

# **THE CHALLENGE OF CLIMATE SERVICES**

**John W Zillman**

**International Conference on Climate Services II (ICCS2)  
Brussels, 5-7 September 2012**

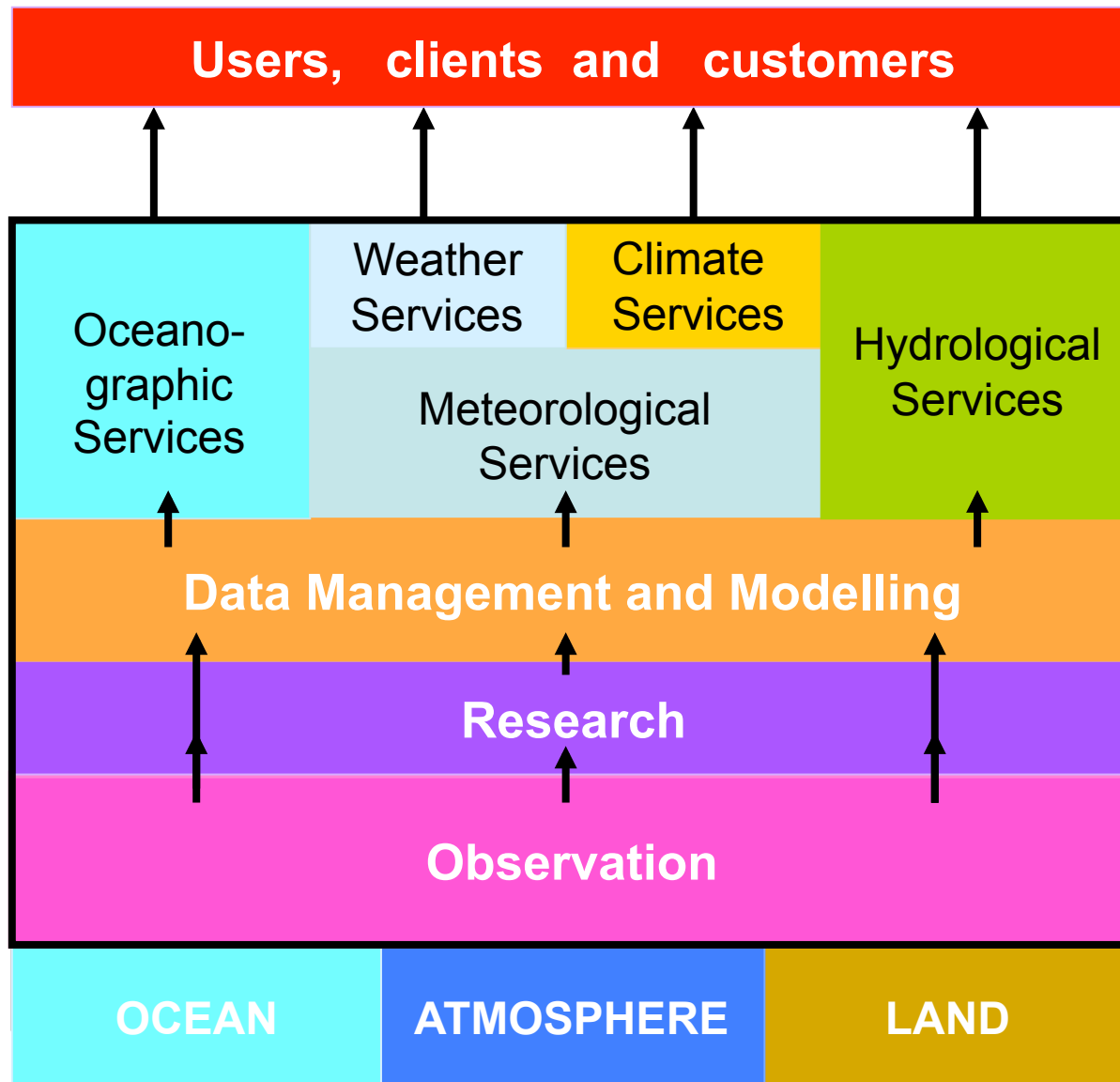
# **THE CHALLENGE OF CLIMATE SERVICES**

- **Early initiatives in climate applications and services (including WCC-1 and WCC-2)**
- **Towards a Global Framework for Climate Services (GFCS)**
- **Design and implementation of the GFCS**
- **Some challenges in implementing the Global Framework**
- **Challenges for climate service provision at the national level.**

# **CLIMATE SERVICES BEFORE THE FIRST WORLD CLIMATE CONFERENCE**

- **WMO Commission for Climatology (since 1929)**
- **National meteorological networks and data banks**
- **Climate data provision and advice**
- **Drought watch and other climate monitoring activities**
- **Climate services sections of National Meteorological Services (NMSs)**

# NMSs AS NATIONAL CLIMATE SERVICES



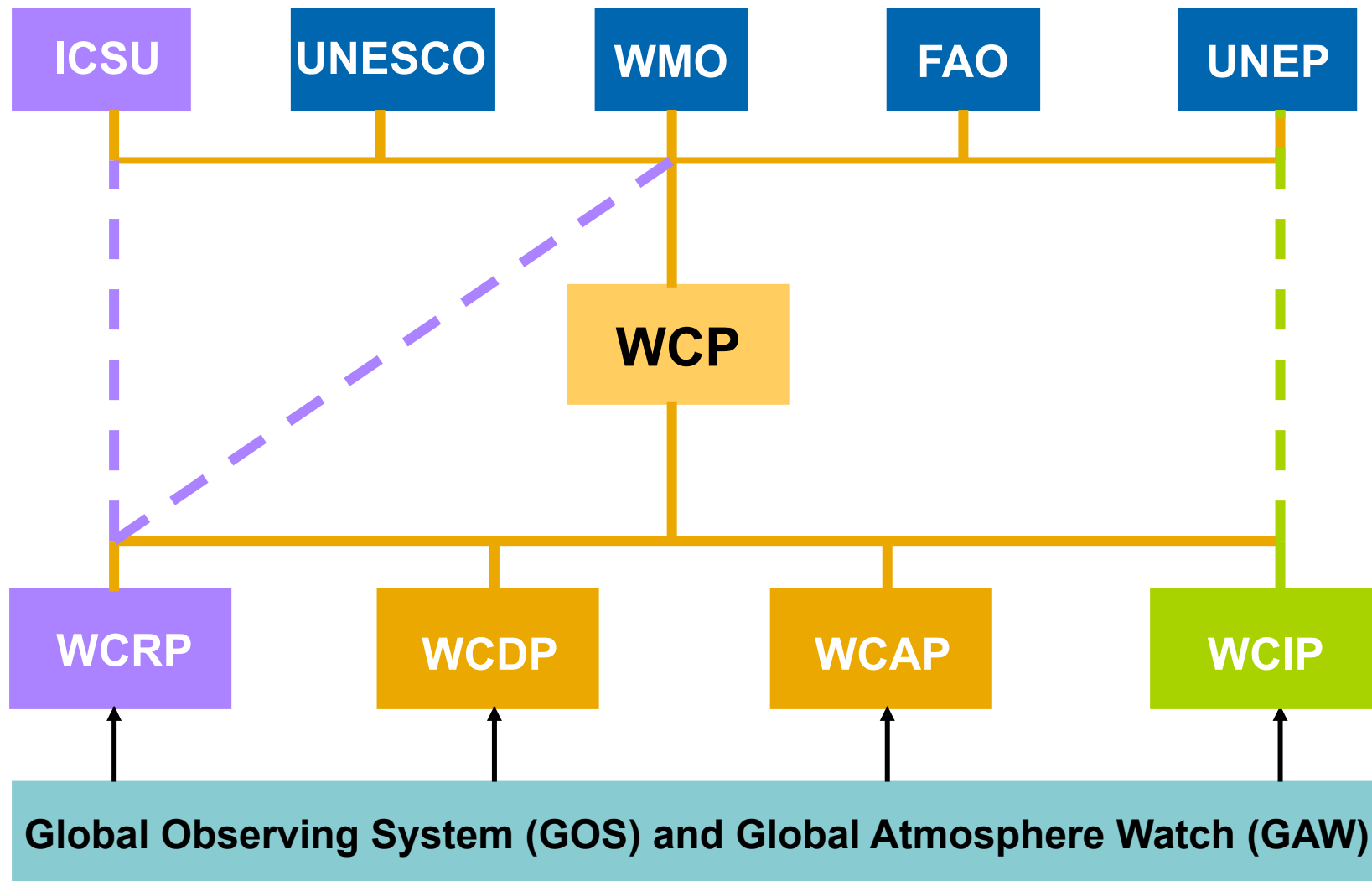
# FIRST WORLD CLIMATE CONFERENCE (WCC-1) (February 1979)



