

The World Climate Research Programme (WCRP)

*National Adaptation Forum Breakout Group
Partnerships for Adaptation*

Helen Cleugh, Vice Chair of WCRP's Joint Scientific Committee

1. The World Climate Research Programme (WCRP)

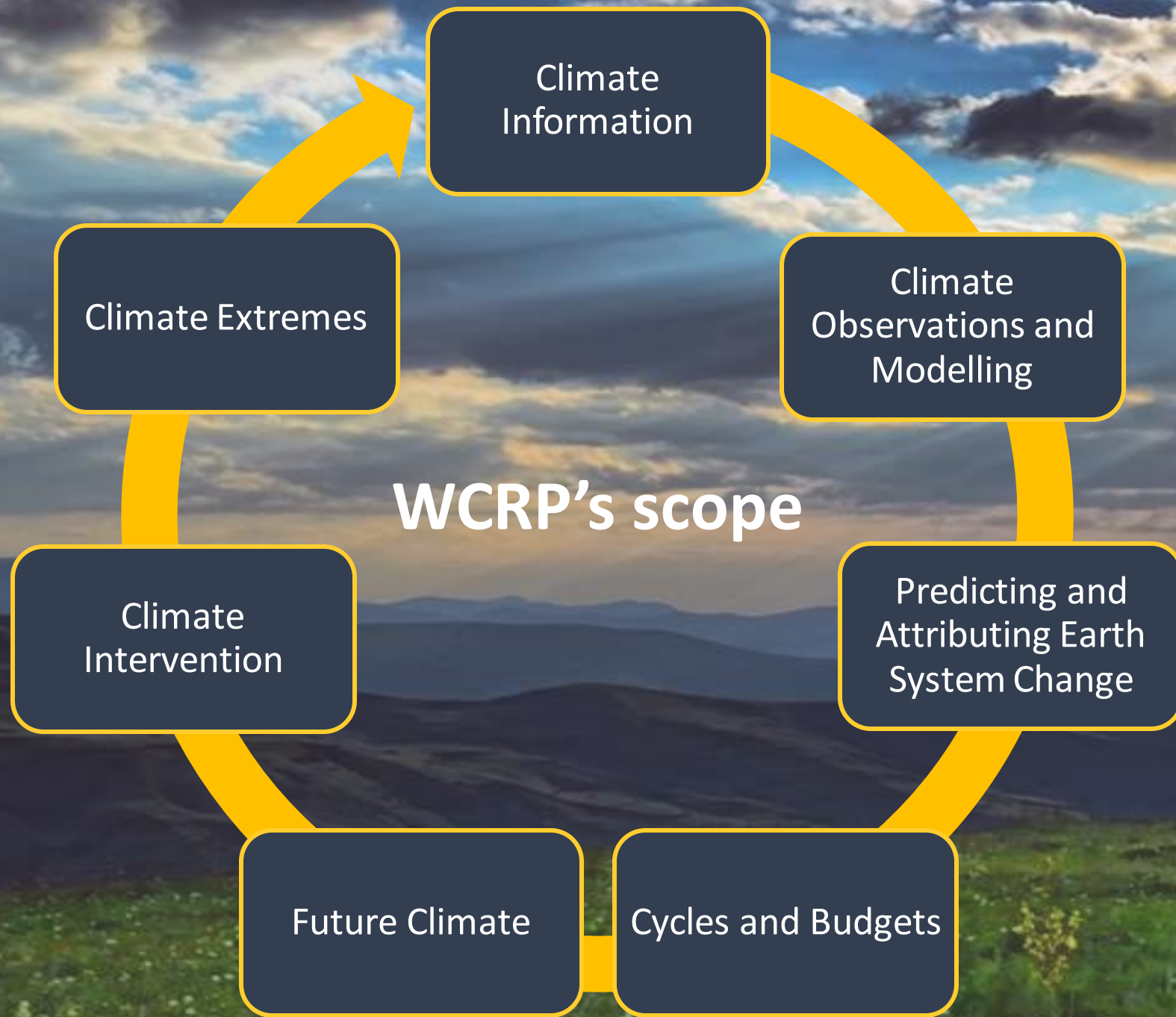
WCRP coordinates climate science around the world - to advance our understanding of the Earth's climate system, and to provide the scientific basis for actions addressing the challenges of climate change.

