



The Global Framework for Climate Services

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Outline

- GFCS and its history
- Early Implementation
- Some Examples

History of the GFCS

- **Third World Climate Conference (2009):** GFCS established as a UN-led initiative spearheaded by WMO
- **High Level Task Force (2010)** formed to propose elements for the Framework. “Climate knowledge for action: A global framework for climate services – empowering the most vulnerable” as the basis for GFCS
- **2011: Task team** (to develop the Implementation Plan) set up and GFCS office created
- **WMO Extraordinary Congress (2012):** Intergovernmental Board on Climate Services (IBCS) was established and the GFCS implementation plan was adopted for subsequent consideration of the IBCS.
- **IBCS-1:** First Meeting of the Intergovernmental Board on Climate Services (July 2013)



**CLIMATE
KNOWLEDGE**
FOR
ACTION:

A GLOBAL FRAMEWORK
FOR CLIMATE SERVICES—
EMPOWERING
THE MOST VULNERABLE



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



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

A Climate service: Providing climate information in a way that assists decision making by individuals and organizations. A service requires appropriate engagement along with an effective access mechanism and must respond to user needs.



Photo Credits: NASA, Pedro Sanchez, Renzo Taddei

Decision-making across timescales

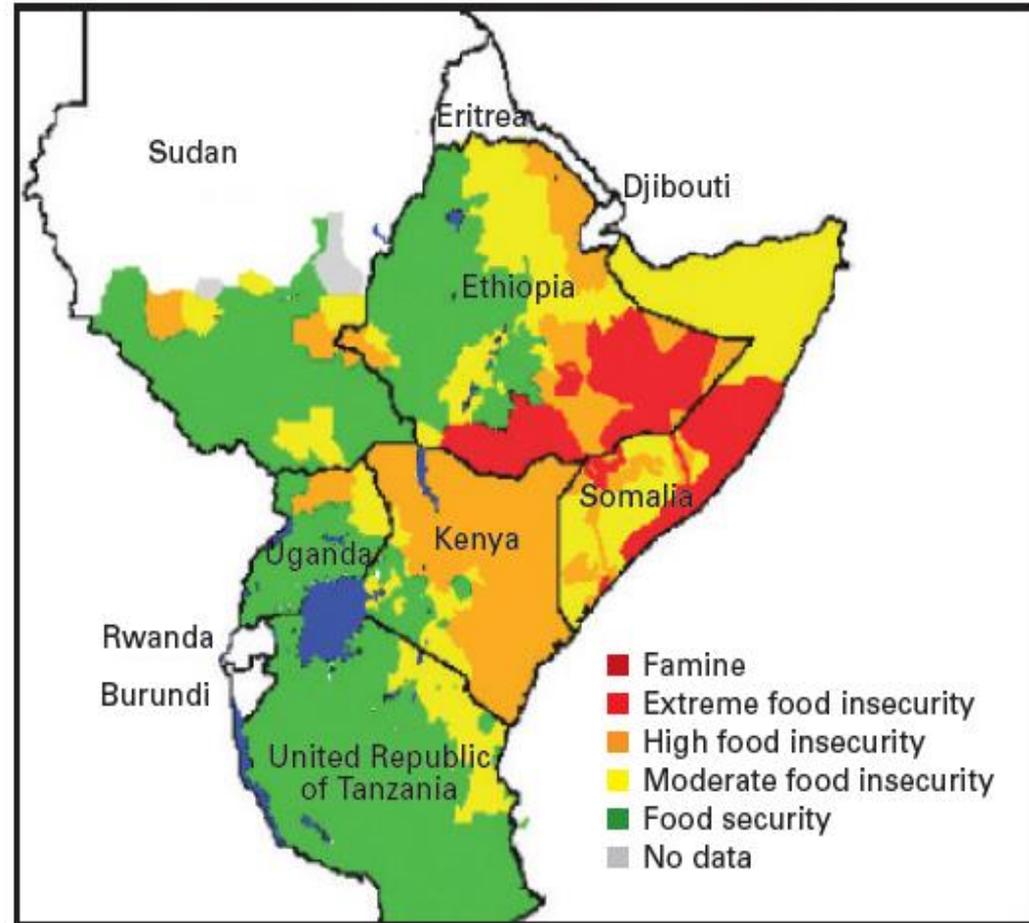
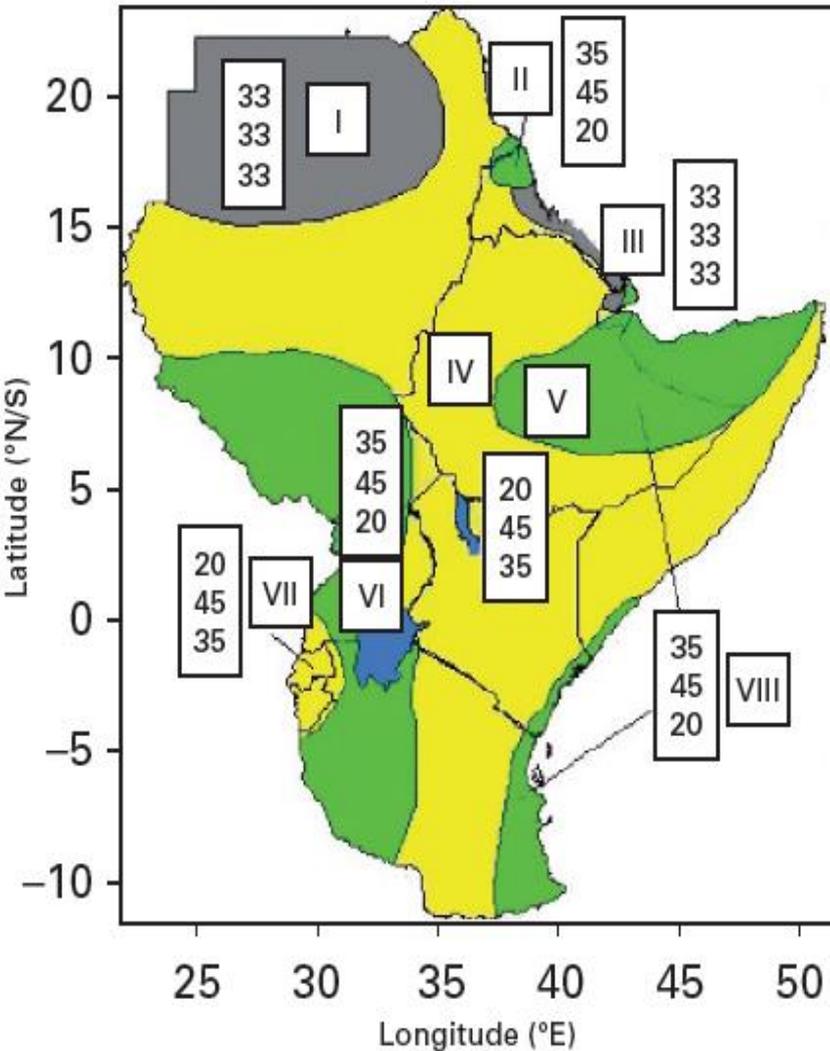


