

Advancing Climate Science with and for Society:

World Climate Research Programme's Role in Actionable Climate Knowledge

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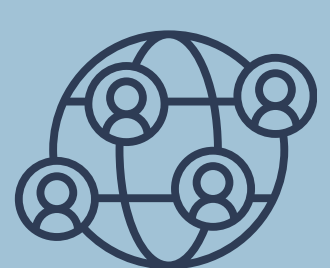
APARC 2026 Poster Presentation

**Climate science is most powerful when it is robust, trusted and usable.
WCRP helps connect frontier climate research with the needs of society.**

WHY THIS MATTERS

- Climate risks are growing.
- Communities, governments and institutions need climate knowledge that is clear, timely and relevant to real decisions.
- Trust in evidence-based decision-making is under pressure.
- WCRP helps keep climate science rigorous, independent and useful for society.

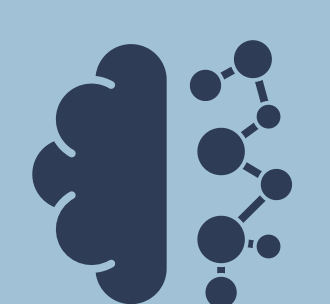
WHAT WCRP BRINGS



Global coordination
Connecting international climate research communities.



Scientific foundation
Supporting understanding, prediction and assessment of Earth system change.



Cross-cutting expertise
Linking observations, modelling, extremes, regional risks, sea level, AI and services.



Trusted knowledge
Helping turn frontier science into information for policy, operations and communities.

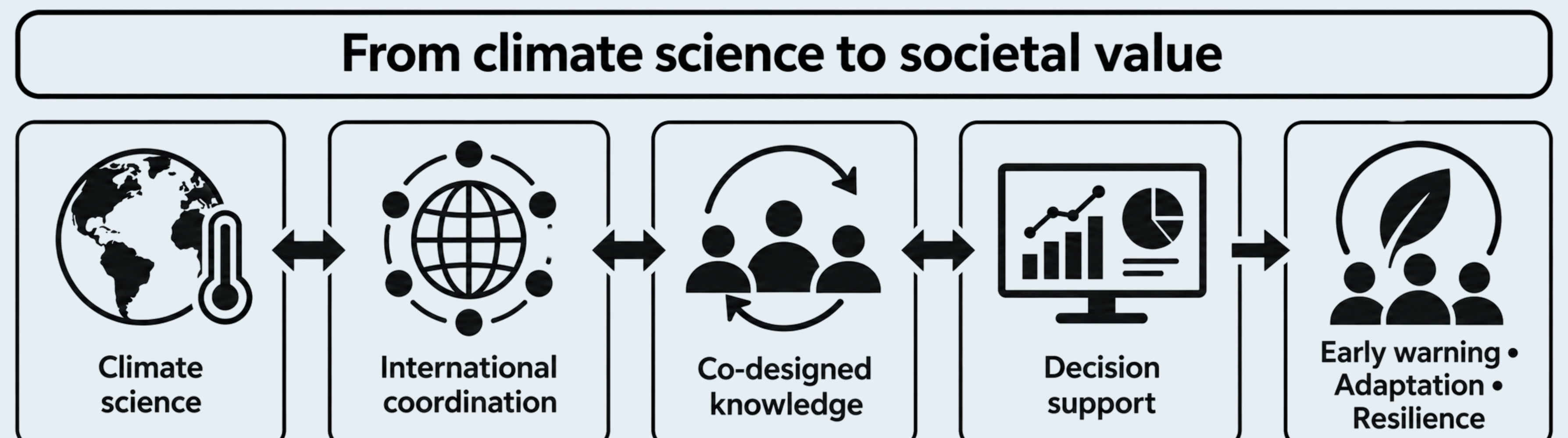
HOW WCRP WORKS

- Core Projects
- Lighthouse Activities
- WCRP Academy
- Task teams
- Wider research community



Together, these activities help transform climate science into knowledge that can support action.

FROM RESEARCH TO SOCIETAL VALUE



SCIENCE WITH AND FOR SOCIETY

- Science “with society” means listening to user needs.
- Science “for society” means producing knowledge that can support real decisions.
- This does not weaken scientific independence. It makes the pathway from research to use clearer and stronger.

ACTIONABLE CLIMATE KNOWLEDGE CAN SUPPORT

- Early warning systems
- Hazard and risk assessment
- Adaptation planning
- Resilient infrastructure
- Finance and investment
- Coastal and urban decisions
- Climate services
- Education and understanding

The goal is not only more information. The goal is information that is usable, credible and connected to decisions.

WORKING WITH PARTNERS

- WCRP co-sponsors
- National Meteorological and Hydrological Services
- Operational agencies
- Regional climate institutions
- Universities and research centres
- Early-career researchers
- Decision-makers and user communities

Partnerships help bring regional knowledge into global science.

APARC AS A KEY EXAMPLE

APARC contributes directly to science with and for society. Its work connects fundamental atmospheric science with practical needs.

Atmospheric processes → Better Understanding

Extremes → Risk Awareness

Prediction → Preparedness

Regional knowledge → Relevance for services

This is essential for high-impact events, monsoons, storms, circulation changes, atmospheric composition and extremes.

WAY FORWARD

- Strengthen links between research and operations
- Support science for services
- Improve climate information for risk and adaptation
- Build capacity across regions
- Engage early-career researchers
- Maintain trust in scientific evidence

The aim is simple: climate research must remain relevant, trusted and impactful in a rapidly changing world.

WCRP helps translate cutting-edge climate science into trusted knowledge that supports early warning systems, adaptation, resilience, and informed decision-making.