Science that is too large and complex to be tackled by a single nation, agency or scientific discipline.

It takes a world research program to lead and coordinate climate science and capability

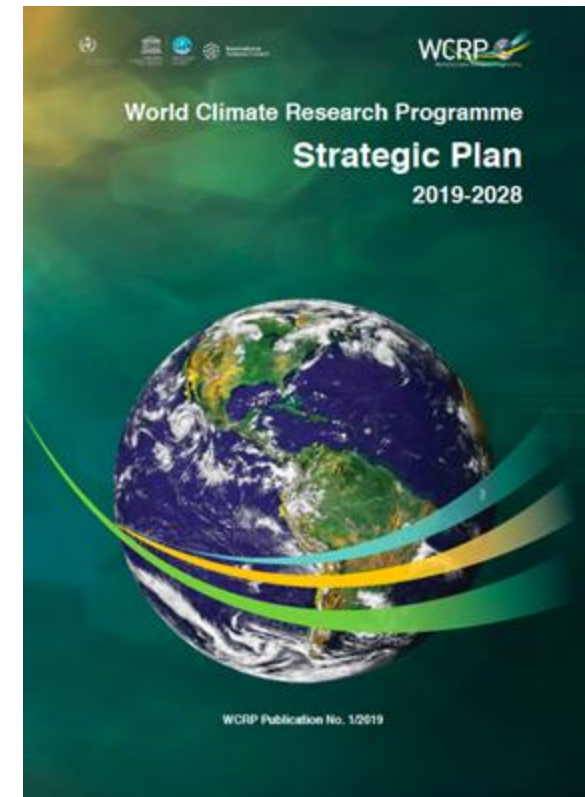
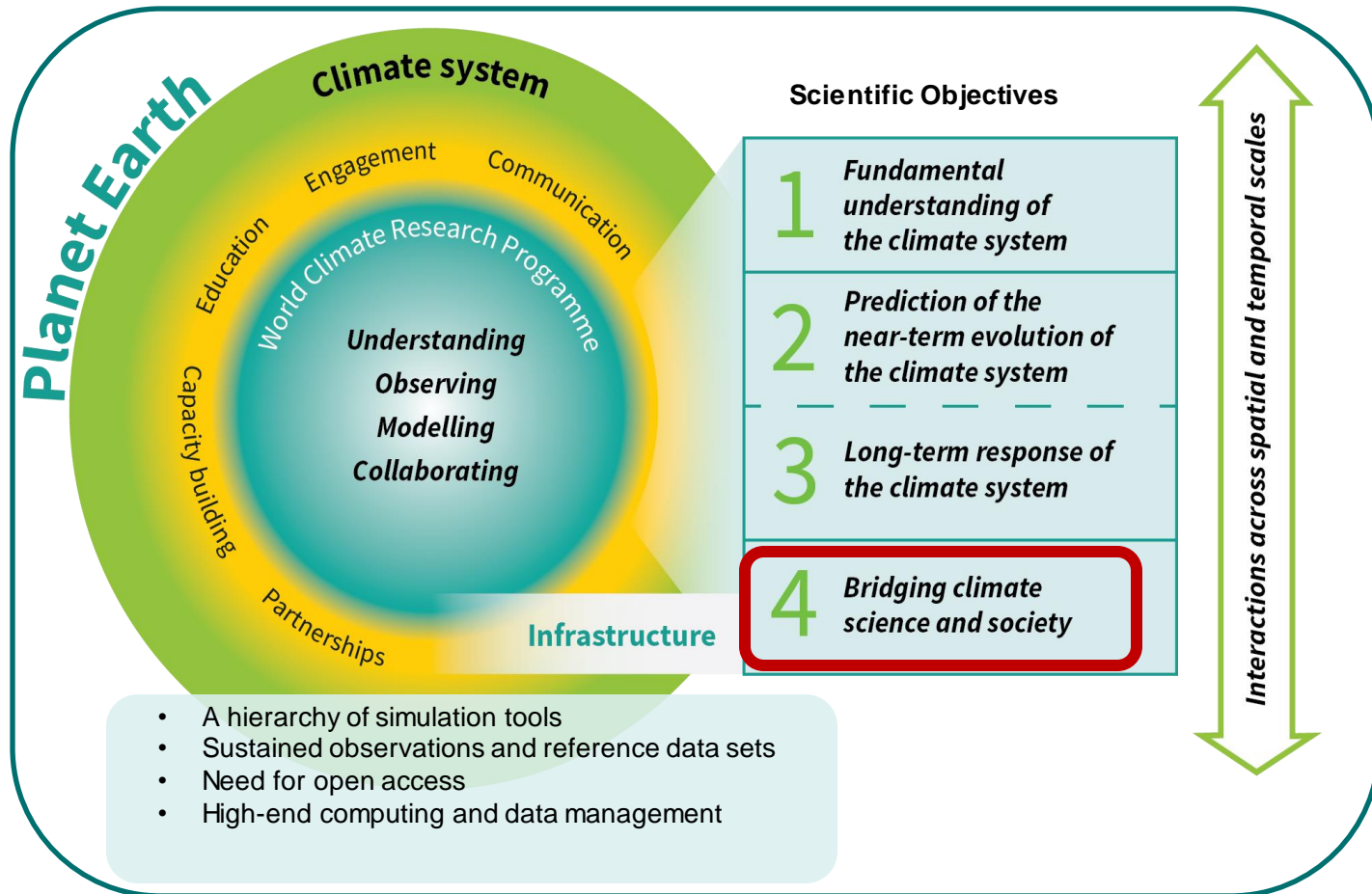
WCRP initial goals were to answer two questions: To what extent can climate be predicted? How are humans affecting climate?