- **Begin planning and monitoring of forecasts**
- **Update contingency plans**
- **Train volunteers**
- **Sensitize communities**
- **Enable early-warning systems**
- **Continue monitoring**
- **Short-time-scale forecasts**
- **Adjust plans**
- **Alert volunteers, warn communities**
- **Local preparation activities**
- **Activate volunteers**
- **Instruction to communities to evacuate, if needed**

Climate is what you expect, weather is what you get

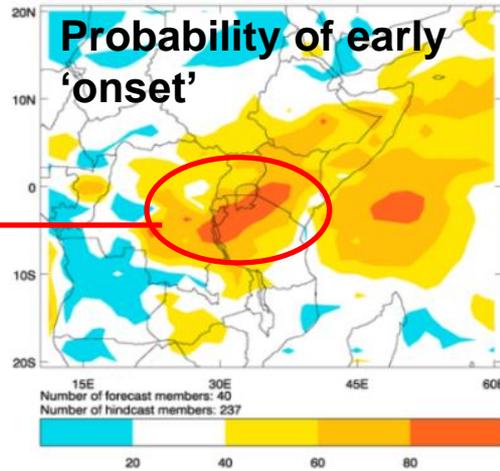
Mark Twain

Application for Agriculture

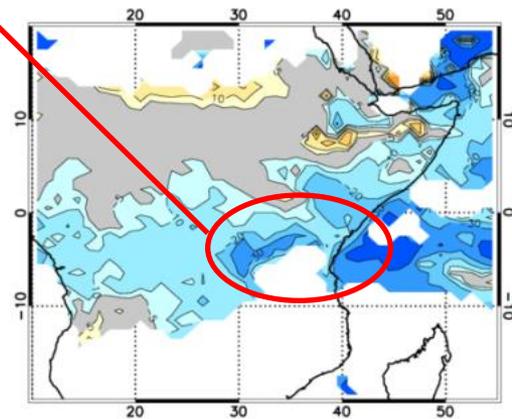


New trial user products: onset prediction and monitoring

Early onset
predicted
most likely



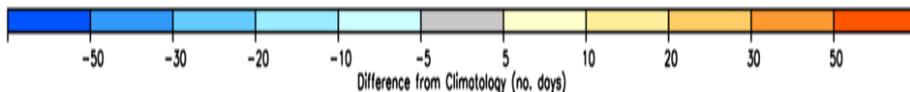
Early onset
occurred



CSRP monitoring
product: Observed
time of 'onset' (in
days difference
from long-term
average

Greater Horn of Africa, short-rains season
2011 – 1 month lead time prediction

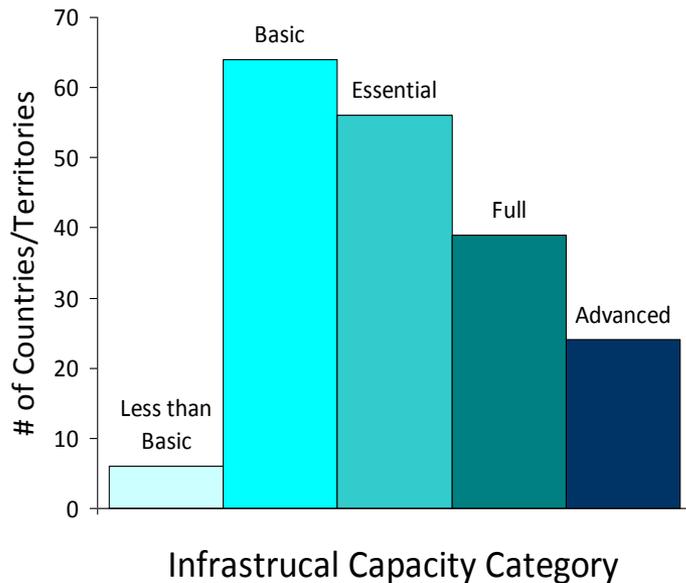
- Assessment over retrospective cases indicates forecast can discriminate early/late onset in ~70% of cases (Tanzania/Kenya)
- Onset forecasts being trialled at regional centres in East, West and southern Africa



Concern...

