

Regional approach for implementation of Climate Services Information System

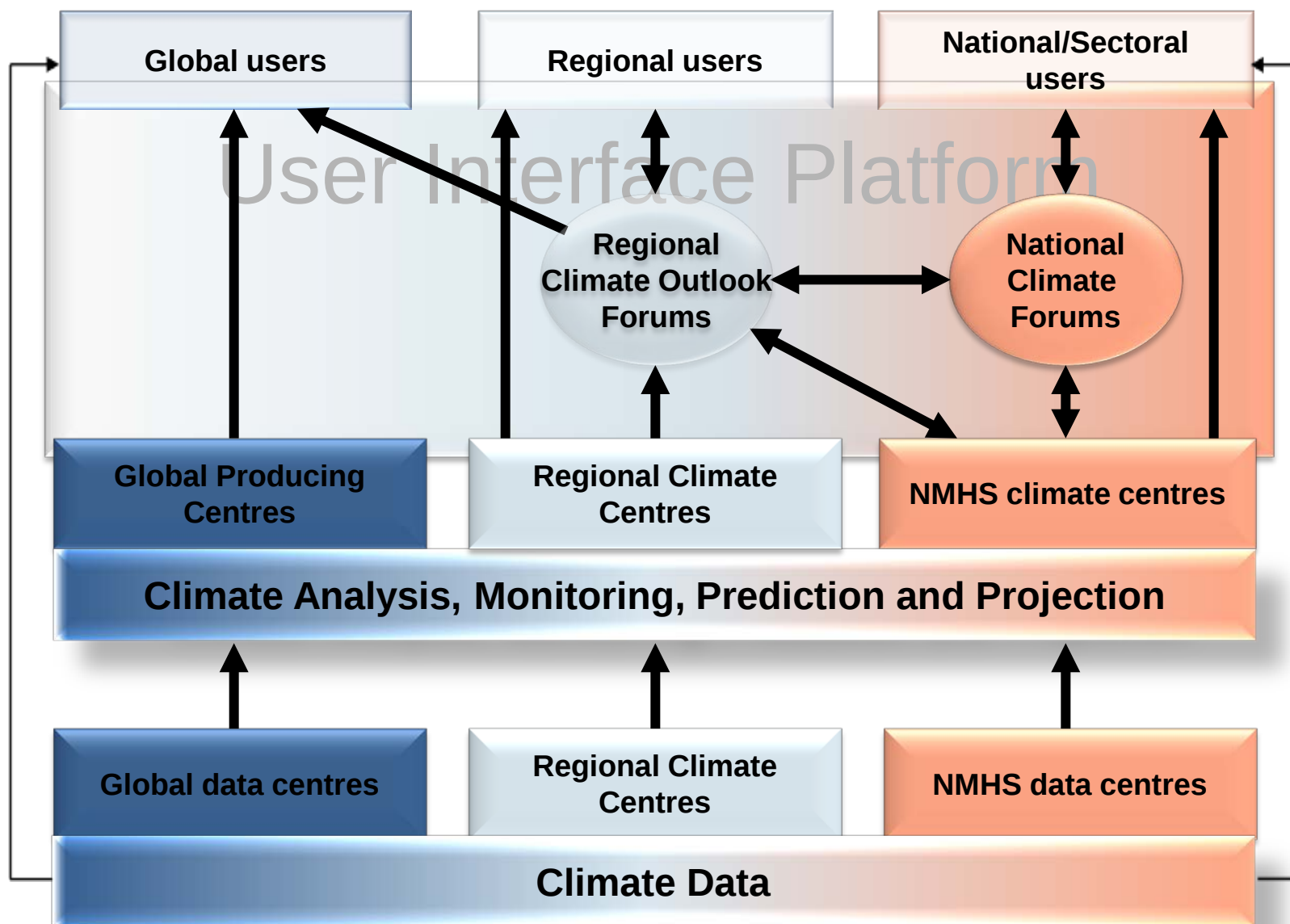
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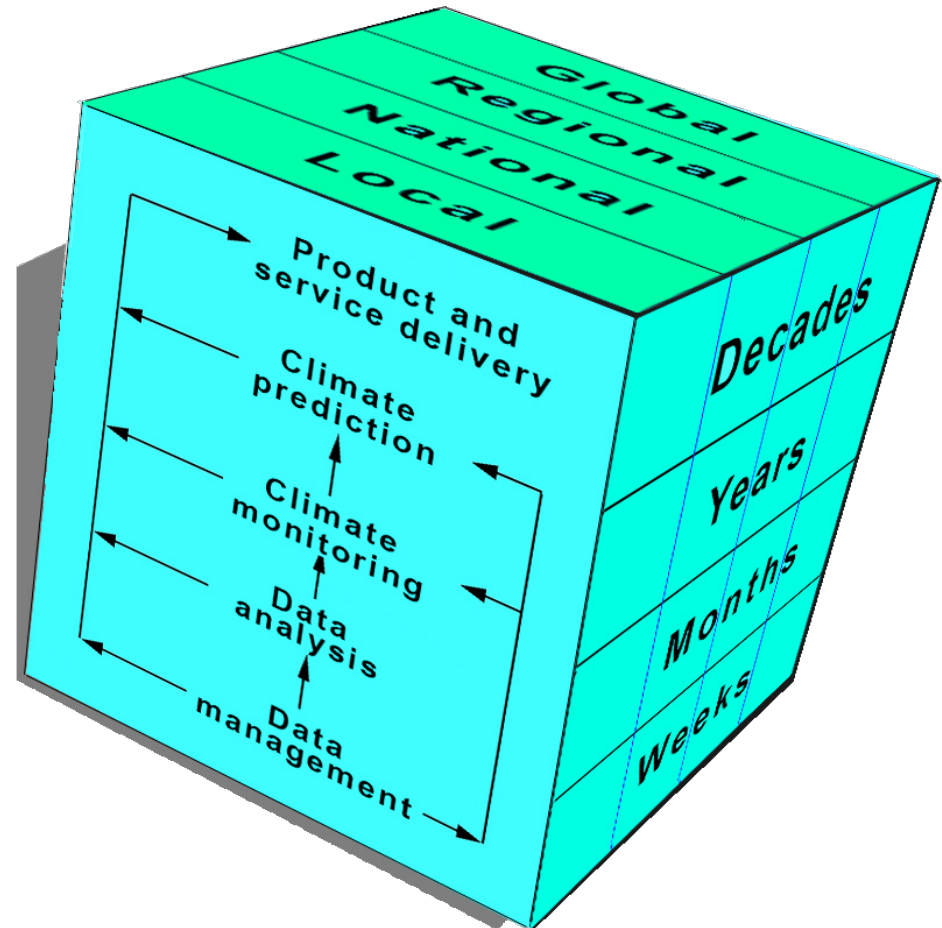
World Meteorological Organization
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CSIS Infrastructure Layout