Today, WCRP continues to lead and coordinate frontier climate science, while recognizing the critical need for ***decision-relevant, evidence-based climate information for adaptation and mitigation.***



A new WCRP Strategic Plan for this decade

WCRP's Mission (*purpose*) is to coordinate and facilitate international climate research to develop, share and apply the climate knowledge that contributes to societal well-being.



A “fit-for-purpose” structure to facilitate coordination and collaboration

Joint Scientific Committee (JSC)

WCRP Secretariat and International Project Offices

Ongoing Activities and Forums

- Fixed-term projects
- Conferences and workshops
- Reference datasets, evaluations and benchmarking
- Diversity and capacity building: ECRs, regions, and global south
- Rapid updates, syntheses, assessments and gap analysis
- Communications and outreach



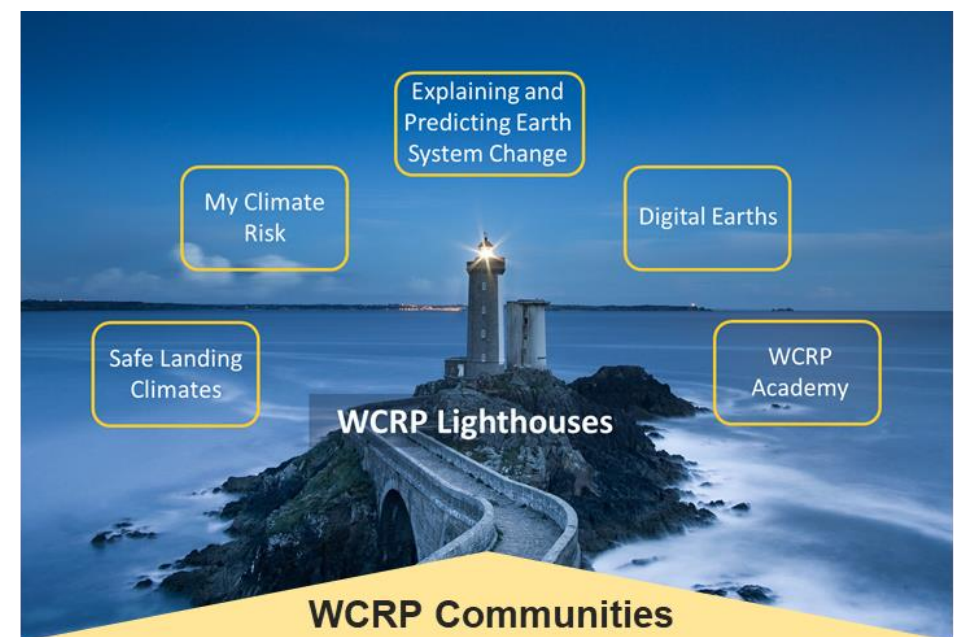
International
Science Council



United Nations
Educational, Scientific and
Cultural Organization



Intergovernmental
Oceanographic