- Many countries lack the infrastructural, technical, human and institutional capacities to provide high-quality climate services.

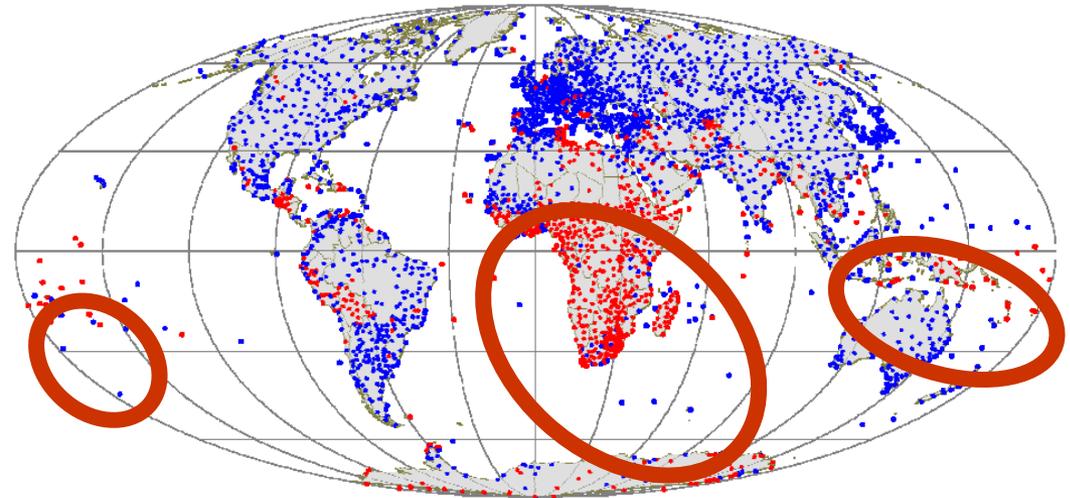
Infrastructural Capacities of Countries as of Aug 2010 to provide Basic, Essential, Full and Advanced Climate Services.



Availability of CLIMAT reports from RBCN stations

Monitoring period: 1 to 15 October 2011

(CLIMAT reports September 2011)

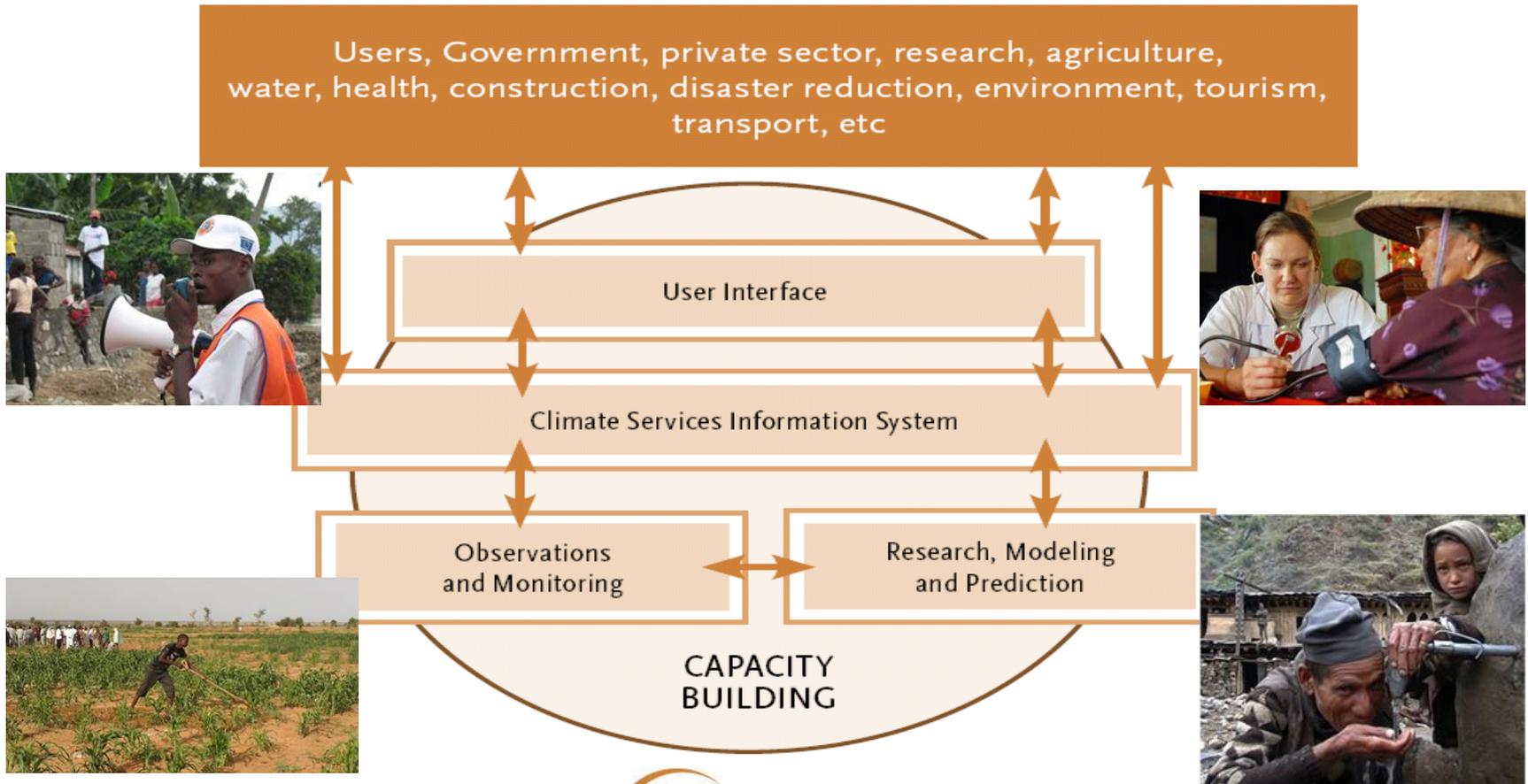


■ report received (2110)
■ no report received (860)