Having regard to the all-pervading influence of climate on human society and on many fields of human activity and endeavour, the Conference finds that it is now urgently necessary for the nations of the world:

- (a) To take full advantage of man's present knowledge of climate
- (b) To take steps to improve significantly that knowledge
- (c) To foresee and prevent potential man-made changes in climate that might be adverse to the well-being of humanity.

# WORLD CLIMATE PROGRAMME (WCP) 1980-90



# **CLIMATE SERVICES DEVELOPMENTS THROUGH THE 1980S**

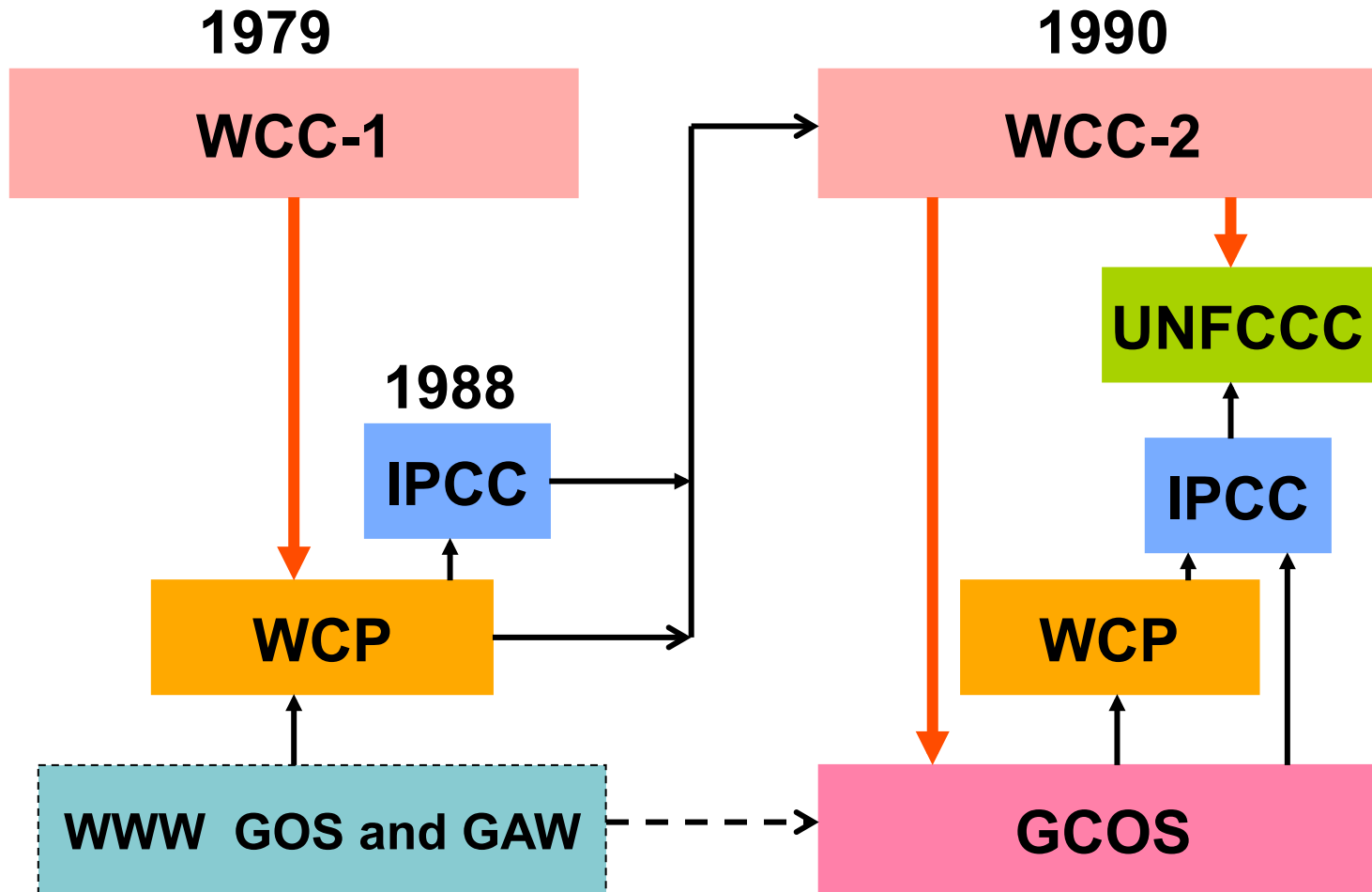
- **World Climate Data Programme (WCDP)**
  - Data Rescue (DARE)
  - Climate Computing (CLICOM)
  - Climate System Monitoring (CSM)
  - Climate Data Information Referral System (INFOCLIMA)
- **World Climate Applications Programme (WCAP)**
  - WCP (Energy, Food, Water, Urban and Building)
  - Climate Applications Referral System (CARS)
- **Establishment of National Climate Programs**
- **Intergovernmental Panel on Climate Change (IPCC)**