Commission



WCRP Lighthouses

WCRP Communities

Enduring Capabilities, Homes for Expertise

Rifs

Regional Information for Society



CLIC

Climate and Cryosphere

CLIVAR

Climate and Ocean
Variability, Predictability
and Change

GEWEX

Global Energy and Water
Exchanges

SPARC

Stratosphere-troposphere
Processes And their Role
in Climate

ESMO

Earth System Modelling and Observations



2. Collaboration and Partnerships

WCRP coordinates and facilitates climate science around the world, but it doesn't provide funding.

This means that engagement, coordination and collaboration are critically important.

- **Facilitating science**

- leading and coordinating experiments; developing models; building capacity of scientific workforce around the world.

- **Jointly identifying research priorities**

- WCRP community AND other research programs and user/practitioner communities.

- **Engaging with funders**

- to align research priorities for mutual benefit.

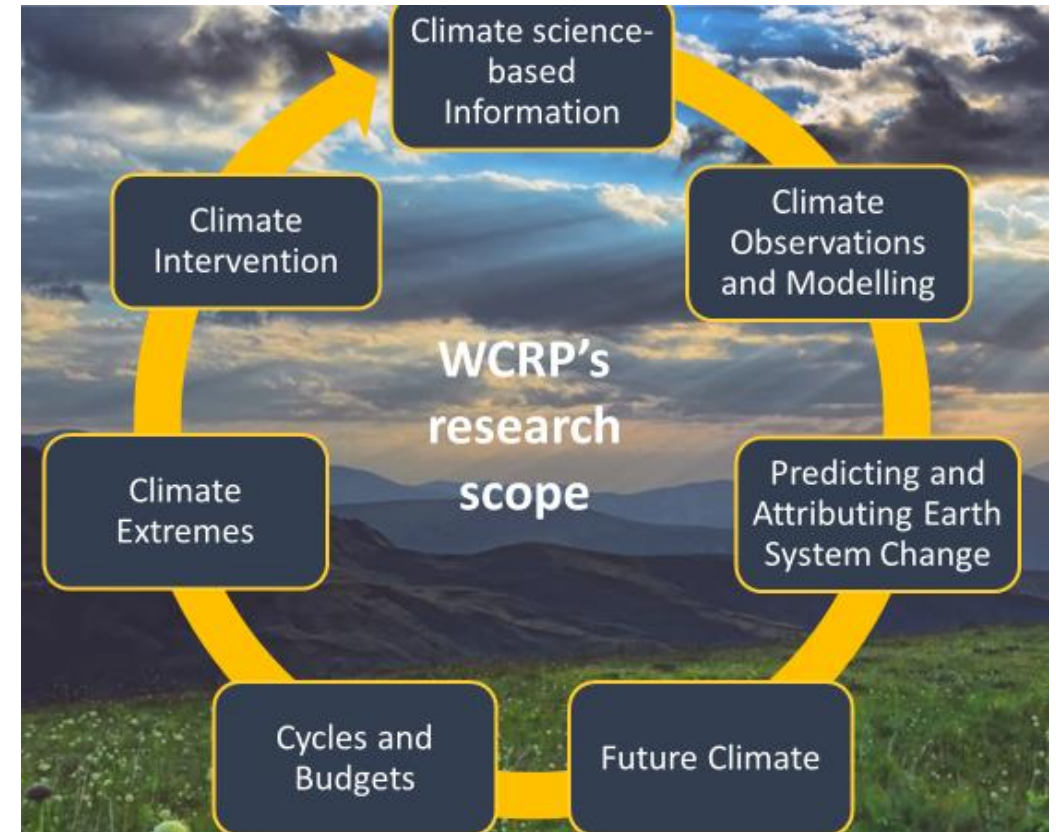
- **Scientific assessments, reviews and syntheses**

