

GFCS Background, current status, NFCS implementation

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“Climate Services”?

Climate services are the provision and use of climate information to assist decision-making

Climate information is being used in decision-making and risk management world-wide

- Must respond to user[†] needs
- Need to be based on scientifically credible information and expertise
- Require appropriate engagement between the users and providers with an effective access mechanism

[†] Users could include policy makers, decision makers, governments, public sector, private sector, general public, ...



Climate services – timescales of interest

1. Past and current climate

observations and monitoring, climatologies

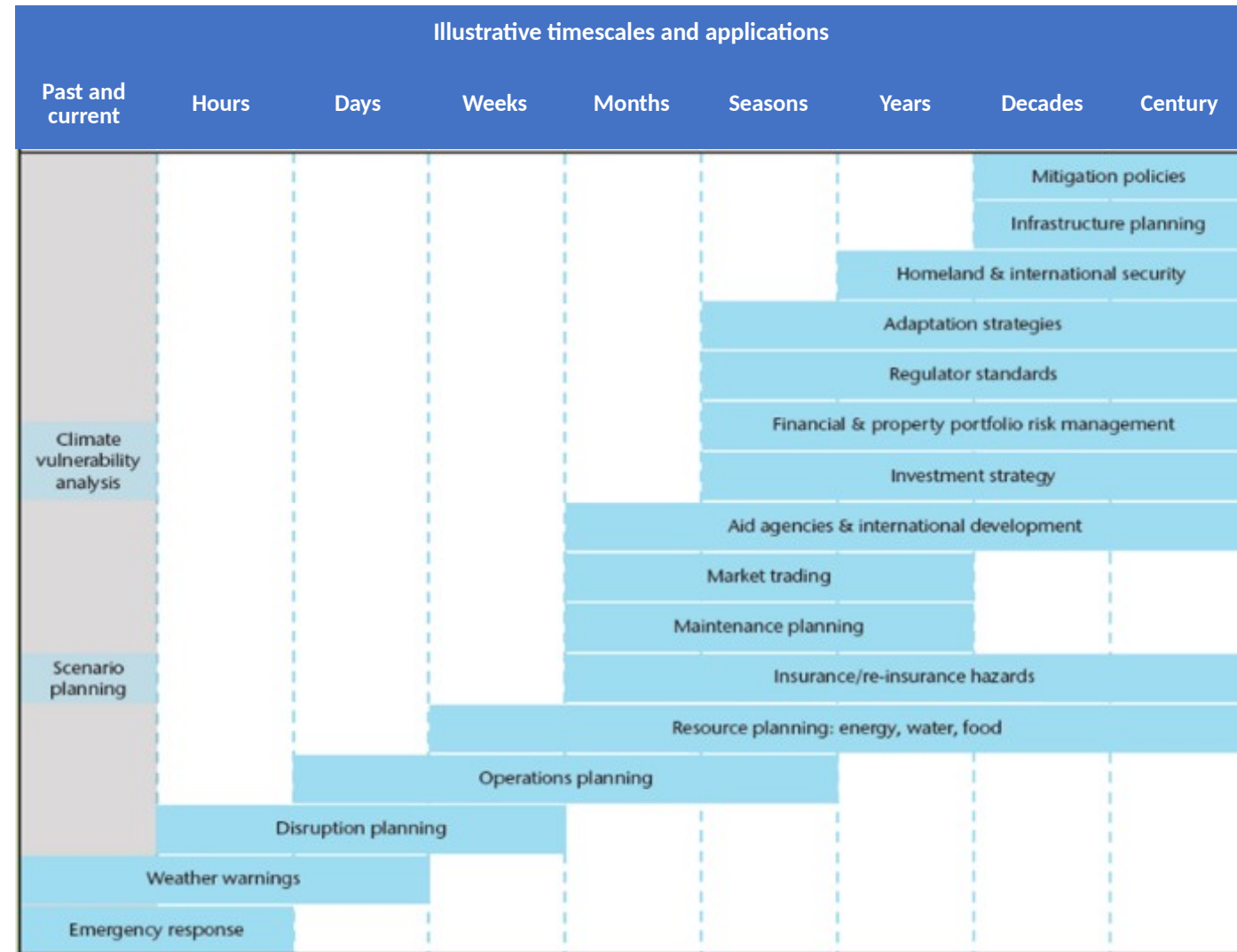
2. Near-term future climate

month-season-decade predictions

3. Long-term future climate

multi-decadal projections

Often an overlap with weather services

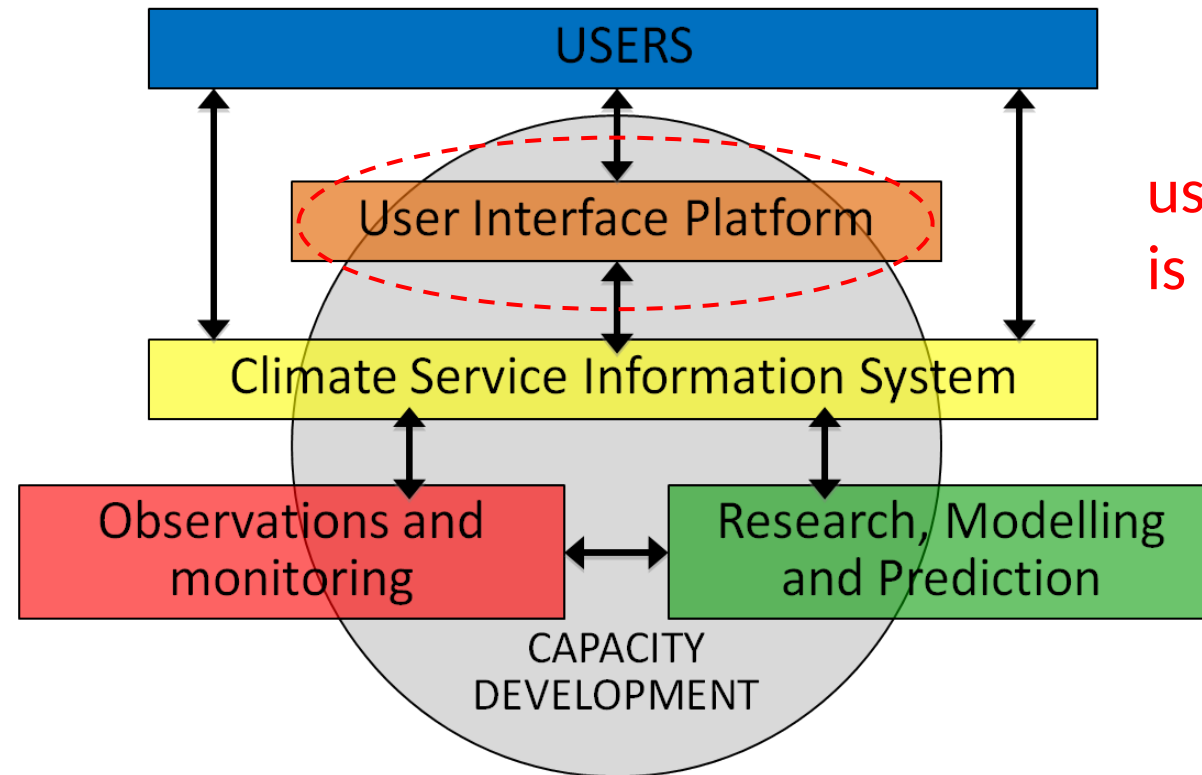


Global Framework for Climate Services (GFCS) – 2012-2022

Vision: enable society to manage better the risks and opportunities arising from climate variability and change.
Using science-based climate information

Priority areas:

- Agriculture and food security
- Water resource management
- Health
- Disaster risk reduction
- Energy



Vision: enable society to better manage the risks and opportunities arising from climate variability and change

1

Strengthen climate service capacity and capability, particularly in NMHS

- Improve availability of, access to, and use of, climate information, providing scientific and technical support
- Establish National Frameworks for Climate Services, and National Climate Fora, and link to regional structures



2

Support climate policy and finance with authoritative scientific information

- Produce regular reports and advice to support adaptation and mitigation (such as Global and Regional State of Climate Services reports; State of Climate Services; ENSO Bulletins; Climate Updates. Build on IPCC knowledge)
- Provide tools and expertise to help incorporate climate science into actions and investments



