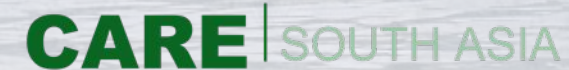


# PLANNING WORKSHOP ON Impact-Based Forecasting and Climate Services

21–24 January 2025 | Bangkok, Thailand

Climate Services





# Overview

1. IBF □ Climate Services: Exploring connections
2. What is climate services?
3. Scene setting: the SAHF Climate Services journey so far
4. SAHF WG on Climate Services: A vision for 2030
5. Deep dive on priorities for a WG on Climate Services
6. Practical decisions and workplan development





# IBF □ Climate Services

Exploring connections between IBF and CS community: SIMBOL Project



# What are climate services?

Timescales?

*Do I need to plant drought-resistant seeds next season based on the likely impact of forecast rainfall and temperature?*

*Is our city's infrastructure resilient to projected changes in extreme rainfall under a changing climate?*

*How much wind and solar resources can we expect to get in various areas in the coming months, seasons and years to establish new renewable power plants?*

**WMO:** Climate services are the provision and use of climate data, information and knowledge to assist decision-making.

## Global Framework for Climate Services

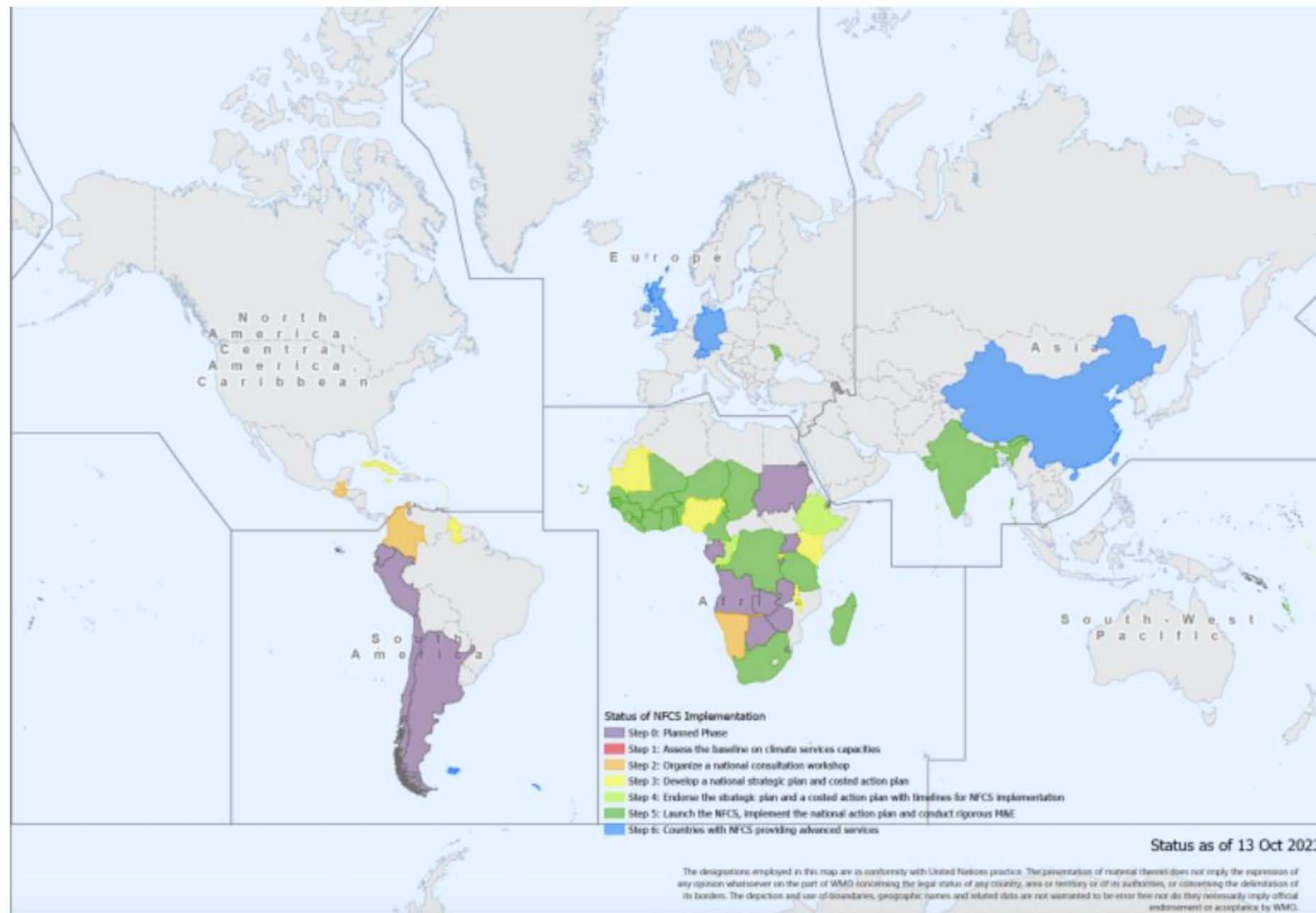




# NFCS – Reflections from India

Dr Satyaban Ratna

Current status of NFCS implementation worldwide





# Describe what climate services means to you (one word/ short phrase)

31 responses



From Climate Services Consultation (Dec 2024)





## Advancing climate services in South Asia

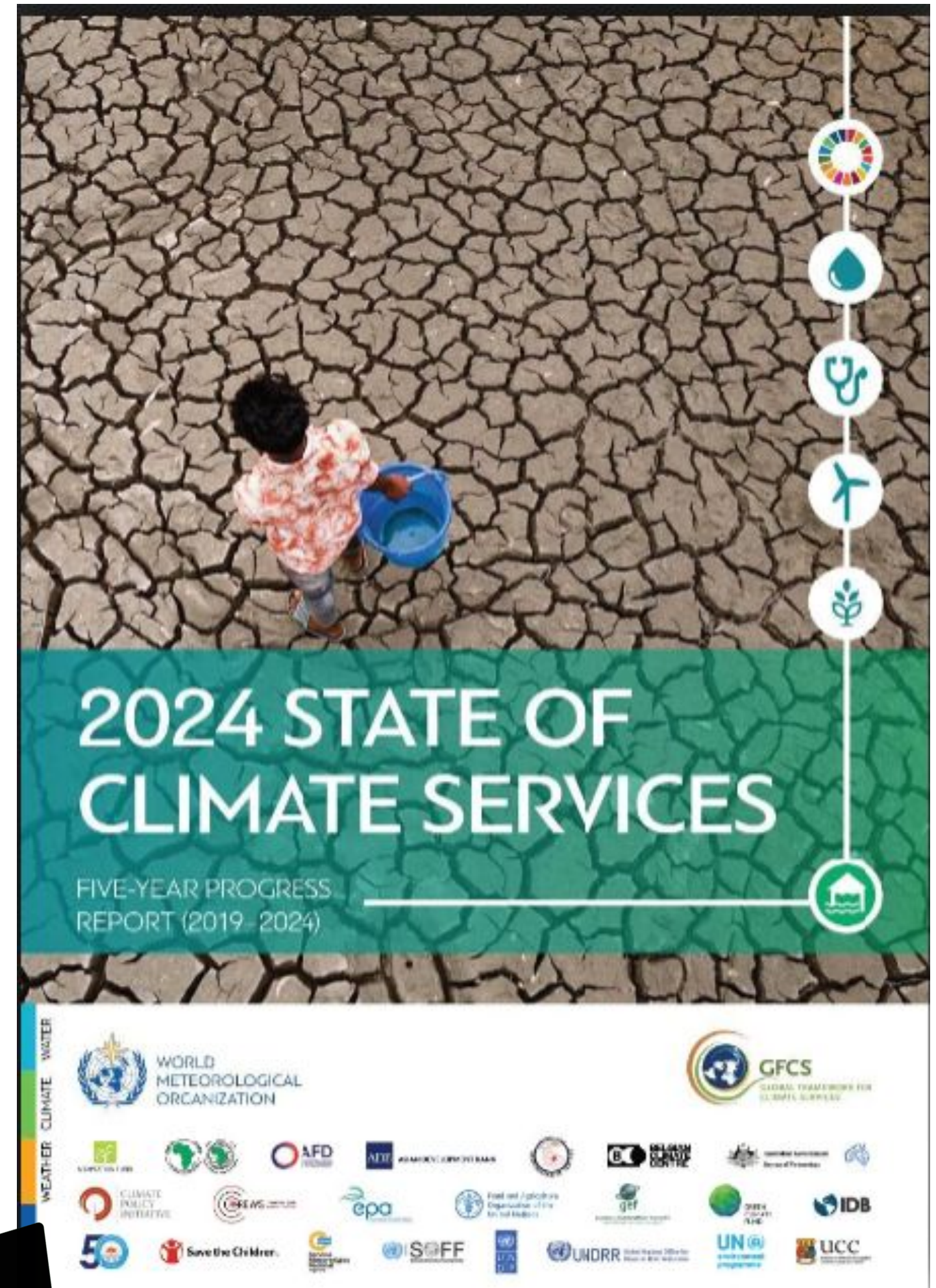
J. Daron<sup>a, b, 1</sup>, M. Bruno Soares<sup>a, c</sup>, T. Janes<sup>a</sup>, F. Colledge<sup>a</sup>, G. Srinivasan<sup>d</sup>, A. Agarwal<sup>d</sup>,  
C. Hewitt<sup>a, e</sup>, K. Richardson<sup>a</sup>, S. Nepal<sup>f, g</sup>, M. Singh Shrestha<sup>f</sup>, G. Rasul<sup>f, h</sup>, N Suckall<sup>c</sup>,  
B. Harrison<sup>a</sup>, R.L. Oakes<sup>a</sup>, D. Corbelli<sup>a</sup>



