

Global Observations for Climate Prediction and Adaptation
ESA-WMO Side Event SBSTA-29
Posnan, Poland, 3 December 2008

The Value of Systematic Observation Networks and Data for Adaptation

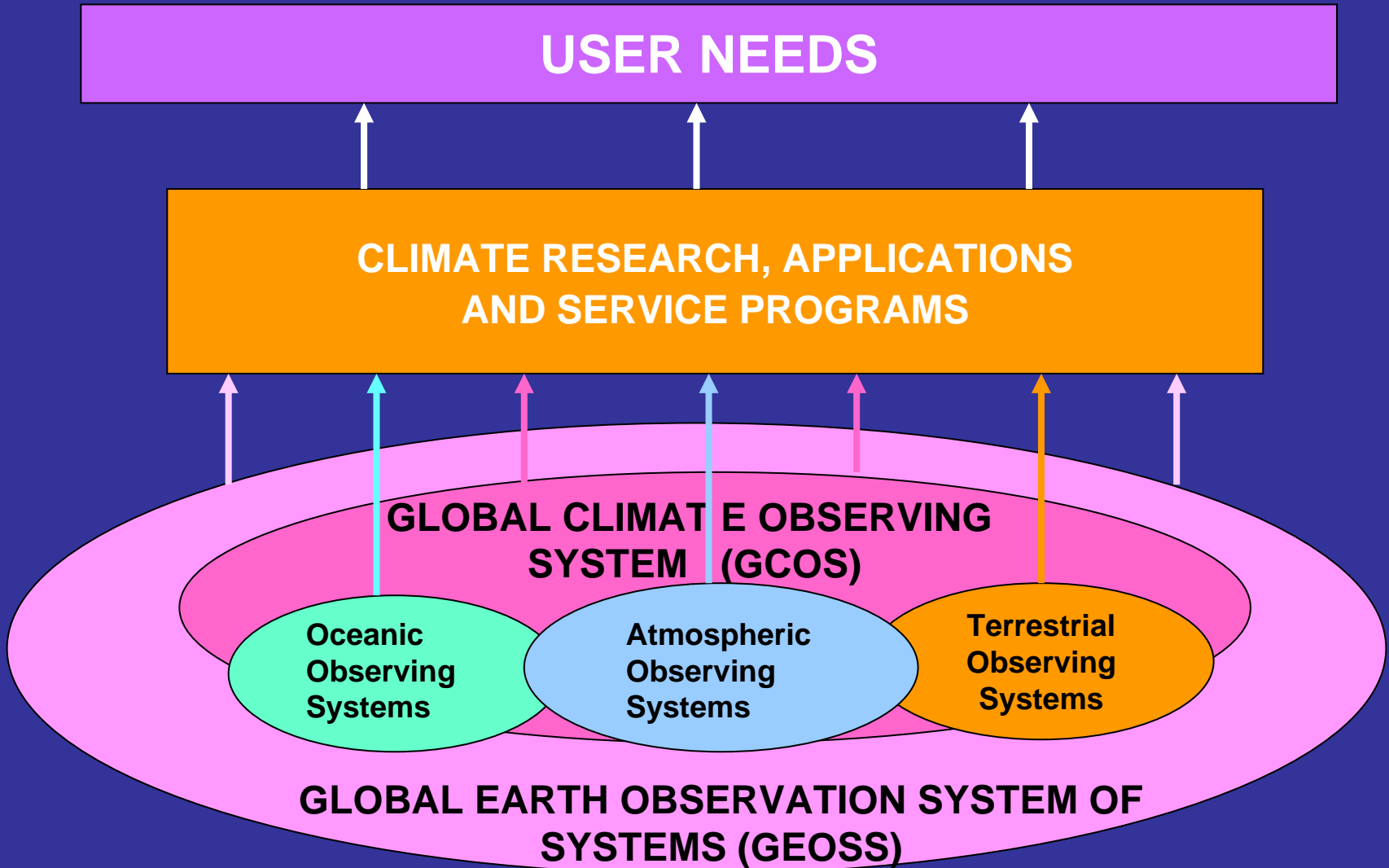
John W. Zillman
Chairman, GCOS Steering Committee