3

Develop Standards, Quality Management and Training

- Assess and develop Climate Service capacities (basic \leq essential \leq full \leq advanced) and needs
- Produce guidance on standards and competencies (through WMO's SERCOM and INFCOM)



4

Develop the climate services value chain/cycle

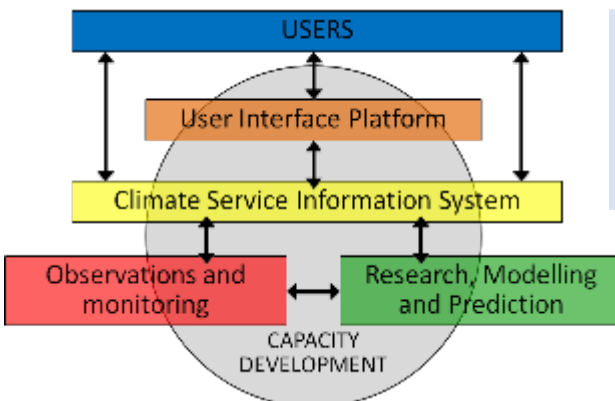
- Scientific capability (including Obs., data, WCRP) \rightarrow climate services information \rightarrow user engagement
- Generate value and enable actions



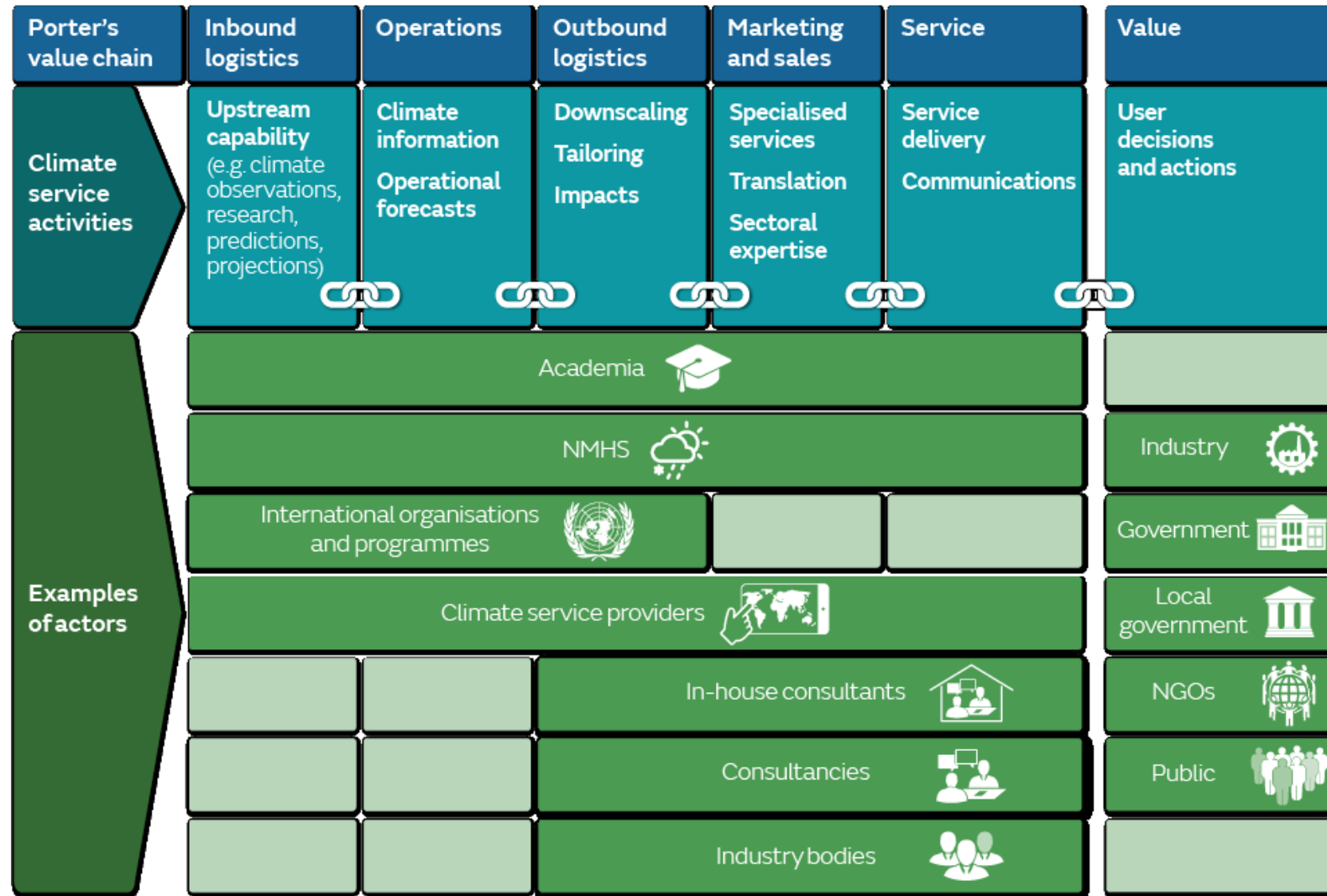
5

Improve visibility and effectiveness of GFCS, promote coordination

- Climate services are essential for society. Needs global-regional-national coordination
- Provide a forum for stakeholder communication, knowledge sharing, collaboration



The climate service actors – a *value chain* view



WMO Expert Team on user engagement for climate services

- Identify and evaluate examples of user engagement for the provision of climate data, products and services
- Publish guidance on good practices, with case studies of good examples



WHAT ARE THE USERS' NEEDS?

Multiple Interfaces for User Engagement and Informing Decisions

- Bespoke services
- More intense interaction
- Highly iterative
- Directly usable data
- One-to-one contact
- In-depth understanding

- Multi-way communications
- Build trust
- Co-learning
- Co-producing
- Capacity-building
- Regular interaction

- One-stop shop window
- Up-to-date
- Wide range of products
- Easy to use
- User guided design
- Intuitive

ACTIVE ENGAGEMENT

Focused Relationships

Tailored & Targeted

Interactive Group Activities