### Key conclusions from paper

*“There is a need for improved integration between disciplines and tools for risk-based information to better meet decision-maker needs, with a potential role for new **climate impact services**.”*

*“Funders and implementing organisations must remain sensitive to **ethical challenges in co-producing climate services**, particularly on potential power imbalances between institutions in the global north and south.”*



***“Regional cooperation is a key enabler for successful development, delivery and use of climate services.”***



# Setting the scene



**SOUTH ASIA CLIMATE FORUM**  
SCIENCE TO ACTIONS

**SASCOF Climate Services User Forum**

**South Asia Climate Forum**



**SAHF Climate Services WG**

Operational vs non-operational CS

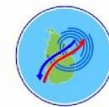




# SAHF Climate services: the journey so far



February 6-8 2024 Colombo Sri Lanka





# **Declaration from SAHF IV (Colombo, Feb 2024)**

We, representatives of NHMS, DRM agencies, regional organizations, academia, development organizations, sectoral and other stakeholder groups, meeting in Colombo, Sri Lanka from 6 to 8, February 2024 at SAHF IV, consider the need to:

- **Create a shared vision for building a regional observation network for weather, water and climate services**

## **AFFIRM:**

- Enhanced collaboration between SAHF and technical partners... to strengthen the hydromet value chain in South Asia. This includes promoting the exchange of best practices... to enhance weather, water and climate services, to ensure all SAHF members have the capacity to visualize, use and integrate model data and other information into the forecast processes to **maximize social and economic benefits of these services.**

## **RESOLVE:**

- **to enhance climate services**, by building on RIMES Climate Data Access and Analysis System (CDAAS), Regional Data Analytics System (RDAS) and Copernicus Climate Changes Service (C3S), **among others, in support of climate adaptation by communities of South Asia.**

## **ENCOURAGE:**

- further assessments of the socio-economic value of hydromet services. This includes recognizing their importance in countering the negative effects of climate and natural hazards and improving business models for securing resources – both human and financial - **to strengthen the provision of weather, water, and climate services.**



# SAHF IV Commitments

- **Deepen collaboration** and **increase regional synergies** and economies of scale for better hydrometeorological and **early warning services** to enhance resilience and socioeconomic benefits in the region;
- Create a shared vision for enhancing a regional observation network to support weather, water, and climate services;
- Create mechanisms, based on science, to **strengthen regional forecasting**, data analytics, and scenario planning,
- Develop effective last-mile communication mechanisms to enable people, including stakeholders, to take **informed decisions**;
- Help the region collectively to undertake actions for climate resilience by strengthening the hydromet services' contribution to public services, in an effective and efficient manner;
- Enhance **opportunities for sharing experiences and lessons learned** towards mainstreaming weather, water and **climate services** that contribute to the achievement of Sustainable Development Goals.



