



Research Gaps and Needs to Address GFCS Priority Areas in Africa

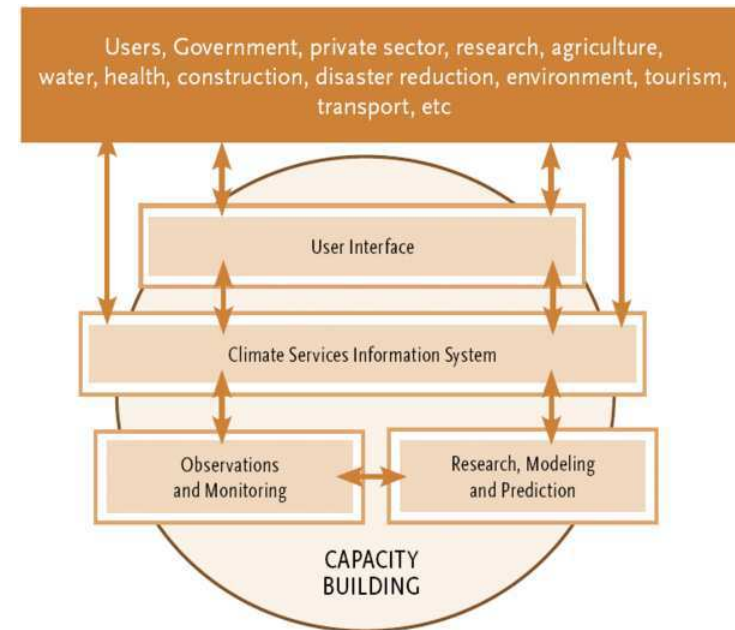
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The GFCS

Goal

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

GFCS requires **User Interfaces** to determine the observation needs, research and capacity development for production of effective climate services to meet the rapidly growing need for science-based climate information by a wide range of socio-economic sectors.