Dialogue Based

Websites & Web Tools

Information Provision

PASSIVE ENGAGEMENT

Guidance on Good Practices for Climate Services User Engagement

Expert Team on User Interface for Climate Services
Commission for Climatology

2018 edition

nature climate change

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nature > nature climate change > commentary > article

Published: 01 September 2017

Improving the use of climate information in decision-making

Chris D. Hewitt, Roger C. Stone & Andrew B. Tait

Nature Climate Change 7, 614–616 (2017) | Cite this article
824 Accesses | 48 Citations | 22 Altmetric | Metrics

To enable society to better manage the risks and opportunities arising from changes in climate, engagement between the users and the providers of climate information needs to be much more effective and should better link climate information with decision-making.

There is growing acceptance that the climate is changing, and increasing recognition and realization of the socio-economic benefits arising from using climate information to better inform decisions and policies across a wide range of sectors^{1,2,3}. Climate services are being developed worldwide for an expanding group of decision-makers and policy-makers to enable society to better manage the risks and opportunities arising from changes in climate, especially for those who are most vulnerable.

Hewitt et al, 2017: Nature Climate Change, 7, 614-616, <https://www.nature.com/articles/nclimate3378>

WMO Publication number 1214, 2018, https://library.wmo.int/doc_num.php?explnum_id=4550

Regional level

Regional Climate Centres (RCCs)

