

World Meteorological Organization

Working together in weather, climate and water

THE GLOBAL FRAMEWORK FOR CLIMATE SERVICES (GFCS)

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http://www.wmo.int/pages/gfcs/gfcs_en.html



Concern...





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• Many countries lack the infrastructural, technical, human and institutional capacities to provide high-

Infrastructural Capacities of Countries as of Aug 2010 to provide Basic, Essential, Full and Advanced Climate Services.





Infrastrucal Capacity Category



Concern...

Climate services do not get to the "last mile" to those who need them the most.







Need for a coordinated and integrated approach

- GFCS is a global collective effort being built in collaboration with UN family, partners and stakeholders
- Need to address the full value chain from observations, research, products development to service delivery involving various actors
- WMO with its Members, bodies and co-sponsored programmes will provide only a component needed to build the framework





Partnerships are key for success of GFCS



The purpose of the GFCS





Enable better management of the risks of climate variability and change and adaptation to climate change, through the development and incorporation of science-based climate information and prediction into planning, policy and practice on the global, regional and national scale





The 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, which will have a central role in its management through the Framework
- 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



The GFCS short term priority areas

- ✓ Water
- ✓ Disaster risk reduction
- ✓ Health
- Agriculture/food security













Innovative mechanism that will:

- 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
- Indentify products and services requirements of users
- Increase the literacy of climate service users
- Monitor user satisfaction with the overall performance of the Framework

Users, Government, private sector, research, agriculture, water, health, construction, disaster reduction, environment, tourism, transport, etc









 Generate, protect and distribute climate data and information according to the needs of users and to agree standards from the global to national levels





- Collect data to meet service provision needs as identified by the UIP and research needs
- Develop agreements and standards for generating necessary climate data





PLANET

2 MARCH 26-29 LONDON

Future Earth - research for global sustainability

The pillars of the GFCS

- Further understanding of the climate system dynamics and change
- Engage in multidisciplinary research focusing on human vulnerabilities to changes, socio-economic impacts and adaptation options
- Engage in research to respond to needs emanating from UIP
- Translate scientific advances into applications and tools to address user needs





• Support the systematic development of the institutions, infrastructure and human resources needed for effective climate services







Domains of operation of GFCS

Global Level (GPC)

- Produce global climate prediction products
- Coordinate and support data exchange, major capacity building initiatives
- Establish and maintain standards and protocols





Domains of operation of GFCS

Regional Level (RCC)

- Support multilateral efforts to address regional needs
 - Regional policy, data exchange, infrastructure dev, research, training at service provision
- e.g., RCOF
 - Focused on providers
 - Need more linkages with research



Critical for capacity building requiring resources beyond a single nation



Domains of operation of GFCS

National Level (NCC)

- Ensure access to data and knowledge products
- Tailor information to user requirements
- Ensure effective routine use of information
- Develop sustainable capacities





Development of the Research Pillars of the GFCS





HLT recommendations

RM&P component to:

• Improve understanding of climate

• Develop core prediction tools, applications, products foe development & improvement of climate services



WCRP Grand Challenges

- Provision of skilful future climate information on regional scales (includes decadal and polar predictability),
- Regional Sea-Level Rise,
- Cryosphere response to climate change (including ice sheets, water resources, permafrost and carbon),
- Improved understanding of the interactions of clouds, aerosols, precipitation, and radiation and their contributions to climate sensitivity,
- Past and future changes in water availability (with connections to water security and hydrological cycle), and
- Science underpinning the prediction and attribution of extreme events.



Objectives of the RM & P of GFCS

- Enhance through the UIP, the two-way interaction of the research community with climate information users in different sectors social and natural scientists, private sector, NGOs, etc.
- Maximize production of partnership-based socially-relevant climate science information by proactively targeting the research towards developing and improving multiple practical applications and information products and satisfying the identified requirements of climate information users at the current science and technology readiness level
- Improve on a sustained basis the understanding of the functioning and predictability of the Earth's climate, impacts of its variability and change on people, ecosystems and infrastructure,
- Enhance the science readiness level for core climate projections/predictions, and substantiated climate information products.



Scope of the GFCS RM&P

- Ensure both fundamental and applied climate research;
- Address all components of the Earth System, including the role of humans and their significant interactions;
- Deliver climate information at global to national, and local levels with corresponding scaling up and down both in time and space, and characterizing the uncertainty of such information for users;
- Promote research on the development of the relevant Earth observations, field experiments, and production and validation of relevant datasets
- Provide policy relevant, but not policy prescriptive information; and
- facilitate research capacity development at the global, regional, and national levels.



Key priorities

- improving the availability of regularly updated standardized climate diagnostic and prognostic information, which can be characterized as infrastructural development and building on commitment of science to deliver through GFCS
- focusing climate research on delivering sustained improvement of climate information identified as feasible and most needed in the four priority areas of GFCS implementation
- supporting applied climate research for developing practical applications for the four near-term GFCS priorities through pilot and demonstration projects that bring together all five elements of the GFCS with a primary focus on integration and delivery of best climate information to users and decision makers.



Requirements for Successful Implementation of RM&P Pillar

- Active engagement of the climate science community in coordinated and targeted research on and development of all GFCS elements
- Adequate funding, human resources, and computing / data transmission and information technology support
- Availability of observations for climate variables that result in representation in models, their initial conditions, and forcing functions of identified known and predictable processes and phenomena
- Effective user feedback on products enabled by RM&P pillar, including through CSIS and UIP, and engagement in development of their capacity to effectively apply the climate information to addressing their requirements, which involves efforts to produce corresponding data and services on the user side, in all GFCS sectors
- Partnerships at global, regional and national levels.



Milestones

- <u>Aug 2011 to date:</u> Consultations under pillars and priority areas of GFCS
- <u>28 Feb 1 March</u>: 2nd Meeting of ECTT-GFCS
- <u>8 19 March 2012:</u> Review of Zero Order drafts by experts and ECTT members
- <u>25 June 3 July</u>: Consideration of the 1st Draft in the 64th session of the Executive Council
- <u> $1^{\text{st}} \frac{1}{2} \text{May} 15 \text{ July:}$ </u> Open review of 1st Drafts of IP and governance documents
- <u>6 August:</u> 2nd Draft the Implementation Plan, governance mechanism and Annexes available on Web
- <u>6-21 August</u>: Open review of 2^{nd} Oder drafts and Annexes
- <u>21-23 August 2012 :</u> 3rd meeting of the ECTT-GFCS
- <u>31 of August:</u> Final document of the implementation plan, governance mechanism and rules of procedure
- <u>17 September</u>: Final documents of the Implementation plan, governance mechanism and rules of procedure and annexes available on the website
- <u>26 27 October 2012</u>: Climate Services user Conference
- <u>29 31 October 2012</u>: Extraordinary Congress



Thank You