ICSU
International Council for Science



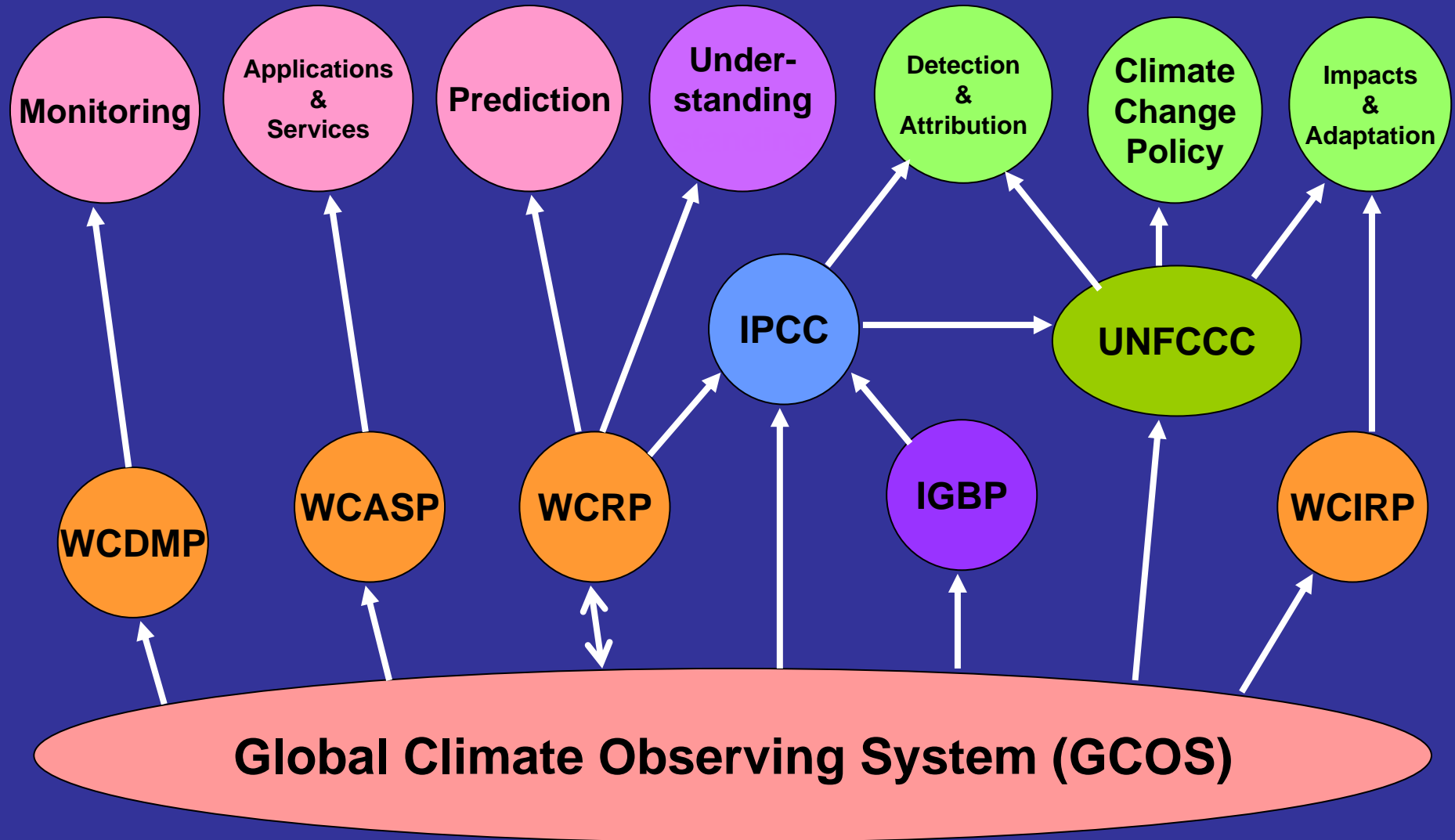
THE BASIC CONCEPT OF GCOS



THE NEEDS FOR CLIMATE OBSERVATIONS

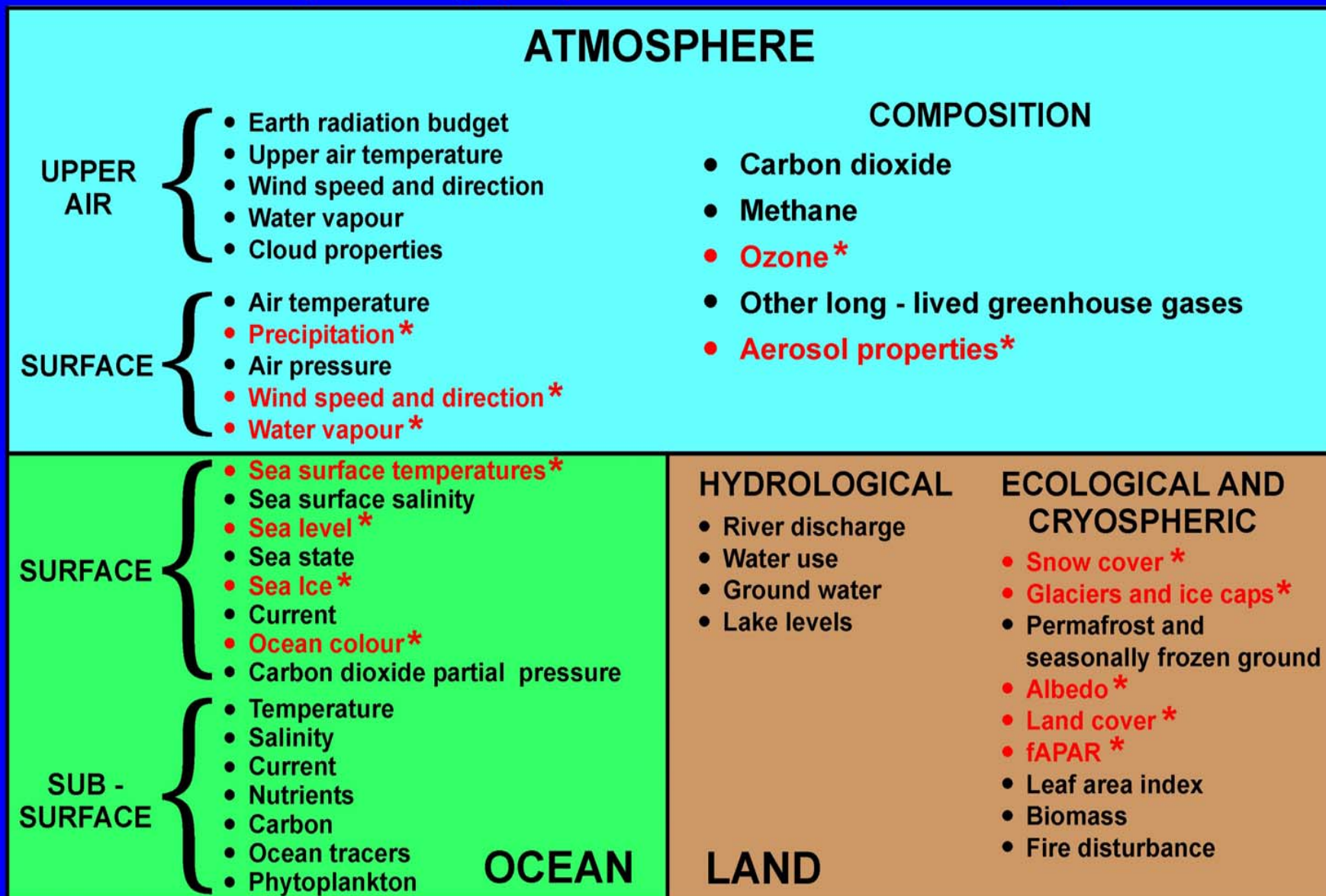
- Climate system monitoring
- Climate change detection and attribution
- Operational climate prediction on seasonal-to-interannual time scales
- Research to improve understanding, modelling and prediction of the climate system
- Applications and services for sustainable economic development
- Assessment of the impacts of, and vulnerability and adaptation to, natural climate variability and human-induced climate change
- Meeting the requirements of the UNFCCC and other international conventions and agreements