# SECOND WORLD CLIMATE CONFERENCE (WCC-2) (October-November 1990)





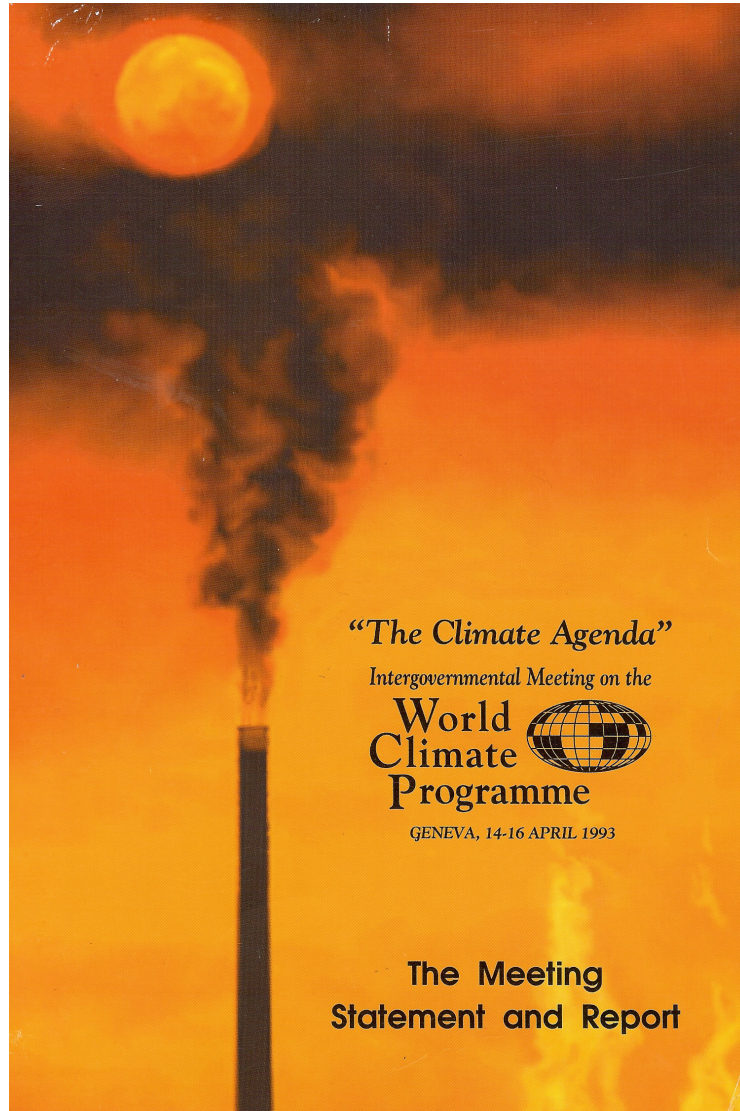
# OUTCOME OF THE FIRST AND SECOND WORLD CLIMATE CONFERENCES



# **MAJOR CLIMATE SERVICES INITIATIVES OF 1991 WORLD METEOROLOGICAL CONGRESS**

- **Establishment of Global Climate Observing System (GCOS) to meet increasing needs for climate data**
- **Expansion of WCDP to World Climate Data and Monitoring Programme (WCDMP)**
- **Expansion of WCAP to World Climate Applications and Services Programme (WCASP)**
- **Convening of an Intergovernmental Meeting on the World Climate Programme (WCP) to identify resources for WCP and GCOS**

# INTERGOVERNMENTAL MEETING (1993) AND THE CLIMATE AGENDA

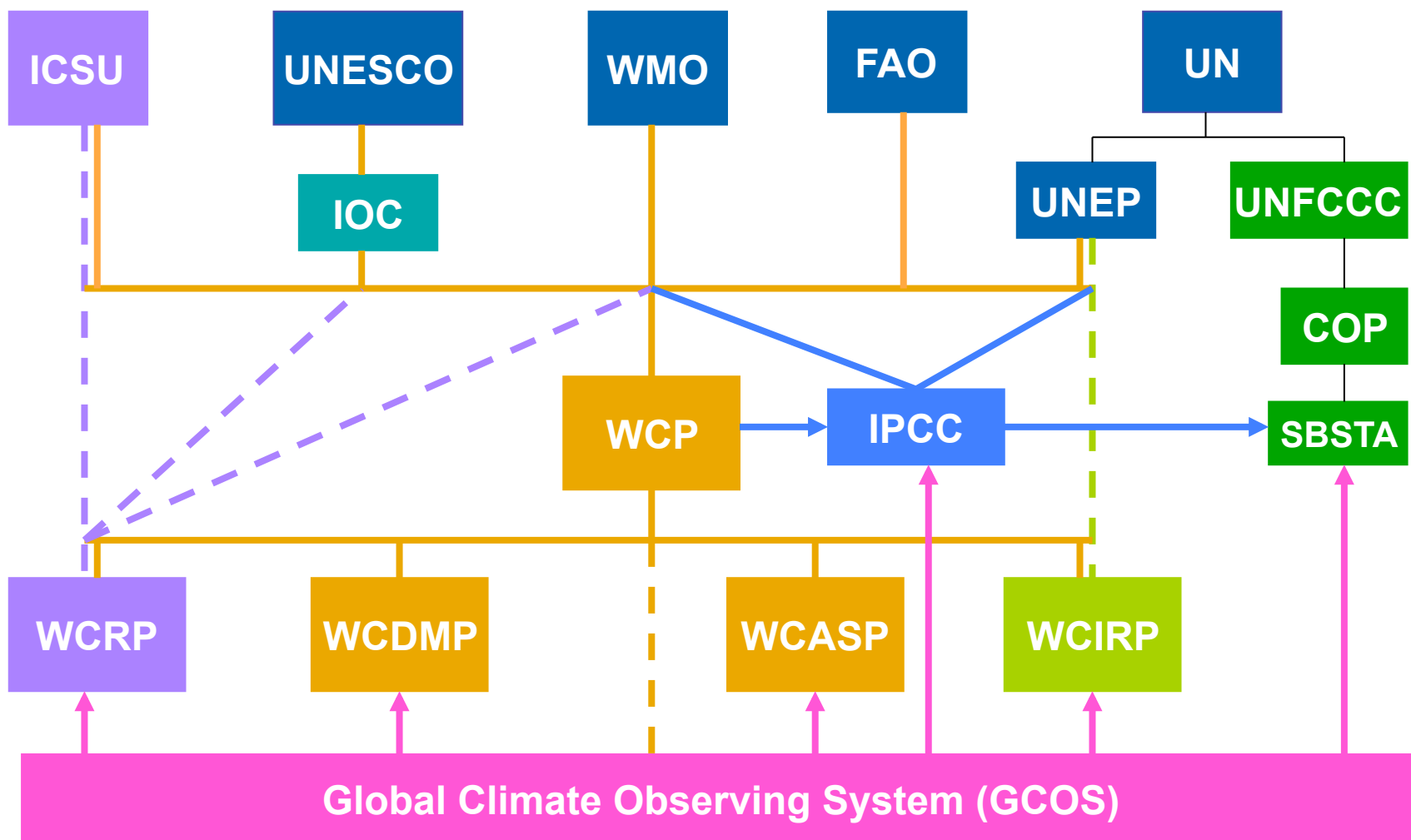


## Statement on the Climate Agenda (16 April 1993)

The Meeting .....endorsed the proposed four main thrusts of the World Climate Programme (WCP) and its associated activities:

