

Needs for climate information under the UNFCCC

Fourth United Nations International UN-SPIDER Bonn Workshop on Disaster Management and Space Technology: “The 4 C - Challenge: Communication - Coordination - Cooperation - Capacity Development

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OUTLINE

- Reflections on the 4 C-challenge in the UNFCCC context
- Update on current negotiations
- Needs for climate information under UNFCCC
 - Nairobi work programme on impacts, vulnerability and adaptation (NWP)
 - NAPAs
- Meeting the needs
 - Global Climate Observations
 - Global Framework for Climate Services under WMO and its partner organizations
- Space-based information under the Convention process

IPCC 4th Assessment Report (2007)WG II – Impacts, adaptation and vulnerability

“Impacts due to altered frequencies and intensities of extreme weather, climate and sea-level events are **very likely** to change”

... Confidence has increased, that

“some weather events and extremes will become more frequent, more widespread and/or intense during the 21st century.”



Communication –

Information on needs and activities carried out under UNFCCC available *ia.* through:

National Communications

SBSTA Research dialogue

National Adaptation Programmes of Action (NAPAs)



Coordination and Cooperation –

Cooperation to support the deliberations under the UNFCCC -

Relevant global observing systems (GCOS, GTOS, GOOS) and CEOS

The IPCC and regional and international climate change research programmes and organizations

Major global initiatives relevant to climate change (eg. Global Framework for Climate Services)

Nairobi work programme on impacts, vulnerability and adaptation to climate change - implemented by Parties, intergovernmental and non-governmental organizations, the private sector, communities and other stakeholders.



Capacity Development –

Capacity-building activities under the Convention aim to assist developing country Parties to cope with climate change, including in the areas of adaptation, technology development and transfer, research and systematic observation and education, training and public awareness



Ad-hoc Working Group on Long-term Cooperative Action (AWG-LCA)

Views and proposals relevant to climate change research and systematic observation include:

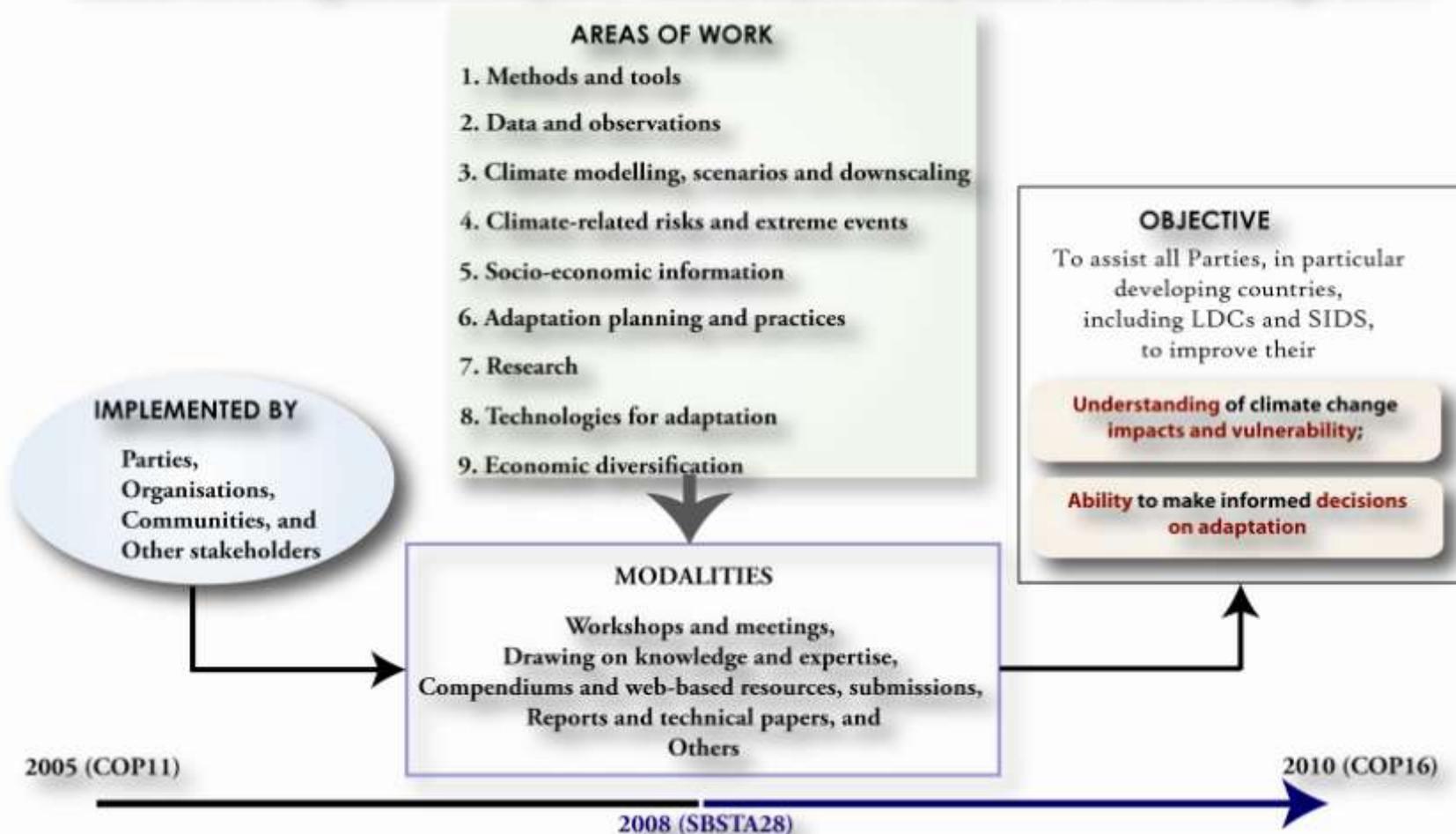
- **Shared vision –**
Long-term global goal for reducing GHG emissions and **Review** of the long-term global goal;
Encouraging Parties to support further development and operational implementation of the WMO **Global Framework for Climate Services**
- **Adaptation –** Enhancing adaptation action (Adaptation Framework), including through **strengthening institutions and capacities** and improving **availability of data and information**
- **Technology, finance and capacity building –** Provision of technological, financial and capacity building support for example for improved climate change observation systems and related information management



