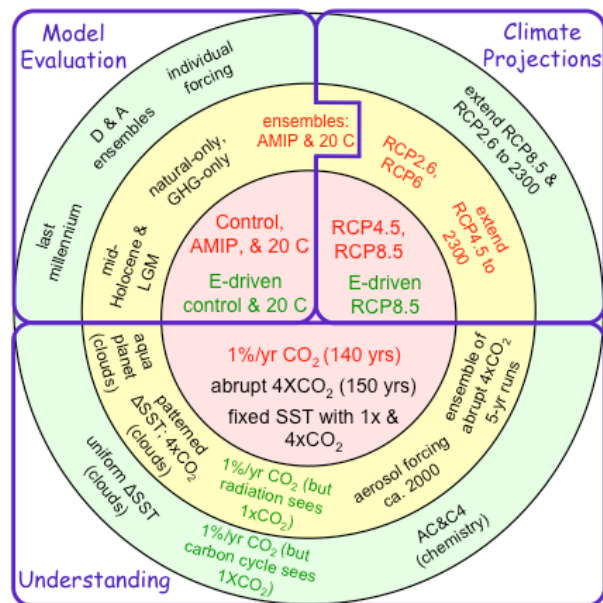


# CMIP standards and practices

WDAC2  
27 May, Brasilia

M. Rixen, JPS

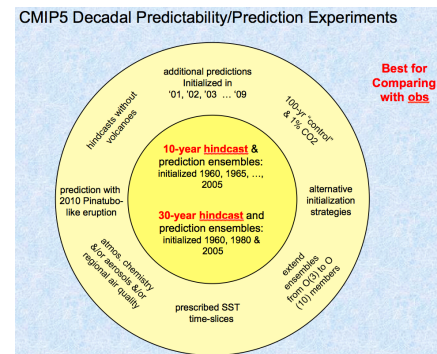
### A rich set of modeling experiments, drawn from several predecessor MIPs, focuses on model evaluation, projections, and understanding



**Red** matches CMIP3 experimental suite

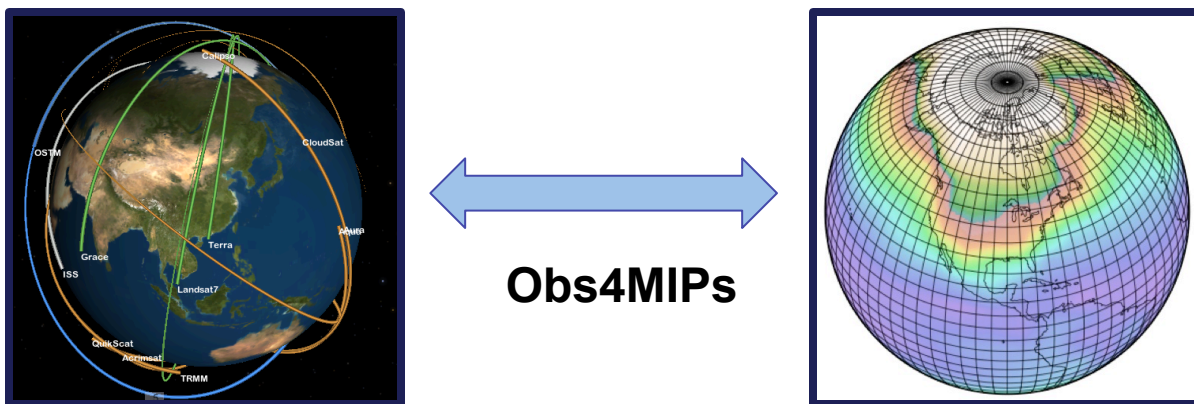
**Green** coupled carbon-cycle climate models

- 2+ Petabyte on Earth System Grid
- 59 models, 24 groups
- Many studies contributing to the IPCC AR5 report
- Already 250+ papers
- Other modeling efforts within WCRP (Seasonal-to-internannual, Decadal, Regional-CORDEX) could likely follow similar scheme in the future



# Intercomparison Models-Observations

Coordinated with CMIP5 are parallel efforts to collect and make available observationally-based products



A pilot effort to improve the connection between data experts and scientists involved in climate model evaluation. Aligned with CMIP5, with encouragement from the WGCM, WGNE, WDAC.

NASA and the U.S. DOE have initiated the project with significant contributions of appropriate NASA products.

Communities to contribute data to Obs4MIPs such as cryosphere, biogeochemistry, etc.

