

## The World Climate Research Programme: science for a changing planet



We are a global programme uniting the world's leading climate experts and other stakeholders to understand the planet's most urgent challenge: climate change.

Led by WMO, IOC-UNESCO, and ISC, WCRP coordinates global climate research to ensure society has the knowledge it needs to make smart & safe decisions.

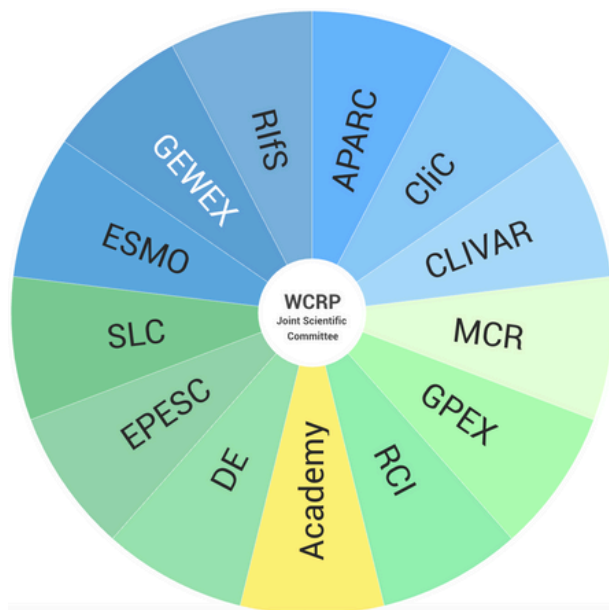
### Why does climate science matter to you?

Your livelihood. Your family. Your future.

Climate science is not just about the environment! It is about your life, how you grow food, build cities, run your business, and how to support and protect your family.

From predicting floods and wildfires to preparing for heatwaves and rising seas, WCRP-backed science helps governments, companies, and communities prepare for what is coming before it arrives.

## Our teams



## WCRP flagship teams

### CORDEX

The Coordinated Regional Climate Downscaling Experiment (CORDEX) advances and coordinates the science and application of regional climate model (RCM) downscaling through global partnerships, providing critical insights into local and regional climate change to support adaptation and resilience where it is needed most.



### CMIP

The Coupled Model Intercomparison Project (CMIP) coordinates the evaluation and comparison of the global climate models from modelling centers worldwide. These models help us understand how the Earth's climate is changing and are the foundation for major climate risk impact assessments, like those from the IPCC.



## WCRP Academy

The Academy is the training and coordination arm of the WCRP, created to strengthen global climate science capacity. It has supported the connection between training providers and thousands of learners around the world.

The Academy links experts, early-career scientists, and institutions. It ensures high-quality, accessible, and diverse learning opportunities.



**The future is not something we can wait for,  
it is something we must prepare for now!**



# WCRP

## World Climate Research Programme

### The climate is changing and so is our world around us

Discover how science is helping to protect  
your future



**Core Projects (CP):** Permanent projects that form the scientific foundation to understand the global climate system.

## WCRP scientific activities

**Lighthouse Activities (LHA):** Temporary and flexible initiatives that apply science to deliver solutions and social benefits.

Atmospheric Processes and their Role in Climate

**APARC**  
(CP)

**How do clouds, winds, and storms shape our climate?**

APARC studies the atmosphere, how it moves, how it changes, and how it drives extreme weather.

Climate and Cryosphere

**CLIC**  
(CP)

**Why do ice and snow matter?**

CLIC studies the frozen parts of the planet, including sea ice, permafrost, mountains, the Arctic and Antarctica, and how melting ice affects sea level, weather, and ecosystems.

Climate and Ocean Variability, Predictability and Change

**CLIVAR**  
(CP)

**What role do oceans play in climate change?**

CLIVAR studies ocean currents, heat storage, and how oceans influence global weather patterns.

Earth System Modelling and Observations

**ESMO**  
(CP)

**How do we simulate and observe the planet?**

ESMO combines satellite data and climate models to better predict future local and global conditions.

Global Energy and Water Exchanges

**GEWEX**  
(CP)

**Where does Earth's water and energy go?**

GEWEX tracks how heat, moisture, and clouds move across the planet critical for forecasts and water security.

Regional Information for Society

**RIfS**  
(CP)

**How can science help in your region?**

RIfS helps enhance the scientific value of regional climate information for farmers, cities, and decision-makers.

Digital Earths

**DE**  
(LHA)

**What if we had a digital twin of the Earth?**

DE builds powerful simulations to explore possible futures and better inform climate action.

Explaining and Predicting Earth System Change

**EPESC**  
(LHA)

**Why is the climate changing and what's next?**

EPESC work helps us understand why changes are happening, and how they will evolve over time.

Global Precipitation EXperiment

**GPEX**  
(LHA)

**Can we predict rain and drought better?**

GPEX improves how we understand and forecast rainfall essential for food, water, and disaster planning.

My Climate Risk

**MCR**  
(LHA)

**How can we make climate risks easier to understand?**

By taking a bottom-up approach, MCR helps communities understand how climate change affects them directly and what actions they can take.

Research on Climate Intervention

**RCI**  
(LHA)

**Should we consider technologies to cool the planet?**

RCI explores the risks and ethics of ideas like reflecting sunlight or removing carbon from the air.

Safe Landing Climates

**SLC**  
(LHA)

**What is a "safe" climate future and can we get there?**

SLC asks what thresholds and pathways must be avoided to ensure the planet supports healthy populations and ecosystems in the future.