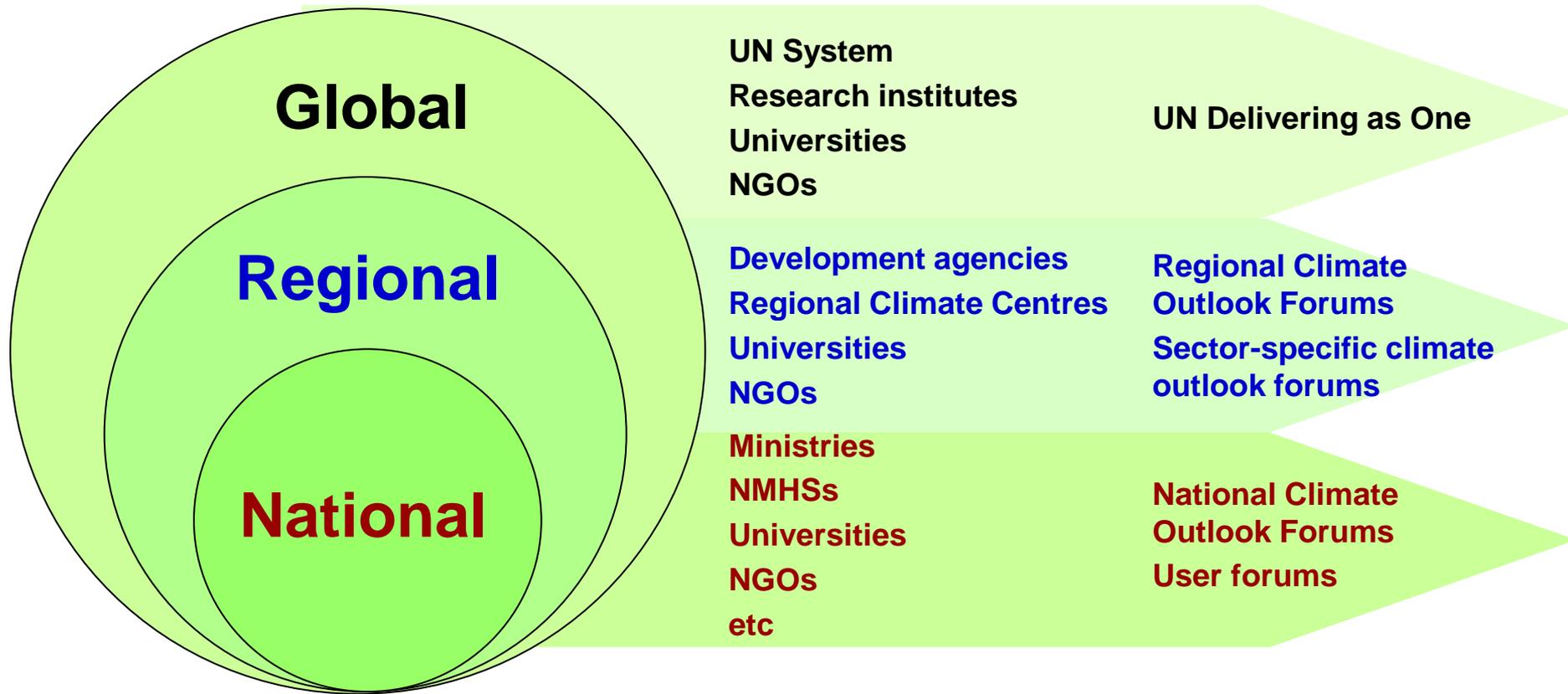
The designations employed and the presentation of material in this chart do not imply the expression of any opinion whatsoever on the part of the Secretariat of the World Meteorological Organization concerning the legal status of any country.