CSIS Implementation Strategy

- Developing and implementing CSIS architecture
 - Functional descriptions and product development (Data/Monitoring/Prediction/Projection)
 - Operational infrastructure: GPCs, RCCs, RCOFs, NMHSS, NCOFs/NCFs
 - Climate Services Toolkit
 - Capacity Development



Regional Context: ENSO Focus

- The recent very strong El Nino event of 2015-2016 has renewed interest and awareness in the phenomenon
- ENSO is a major source of predictability in regions with climate teleconnections, making them good candidates for demonstrating the value of climate services
- A focus on El Nino can be attractive to partners who otherwise might not be paying attention to hydrometeorological issues and climate services



Regional Demonstration Rationale

- The country-focused results based framework for WMO contributions to the GFCS focuses on creating the regional delivery systems, tools and methods, and national capacities for improving climate-related outcomes
- A focused regional effort would facilitate systematic strengthening of early warning services in a comprehensive manner that would help countries in the region achieve this goal, with facilitated access to regional information as an essential input for national climate services
- The approach can be demonstrated in a few target regions and up-scaled to other regions

Motivation

- Climate drivers such as ENSO strongly affect regional climate, and present a high degree of predictive potential associated with anomalies such as ENSO events
- Several regions across the world have long experience with ENSO, which facilitates communication at all levels
- Considerable planning has already been done in regions, on how to provide early warning information and services on multiple timescales



Regional Consolidation of Investments

- Considerable investment in the relevant institutions needed for seamless multi-hazard early warning has already been made (e.g., RCCs/RCC-Networks already in place or coming up shortly)
- WMO has access to extra-budgetary funding (e.g., through CREWS and potentially through GCF), and additional investments could be available in related projects under implementation by partners, creating significant leveraging potential
- The approach developed through demonstrations in regions with immediate access to funding can be adapted to others

Potential Elements: Data

- Observations, historical data and information management
 - Strengthened observing systems and integration of observations at all levels
 - Data rescue
 - Improved historical time series/reanalyses
 - Strengthened climate data management systems
 - Integration of data, tools and products among global, regional and national centers using WIS and GDPFS



Potential Elements: Prediction

- Seamless prediction
 - Objective regional seasonal and sub-seasonal forecasting systems (EC-69, Decision 4.5/4)
 - Downscaling and tailoring sector applications in countries with potential CREWS funding availability
 - Strengthened severe weather, typhoon and flood warning systems
 - Sub-seasonal forecast bundles
 - Downscaled regional projections of key variables



Potential Elements: Service Delivery

- More systematic provision of monitoring products
- Strengthened alerting systems using the Common Alerting Protocol
- Tailored products for risk management in sensitive sectors including marine services (e.g. coastal inundation, fisheries)

Generalized Project Template for Regional CSIS Implementation

- **Description:**
 - A tiered network of service providers will be implemented that collectively fulfil the minimum CSIS functions as per attached draft technical framework
- **Objective:**
 - To underpin national and regional climate service delivery based on UIP requirements
- **Benefits:**
 - End users will be able to access a full suite of climate services covering all timescales from historical past to future;
 - NMHS will be empowered to provide relevant climate services
- **Outputs:**
 - Tailorable quality climate data, state-of-the-art climate diagnostics and statistics, forecasts and projections
- **Activities:**
 - Assessment and implementation plan
 - Implementation of tools and infrastructure as appropriate
 - Training as appropriate
- **Inputs:**
 - Appropriate funding and international expertise
- **Partners:**
 - NMHSs, RCC, research community, producers of climate information (public and private sector), users



Basic Building Blocks

- Implement CSIS minimum functions
 - Data (historic, present, future)
 - Monitoring
 - Prediction (monthly to decadal)
 - Projection
- Implement additional CSIS functions to underpin demand-driven services
- Implement Climate Services Toolkit
- Integration with relevant WMO formal mechanisms
 - GDPFS
 - WIS
 - WIGOS
- Partnerships
- Aspects of seamlessness
- Capacity development
- A regionally tailored project needs to:
 - Make sure that all above elements are identified and in place and fully operational
 - Make sure that all interfaces between the above elements are identified and established and allow for a lively information exchange



Thank you



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