# How can we streamline WCRP modeling research and boost scientific outcome?

- Archive standards
- Consistent experimental design
- Cross-fertilization of products

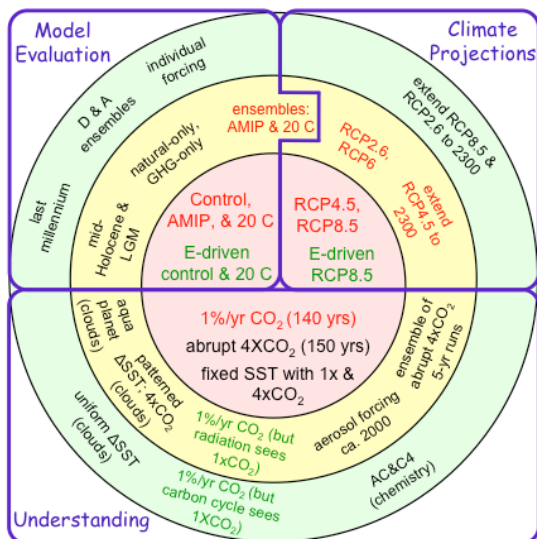
# ESGF Archive



- Game changing technology
- CMIPs initially
- Being tested/adopted by WGSIP/CORDEX
- Observations, reanalysis
- Core projects? WGNE?
- Interface with operational world/NWP (e.g. TIGGE, etc)?

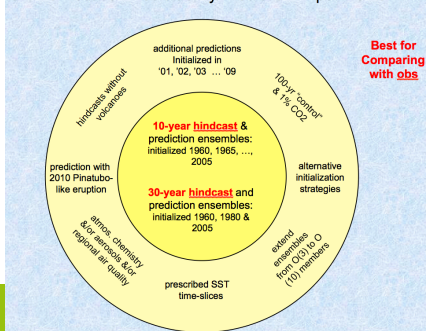


# Experimental design



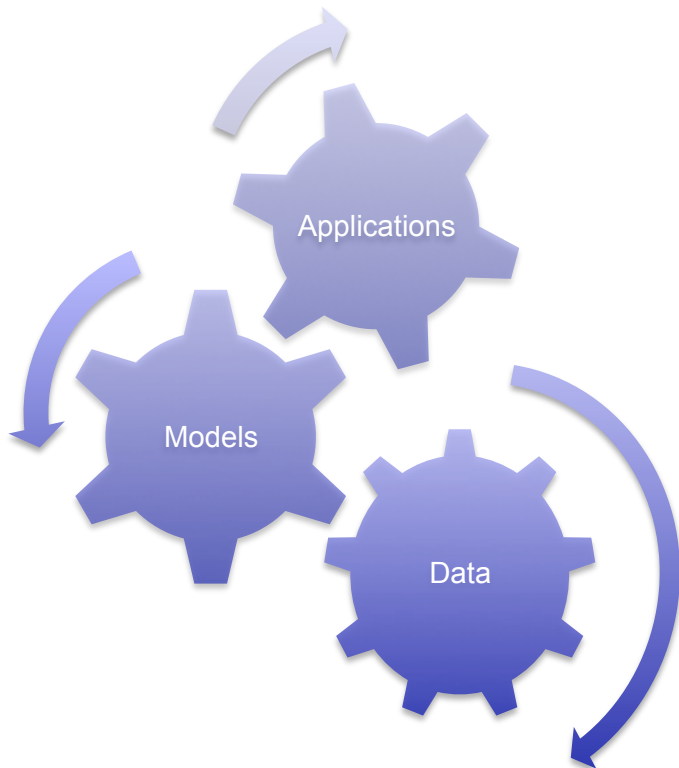
- WGSIP?
- CORDEX?
- WGNE?
- Reanalyses?

CMIP5 Decadal Predictability/Prediction Experiments



- Aspen meeting: ambition of CMIP6?

# Cross-fertilization



- Across space and time
- Multivariate
- Multi-model
  
- Model-model
- Model-data
- Data-data
- Grand-ensembles
- Super-ensembles

# ESGF governance

- What is the ideal representation of WCRP in the ESGF
- Review board (RB): advance ESGF technology by providing direction and oversight to its development
- Steering Committee (SC): program managers whose agencies provide significant sources of identified and dedicated funding and resources for ESGF development and core infrastructure
- Executive Committee (TC): general guidance and overall high-level decisions in directing the course of the ESGF project in correspondence with multiple sponsor and stakeholders needs
- Technical Committee (TC): guidance and direction on technical issues set by executive committee requirements—focused on technical aspects of ESGF.



**Thank you for your attention!**