# SAHF IV Side session on Climate Services

## Key takeaways

- A broadening of SAHF to cover longer-term information as well as ‘users’ of climate information/services
- SAHF as a mechanism to tackle ‘siloing’, and bring producers and users together, connecting those working across different timescales
- The appetite in SAHF is for climate services on shorter timescales, but lessons learnt on these timescales can be applied at longer timescales – a timescale transition period may be required

## Recommendations

- A coordinated regional approach, such as through a Regional Framework for Climate Services
- To understand how a SAHF WG on Climate Services will work with other regional mechanisms such as SASCOF





# SAHF Climate Services Consultation

**December 2024**



# What should the initial priorities be for a SAHF working group on climate services?

5 groups found



## Regional coordination

12 responses

"Map existing initiatives and mechanisms (inc. dev..."



## Needs and gap analysis

4 responses

"Need and gap analysis", "Identify clear needs, ga..."



## Capacity building

8 responses

"Capacity building", "Capacity building for the Use..."



## Impact-based services

7 responses

"Impact-based climate services", "Multi sectoral I..."



## Data sharing

7 responses



Press **SPACE** to hide groups

Press **ENTER** to start voting

1



13





## **1. Focus on (climate) priorities:**

- a. Need for support, technology, and the creation of climate epicentres and 'messengers'.
- b. Focus – both terrestrial and marine climates, particularly monsoons.
- c. A holistic approach involving CSUF, TPCF, cryosphere, terrestrial, marine and coordination with SASCOF.

## **2. Collaboration and information sharing:**

- a. A note on the funders of CARA value SAHF for its role in fostering collaboration and standardizing information.
- b. Distilling prior consultations through ARRCC as well as insights from SASCOF.

## **3. Value addition, funding and donor coordination:**

- a. Sustainability across funding streams and donor coordination.

## **4. Regional and sub-regional challenges:**

- a. The challenges of coordination in a vast region was highlighted with a suggestion for leveraging mechanisms for agricultural services and anticipatory actions
- b. The WMO supports a sub-regional approach, given the diversity of countries, climates, issues etc faced across South Asia.

## **5. On the establishment of a Working Group (WG) on Climate Services:**

- a. Disagreement on overall remit of WG
- b. Good agreement that a WG should work on 1) extending into longer timescales, 2) consideration of a Regional Framework for Climate Services (RFCS), 3) providing an overall coordination role, 4) NOT reinventing the wheel!



*Case studies: “Regions where there is currently strong regional coordination on climate services, to the extent that some may consider that they already have a Regional Framework for Climate Services or equivalent regional climate services coordination mechanism”*

### **1. Pacific:**

- Guided by the Pacific Roadmap for Strengthened Climate Services (2017-2026).
- Focuses on regional coordination due to limited capacity of National Meteorological and Hydrological Services (NMHSs).
- Highlights sectors like tourism and fisheries and emphasizes inclusivity and open access to climate data.

### **2. Caribbean:**

- Led by the Caribbean Institute for Meteorology and Hydrology (CIMH).
- Includes a regional climate consortium, action plan, biannual climate forums, and tailored regional products.
- Strong collaboration improves national services, though care is needed to avoid overlaps with NFCS.