- **Climate services for sustainable development;**
- **New frontiers in climate science and prediction**
- **Dedicated observations of the climate system**
- **Studies of climate impact assessments and response strategies to reduce vulnerability.**

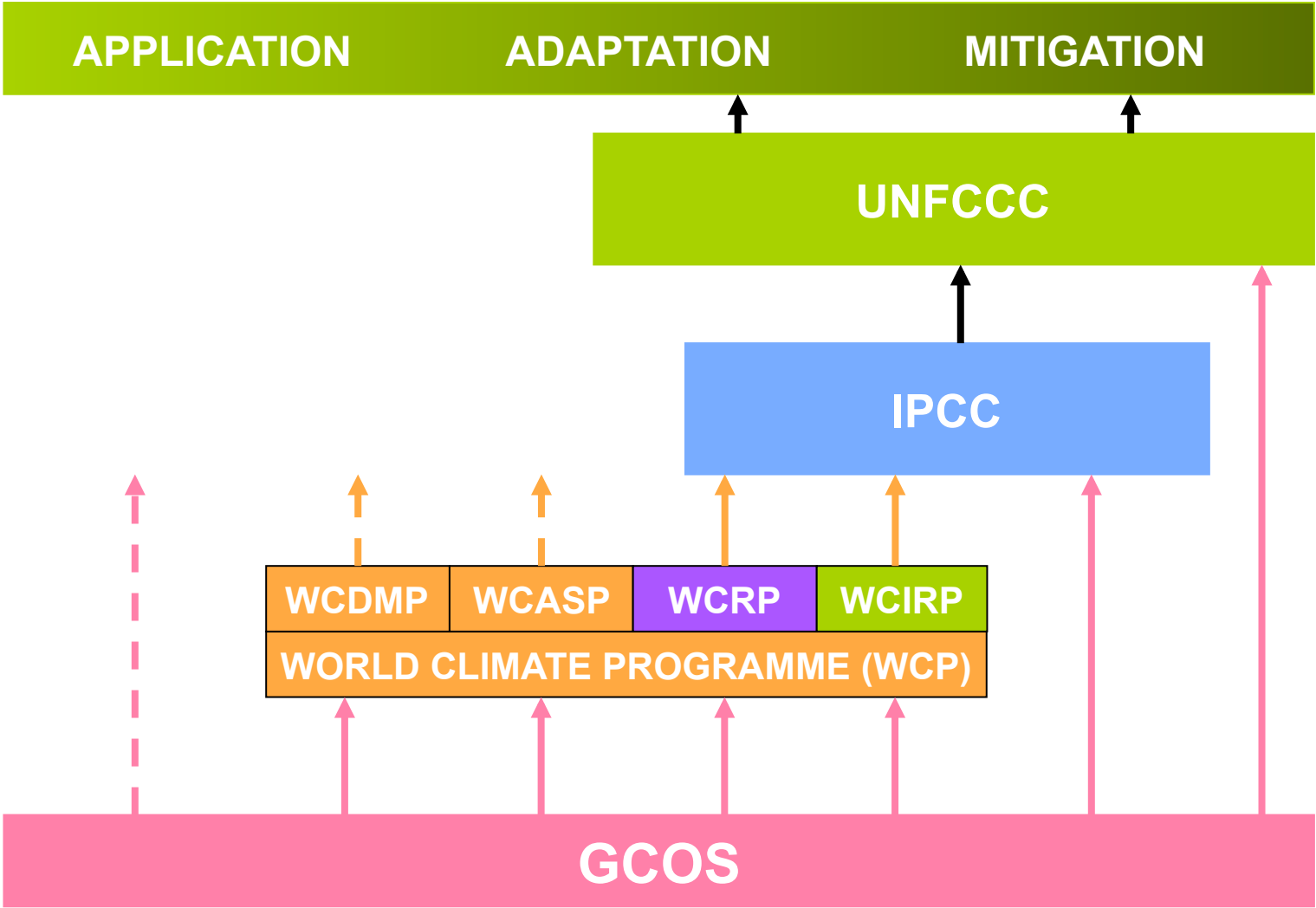
# THE WORLD CLIMATE PROGRAMME AND ASSOCIATED ACTIVITIES OF THE CLIMATE AGENDA



# CLIMATE SERVICES DEVELOPMENTS THROUGH THE 1990s

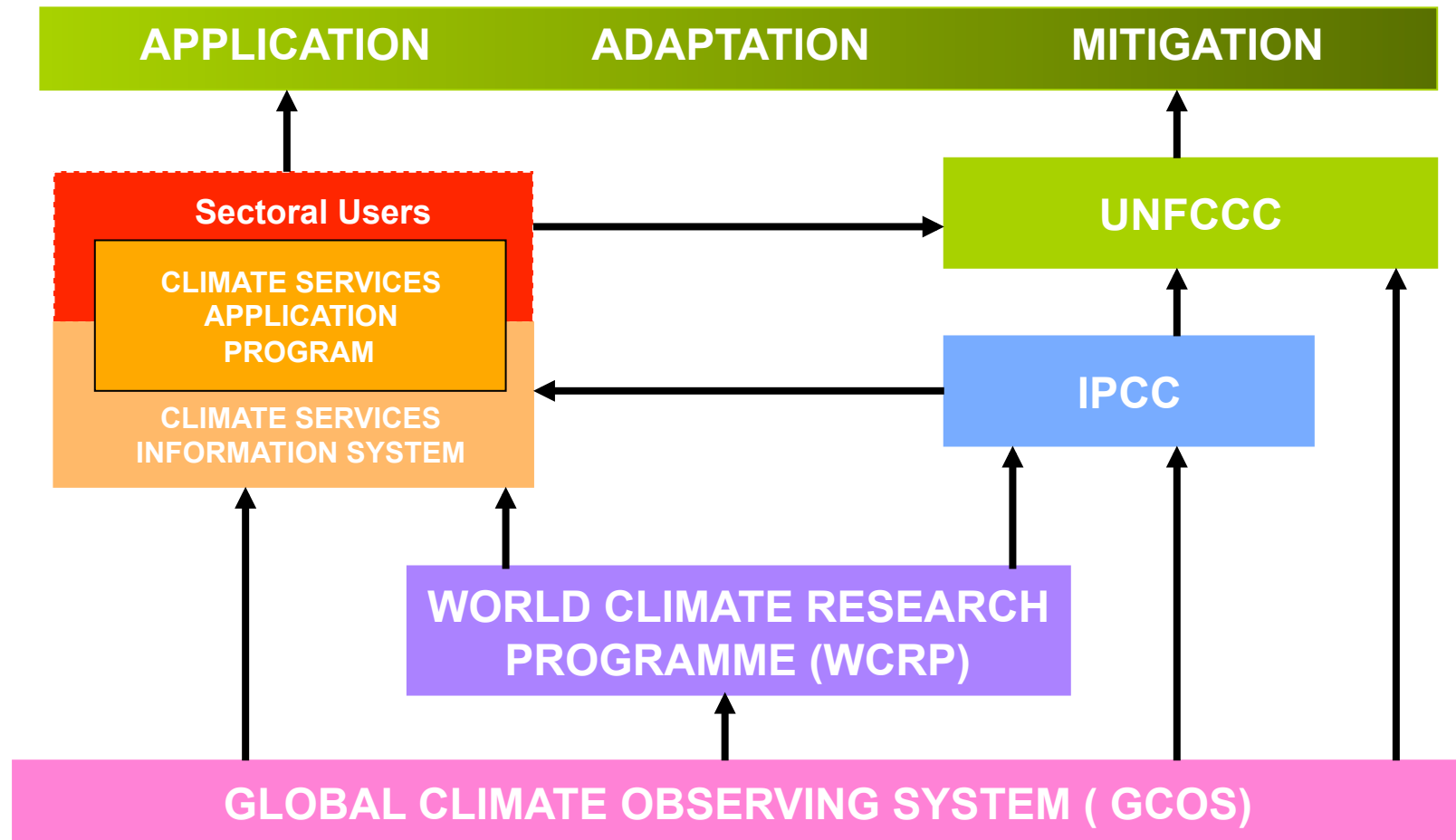
- Inter-Agency Committee on the Climate Agenda (IACCA)
- Establishment of International Research Institute for Climate Prediction (now Climate and Society) (IRI) based on outcome of WCRP-TOGA
- Climate Information and Prediction Services (CLIPS) as a major project of WCASP
- Initiation of Seasonal Climate Outlooks in many countries
- **BUT** failure to resource the climate services components of the Climate Agenda