WMO Secretariat

GFCS Pillars & Priority Areas

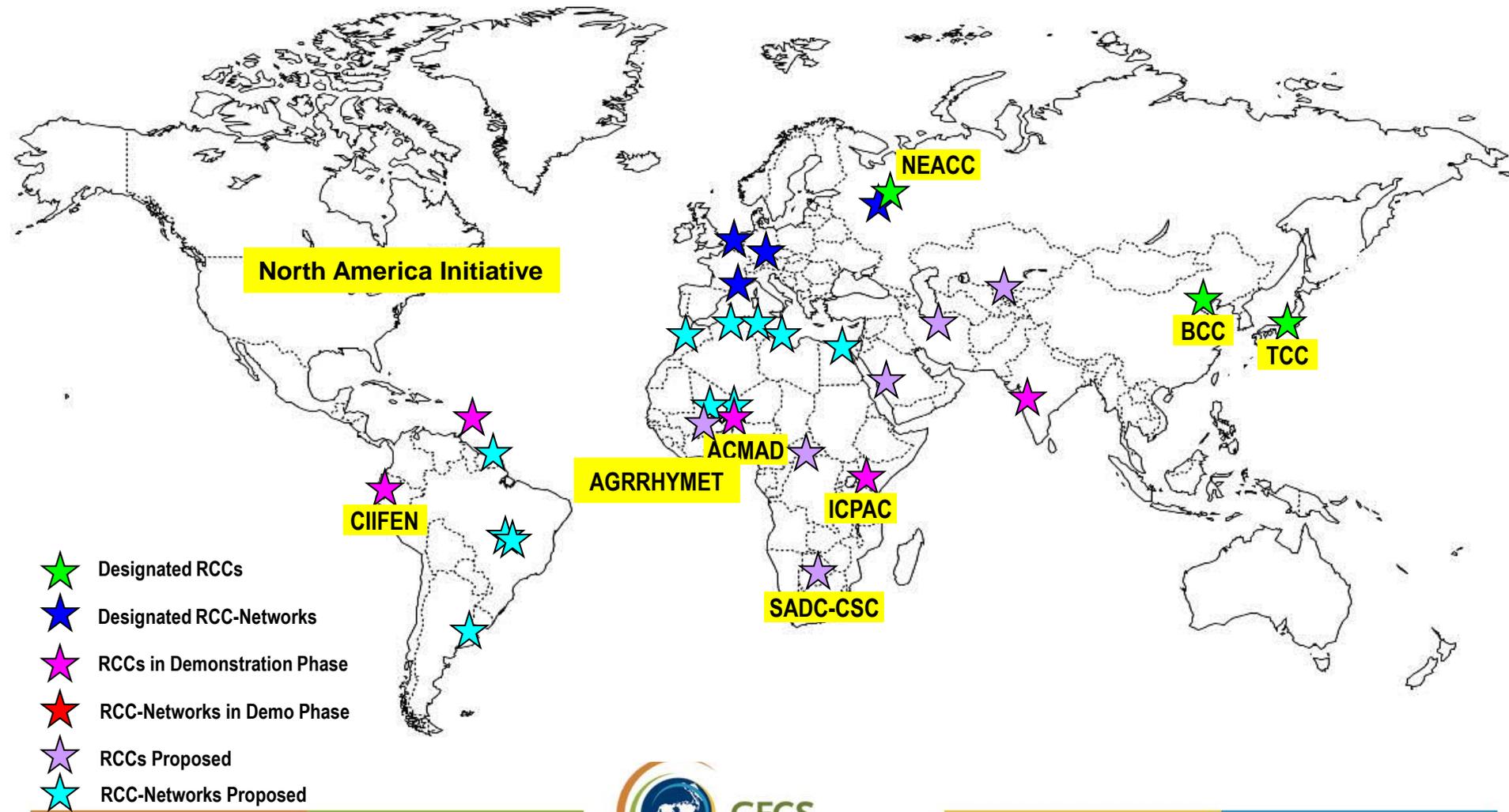


User Interface Platform

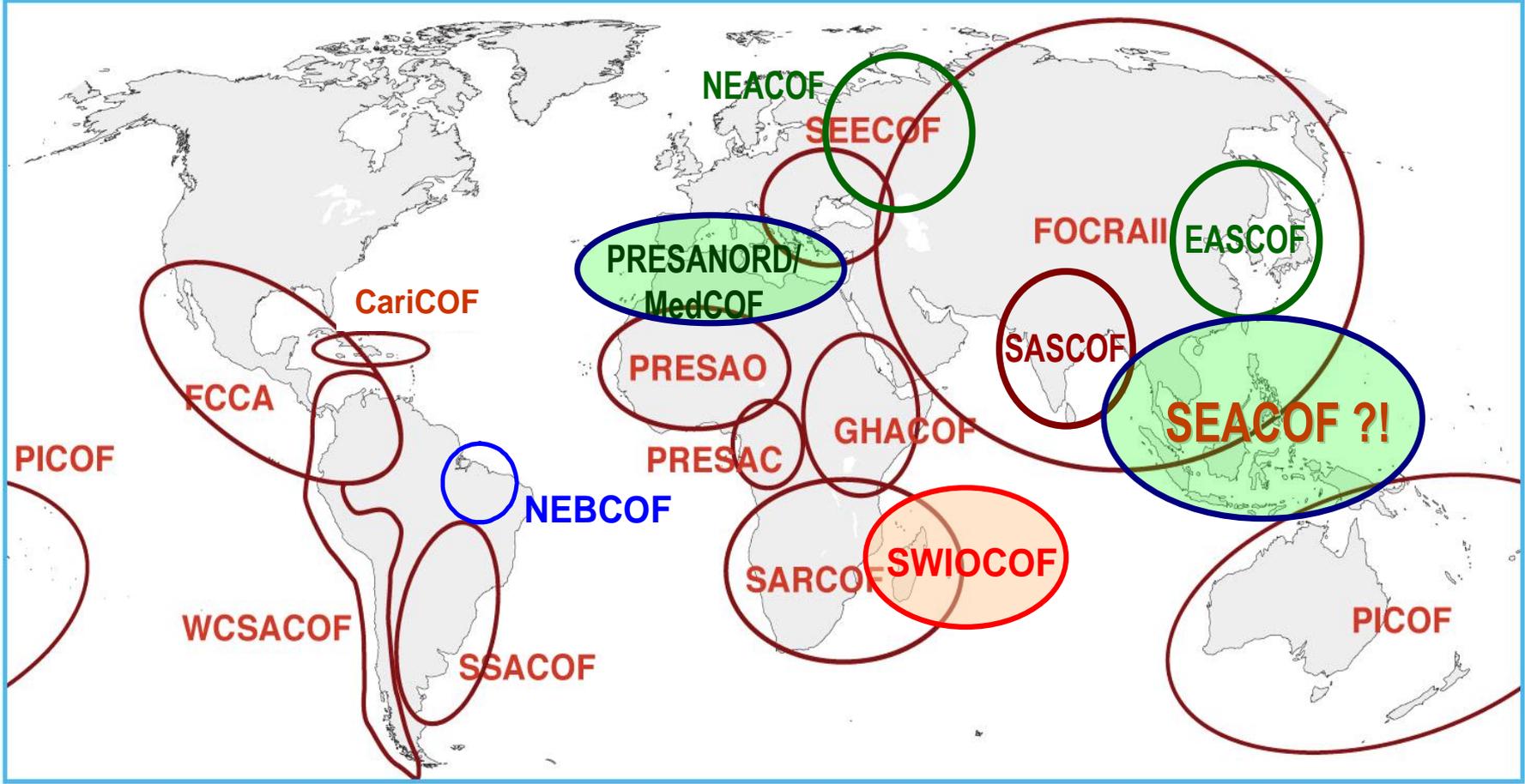


The needs of the user community are diverse and complex

WMO RCC Status Worldwide



Regional Climate Outlook Forums - RCOFs



- Early Implementation

Early implementation



Pilot projects in Belize, Burkina Faso, Chad, Mali, Niger, South Africa, Senegal



Regional workshops for the most vulnerable countries

South East Asia, Caribbean, South West Pacific Islands

SEE (TBD), Latin America (Costa Rica, July 2014)