Primary users

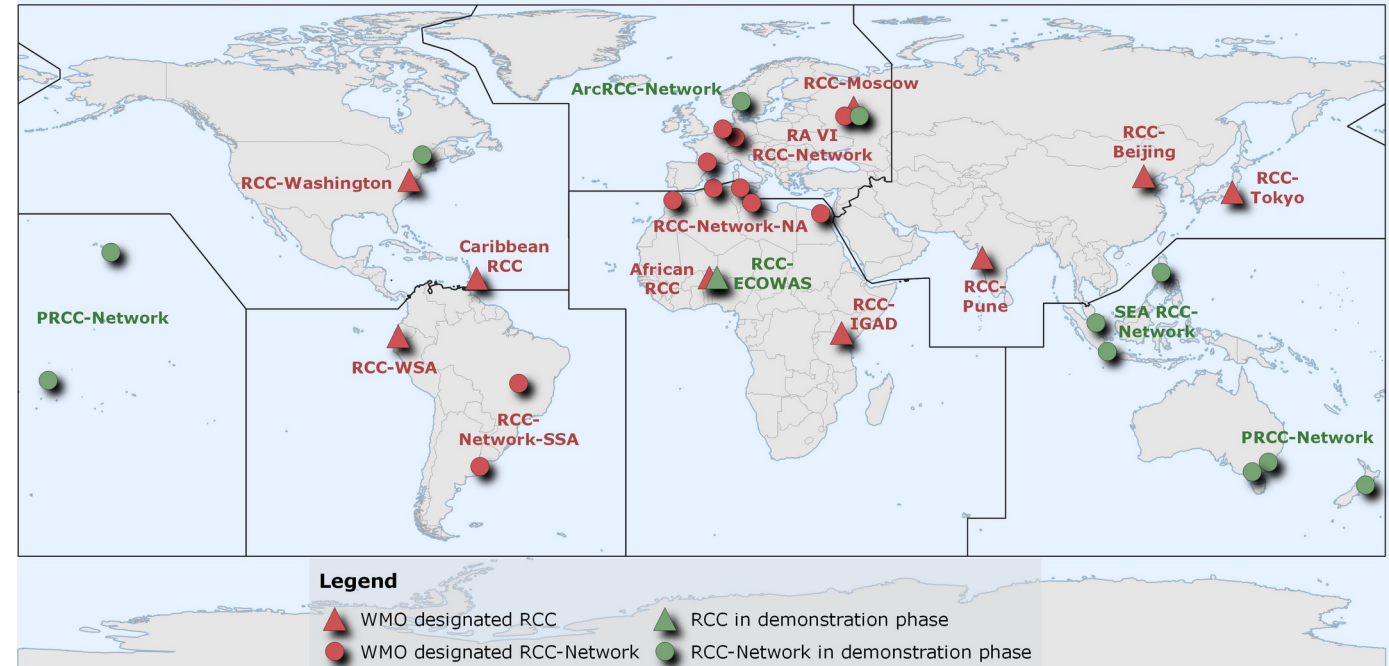
- National Meteorological and Hydrological Services within the RCC region

Mandatory functions

- Long-Range Forecasting
- Climate monitoring
- Data services
- Training

Highly recommended functions

- Climate prediction and projection
- Non-operational data services
- Coordination
- Training and capacity building
- Research and development



16 WMO Regional Climate Centres and Regional Climate Centre-Networks



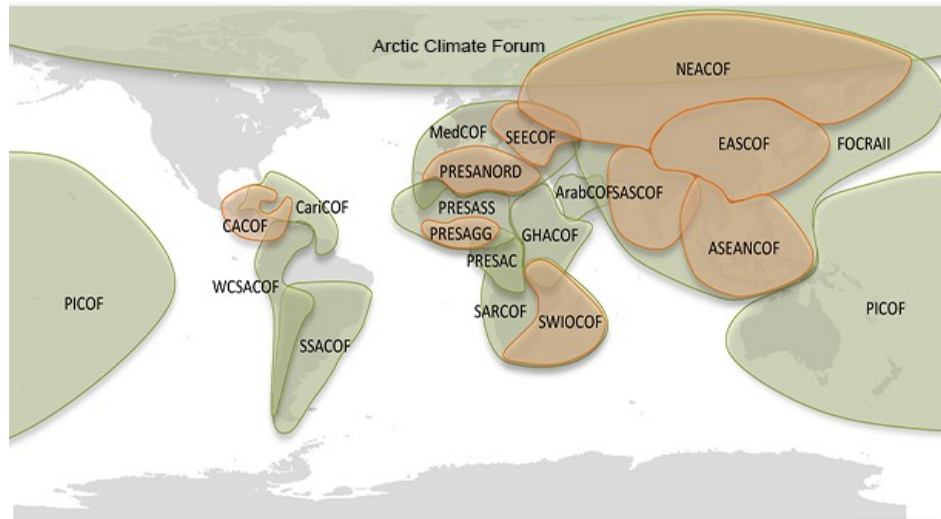
RCC operations must be consistent with WMO data sharing framework and standards (i.e. WIS).