GCOS SUPPORTING INTERNATIONAL CLIMATE PROGRAMS SERVING USER NEEDS



THE CLIMATE SYSTEM DOMAINS AND ESSENTIAL CLIMATE VARIABLES (ECVs)

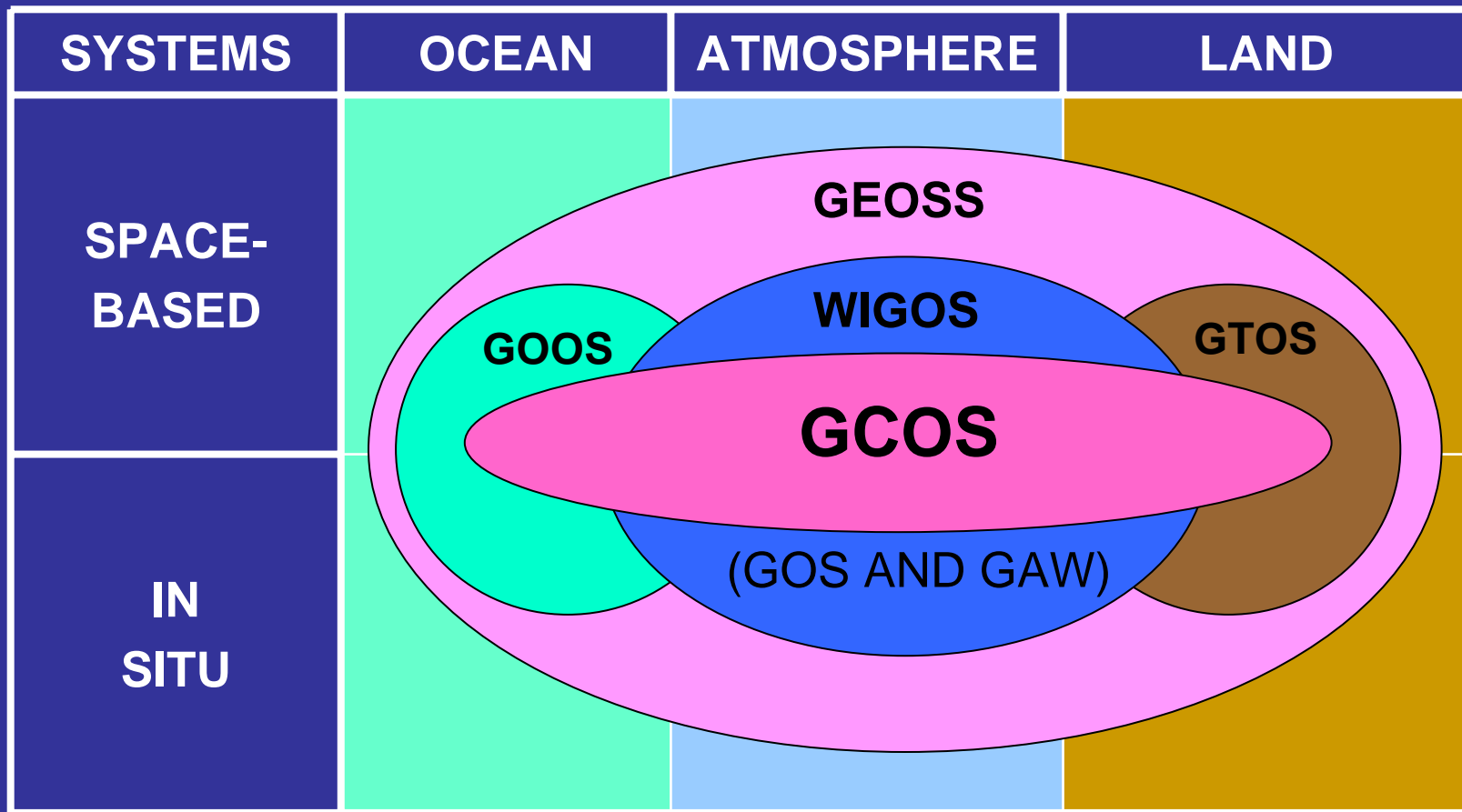
(*ECVs largely dependent on satellite observations)



