

**WCRP**

World Climate Research Programme



ICSU

International Council for Science

# World Climate Research Programme

## JOINT WGNE27th-WGCM 15<sup>th</sup> session

### October 2011

### Geneva, Switzerland

Michel Rixen, WCRP JPS, on behalf of

Ghassem R Asrar, Director, WCRP

Antonio J. Busalacchi, chair JSC, WCRP



### C. Core Service Delivery Mechanisms For Forecasts/Predictions



Earth System Science

### B. Research Communities Meet



### A. Mix of Research & Operations



Nowcasts      Day to Month Weather Forecasts      Seasonal/Inter-annual Prediction      Decadal Prediction      Decadal To Century

Time Scale Dependence Of Three Different Characteristics Of Weather, Climate, Water and Environmental Prediction Activities

## Emerging structure Post-2013

- The WCRP will be based on four fundamental *interactions* of the Earth/climate system:
  - Ocean-atmosphere
  - Land-atmosphere
  - Stratosphere-troposphere
  - Cryosphere

### WCRP Overarching/Unifying themes:

Observation and Analysis

Process understanding

Modeling development, projections and prediction

Climate Information and Application

## Responding to new challenges: preparation

- WCRP Modelling Coordination Meeting
- Role of WCRP Research in Climate Services, Task Team
- Transition Plan from WOAP to a WCRP Data Council, Task Team

## WCRP Modeling Coordination Meeting

- Why?
  - World Modeling Summit: need for operational climate predictions at all scales
  - Numerous groups, panels and working groups
- Progress needed:
  - Unified voice for community challenges and needs
  - Strategy (critical gaps, shortfalls), ambitious projects and emerging science
  - WCRP internal and external communication and coordination

# WCRP

World Climate Research Programme



ICSU

International Council for Science

- **Promoting application of models to problems of societal relevance, quantifying uncertainties and making sure they are well communicated and understood** T. Palmer, C. Jones, J. Hurrell, J. Petch, G. Danabasoglu, M. Latif
- **Promoting the model development and improvements** C. Jakob, K. Trenberth, T. Shepherd, D. Bromowich
- **Promoting the confrontation of models with observations and results of process studies** V. Eyring, M. Manton, K. Steffen, D. Stammer
- **Promoting collaboration amongst various climate science communities (includes numerical weather prediction (NWP), seasonal to interannual prediction and climate projection communities as well as those dealing with biogeochemistry, air quality, terrestrial ecology, etc.)** B. Kirtman, V. Ramaswamy, J. Slingo, V. Kattsov
- **Role and terms of engagement for the WCRP Modelling Council** S. Bony, D. Griggs, J. Marotzke, H. Le Treut

## WCRP Modeling Coordination Meeting Recommendations:

- Modeling Council: facilitate coordination and integration between WCRP projects/panels, IGBP, WWRP, etc
- Major topics:
  - Use of observations for evaluation and analysis
  - Model development (e.g. seamless, downscaling, sub-seasonal)
  - Uncertainties (risk quantification, ensembles)
  - Applications/services (training, capacity building, GFCS)
- Grass roots approach, avoid duplicates

## WCRP Modeling Council: who?

- Co-chairs of the different WCRP modeling panels and working-groups (e.g. WGNE, WGSIP, WGCM, WGOMD, TFRP, GCSS/GABLS, GLASS, CCMVal, GPC, CFMIP, PMIP)
- Reps from the Observation Council
- Reps from other international programmes (e.g. CAS, IGBP)
- Co-chairs from WCRP projects GEWEX, CLIVAR, SPARC, CLIC (unless they can be represented by the co-chairs of their modeling groups)
- Reps from application modeling
- Reps of projects of special interest for WCRP modeling such as: YOTC/MJO
- A few JSC members
  
- Chair: not a JSC member, former co-chair in relevant group, 2-year term



## WCRP Modeling Council: how?

- Communicate regularly by e-mail
- Meet at least once a year during the annual JSC meeting
- Encourage occasional joint meetings of working groups or panels to promote communication or to launch focused joint initiatives
- Not be a substitute of existing working groups or panels

## Data Council

- Promote research using sustained observations and data from process studies across the WCRP
- Promote assessment of the adequacy of sustained observations and derived products to support climate research
- Promote assessment of gaps in the global observing system
- Promote coordinated assessment and comparison of climate-data products, including those from reanalyses
- Promote research for continuing improvement in the processing and reprocessing of fundamental climate data records
- Promote development of mechanisms for archival of, access to and analysis of data, and associated meta data, across the research community
- Promote standards for product generation, including global and regional reanalyses
- Promote a coordinated approach to reanalysis across all domains
- Promote scientific development of coupled assimilation
- Work with the Modelling Council to promote effective use of observations with models.

## Operation of Data Council

- Council will meet annually, likely out of phase with GCOS panels
- Council will promote action within existing programs or by establishing task groups
- Membership
  - Chair and vice-chair (both independent)
  - Representative from each of the four projects (designated individuals; e.g. GSOP representative from CLIVAR)
  - Representative of SOLAS (and other pertinent groups that are jointly sponsored by WCRP)
  - Representative from each of the three GCOS panels (chairs or their nominees)
  - Representative of Modelling Council
  - Representative of IGBP
  - Representatives of CEOS and CGMS
  - Other international agencies and satellite coordinating bodies may participate as observers.

