

Capacity Development Activities updated from RB

(From September 2025 to February 2026)

WCRP School on Climate Prediction Across Timescales (upcoming, Feb 2026)

Tag: *AI-enabled Climate Prediction Across Timescales | Early Career Researchers & Advanced Students*

- Purpose: Close key knowledge and skills gaps in applying sub-seasonal to inter-decadal forecasts for climate services, especially predictability assessment, uncertainty communication, and merging predictions across timescales.
- Highlight: Introduces emerging machine learning and AI tools for forecasting, alongside hands-on labs using real-world datasets.
- Scale/impact: Intensive training for 30 early-career researchers and advanced students, strengthening the talent pipeline for climate services, disaster preparedness, and planning.
- Delivery & support: Hosted by Universidad de Buenos Aires with CONICET–UBA/CIMA and IFAECI (IRL 3351 – CNRS-CONICET-IRD-UBA); supported by ICTP; sponsored by WWRP, WMO Education and Training Programme, and Spark Climate.
- Website: [WCRP School on Climate Prediction Across Timescales — ESMO Website](#)

APARC/WCRP AI4Climate Training School at AIMS, Senegal (24–28 Nov 2025)

Tag: *AI/ML for Weather & Climate Forecasting | Global South Early Career Scientists*

- Purpose: AI4Climate aimed to strengthen AI-enabled climate and weather forecasting capacity tailored to Global South needs, supporting actionable knowledge for climate services and resilience.
- AI highlight: The five-day programme combined expert lectures with hands-on Python-based ML/AI training, introducing modern tools and methods (including causal inference and AI applications) to locally relevant datasets.
- Scale/impact: around 80 Early-career participants developed mentored mini-projects addressing regional challenges, helping catalyse sustained collaboration networks and longer-term research engagement beyond the workshop.
- Delivery & support: Jointly organised under APARC/WCRP and hosted by AIMS (Mbour, Senegal), with financial support from partners including WWRP, IAMAS/ICMA, Jülich Research Centre, IRD and AIMS.
- Website: [AI4Climate](#)

Webinar Series: Data-Driven Climate Prediction from Subseasonal to Interdecadal Timescales (Q4 2025) -WCRP

Tag: *Data-driven & Hybrid Climate Prediction (AI/ML) | Global Research & Practitioner Community*

- Purpose: Launched by the WCRP Working Group on Subseasonal to Interdecadal Predictions (WGSIP) to provide a collegial forum for researchers, practitioners, and early-career scientists to exchange advances and build capacity in data-driven S2I climate prediction.
- AI highlight: The series focused on how AI/ML and hybrid approaches are reshaping subseasonal-to-interdecadal forecasting, offering prospects for higher-resolution and more efficient predictions while addressing challenges in forecast skill, physical consistency, and extremes.
- Scale/impact: Delivered through three well-attended global online sessions with invited expert talks and interactive Q&A, strengthening community dialogue and collaborative momentum in this rapidly expanding field.
- Website: [New Webinar Series: Exploring Data-Driven Climate Prediction from Subseasonal to Interdecadal Timescales — ESMO Website](#)

3rd Capacity Building Workshop on SDS Analysis and Modelling in the Middle East and North Africa Region - GAW

Tag: *Sand and Dust Storm Forecasting & Warning Tools | MENA Regional NMHS & Environmental Services*

- Purpose: Strengthen regional capacity in the Middle East and North Africa for sand and dust storm (SDS) monitoring, analysis and forecasting, supporting improved early warning and user-oriented climate and environmental services.
- Technical highlight: Delivered hands-on training on observational and forecasting tools, including web-based dust monitoring and prediction platforms, regional climate modelling approaches to assess SDS drivers and impacts, and practical adaptation of an SDS Warning Advisory System.
- Scale/impact: The workshop enhanced technical skills and operational readiness for SDS-related services in a region highly exposed to dust hazards, reinforcing cross-institutional collaboration among meteorological and environmental actors.
- Delivery & support: Organised by UN ESCWA in cooperation with WMO, the Egyptian Meteorological Authority (EMA), GAW, and the WMO Barcelona Dust Regional Center.
- Website: [Capacity Building Workshop on Sand and Dust Storm Analysis and Modelling in the Middle East and North Africa Region | RICCAR](#)

IGAC Seminar on Science Governance (29 January 2026) - GAW

Tag: *Science Governance & Programme Engagement | Early Career Researchers & Young Professionals*

- Purpose: Strengthen early-career capacity and awareness of science governance by illustrating how international research and operational programmes shape global weather, climate and atmospheric science.

