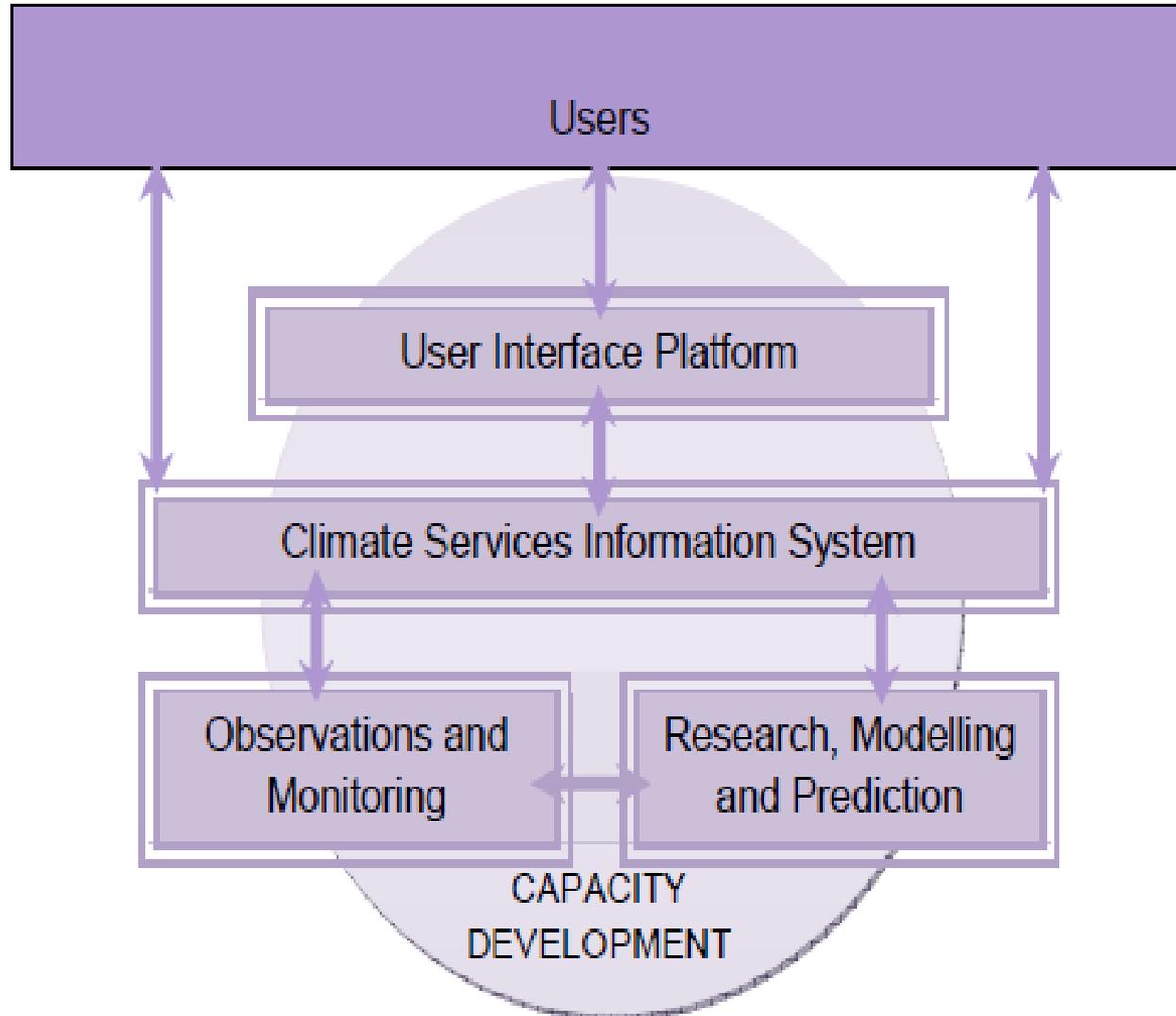
Governance

- The main governing body of GFCS is the **Intergovernmental Board on Climate Services (IBCS)**.
- **Management Committee** that carries out the decisions and requests of the Board during the inter-sessional period.
- The governance structure of GFCS includes the **Partner Advisory Committee (PAC)**, which is the stakeholder engagement mechanisms, and a technical committee.
 - UNDP, UNEP, IUGG, WMO, FAO, EC, World Bank etc

Structure of the Global Framework for Climate Services: Five pillars

- *User Interface Platform*
- *Climate Services Information System (CSIS)*
- *Observations and Monitoring*
- *Research, Modelling and Prediction*
- *Capacity Development*

Structure of GFCS



User Interface Platform

- It is the most novel component.
- Provide ways for climate service **users and providers** to monitor requirements for climate services.
- Provide forum for dialogue to understand needs of users and capabilities of providers.
- Identify products and services requirements of users.
- Increase the literacy of climate service users.
- Monitor user satisfaction with the overall performance of the Framework.