- jointly leading and coordinating with allied programs (e.g. IPCC).

Outcomes from four decades of the WCRP: *Climate policies, observing and modelling systems*



WCRP's science enabled the IPCC Sixth Assessment Report to conclude that human activities, through emissions of climatically active constituents, have caused the Earth's climate to warm by 1.07°C since pre-industrial



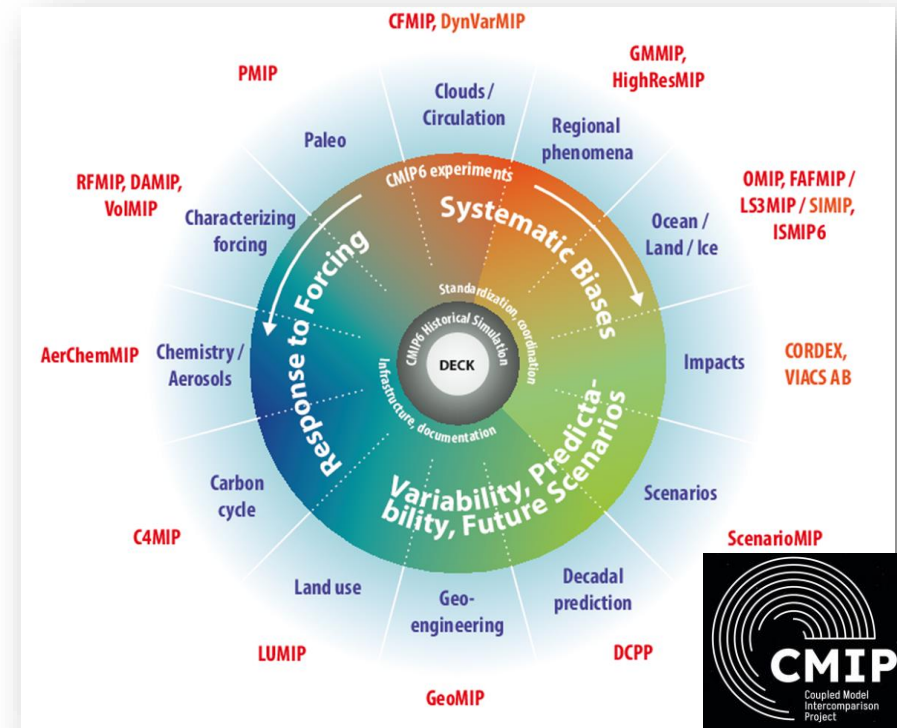
WCRP's coordination of science around the world has built comprehensive observing systems and increasingly complete and accurate climate model systems capable of delivering climate change projections for the 21st century and beyond.

Outcomes from four decades of the WCRP: *Climate science-based services - CMIP and CORDEX*

Coupled Model Intercomparison Project (CMIP):

- Advance scientific understanding.
- Support model development.
- Climate simulations to support policy-making and decision-making.

