

# What are the WCRP Core Projects?

The World Climate Research Programme (WCRP) coordinates four core projects, which mobilize an enthusiastic community of scientists to actively collaborate, share data, improve models and climate projections, and build scientific capacity.

## cliC

### Climate and Cryosphere



Changes in the cryosphere – ice sheets, glaciers, snow, permafrost and sea ice – can have profound global consequences, notably through the global snow/ice albedo feedback, one of the most powerful mechanisms amplifying changes in global climate, and by shrinking mountain glaciers and ice sheets with consequent sea-level rise and impacts on water resources. CliC acts as a focal point for climate science related to the cryosphere.

[www.climate-cryosphere.org](http://www.climate-cryosphere.org)



## GEWEX

### Global Energy and Water Exchanges

The global water cycle is the continuous journey of water from the atmosphere to land and oceans, and back to the atmosphere. This cycle directly influences both humankind and our environment. GEWEX creates and fosters international collaborative research networks to exchange knowledge and data on Earth's water cycle and energy fluxes, including human influences, to better describe and predict weather and climate.

[www.gewex.org](http://www.gewex.org)



## CLIVAR

### Climate and Ocean-Variability, Predictability and Change



Oceans cover over 70% of the planet and transport huge quantities of heat and water around the globe, influencing day-to-day weather and longer-term global climate, over decades and centuries. They directly affect our climate by exchanging carbon dioxide with the atmosphere. CLIVAR focuses on initiating, enhancing and fostering international research collaboration to further our understanding of the ocean-atmosphere system.

[www.clivar.org](http://www.clivar.org)



## SPARC

### Stratosphere-troposphere Processes And their Role in Climate

Atmospheric processes, including dynamics and chemistry, and their interactions play an important role in climate variability and change. SPARC provides intellectual leadership to address key issues in atmospheric dynamics and predictability, chemistry and climate, and long-term records for climate understanding. SPARC contributes significantly to international assessments, providing cutting-edge knowledge of direct relevance to decision-makers.

[www.sparc-climate.org](http://www.sparc-climate.org)



WCRP CORE PROJECTS