Climate Services Information System

- It is the principal mechanism through which information about climate (past, present and future) is routinely collected, stored and processed to generate products and services.
- Generate, protect and distribute climate data and information according to the needs of users and to agree standards from the global to national levels
- It is the means by which research outputs and technological developments are transformed into improved operational climate information.
- There is need to expand, coordinate and **standardize** operations and products.

Observations and Monitoring

- To ensure that the climate observations necessary to meet the needs of end-users are made, managed and disseminated, supported by relevant metadata.
- High-quality historical and real-time observations and also relevant biological, environmental, and socio-economic variables.
 - Exchange of socio-economic variables
- Monitoring products such as extreme value statistics derived from high-quality climate observations.
 - Development of indices
- Contributions from Global Climate Observing System and the Global Earth Observation System of Systems.

Research, Modelling and Prediction

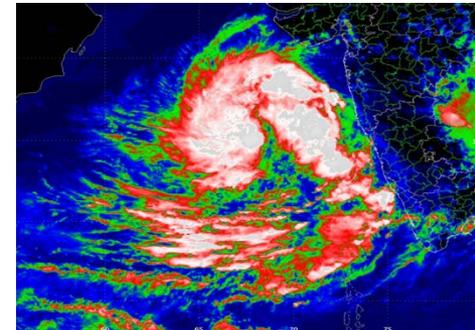
- It fosters research towards continually improving the scientific quality of climate information.
- Will provide an evidence base for determining the impacts of climate change and variability.
- High-quality, reliable observation data and targeted dynamical model outputs will be developed to support the activities of the other pillars.
- Role of World Climate Research Programme (WCRP)

Capacity Development

- *to address the particular capacity development requirements identified in the other pillars and, more broadly, the basic requirements for enabling any Framework related activities to occur.*
- This lack of capacity is found most acutely in many Least Developed Countries, Small Island Developing States and Landlocked Developing Countries where the need for climate services is greatest.

Priority Areas

- **Agriculture and Food Security**
 - Vulnerable to climate variability and climate change and natural hazards.
- **Disaster Risk Reduction**
 - Most natural hazards are caused by weather and climate
- **Health**
 - Understanding linkages of diseases to climate factors



Priority Areas

- Water Resources
 - The amount and availability of water is strongly influenced by climate variability and change.
- Energy (approval pending)
 - Energy generation and planning of operations are markedly affected by meteorological events.



Domains of Operation

Global Level:

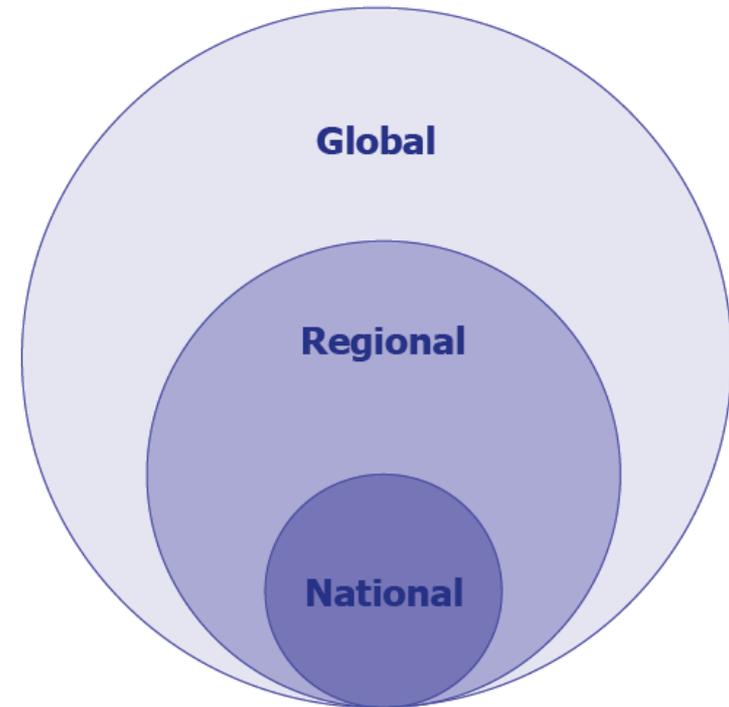
- Produce Global Climate Prediction products
- Coordinate and support data exchange, capacity building

Regional Level:

- Support multilateral efforts to address regional needs
- Regional Climate Forums

National Level:

- Ensure access to data and knowledge products
- Tailor information to user requirements