Regional level

Regional Climate (Outlook) Forums

Regional Climate Outlook Forums (RCOFs)

- 21 RCOFs are regularly conducted in many parts of the world.
- RCOFs produce consensus-based seasonal climate forecasts.

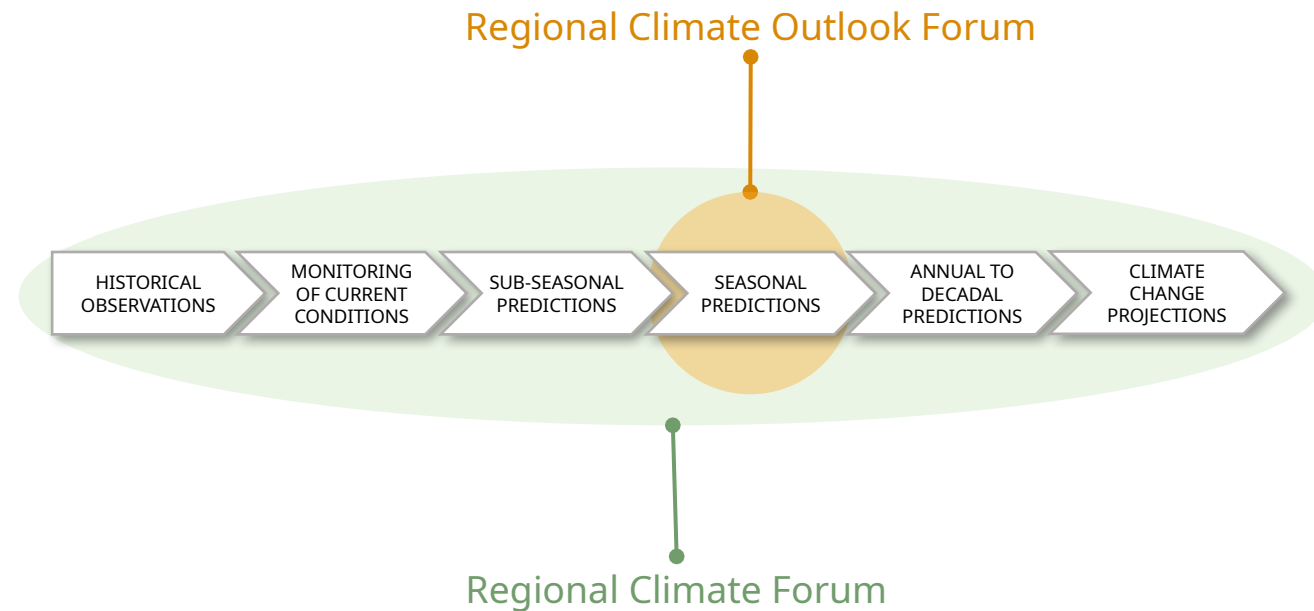


WMO Regional Climate Outlook Forums



Transition to Regional Climate Forums (RCFs)

Efforts are made to evolve the RCOF concept to RCF to encompass a range of products beyond seasonal time scale and better address Member's requirements.