AN INTEGRATED GLOBAL CLIMATE OBSERVING SYSTEM



THE COMPOSITION AND SCOPE OF THE MAIN GLOBAL OBSERVING SYSTEMS



GCOS PLANS

THE GCOS PLAN (Version 1.0, 1995)	REGIONAL ACTION PLANS (2001-06)	IMPLEMENTATION PLAN FOR THE UNFCCC (2004)
<ol style="list-style-type: none"> 1 Introduction and objectives 2 International background 3 Scientific priorities 4 The benefits of GCOS 5 The strategy for GCOS 6 The initial operational system 7 Data and information management 8 Space-based observations 9 Long-term needs 10 The next steps 11 Management 12 Conclusions and summary 	<ul style="list-style-type: none"> •Pacific Islands •Eastern and Southern Africa •Western and Central Africa •Central America and the Caribbean •East and Southeast Asia •Central Asia •South and Southwest Asia •South America •Eastern and Central Europe •Mediterranean Basin <p>•CLIMATE FOR DEVELOPMENT IN AFRICA (2006)</p>	<ol style="list-style-type: none"> 1 Background and introduction 2 The strategic approach to implementation 3 Overarching/crosscutting issues 4 Atmospheric climate observing system 5 Oceanic climate observing system 6 Terrestrial climate observing system <p>SATELLITE SUPPLEMENT</p> <ol style="list-style-type: none"> 1 Introduction 2 Cross-cutting needs 3 Products
	<p>GCOS IMPLEMENTATION IN CENTRAL AMERICA AND THE CARIBBEAN (2008)</p>	

AGENTS FOR IMPLEMENTATION OF THE SPACE-BASED COMPONENTS OF GCOS

International Coordination Mechanisms

- CEOS (Committee on Earth Observation Satellites)
- CGMS (Coordination Group for Meteorological Satellites)
- HLCC (WMO High Level Consultative Committee on Satellites)
- WSP (WMO Space Program)
- GEO (Group on Earth Observations)