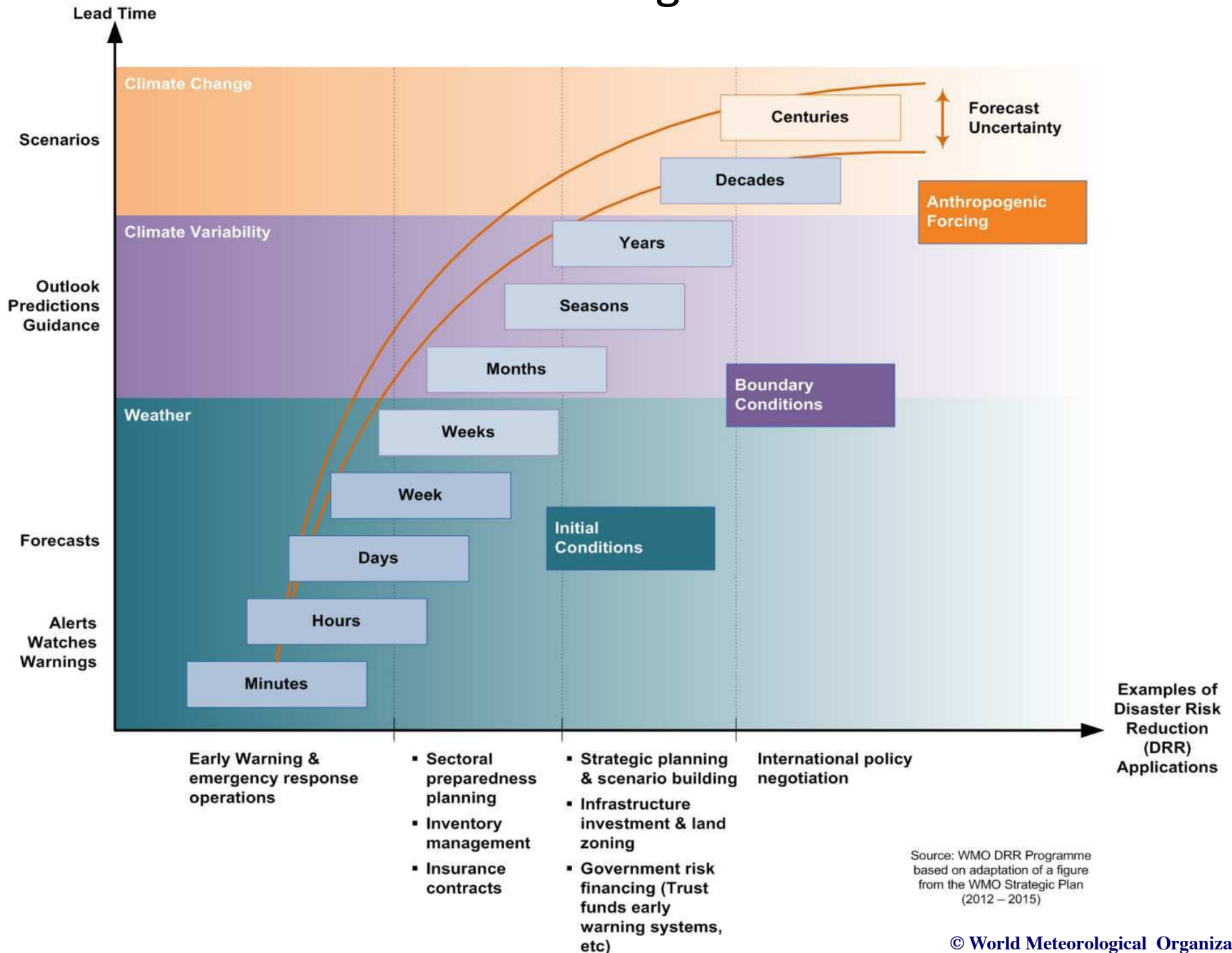
Initial Priority Areas of the GFCS



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

Seamless Meteorological and Climate Services



However there are Gaps...

- **Actionable** climate information and services based on sound science
- **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 centennial climate projections
- **Limited or unknown predictability** for a range of key time-space scales
- Lack of comprehensive approaches and experience in dealing with **uncertainty**
- **Training** and development of next generation of scientists and decision makers information

Priorities

- Climate predictability and prediction on **subseasonal to seasonal time scales**
- Climate predictability and prediction on **decadal to centennial time scales**
- Characterizing and communicating **uncertainties in climate information** for climate risk, adaptation, and mitigation **decisions**
- **Research on climate observations**, change detection, and development of climate data records
- **Attribution and prediction** of extreme events

Initial activities

- **Strengthening planning and coordination** of present and future research strategies and virtual forums supporting them, engaging sponsors
- **Bridging communities** producing experimental and regular climate information
- **Research in support of core climate products** including subseasonal to seasonal predictions, decadal and centennial predictions

GFCS implementation priorities

- **Capacity development:**
 - Linking climate service users and providers.
 - Developing national capacity in developing countries.
 - Strengthening regional climate capabilities.
- **High-profile projects** to address gaps across pillars and priority areas;
- **Observations and data recovery** in data sparse areas;
- **Partnerships across sectors and disciplines** for addressing gaps and priorities;
- Governance, leadership and management capacity to take the Framework forward.

Success Criteria

- Active **engagement** of researchers from the climate, applied and social sciences
- Identifying and **engaging partners in co-design, development and implementation** of activities
- Mobilizing **resources** for implementing activities through active engagement of relevant stakeholders
- **Capacity development** to support training and education of **scientists** and establishing **research networks**
- Continuity of key Earth system **observations for process understanding, modeling and analysis**
- Creating **an environment** to engage scientists to work together on co-design, development and delivery of products and services



Thank you for your attention

What are Climate Services?

- The accumulation of knowledge about the past, present and future of the climate system;
- The development and delivery of a range of "products" and advice based on this knowledge about the past, present and future climate and its impacts on natural and human systems
 - Historical climate data sets
 - Climate monitoring
 - Climate watches
 - Monthly/Seasonal/Decadal climate predictions
 - Climate change projections
- The use and the effective application of these products to help achieve the desired results.



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