Needs for climate information



Nairobi Work Programme on Impacts, Vulnerability and Adaptation to Climate Change (NWP)



Examples include:

- NWP:
 - Improving availability and access to data, information and knowledge
 - Importance of the regional centers as platforms for knowledge management
 - Closer collaboration between the users and providers of climate data and information
- NAPAs (LDCs):
 - Projects with intrinsic needs for climate information (eg. early warning, disaster management projects)



Meeting the needs



GCOS Implementation Plan

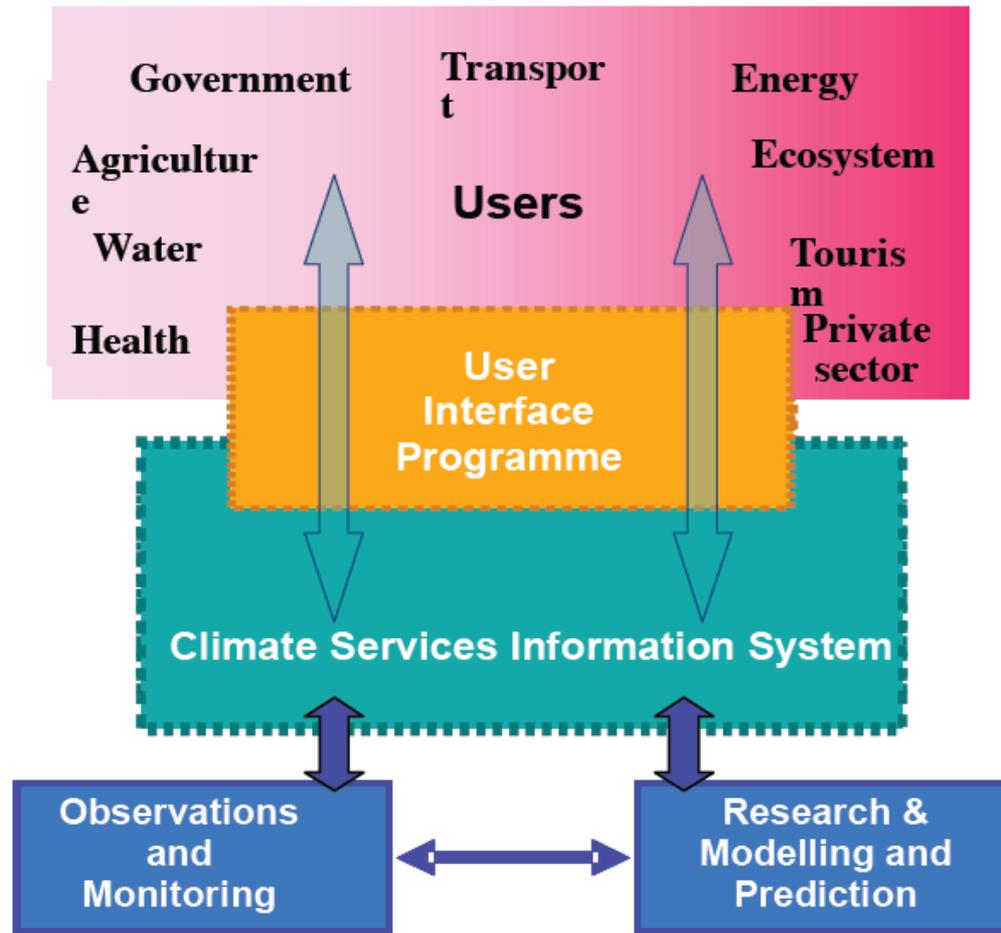
- Information on the total climate system, including range of physical, chemical and biological properties, and atmospheric, oceanic, hydrologic, cryospheric and terrestrial processes (ECVs)
- Designed to meet the needs for climate-related observations, including the needs of the Parties to the UNFCCC
- Implementation carried out by various national meteorological, hydrological, oceanographic, space, environment, research and other Earth observing agencies of the Member countries of the sponsors of GCOS
- 2010 update of the GCOS implementation plan – including updated list of GCOS ECVs (now 50); actions required to implement and maintain a comprehensive global observing system for climate



Domain	Essential Climate Variables
Atmospheric (over land, sea and ice)	Precipitation, Earth radiation budget (including solar irradiance), upper-air temperature, wind speed and direction, water vapour, cloud properties, carbon dioxide, ozone, aerosol properties
Oceanic	Sea-surface temperature, sea level, ocean colour (for biological activity), sea state, ocean salinity
Terrestrial	Lakes, snow cover, glaciers and ice caps, albedo, land cover (including vegetation type), fraction of absorbed photosynthetically active radiation (fAPAR), leaf area index (LAI), biomass, fire disturbance, soil moisture

Source: Systematic Observation Requirements for Satellite-based Products for Climate – Supplemental Details to the GCOS Implementation Plan





Concepts relevant in the context of space-based information

Access to and **availability** of data and information important, especially for the developing countries

Need too ensure **long-term continuity** of space-based observations

Need for improved observations in terms of cross-sectoral information, coverage and all variables (ECVs).

Responding to the user needs – **services, communication**