# THE LATE 1990's LEGACY OF WCC-1 AND WCC-2



**TOWARDS A  
GLOBAL FRAMEWORK FOR  
CLIMATE SERVICES**

# CONCEPT OF A GLOBAL FRAMEWORK



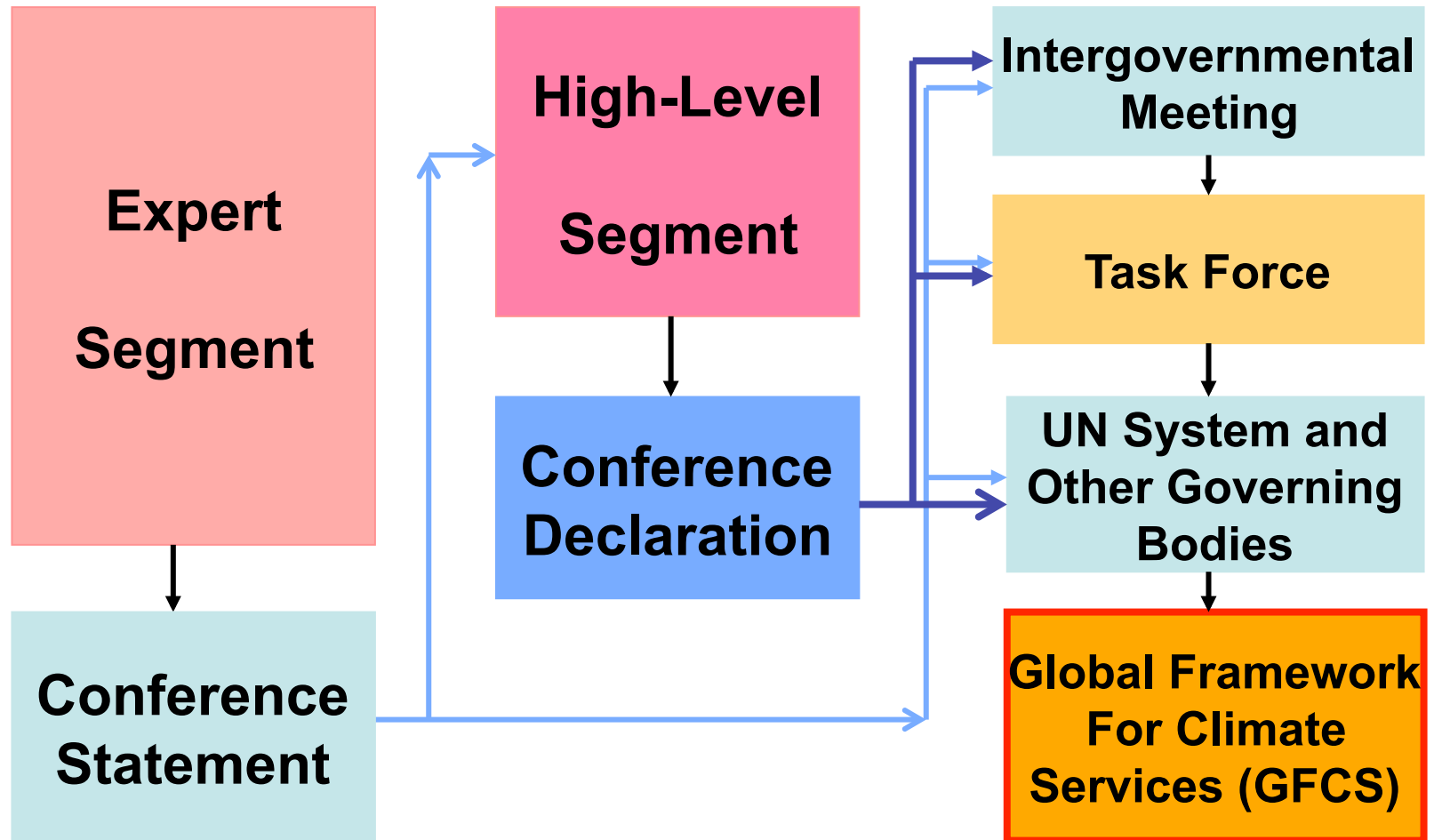


# **THE VISION FOR WORLD CLIMATE CONFERENCE-3 (WCC-3)**

**Better climate information for a better future**

**An international framework for climate services that links science-based climate predictions and information with the management of climate-related risks and opportunities in support of adaptation to climate variability and change in both developed and developing countries.**

# THE PLAN FOR WCC-3



# WORLD CLIMATE CONFERENCE-3 (WCC-3) (31 August – 4 September 2009)

Opening of  
the Expert  
Segment



Opening of  
the High-level  
Segment



# **WCC-3 CONFERENCE STATEMENT**

## **(The Essential Elements of a Global Framework for Climate Services (GFCS))**

- **The Global Climate Observing System** and all its components and associated activities.....
- **The World Climate Research Programme**, under-pinned by adequate computing resources.....
- **Climate services information systems** taking advantage of enhanced existing national and international climate service arrangements.....
- **Climate user interface mechanisms** that are focused on building linkages...between the providers and users.....
- **Capacity building** through education, training and strengthening outreach and communication