Lessons learned from regional workshops and national consultations

Regional

- Importance of research and science
- Role of Regional Climate Outlook Forums
- Maximization of limited resources through regional approach
- Exploring gaps, capacity development, and strategies for engaging stakeholders

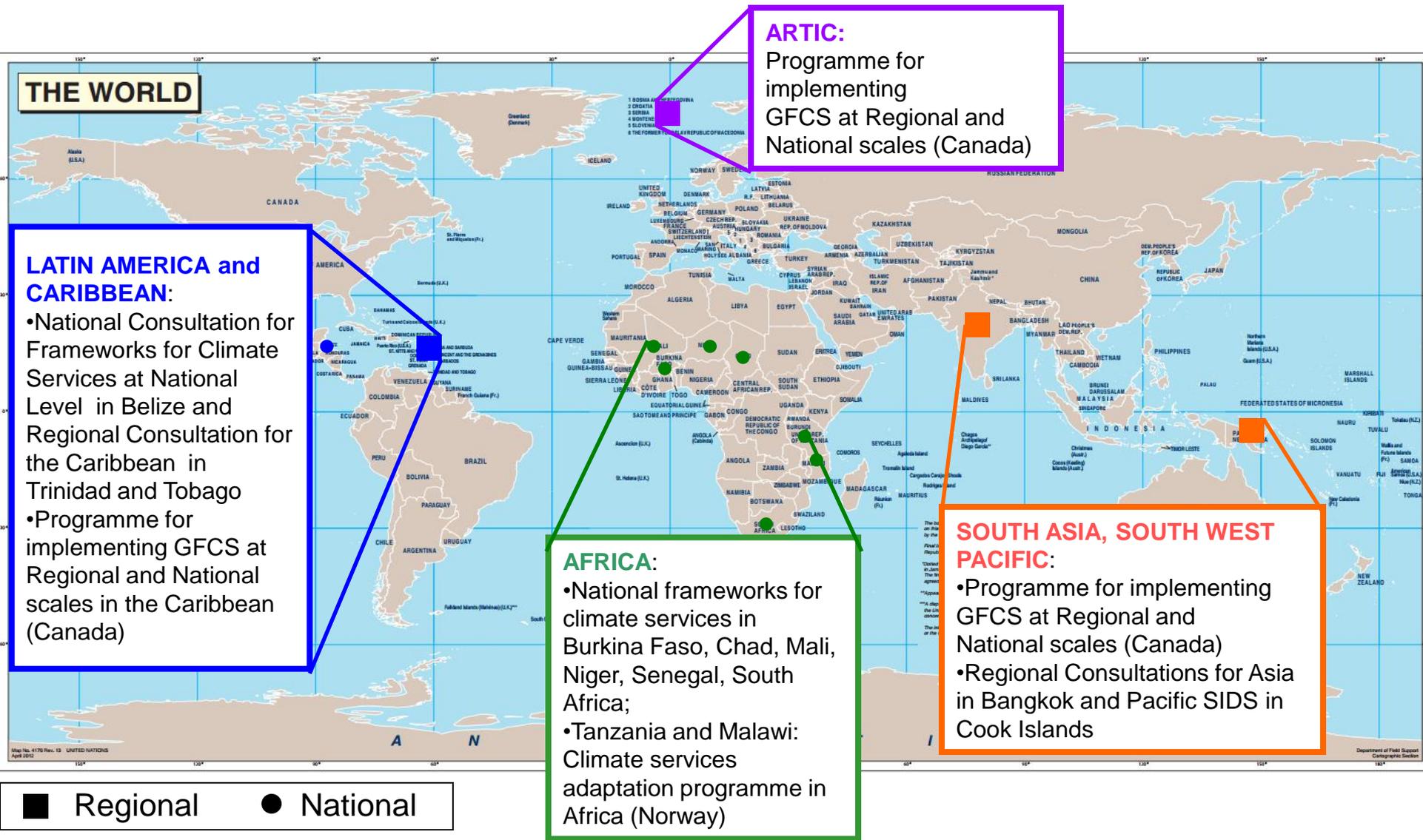
National

- Systematic dialogue with users
- Understanding in-country capabilities
- Identification of data and observation requirements
- Identification of priority research questions
- Building sector-specific capacities
- Leveraging enabling factors