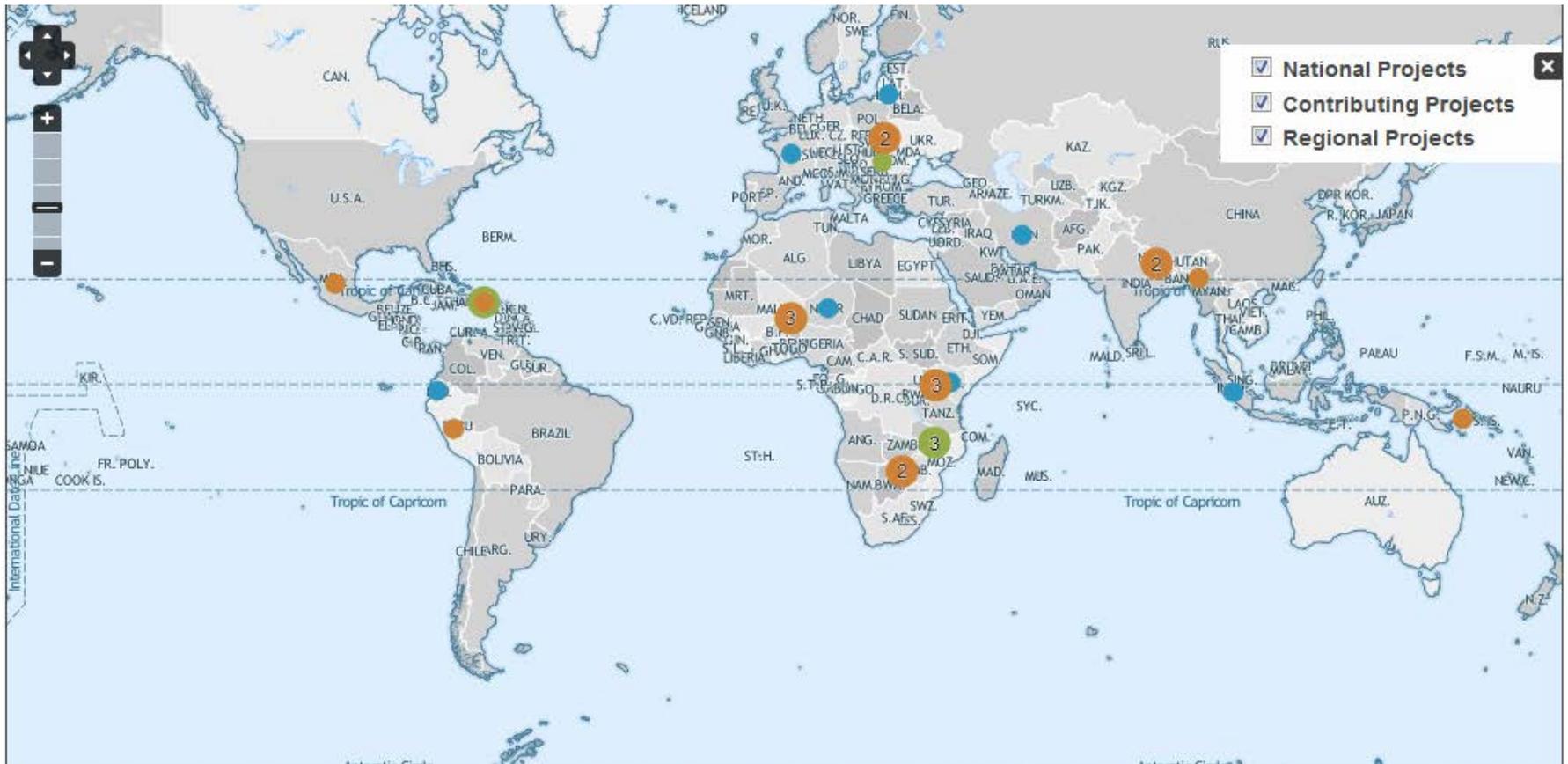
Timeframe

- The Framework is being implemented through **three phases**:
- It sets targets within **2-, 6-, and 10-year** timeframes to facilitate review at the World Meteorological Congress.
- The first two years (**Start up Phase, 2013-14**) will see the establishment of Governance Structure and will focus on developing and delivering services to the four priority areas.
- During the Second Phase (**2015-2018**), it is expected that improvements to climate services in these priority areas will be measurable and that activities in other areas will be initiated as new priorities emerge.
- After ten years (**by 2022**) there will be access to improved climate services throughout the world and across all climate-sensitive sectors.