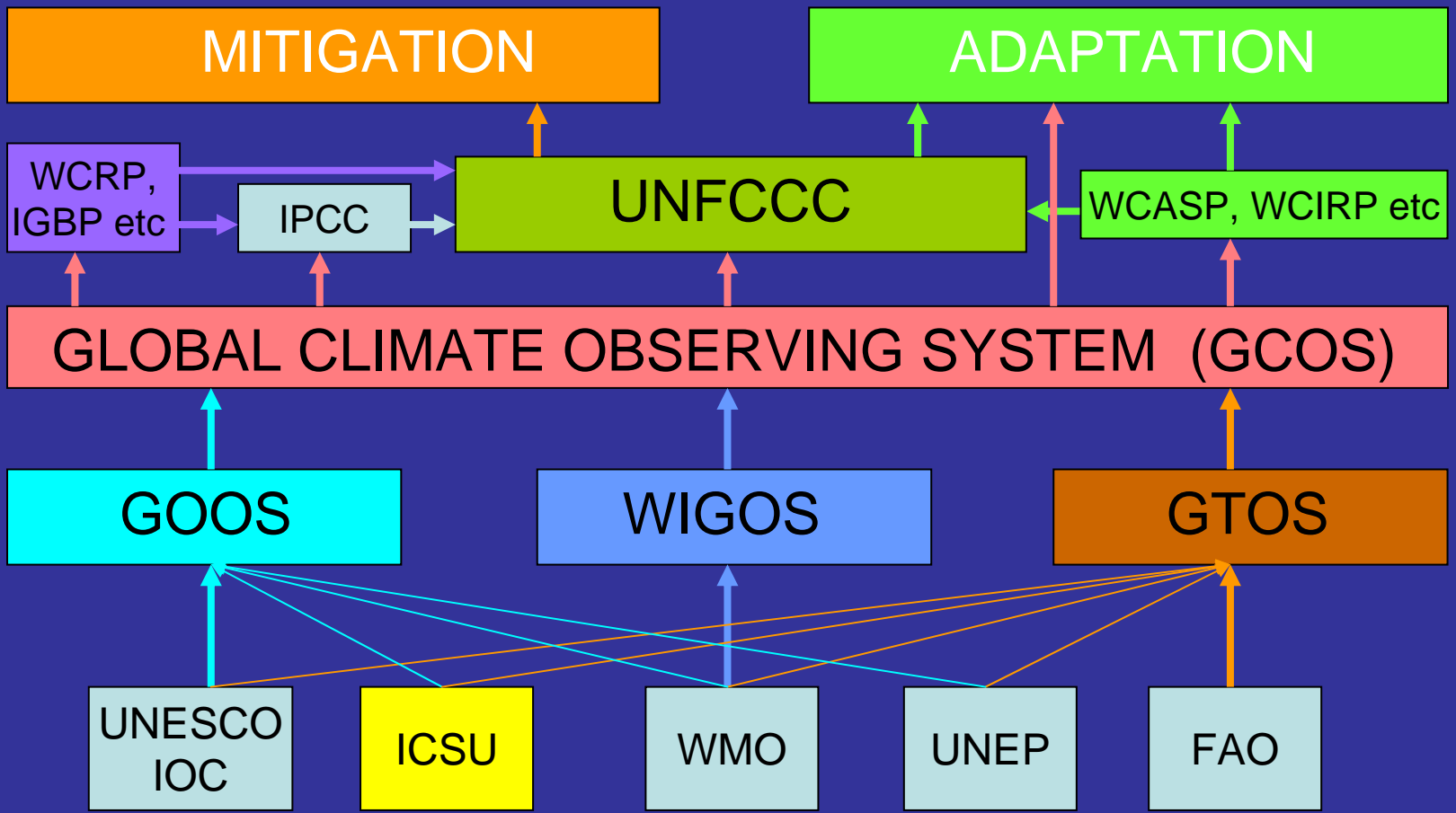
Regional/Specialized Intergovernmental Organizations

- ESA (European Space Agency)
- EUMETSAT (European Organization for the Exploitation of Meteorological Satellites)


National Space Agencies

- | | |
|-----------------------------|-------------------|
| – NASA, NOAA/NESDIS (US) | CNES (France) |
| – FSA, Roshydromet (Russia) | CAST, CMA (China) |
| – JAXA, JMA (Japan) | ISRO, IMD (India) |

THE UN SYSTEM AGENCIES AND ICSU UNDERPINNING THE UNFCCC ADAPTATION AGENDA THROUGH THE CO-SPONSORED GLOBAL OBSERVING SYSTEMS



GCOS SUPPORTING ADAPTATION

- Improved observations means better
 - Climate monitoring
 - Understanding and modelling
 - Climate change projection
 - Climate prediction
 - Climate-impact relationships
 - Climate services

Means better adaptation
- Climate for Development in Africa (ClimDev Africa)
 - Widely available climate information, packaging, and dissemination
 - Quality analysis for decision support and management practice
 - Informed decision making, awareness, and advocacy
- GCOS/WCRP/WCP regional observation/modelling/adaptation project
 - Assess adequacy of regional networks (GCOS/WCDMP)
 - Assess and apply regional model capabilities (WCRP)
 - Incorporate model projections into adaptation planning (WCASP)