

World Climate Research Programme

WCRP Data Advisory Council (WDAC)

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WCRP Organization

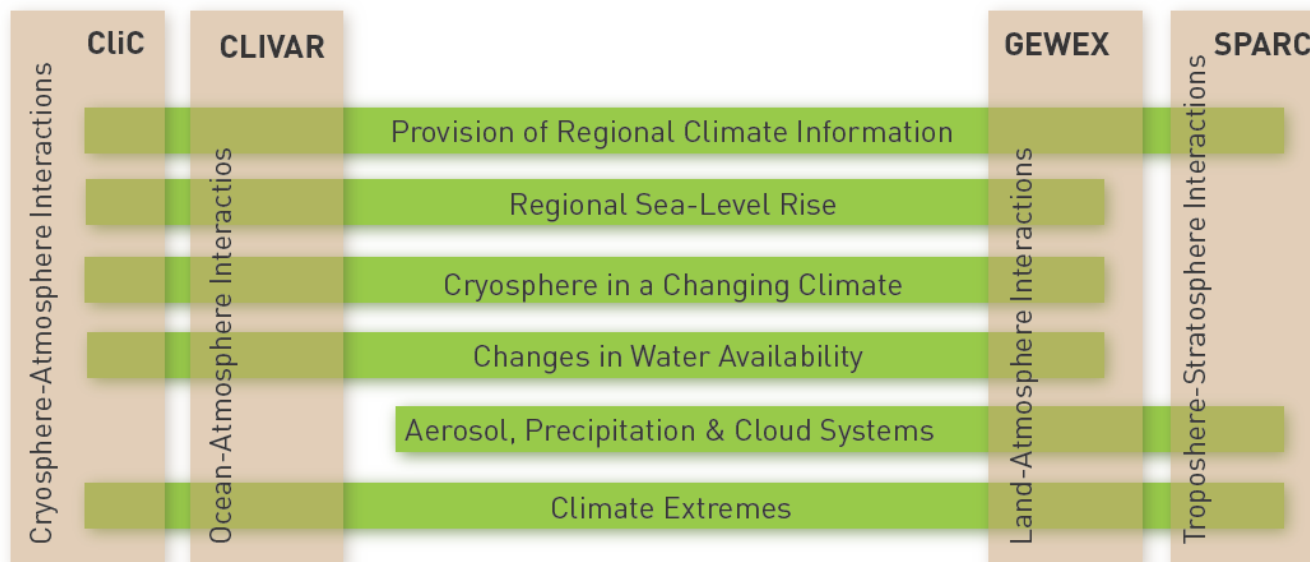
Joint Scientific Committee

Joint Planning Staff

Modeling Advisory Council

Data Advisory Council

Working Groups on: Coupled Modelling (WGCM), Regional Climate (WGRC), Seasonal to Interannual Prediction (WSIP), Numerical Experimentation (WGNE)



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Background

- A combination of climate observations and models are resulting in significant amount of data and information.
- Research on and development of Earth observing systems, models and field experiments comprise an intrinsic part of WCRP activities and contribute to continuation and expansion of global environmental monitoring.
- Every WCRP project develops data and information and has a set of observation activities.
- The WCRP Data Advisory Council (WDAC) will act as a single entry point for all WCRP data, information, and observation activities with its sister programmes, and will coordinate their high-level aspects across the WCRP, ensuring cooperation with main WCRP partners such as GCOS and other observing programmes.
- WDAC will work with the WCRP Modelling Advisory Council to promote effective use of observations with models and to address issues related to the coordinated development of data assimilation, reanalysis, Observing System Simulation Experiments, and paleoclimatic data and their assessments.

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Terms of Reference:

- To serve as a focal point for observations and data in WCRP
- To advise JSC and WCRP Projects on issues pertaining to observations and climate data.
- To promote research using sustained observations and data from process studies across the WCRP.
- To promote assessment of the adequacy of sustained observations and derived products to support climate research.
- To promote assessment of gaps in the global observing system in cooperation with observation programmes.
- To promote coordinated assessment and comparison of climate-data products, including those from reanalyses.
- To promote research for continuing improvement in the processing and reprocessing of fundamental climate data records
- To promote development of mechanisms for archival of, access to and analysis of data, and associated meta data, across the research community.
- To promote standards for product generation, including global and regional reanalyses.
- To promote scientific development of coupled data assimilation and a coordinated approach to reanalysis across all domains.
- To liaise with GCOS, CEOS and GEOSS, as required.

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- Council's role is to be advisory, to inform the JSC where the gaps, redundancies and opportunities lie that need to be addressed.
- JSC does not want to be prescriptive regarding the functioning of the Council, we leave it to you to determine the best approach going forward
- In this regard the Council is a grass-roots-based entity charged with facilitating rather than governing
- Changes from WOAP include
 - Add support for Earth System Modeling;
 - Requirement to interface with modelers and Modeling Council
 - Advocate providing sufficient resources (for staff support, workshop funding, and project support).

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Expectations for the WCRP Data Advisory Council include:

- Communicate regularly by email, webinars
- Meet in person, as needed
- Encourage joint meetings of working groups and/or panels to promote communication or to launch focused joint initiatives

WDAC should have the flexibility and resources to promote action within existing WCRP projects and panels or by appointing limited duration task teams to accomplish its tasks.

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Suggested areas of activity include:

- Identify data aspects of the Grand Challenges and advance them
- Promotion of Global Synthesis (e.g., extremes)
- Support for archiving “orphan data sets”
- Regional/thematic test beds for data exchange (e.g., consolidation of cryospheric data sets)
- Coordination of data intercomparisons projects (e.g., surface fluxes)

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WCRP Grand Challenges

- A Grand Challenge is both **highly specific and highly focused** identifying a specific barrier preventing progress in a critical area of climate science.
- This focus enables the development of **targeted research efforts** with the likelihood of significant progress over 5-10 years, even if its ultimate success is uncertain.
- It should thus enable the implementation of effective and **measurable performance metrics**.
- By being transformative, a Grand Challenge should bring the **best minds** to the table (voluntarily), **building and strengthening communities of innovators that are collaborative**, perhaps also extending beyond “in-house expertise”.
- It can **capture the public’s imagination**: teams of world-leading scientists working to solve pressing challenges can offer compelling storylines to capture the interest of media and the public.

WCRP Grand Challenges

- Provision of skillful future climate information on regional scales (includes decadal and polar predictability)
- Regional Sea-Level Rise
- Cryosphere response to climate change (including ice sheets, water resources, permafrost and carbon)
- Improved understanding of the interactions of clouds, aerosols, precipitation, and radiation and their contributions to climate sensitivity
- Past and future changes in water availability (with connections to water security and hydrological cycle)
- Science underpinning the prediction and attribution of extreme events