

Research Board Updates

Eleventh Meeting of the Capacity Development Panel

Prof. Mary Scholes, Research Board Vice-Chair
22-26 September 2025

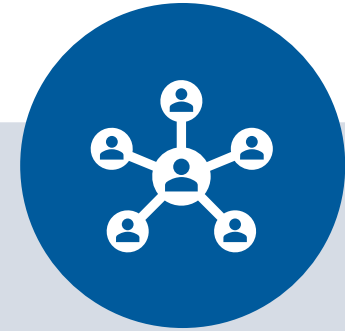
Research Board Overview



25 to 30 members active in the fields of weather, climate, water, ocean and related environmental and social sciences who participate in their personal, expert capacity



Translates strategic aims of WMO and the decisions of Members into overarching research priorities and mobilizes research internationally to achieve these priorities



Acts as a liaison between international scientific communities, WMO sponsored and co-sponsored Research Programmes, WMO bodies and Regional Associations

Affiliated Research Programmes

The building blocks of the Research Board are the WMO sponsored and co-sponsored* research programmes



GAW Capacity Development Activities



GAW [Compendium on Capacity Development Activities](#) highlights:

- **Expert Team on Capacity Building, Training and Education** created a strategy in 2024 for capacity building in GAW, ensuring regular sessions for all users in different Regions
- **Formal training program for station operators:** hands-on training on operational measurement techniques and protocols at GAW Training and Education Centres and GAW facilities (2-3 per year in different regions)
- **Formal training program for atmospheric composition forecasting** (Sand and Dust Storms, Vegetation Fires and Smoke Pollution, Air Quality) - several/year
- **Formal training program** for methodologies on observation-based quantification of Greenhouse Gases emissions and removal, including webinars
- **Specialized training schools and workshops** on atmospheric composition and impacts on climate, air quality, health

GAW Capacity Development Activities



Past and upcoming Capacity-Building, Training and and Education program including on-line education material on atmospheric composition accessible to all users [HERE](#)

- **International Summer School on Climate Change and Related Risks**, 30 June to 18 July 2025, Fudan University, Shanghai, China
- **Hands-on training on Brewer and Dobson ozone monitoring instruments for Region I**, 12-25 June 2025, Agencia Estatal de Meteorología, El Arenosillo, Spain,
- **9th WCC SF6 Training and Education Course**, 15-19 September 2025, National Institute of Meteorological Sciences, Jeju, Republic of Korea
- **Training Workshop on Air Quality Monitoring and Analysis**, 9-11 October 2025, co-organized with UM6P, Météorologie Maroc, Korea Meteorological Administration, Benguerir, Morocco
- **Training Workshop on Air Quality Time Series Analysis and Modelling**, April 2026, co-organised with University of Santiago, Santiago de Chile



Opening ceremony 2025 Fudan School



Hands-on training for Dobson instruments, EL Arenosillo, Spain, June 2025

WWRP Capacity Development Activities



9th International Verification Methods Workshop *(May 2024, South Africa)*

- Organized by WWRP Working Group on Forecasting Verification Research
- Included verification tutorials, topical lectures, practical assignments, keynote talks, presentations
- Attended by 25 participants, including early-career scientists, postgraduate students, and senior scientists from various regions

Weather and Climate Information Services (WISER) Early Warnings for Southern Africa (EWSA) Project *(March 2023 – June 2025)*

- A key component of the project was enhancing the nowcasting and impact-based forecasting capacity of the NMHSs in southern Africa
- Training was done online as well as through 3 testbed events in Zambia and Mozambique

WWRP Capacity Development Activities



Winter School on Nowcasting Techniques *(July 2025, Argentina)*

- Organized by WWRP Working Group on Nowcasting and Mesoscale Research and attended by 29 people
- Topics: a) Nowcasting techniques b) Methods ranging from: Radar echo extrapolation, Feature detection algorithms, Integration with NWP outputs and c) Focus on phenomena like: Tornadoes, Microbursts, Flash floods and heavy precipitation

8th WMO International Workshop on Monsoons *(March 2025, India)*

- Early Career Researcher (ECR) session co-organized by WCRP and WWRP brought together 68 ECRs
- Included interactive peer discussions around Monsoon research gaps and career exchanges with senior scientists to foster capacity development and lead to the formation of an active writing group

Weather and Society Conference 2026 *(23 - 28 February 2026, Online)*

- Theme: Weather-Ready Communities: Governance, Warnings, and Action
- Free registration and virtual, targeted toward ECRs. Attended by 350 participants in 2024

WCRP Capacity Development Activities



Early and Mid-Career Researcher (EMCR)* Engagement

- WCRP prioritizes support for EMCRs from all regions with financial support for conferences, mentorship programs, and leadership development opportunities.
- Regular summer schools, workshops, and training courses organized by all core projects in collaboration with international institutions.
- A dedicated WCRP tiger team on EMCR engagement and integration in WCRP has submitted its recommendations on continued collaboration and visibility of EMCRs.

Examples of Upcoming Activities

- APARC's workshop on climate data and AI in the Global South (AI4Climate)- 24-28 Nov 2025, University Cheikh Anta Diop, Dakar, Senegal.
- WCRP ESMO School on Climate Prediction Across Timescales: Predictability Assessment and Communication of Uncertainty for Applications in Environment and Society –23-27 Feb 2026, University of Buenos Aires, Argentina.

WCRP Capacity Development Activities



WCRP Academy (Support Unit in Manila)

- promotes and advances lifelong learning opportunities and global equity in climate science training. Developing a 'Future Leaders Programme'

WCRP Global South Fellowship Programme

- Initiated in 2024, gives EMCRs from the Global South the opportunity to develop their own WCRP-related research activity, boosting climate research activities in their region
- 2024 fellow: **Dr Coumba Niang** from the Laboratoire de Physique de l'Atmosphère et de l'Océan–Siméon Fongang / École Supérieure Polytechnique, Université Cheikh Anta Diop, Dakar, Senegal

Coupled Model Intercomparison Project (CMIP) Fresh Eyes

- Promotes capacity development on CMIP data analysis tools in a common GitHub repository, including tutorials and entry level documentation for first time CMIP users, and coordinates [workshops](#)

WCRP Global South Inclusion Task Team



- Initiated in 2024 by the WCRP JSC to provide recommendations on how to improve inclusion of the Global South in WCRP activities and panels
- For the purposes of the task team, the Global South is (initially) defined as countries with:
 1. Greater vulnerability to climate
 2. Less influence on global decisions
 3. Less representation in international climate science

WCRP Global South Inclusion Task Team



- Since 2017, the WCRP JSC chairs have always been from the Global North
- JSC Members from the Global South only increased in number in 2025
- 9 of 13 WCRP activity steering committees have Global North Co-Chairs only
- Only 3 WCRP activity steering committees follow the WCRP diversity criterion: *"at least one third of all members should be resident in countries not designated as high-income economies"*

WCRP Global South Inclusion Task Team



Barriers to Global South Participation in the WCRP



Human capacity of the Global South and its visibility to WCRP



Unequal knowledge about and access to research networks



Nature of WCRP as voluntary work



Funding limitations, visas, carbon footprint



Brain drain



Technological capacities

WCRP Global South Inclusion Task Team



Ways forward:

- Both quantitative and qualitative surveys may be employed to capture trends and experiences within the WCRP
- Virtual Regional Workshops: These workshops are considered as a complement to the surveys, to delve deeper into issues and insights that might emerge from the survey results

Thank You