10 Pre-requisites

- 1) Provide a **strong institutional anchorage** for the Framework for Climate Services
- 2) **Meet the demand for tailored climate service** provision in the priority climate-sensitive sectors in the country (Agriculture & Food security, Health, Disaster Risk Management, Construction/Infrastructure/ Transport sector, etc.)
- 3) **Build the capacity of the NHMS** and other technical services to jointly elaborate salient climate products and services, building on pluri-disciplinary knowledge and expertise from each sector
- 4) **Improve the Communication** / widespread distribution of Climate Services
- 5) **Diversify communication channels**, use innovative channels to broadcast (aside from TV)
- 6) Modernize and increase the **density of the national hydro-meteorological observing network**, improving capacity to meet end-user needs
- 7) Improve **collaborative climate research**, towards more salient end-user driven climate research outputs
- 8) Develop and strengthen the **capacity of end-users** to further appropriate and utilize climate services
- 9) **Sustain the newly defined Framework** for Climate Services at the national level
- 10) **Engage all national stakeholders** involved in the production, interpretation, communication and utilization of climate services in a national dialogue around climate service provision, to identify country needs and charter a course for the provision of user-tailored climate services at the national and sub-national levels.

GFCS activities*



* Initiated by GFCS Office

The example of Belize



National consultation in Belize
(Belize City, 30 October-1
November 2013)

National Consultation in Belize

- Five-year strategy to strengthen the National Meteorological Service of Belize
- Institutionalizing a National framework for climate services

Next steps

- Creation of an inter-ministerial committee
- Establishment of public-private partnerships and
- First National outlook forum to be organized with WMO support

The example of Senegal



National consultation in Senegal (Dakar, 26-28 March 2014)

National Consultation in Senegal

- Institutionalizing a National framework for climate services within ANACIM
- Strategy to operationalize the framework building on existing initiatives

Next steps

- Creation of an inter-ministerial committee
- Enlarge the existing “Groupe de Travail Pluridisciplinaire” and hold its First National outlook forum to be organized with WMO support
- Develop a project document

Contributing to GFCS

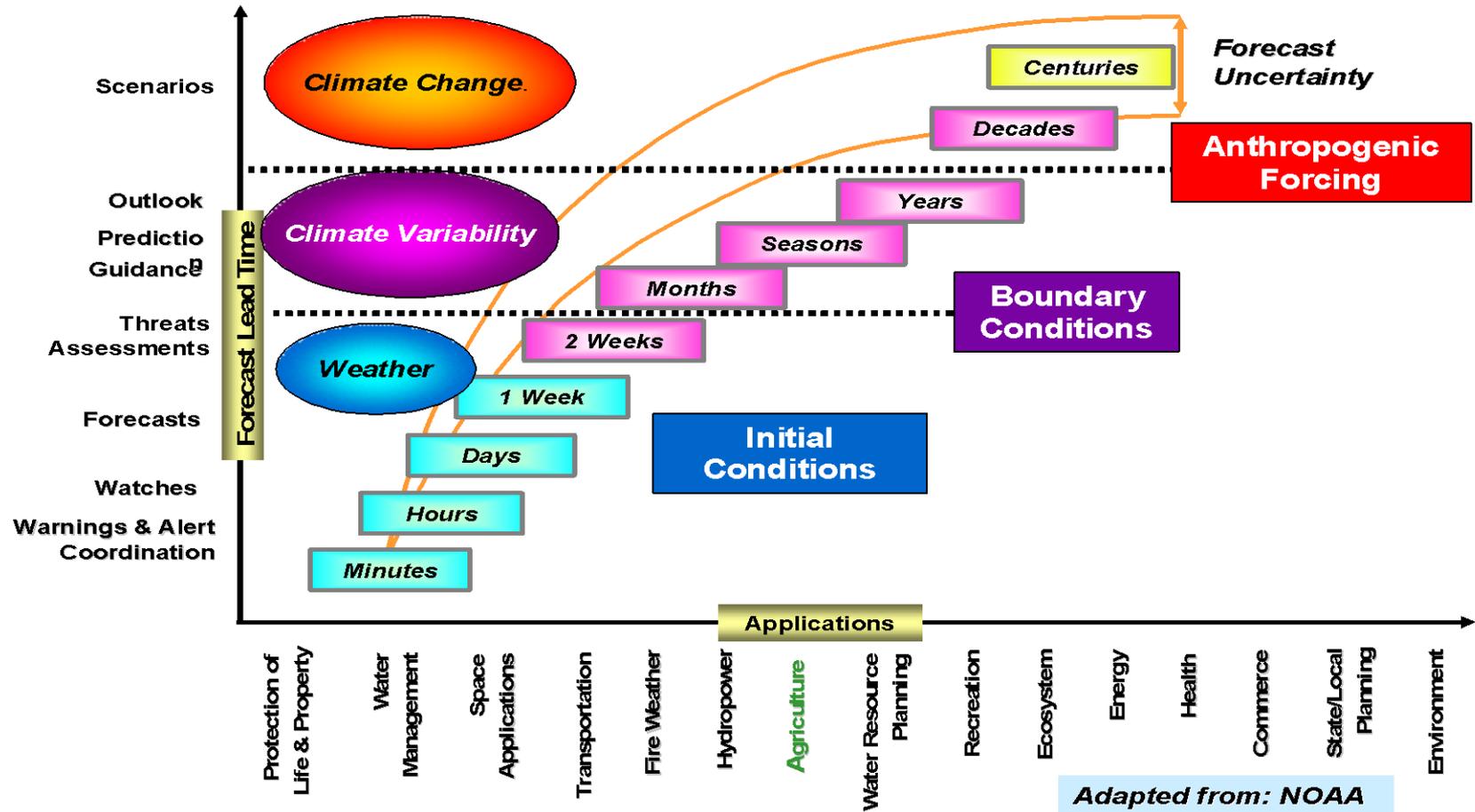
- Implement GFCS in your Region/Country
(go to: www.gfcs-climate.org/final-implementation-plan)
- Be part of the Partnership Advisory Committee (WFP, UNEP, WBCSD, Eumetsat, FAO, IUGG)
- Contribute to GFCS Trust Fund