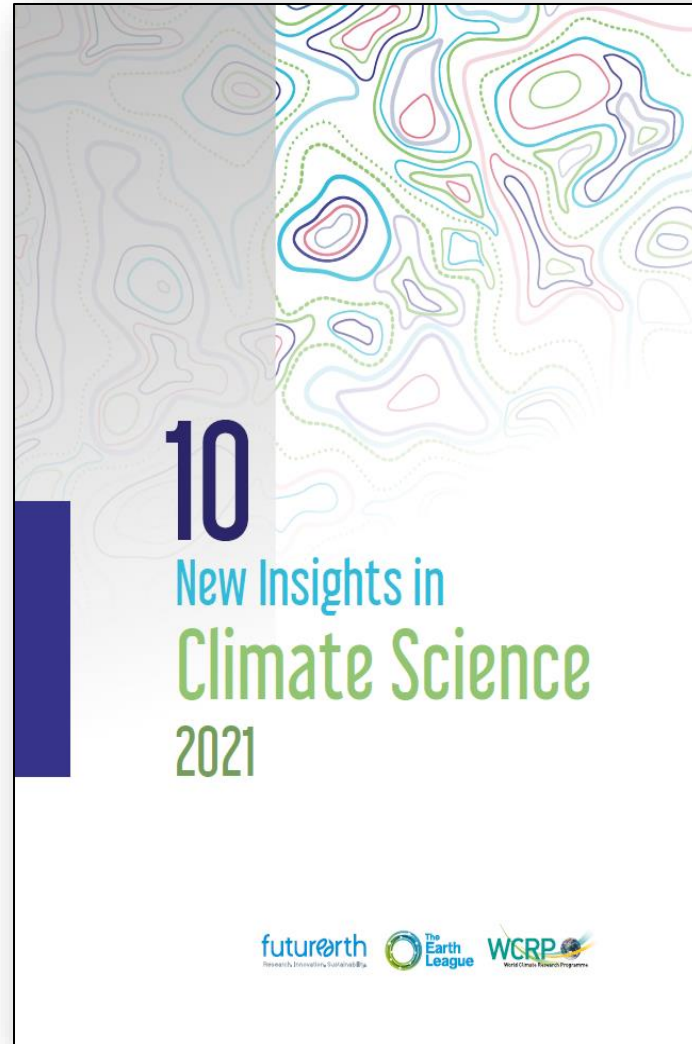
Critical role in IPCC Assessment Reports, both model data and science publications



WCRP
CORDEX
Coordinated Regional Climate Downscaling Experiment

Coordinated Regional
Climate Downscaling
Experiment

- Evaluate and improve regional climate downscaling models and techniques.
- Better understand regional climate phenomena through downscaling.
- Produce coordinated regional downscaled projections worldwide.
- Foster communication and knowledge exchange with users of regional climate information.



Our Shared Vision: Sound, relevant and timely science – providing the evidence base for a resilient, sustainable and equitable world now and in the future; a world where people can thrive



**WORLD CLIMATE
RESEARCH PROGRAMME**
**OPEN SCIENCE
CONFERENCE**
23 - 27 OCT. 2023 | RWANDA

wcrp-osc2023.org/



WCRP Open Science Conference 2023

**ADVANCING CLIMATE SCIENCE
FOR A SUSTAINABLE FUTURE**

We welcome you to join us in remarkable Rwanda, or from anywhere in the world, for this once-in-a-decade, hybrid Conference:

- Launch the new WCRP, science initiatives and partnerships
- Discuss and develop the transformative solutions needed to drive more rapid and urgent climate action
- Bridging gaps between climate science and society, across science disciplines, and between the global north and south

**Theme 1:
Advances in
Climate Research**

Showcasing progress and future challenges in understanding Earth's climate system, and advances in climate science capacity around the world.

**Theme 2: Human
Interactions with
Climate**

Analyzing key drivers and impacts of climate change (past, current and future), identifying risks to human and ecosystem health.

**Theme 3: Co-
produced Climate
Services and
Solutions**

Connecting scientific knowledge, planning, decision-making and policy processes.

Thank You from the WCRP



WORLD
METEOROLOGICAL
ORGANIZATION



United Nations
Educational, Scientific and
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Intergovernmental
Oceanographic
Commission



International
Science Council