## JSC 32 outcomes

- Modeling Council Approved – ToR developed
  - Activities, functioning, membership composition
  - Call for nominations soon
- Observations Council Approved – ToR developed
  - Re-focus: analysis, interpretation and exploitation
  - Membership composition: call for nominations soon
- Next:
  - finalize ToR, membership
  - 1<sup>st</sup> meeting in conjunction with JSC33 (TBC)

# WCRP

World Climate Research Programme

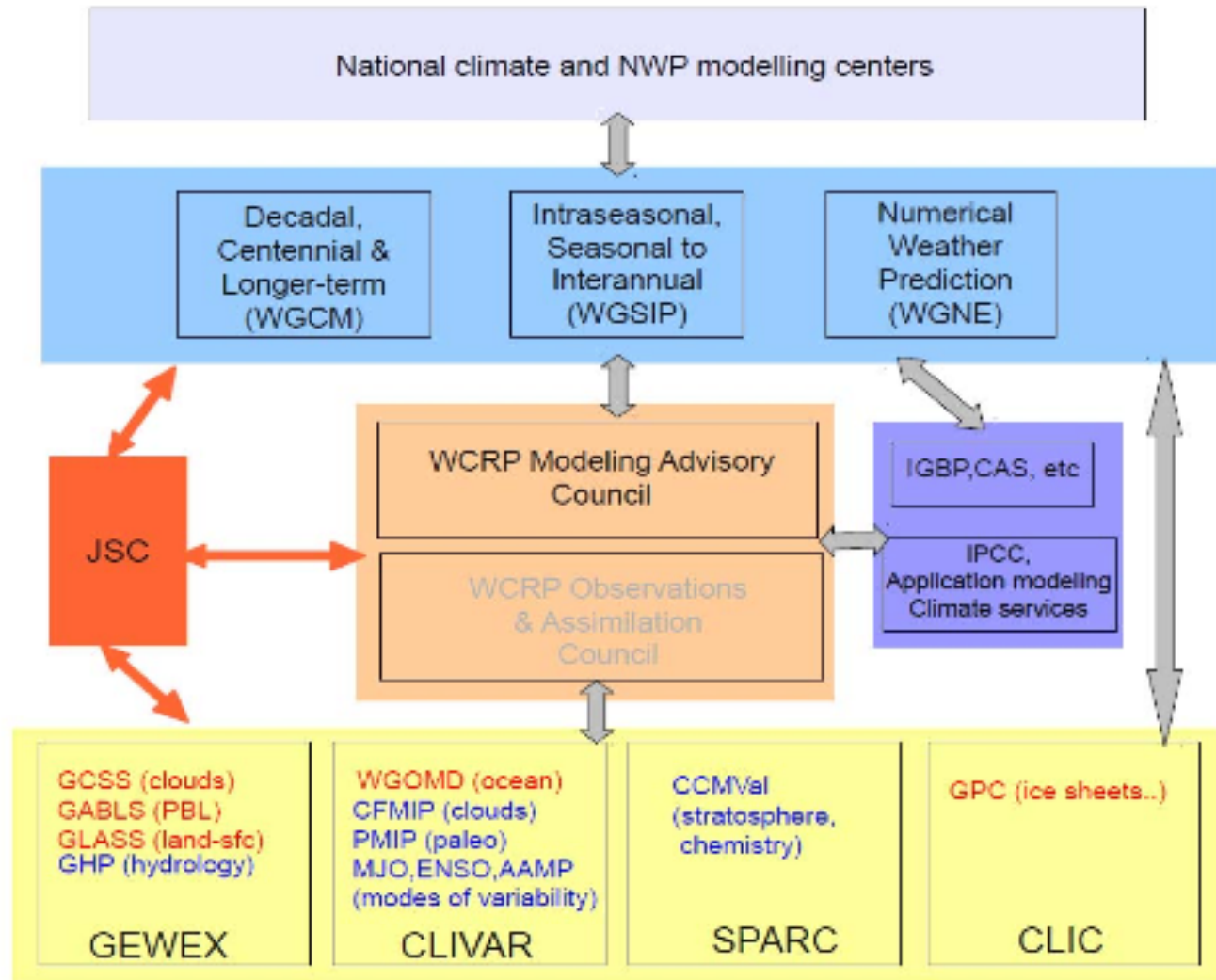


ICSU

International Council for Science

## New developments

- CORDEX South-Asia in preparation (w/START): following CORDEX-Africa model, importance of capacity building
- WWRP-THORPEX/WCRP Planning Group for a “Sub-seasonal prediction research project” established (MJO TF, stratosphere processes, land IC, coupling and DA, parameterization & uncertainties, GHG, YOTC, etc)
- WWRP-THORPEX/WCRP Steering Group for a “Polar Weather Prediction Research Project” being established (leveraging IPY legacy)



Thank you for your attention!

<http://www.wcrp-climate.org>