Achievements in Phase I (2013-14)

- Development of a governance, management and reporting framework through establishment of the
 - Intergovernmental Board on Climate Services (IBCS)
 - Management Committee and (MC)
 - Partner Advisory Committee; (PAC)
- The GFCS office established in WMO to support the governance structure, coordinate GFCS activities and provide support to Members and partners;
- WMO Congress reaffirmed GFCS as a cross-cutting priority at its 17th session;
- Regional and National capabilities were strengthened through targeted programmes;
- Climate services were utilized in several priority areas through demonstration projects in Africa,
- Frameworks for Climate Services were initiated in nine countries;

GFCS Projects



Disclaimer: The depiction and use of boundaries, geographic names and related data shown on maps and included in lists, tables, documents, and databases on website are not warranted to be error free nor do they necessarily imply official endorsement or acceptance by the WMO.

● Regional Projects ● National Projects ● Contributed Projects

40 Projects

Phase II (2015-2018) Activities

- GFCS now is bringing out the **Operational and Resource Plan (ORP) document** of the GFCS.
- During the Phase II, the GFCS will focus on three different, but synergistic objectives.
- These three objectives build on the early successes of the Phase I, scale up implementation to address critical needs in the climate service landscape, and align with the overall goals of the Framework.

Investing in Mechanisms for User Engagement and Service Delivery

ORP Objective	2015-2018 Implementation Strategies	Key Implementation Partners	ORP Expected Results
Investing in Mechanisms for User Engagement and Service Delivery	National. Establishing national legislative and policy frameworks; supporting flagship projects in developing countries	National level government entities, GFCS Office,	Sustained mechanisms are established or enhanced to support effective user-driven climate services at regional and national levels
	Regional. Strengthening regional systems for climate service provision; demonstration projects	Regional Climate Centres, Regional Organizations	
	Global. Coordinate GFCS Governance and Implementation; communication and outreach; feedback and knowledge management; monitoring and evaluation	GFCS Office	

Particular attention will be placed on strengthening and sustaining national, regional, and global coordination and delivery mechanisms.

Supporting Climate Service Applications in the GFCS Priority Sector Areas

Supporting Climate Service Applications in the GFCS Priority Sector Areas

Agriculture and Food Security. Dialogues between the climate and food security communities; support development and implementation of tailored climate services

Disaster Risk Reduction. Develop and implement climate information support for risk analysis, risk reduction and financial protection; support implementation at national level of national DRR strategies

Energy. Coordination office; building climate-energy community through capacity and partnership development; provide technical inputs needed by the energy sector

Human Health. Technical support unit and health user-interface; National Climate and Health Working Groups; Health Protection from Hazardous Air Pollution

Water Resources. Help Desks for flood and drought management; projects on flood management and water security;

WFP, FAO, NMHSs, national agricultural ministries,

UNISDR, national disaster ministries, NMHSs

IRENA, UN-Energy, WEC, IEA, WBCSD, WEMC, SE4ALL, national energy ministries

WHO, WMO, national public health ministries

GWP, UN-Water, IDMP, APFM WMO, NMHSs,

Decision making and investments in climate sensitive sectors are improved through the support of climate services

Support the application of climate services for decision-making in the five climate-sensitive GFCS priority sector areas.

Enhancing Core Technical and Scientific Capabilities for User-Driven Climate Services

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Climate Services Information Systems. Climate Outlook Forums; Climate Services Toolkits; links to Global Production Centres and the WMO Information System; Climate Watch Systems

Observations and Monitoring. Baseline networks; data recovery; precipitation measurements and networks; climate system monitoring

Research, Predictions, and Modeling. Research-based climate observations and data set development; Predictions across all time scales, coordination of research activities.

Capacity Building. Identify Capacity needs; support development of national CSIS and regional climate centers; training climate service practitioners and users; technical expertise exchanges

WMO Commissions (CCL, CBS, CHy, CAgM), Regional Climate Centers

WMO Commissions (CCL, CBS, CHy, CAgM), JCOMM, GCOS/GOOS

JCOMM, WCRP, UNESCO institutes, PROVIA, CSP, IRI, RCCs

WMO Commissions (CCL, CBS, CHy, CAgM), WMO-ETR and partner institutions, UN organizations

National needs are met through enhanced skills, processes, tools and technologies that enable and support climate service delivery

Criteria for GFCS Projects

1. Are aligned with at least one of the Framework's priority areas.
2. Have a strong climate service focus, with operational services as a core element.
3. Ensure that their outcomes will address the needs of decision-makers and users of climate services, and therefore build the User Interface Platform.
4. Develop national or regional capacities
5. Ensure that the project strengthens and supports existing activities and doesn't duplicate.

Criteria for GFCS projects

- 6) Involve, or contribute to activities in regions or countries highly vulnerable and sensitive to climate-related risks.
- 7) Have strong prospects for successful delivery
- 8) Ensure the country or region in which the project is being implemented has demonstrated interest and commitment for successful delivery
- 9) Are implemented at the national, regional or global domain.

Thanks