- Highlight: Speakers from WMO Young Professionals will share practical experience engaging in WMO activities, including contributions to WWRP and GAW, and how research interfaces with coordination and policy processes.
- Scale/impact: The seminar provides a targeted platform for early-career researchers with around 70 registration to understand pathways for international engagement and the role of scientific input in decision-making at global level.
- Delivery & support: Organised by the IGAC-iCACGP Early Career Researcher Scientific Steering Committee, with participation from WMO Young Professionals from WWRP, WCRP and GAW.

2nd Regional Workshop on Sand and Dust Storms in the Arab Region - GAW

Tag: *Sand and Dust Storm Risk Reduction & Modelling | Arab NMHS Operational Services*

- Purpose: Strengthen the capacity of Arab meteorological services to address the growing environmental and socio-economic impacts of sand and dust storms (SDS) through improved analysis, forecasting and modelling.
- Technical highlight: The workshop series focuses on operational tools and modelling approaches to support SDS early warning, risk reduction, and user-relevant services across the region.
- Scale/impact: As part of an ongoing ESCWA–WMO regional mechanism, the 2nd workshop reinforced collaboration among Arab NMHSs and contributed to sustained capacity development, with a 3rd workshop planned in Cairo in December 2025.
- Delivery & support: Co-organised by ESCWA and WMO, with the 2nd workshop hosted by the WMO Jeddah Dust Regional Center in Saudi Arabia.

Training Workshop on Air Quality Monitoring and Analysis – GAW (October 2025)

Tag: *Air Pollution & Chemical Climate Prediction | Early Career Students & African Capacity Building*

- Focus | Target: Air Pollution & Chemical Climate Prediction | Early Career Students & African Capacity Building
- Purpose: Strengthen scientific exchange and regional capacity on chemical weather and chemical climate, with a focus on seamless prediction and air pollution applications in Africa.
- Technical highlight: The conference was preceded by a WMO/GAW training on Seamless Prediction of Air Pollution in Africa, supporting skills development for next-generation air quality prediction.
- Scale/impact: CWCC convened 100 participants (in person and online), complemented by a targeted training that engaged 10 local students and 3 international students, reinforcing early-career capacity building.

- Delivery & support: Held at Mohammed VI Polytechnic University (UM6P), Ben Guerir, Morocco (14–16 Oct 2025), with the associated WMO/GAW training delivered at the same venue on 9–11 Oct 2025.

Other webinars:

- WCRP EPESC (Explaining and Predicting Earth System Change) Webinar: Characterising observational uncertainties (December 2025)
- WCRP's Safe Landing Climates Webinar:
 - [The Future of the Amazon: Deforestation, Climate, and Tipping Points](#) (October 2025)
 - [Online Tipping Points Discussion Series: Dampening effects on positive social tipping points and strategies to reduce them](#) (September 2025)
- IG3IS Webinar Series (Q3-Q4, 2025):
 - Recently published IG3IS Urban Greenhouse Gas Emission Observation and Monitoring Good Research Practice Guidelines (October 23)
 - the latest IG3IS-endorsed project from Spain (October 28).
 - A webinar in Bangla in collaboration with the Bangladeshi Center for Climate Change and Environmental Research (C3ER). (November 4).
- GAW webinar: Low-Cost Sensors for Air Quality Applications (October 2025)
- WWRP InPHRA Webinar:
 - Transdisciplinarity (November 2025) End-to-End Forecasting & Early Warning in Africa: From Nowcasts to Community-Based Warnings in Accra, Ghana (December 2025)
 - The Precipitation Prediction Grand Challenge (February 2026)
- WWRP SAGE Webinar:
 - Uses of subseasonal forecast information in disaster preparedness (November 2025)
 - Engaging users to enhance the effectiveness of S2S forecasts (January 2026).

Capacity development of Early Career Researchers (ECR) in align with workshops/conferences:

- WCRP Virtual Workshop Series on Stratospheric Aerosol Injection (SAI) (Oct 2025) [website](#)
- WWRP Weather and Society Conference 2026:
- Organized under the theme, whole-of-society approaches for weather ready communities, includes sessions on warning and risk communication, qualitative research methods, transdisciplinary approaches and use of AI in warnings and user

responses. The Conference 600+ registrations so far. More information on [Home - Weather & Society](#)

- WCRP CLIVAR: Workshop on Polar Heat: Transports, Mechanisms, and Global Linkages (Feb to March 2026). [website](#)
- WCRP CLIVAR: Joint Conference: "Abrupt changes and tipping points" by 6th CLIVAR CDP workshop & MEC2026 (April 2026) [website](#)