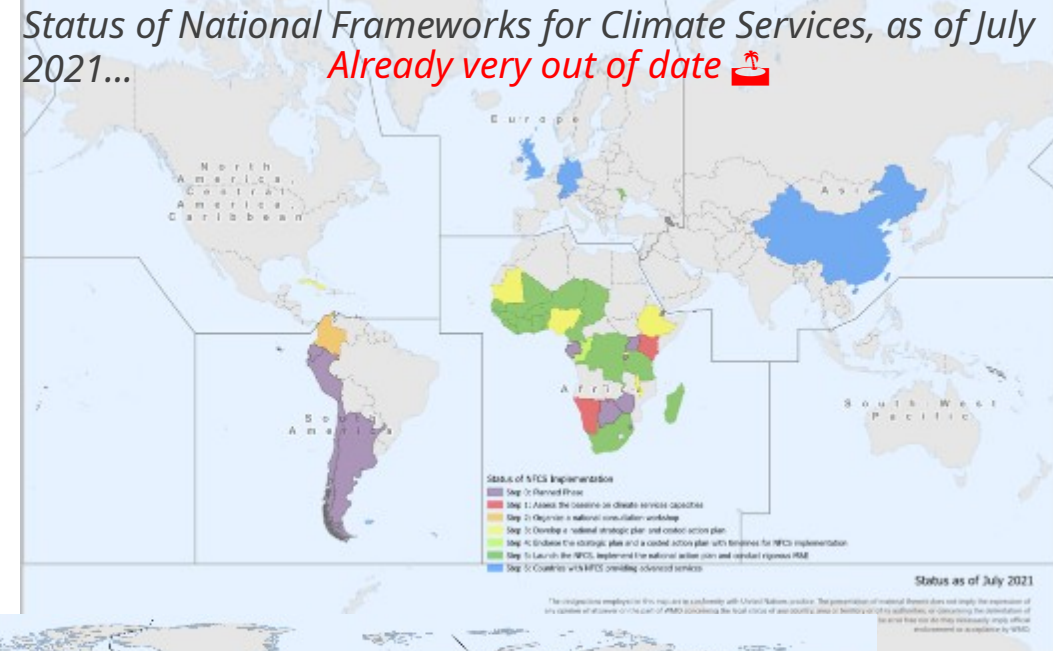


National level: National Frameworks for Climate Services

National Climate Forums

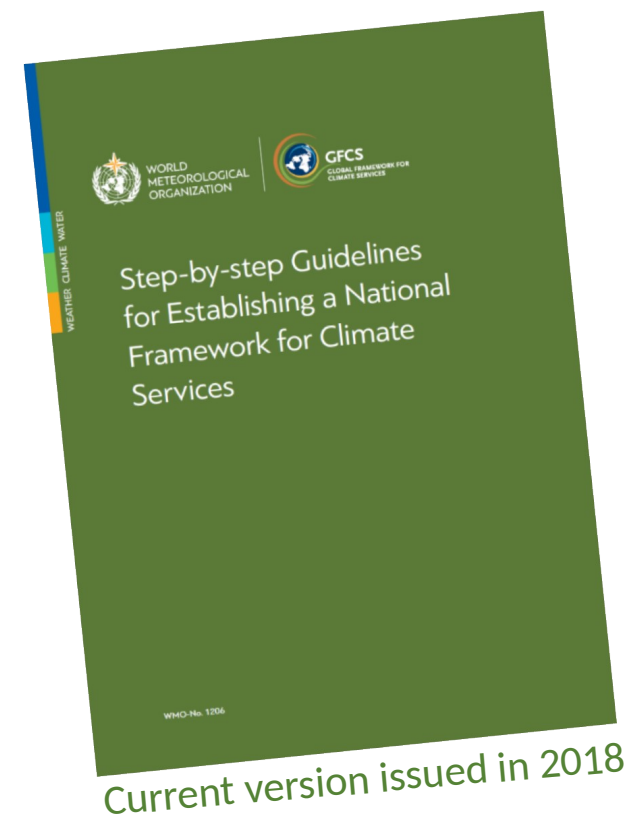
National Frameworks: coordination, governance, collaboration to improve the **development, delivery and use of climate services at country level** to support decision-making

