



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



**Agriculture and
food security**



**Disaster risk
reduction**



Water



Health



Energy

Partnerships



NORWEGIAN
REFUGEE COUNCIL



EUMETSAT



EUROPEAN
COMMISSION



International Union of Geodesy and Geophysics



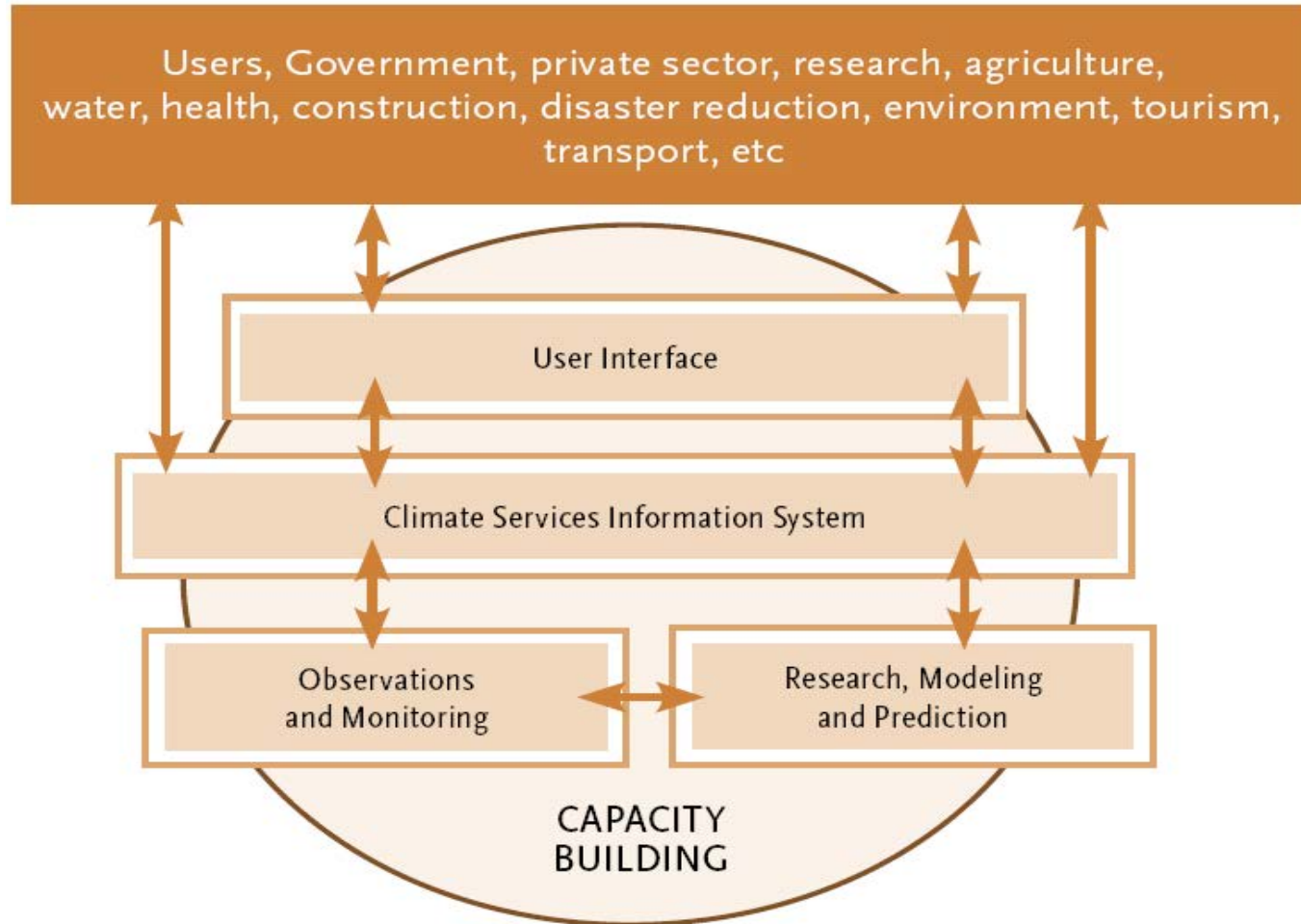
Union Géodésique et Géophysique Internationale