# **WCC-3 CONFERENCE DECLARATION**

## **(3 September 2009)**

**We, Heads of State and Government, Ministers and Heads of Delegation present at the High-level Segment of the World Climate Conference-3 (WCC-3) in Geneva, noting the findings of the Expert Segment of the Conference:**

**Decide to establish a **Global Framework for Climate Services** (hereafter referred to as ‘the Framework’) to strengthen the production, availability, delivery and application of science-based climate prediction and services**

**DESIGN AND  
IMPLEMENTATION  
OF THE GFCS**

# GFCS TASK FORCE REPORT (2011)

## CLIMATE KNOWLEDGE FOR ACTION:

A GLOBAL FRAMEWORK  
FOR CLIMATE SERVICES—  
EMPOWERING  
THE MOST VULNERABLE



THE REPORT OF THE HIGH-LEVEL TASKFORCE  
FOR THE GLOBAL FRAMEWORK  
FOR CLIMATE SERVICES

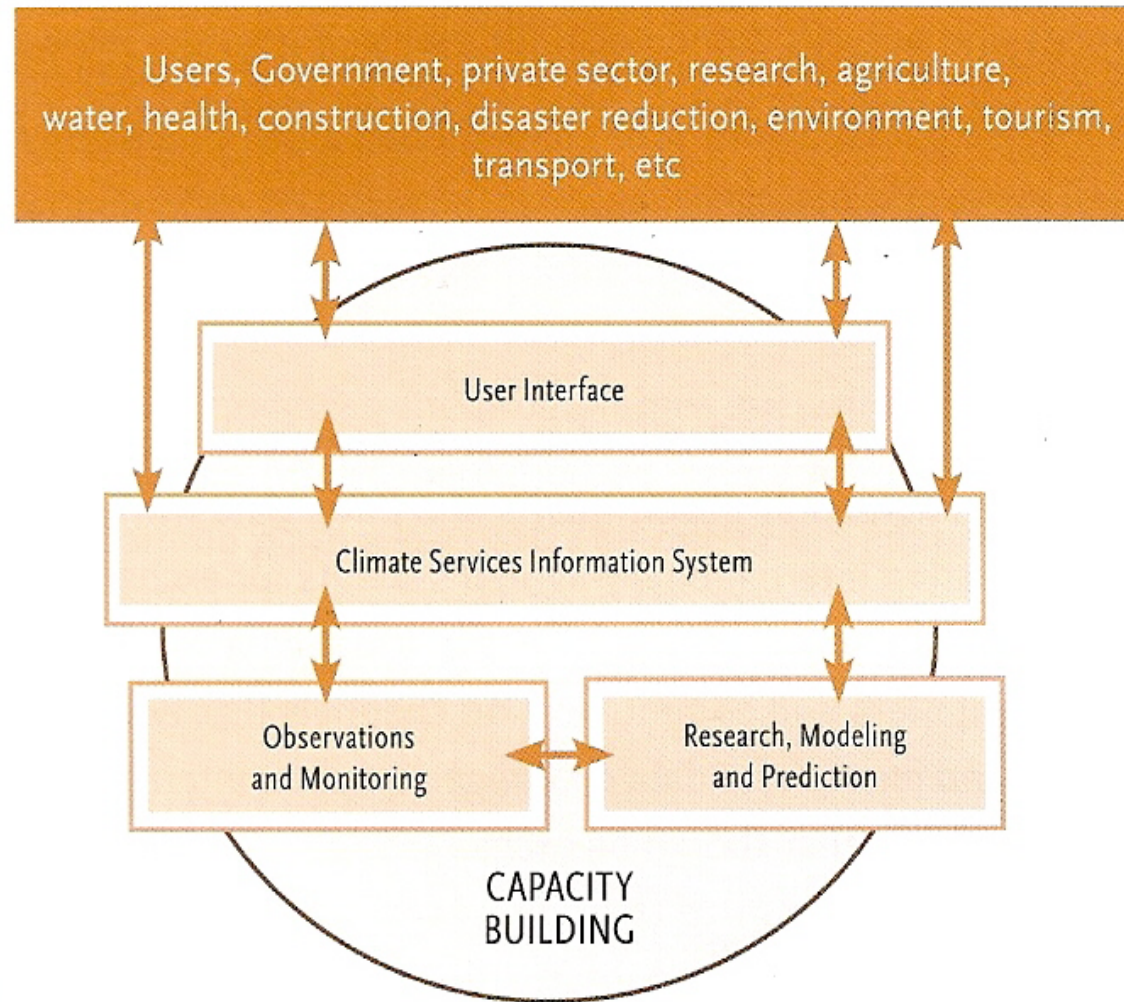
WMO-No. 1065



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1. Climate information & predictions
2. Observing systems & data exchange
3. Research that supports climate services
4. Capacity building that supports climate services
5. Experience of climate sensitive sectors
6. Needs of international policy
7. Case studies: experiences at national level
8. Gaps and opportunities for climate services
9. Implementing the Global Framework for Climate Services
10. Governance arrangements