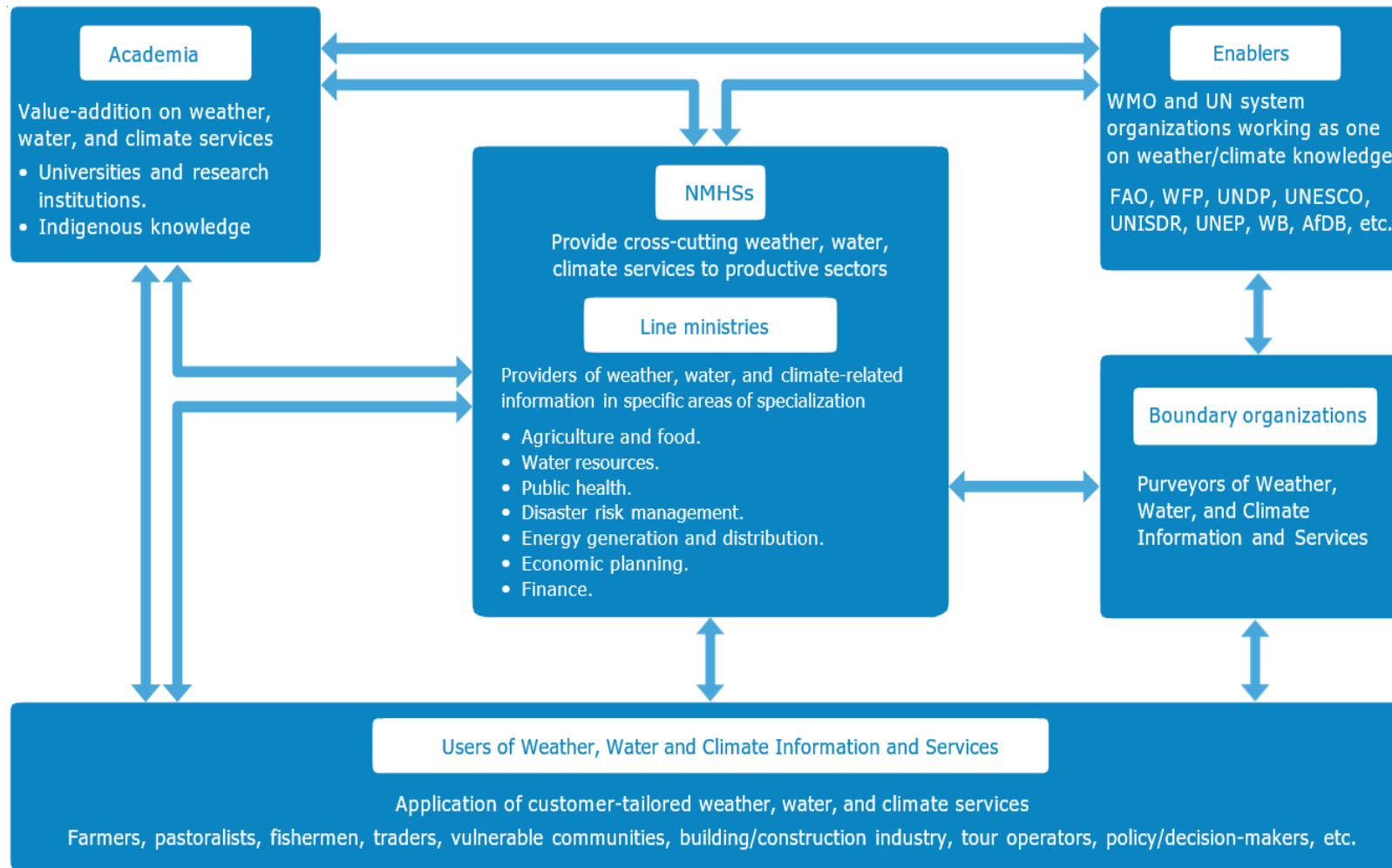
National Forums: National platforms for dialogue for the design of **tailored climate information** to the national context and **translation of key messages** for users



Step-by-step guidelines (currently under review)

- **Step 1:** Assess the baseline on climate services at national level, to identify users and their needs, providers and their capacities and map existing services
- **Step 2:** Hold a National Consultation Workshop to bring together stakeholders and further identify gaps and key priorities for climate services
- **Step 3:** Develop National Strategic and Action plan for climate services
- **Step 4:** Gain high-level endorsement of the National Strategic and Action Plan for climate services
- **Step 5:** Launch the National Framework for Climate Services, conduct monitoring and evaluation
- **Note:** **some** countries may find it more appropriate to develop a framework to also cover weather and water





A schematic representation of an NFCS showing interlinkages among partner institutions acting together as one to develop, deliver and use climate information for decision-making

Some challenges for climate services:

- Only worth delivering if it is to be used to influence an outcome
- Coordination and engagement – Time-consuming, but beneficial
- Requirements versus capability – Often a big gap
- The concept of “users” – Who are they? What do they need?
- The role and importance of other disciplines – e.g. social science
- Capabilities and capacities – Providers and users





Thank you



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