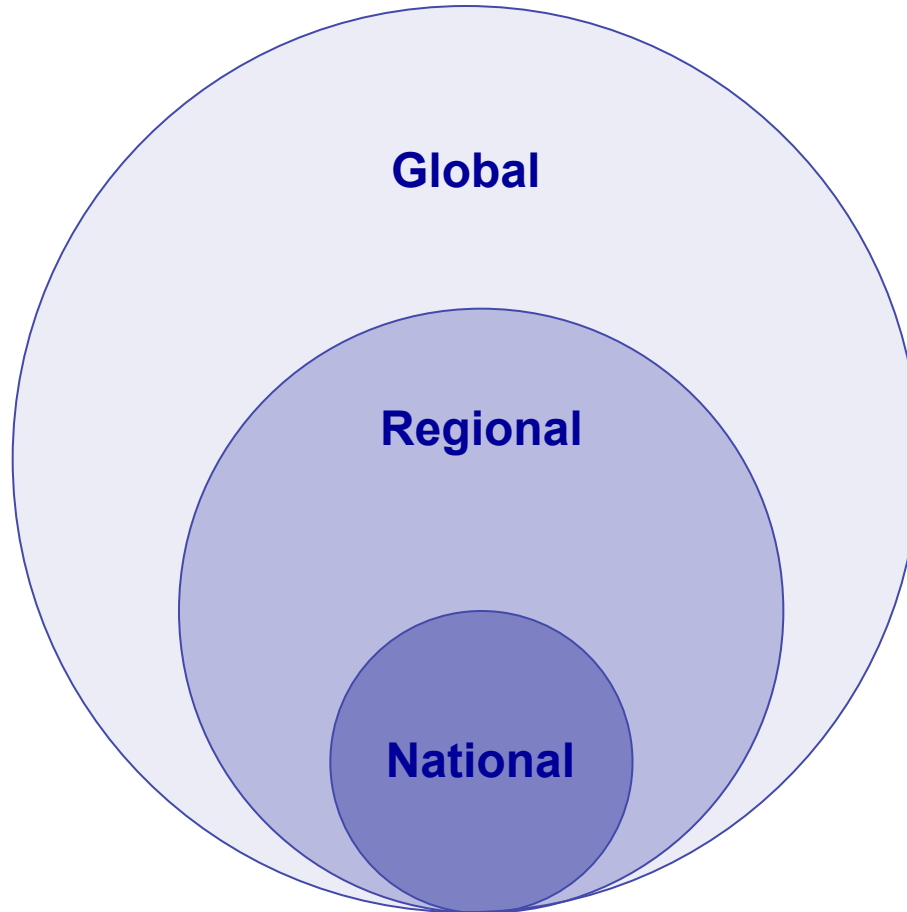
UNEP



Pillars of the GFCS



From Global to 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)

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 centennial 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

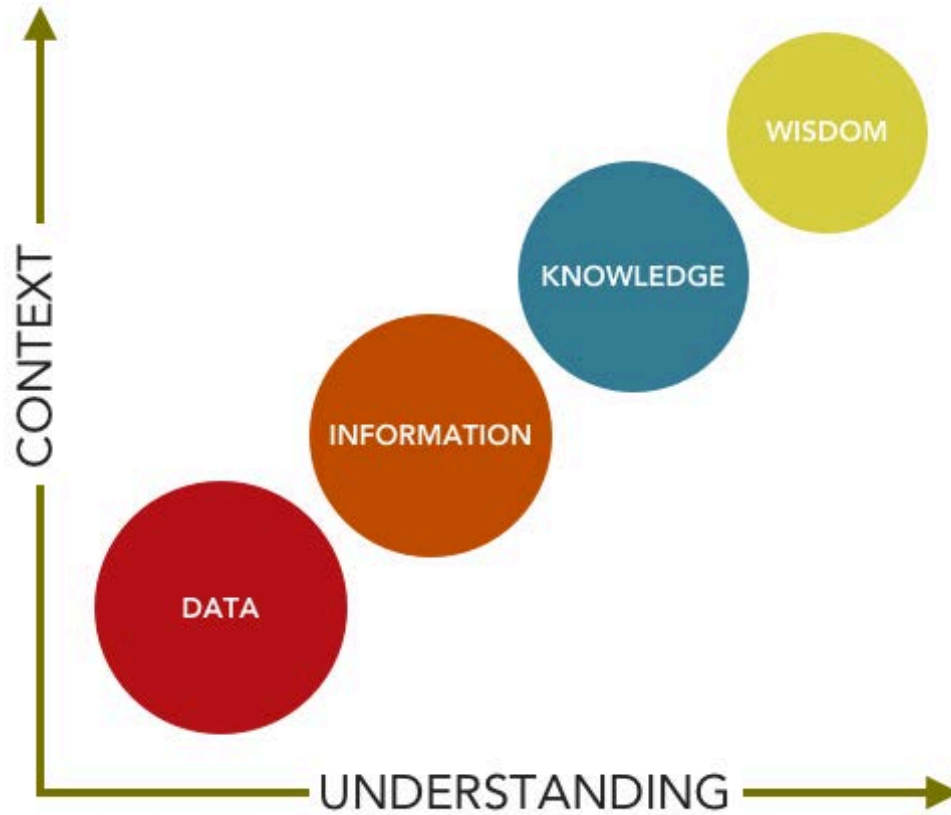
Key priorities

- 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