# TASK FORCE VIEW OF GFCS COMPONENTS





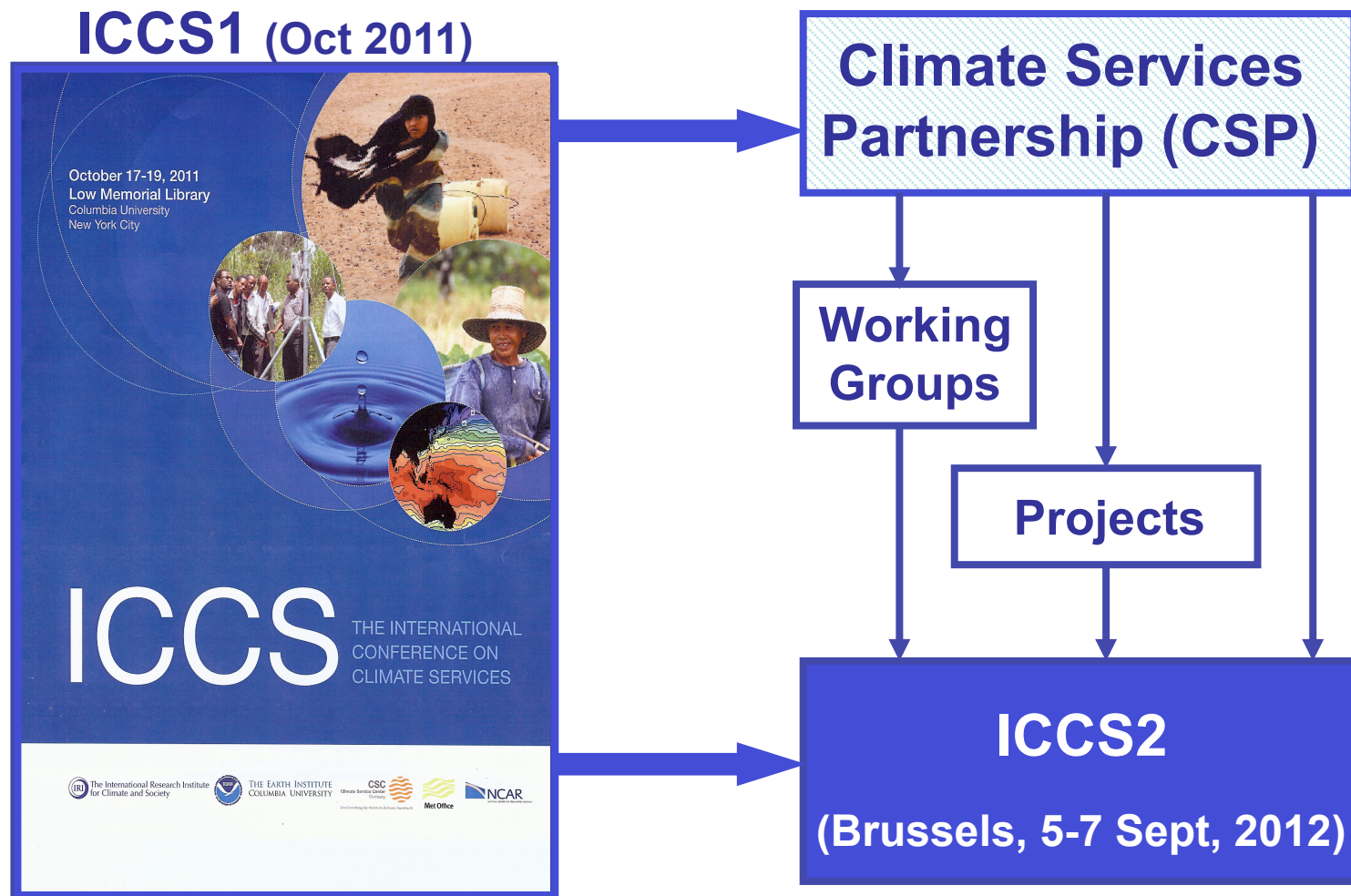
# PRINCIPLES TO BE ADOPTED IN IMPLEMENTING THE FRAMEWORK

1. All countries will benefit but priority should go to building the capacity of climate-vulnerable developing countries
2. The primary goal of the Framework will be to ensure greater availability of, access to, and use of climate services for all countries
3. Framework activities will address 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 the management through the Framework
6. The Framework will promote the 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. The Framework will be built through user-provider partnerships that include all stakeholders

# **WMO CONGRESS DECISIONS (2011)**

- **To support and facilitate implementation of GFCS as a priority for 2012-15**
- **That the peak governance mechanism should be an intergovernmental board**
- **That the Executive Council develop proposals for:**
  - **Draft Implementation Plan for the GFCS**
  - **TOR and Rules of Procedure for Intergovernmental Board**
- **To replace WCDMP and WCASP with a World Climate Services Programme (WCSP)**
- **To convene an Extraordinary Congress in October 2012**
- **To urge NMHSs to develop partnerships etc**

# CLIMATE SERVICES PARTNERSHIP



# **GFCS IMPLEMENTATION PLAN**

**(Draft of August 2012)**

## **Executive Summary**

- 1. Introduction**
- 2. Benefits from the Global Framework for Climate Services**
- 3. Issues to be addressed in implementation**
- 4. Implementation priorities**
- 5. Enabling mechanisms**
- 6. Resource mobilization**
- 7. Conclusions and next steps**

## **Annexes**

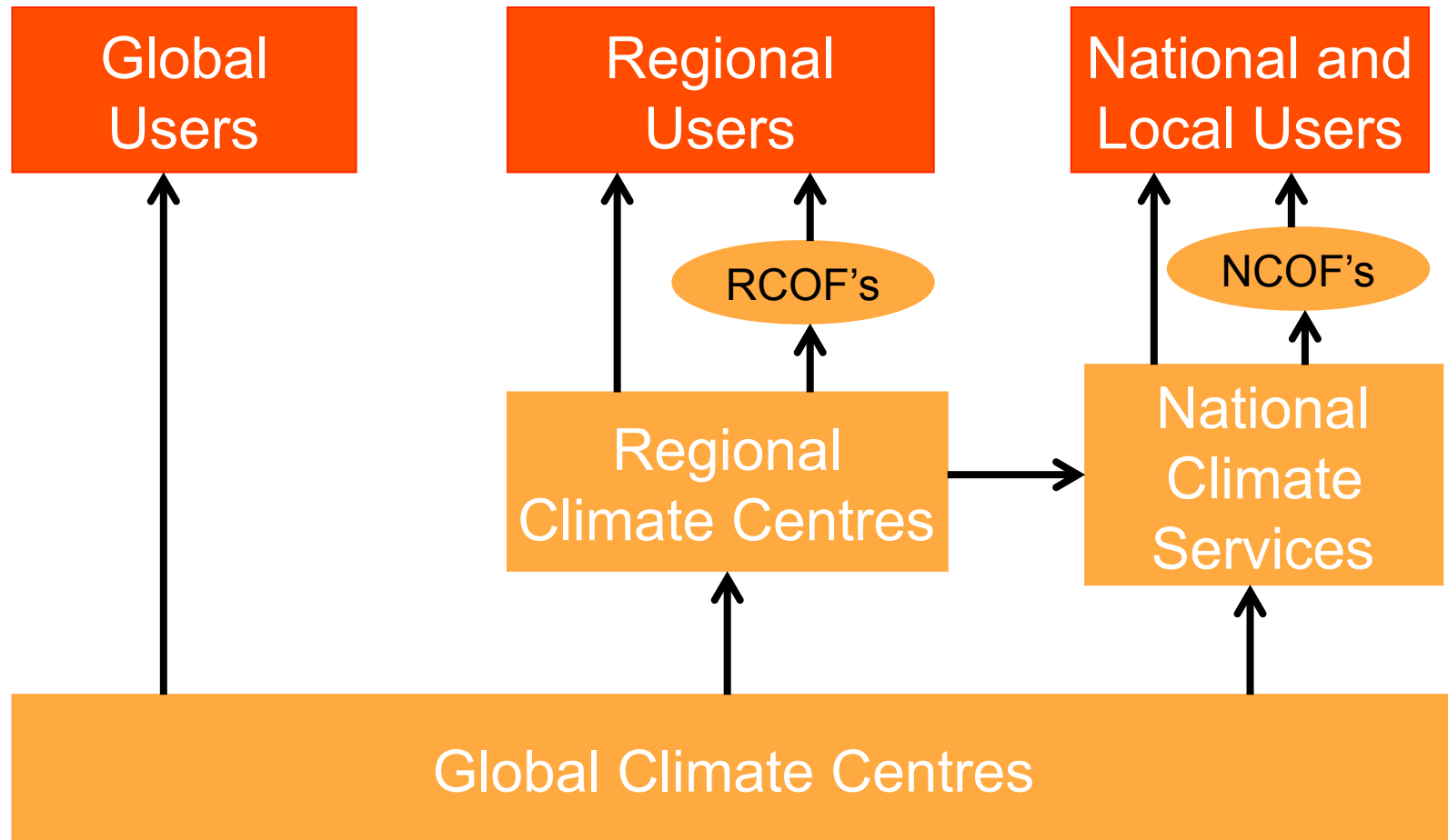
- User interface platform (including exemplars for Health, Food Security, Disaster Risk Reduction, Water)**
- Observations and monitoring**
- Research, modelling and prediction**
- Climate services information system**
- Capacity development**