Thank you for your attention

Seamless hydrometeorological and climate services

Climate Prediction Framework



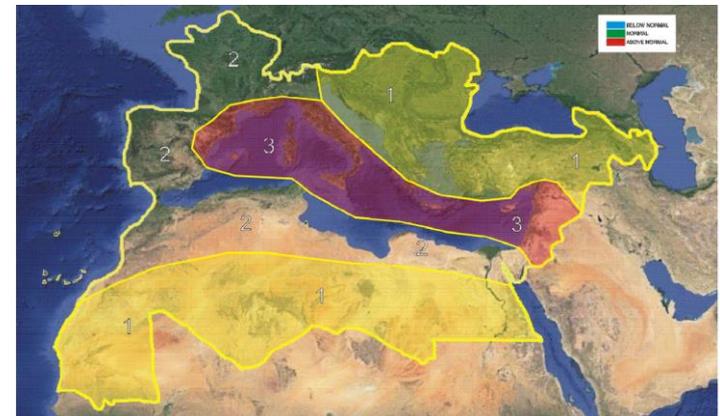
Mediterranean Climate Outlook Forum

- Inaugural session held in November 2013 in Belgrade, Serbia
- Consensus based MEdCOF-1 Climate outlook for the 2013/14 winter season

Recommendations:

- Conduct two forums pre-winter (online) and pre-summer (face-to-face) per year
- Engage major stakeholders to ensure the long term viability of MedCOF within the GFCS

Regional Climate Center (RCC) or RCC-Network encompassing the whole Mediterranean Region (MedRCC)



The principles of the GFCS

- 1 - Priority shall go to **building the capacity** of climate-vulnerable developing countries
- 2 - Ensure **greater availability of, access to, and use** of climate services for all countries
- 3 - **Three geographic domains:** global, regional and national
- 4 - **Operational climate services** will be the core element of the Framework
- 5 - Climate information is primarily an international **public good provided** by governments, which will have a central role in its management through the Framework
- 6 - Promote **free and open exchange of climate-relevant observational data** while respecting national and international data policies
- 7 - The role of the Framework will be to **facilitate and strengthen**, not to duplicate
- 8 - **Built on user needs** through user – provider partnerships that include all stakeholders

Benefits

- **Better water resources management**
 - as inputs to hydrological characterisation (e.g. precipitation, evaporation, etc)
 - in planning, design, development and operation of water supplies
 - in flood and floodplain management and control
 - design and operation of irrigation and drainage systems;
 - for studies associated with power generation, fisheries an conservation, navigation and recreation.
- **Improved disaster risk management**
 - Planning and emergency preparedness and response to extreme events
 - Siting of critical infrastructure such as hospitals, schools, etc
- **Improved support to planning and operations in the health sector**
 - Risk Assessment/health system risk management
 - Epidemiological Surveillance & environmental Monitoring
 - Health Services (heat health warning systems, malaria waning system, etc...)
- **Improved agricultural planning and management**
 - Better drought and flood management
 - Improved food security

Projects contributing to GFCS

THE WORLD

- LATIN AMERICA:**
- Peru: CLIMANDES (Switzerland)
- CARIBBEAN:**
- Climate services to reduce vulnerability in Haiti (Canada)

- AFRICA:**
- Western, Southern and Eastern Africa: Adaptation and DRR in Africa (Norway 1)
 - Ethiopia: Improvement of Agro-meteorological information for small-scale agricultural production (Ireland)

■ Regional ● National

GFCS Adaptation Programme in Africa

Focus Countries

- Tanzania and Malawi
- Programme runs for 3 years
- Total budget of USD 10m
- Funded by



Partners



RESEARCH PROGRAM ON
Climate Change,
Agriculture and
Food Security



International Federation
of Red Cross and Red Crescent Societies



Programme for Implementing GFCS at Regional and National Scales

Focus Countries

- **Pacific Islands:** American Samoa, Cook Islands, Fiji, Kiribati, Federated States of Micronesia, French Polynesia, Marshall Islands, Nauru, New Caledonia, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, Wallis and Futuna.
- **Caribbean:** Antigua & Barbuda, Bahamas, Barbados, Belize, Cuba, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, St. Kitts & Nevis, Saint Lucia, St. Vincent & The Grenadines, Suriname, Trinidad and Tobago
- **South Asia:** India, Pakistan, Sri Lanka, Bangladesh, Maldives, Bhutan, Nepal, Afghanistan and Myanmar

Also supporting

- Climate Service for the Arctic Polar Region
- Climate Services in South Asia/Third Pole Region
- Global Action on Integrated Drought Management
- Capacity Building for Climate Sciences

- Total budget - 6.2 m USD

- Funded by

