Linking the GFCS with CORDEX

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Vision

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.
Partnerships

UNDP
EUMETSAT
EUROPEAN COMMISSION
FAO
Global Water Partnership
NORWEGIAN REFUGEE COUNCIL
International Union of Geodesy and Geophysics
IUGG
Union Géodésique et Géophysique Internationale
UNEP
UNITAR
United Nations Institute for Training and Research
WMO
WMO OMM
wbcspd
WFP
UNISDR
The United Nations Office for Disaster Risk Reduction
GFCS
GLOBAL FRAMEWORK FOR CLIMATE SERVICES
WORLD BANK
wfp.org
Pillars of the GFCS

Users, Government, private sector, research, agriculture, water, health, construction, disaster reduction, environment, tourism, transport, etc.
From Global to National

Global

Regional

National
Climate information needs of users and related knowledge gaps

**Decision-making process and user information gaps**

1. **Strategic ahead-of-season planning** (1-12 month lead time)
   - Trend/frequencies of rainfall/temperature over next 5-10 years

2. **Risk monitoring and management: intra-season operations** (1wk to 40 days range)
   - Timing/duration/intensity of dry/wet spells

3. **Longer-term strategic planning/policy development** (next 1-10 years)
   - Trends/frequencies of rainfall/temperature over next 5-10 years

4. **Climate change adaptation policy development/planning** (next 50 years)
   - Robust climate change projections
   - Information on the role of climate change in observed events

**Climate Research Frontier**

1. **Improving Seasonal prediction**
   - Remote drivers of variability (SSTs, teleconnections, MJO, etc)
     - Local drivers of variability (land-atmosphere coupling)

2. **Sub-seasonal prediction**
   - Improved understanding of sources of sub-seasonal predictability

3. **Decadal prediction**
   - Drivers of decadal and multi-decadal variability (AMO, PDO)
     - Role of aerosols

4. **Climate change scenarios**
   - Earth System Modelling
   - Attribution methodology
   - Understanding Uncertainty
Climate information needs for end users and related knowledge gaps

Decision-making process and end-user information gaps

5 Assessing current vulnerability due to recent climate events
Lack of ‘impacts’ datasets (e.g. crop yields, river flows, health/hospital admission statistics) to aid development and targeting of applications models

6 Decision making at local scales
Detailed climate services (geographically)

7 Estimation of the impacts of climate variability and change

8 Mainstreaming climate services for all timescales

Climate Research Frontier

5 Observation / database development
-Enhancing the observations network for both biophysical and socio-economic climate variables;

6 Downscaling
• understanding and improvement of the downscaling process
• quantification of benefits and uncertainties to users

7 Applications modelling
Improved understanding/ modeling of climate impacts on hydrology, food security and crop yields, health

8 Communication and climate service provider/user interactions
• Improving availability/usability of services
• strategies for bridging the gap between service providers and end users
Research, Modelling and Prediction

Gaps

• Communication between communities of scientists and practitioners
• Last mile between science products and service-oriented climate information
• Lack of seamless suite of climate products for contiguous time scales from weather to centenial climate projections
• Limited or unknown predictability for a range of key time-space scales
• Dealing with uncertainty
Research, Modelling and Prediction

Objectives

• Improve understanding of Earth’s Climate and assess impacts of climate variability and change on people, ecosystems and infrastructure

• Enhance interaction and cooperation between researchers and climate information users

• Target research towards developing and improving practical applications and information products in the four priority areas

• Enhance science readiness level for production of climate projections, predictions and user-tailored climate information products
Key priorities

- Improving the availability of regularly updated standardized climate diagnostic and prognostic information;

- Focusing climate research on delivering sustained improvement of climate information identified as feasible and most needed in the five 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.
Linking GFCS - CORDEX

• Capacity development
  – Research priorities
  – Projects
  – ECS

• Collaboration of CORDEX domains with RCC
Data or information?
Thank you for your attention