# **INITIAL IMPLEMENTATION ACTIVITIES**

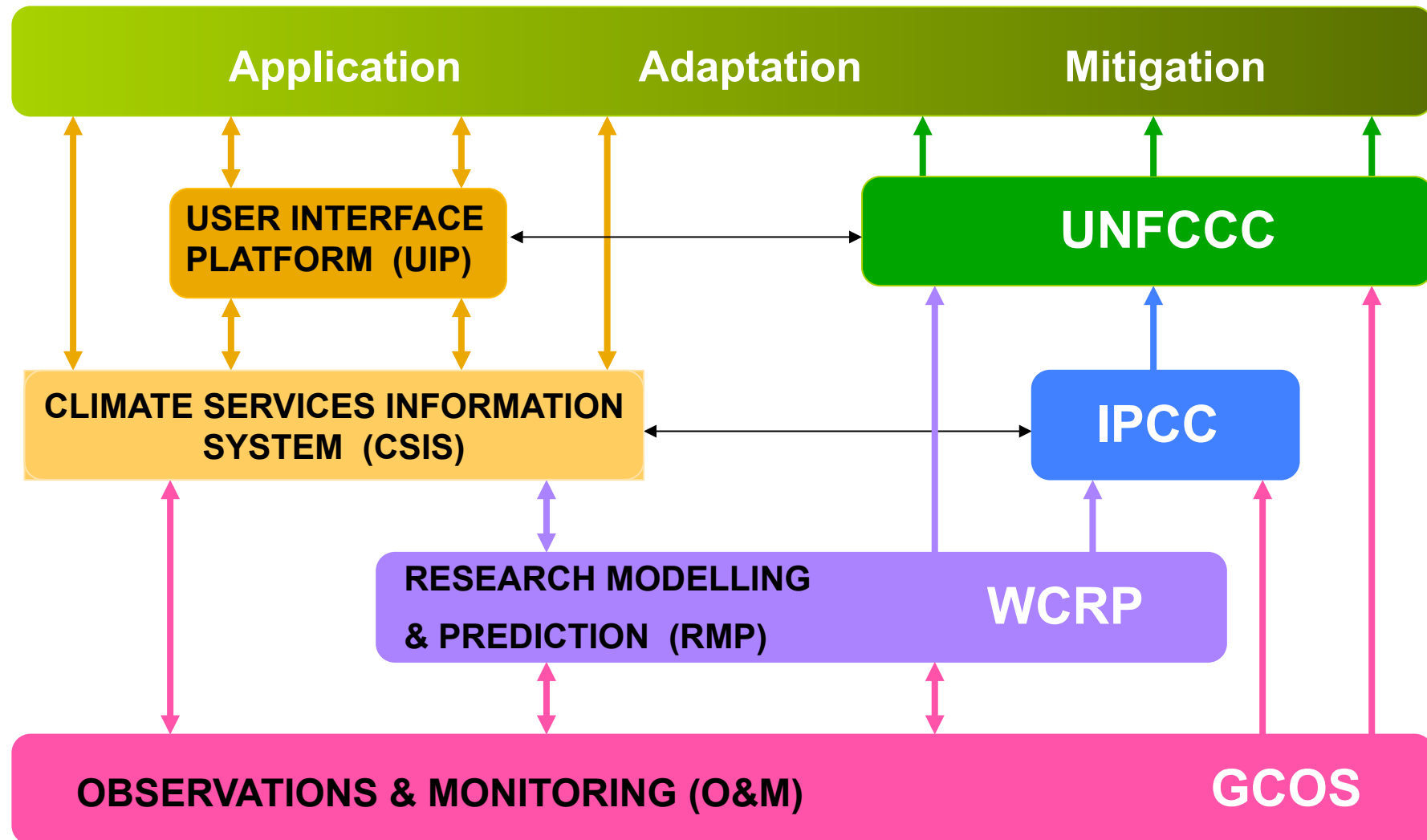
## **(Draft of August 2012)**

- 1. Developing guidance on climate services at the national level**
- 2. Strengthening capacity for disaster risk reduction and early warning**
- 3. Improving communications between the climate and agriculture and food security communities**
- 4. Partnering climate services and water resources management**
- 5. Developing Nation Climate and Health Working Groups**
- 6. Improving decision-making processes in climate related risks**
- 7. Strengthening regional infrastructure for providing climate information**
- 8. Recovering and digitizing data**

# TOWARDS AN INTERNATIONAL ARCHITECTURE FOR THE CLIMATE SERVICES INFORMATION SYSTEM



# TOWARDS AN OVERALL GLOBAL FRAMEWORK FOR CLIMATE SERVICES



# **SOME CHALLENGES IN IMPLEMENTING THE GLOBAL FRAMEWORK**

- **Establishing a broad understanding of the nature, scope and value of climate services**
- **Capturing the wisdom from WCC-3 and the High-level Task Force**
- **Maintaining the political momentum from WCC-3**
- **Building interagency partnerships in climate service provision and application**
- **Restructuring the World Climate Programme (especially World Climate Services Programme) and ensuring its components fit together**
- **Re-establishing commitment to GCOS and WCRP as essential pillars of the GFCS**
- **Linking the GFCS effectively with IPCC and UNFCCC mechanisms**
- **Demonstrating and enhancing the economic and social benefit from the use of climate information**
- **Institutionalising commitment to free and unrestricted data exchange**
- **Achieving closure at October 2012 Extraordinary Congress**
- **Funding GFCS governance, secretariat and initial implementation activities**
- **Extending GFCS to embrace all applications sectors**



# CHALLENGES FOR CLIMATE SERVICE PROVISION AT THE NATIONAL LEVEL

- **Establishing and strengthening essential national climate observational, research data management and service provision infrastructure (especially in developing countries)**
- **Getting agreement on national institutional arrangements for climate service provision (NMS and other)**
- **Establishing dialogue between climate service providers and major user sectors and organizations**
- **Building staff capabilities for climate service provision & application**
- **Linking climate services with national climate change policy mechanisms (mitigation and adaptation)**
- **Resourcing public good component (NMS and other) of enhanced climate service information systems**
- **Establishing/strengthening national consultative and collaborative mechanisms such as NCOFs**
- **Building climate services capacity in the academic & private sectors**
- **Grasping the opportunities provided by the GFCS initiative**

**THANK YOU**