# The Working Group on Climate Services should...

have a very clear focus and remit

4.3

bring together other CS mechanisms in the region

4.4

have a regional focus only (no national foci)

3.0

focus across all timescales

3.4

only focus on shorter timescales (in line with current SAHF focus)

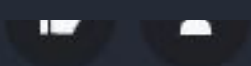
1.9

engage with a range of stakeholders (e.g. academia, NGOs)

4.2

Strongly disagree

Strongly agree







## **A vision for 2030**

*No wrong answers! Think about your context!*

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# Plenary: Vision for 2030

**Exploration of what a Climate Services WG could do – insights from other WGs and RIMES**

**What are the other aligned initiatives that are happening?**

**What would be the impact if we didn't do this?**





# Deep dive!

**Explore priorities: how, who, gaps, challenges, GESI, ethics**







# Practical decisions and workplan development

**Who: roles and responsibilities (chairs and members)**

**What: remit of WG and initial action plan**

**How: should the WG operate, lessons from other WGs**

**When: how often should a working group meet?**









**Any questions?**



# SAHF: Current Working Groups

<b>Working Group</b>	<b>Role</b>
<b>Impact Based Forecasting</b>	Supports National Meteorological and Hydrological Services (NMHSs) to transition from traditional meteorological and hydrological forecasting to impact-based forecasting to ensure NMHSs remain relevant to stakeholders, responders, and civil societies
<b>Numerical Weather Prediction</b>	Ensures the use of numerical weather prediction, including tools to derive additional products, bias correction, and systematic errors as part of objective forecast verification, pattern recognition and algorithms, multi-hazard vulnerability
<b>Observational Networks</b>	Creates a strategy for baseline regional observing networks to optimize and maximize the benefit
<b>Capacity Building</b>	Supports the staff of NMHSs to acquire new skills above the basic meteorological and hydrological competencies
<b>Hydrology</b>	Supports efforts to address the growing importance of hydrology in sectors such as agriculture, infrastructure, and disaster management



### Step 0: Planning phase

- Evaluate the rationale and need for a regional framework for climate services with key internal and external stakeholders.
- Key institutions at this stage may include the RCC, who will most likely be the lead and where appropriate or required (e.g. based on regional structures of institutions involved in climate services delivery and their mandates and convening power), the REC.
- The stakeholders for this stage will depend on the institutional context in the region.

### Step 1: Assessment

- The baseline assessment and their needs for existing services.
- This also involves assessing the capacities of existing institutions and information on climate services.

### Step 2: Engagement

- Regional consultation specifically for climate services.
- National and international consultation to guide the establishment of the RFCS.

### Step 3: Development

- This phase should address the institutional and financial engagement.
- Aligning the RFCS with the national climate services strategy, for example regional climate services strategy.
- Alignment with the national climate services strategy.

### Step 4 Gain endorsement

- The high level endorsement of the framework by representing Ministries, a regional Council of Ministers or other relevant body should be sought where possible. This should be according to RCC or REC protocols for this type of framework.
- If high level endorsement cannot be obtained or is not practical, having the endorsement of the relevant stakeholders, like NMHSs, can be considered.
- A donor forum may be considered to gain their buy-in and support.

### Step 5: Launch the RFCS

- The RFCS can be launched at an event coconvened by the host institution(s) and involving the relevant stakeholders involved in its development and implementation.
- Involving international and national funding organisations will be a key action for supporting resource mobilisation around the implementation of the RFCS.

### Step 6: Review and evolve

- Continuous monitoring, evaluation and learning (MEL) must be conducted in line with the SMART indicators included in the action plan. This is not only to track progress but also to identify the need for changes.
- Continuously looking for sustainable funding for the RFCS implementation will also be needed, including looking into new funding opportunities not identified at the start.
- Evolving and improving the RFCs over time will be desirable as context changes, climate services advance and user needs change.



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

## 1 Strengthen climate service capacity and capability, particularly in NMHSs

- 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 (e.g. Global and Regional State of Climate; State of Climate Services; ENSO Bulletins; Climate Updates)
- 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 ⇨ essential ⇨ full ⇨ advanced) and needs
- Produce guidance on standards and competencies with WMO's SERCOM and INFCOM

## 4 Develop the climate services value chain/cycle

- Link underpinning science capability ⇔ climate services information ⇔ 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
- Revitalize the GFCS website

