

Update on WMO AI Activities and Capacity Development Actions

CDP- 12

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Science, Services and Capacity Development
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Proposed actions for strengthening AI-related Capacity Development at CDP-11

- **Including AI capacity development as a standing agenda item of the CDP to ensure consistent oversight and guidance**
- Assess and monitor Members' needs systematically to analyze the evolving needs of regarding infrastructure, services, and human capacity
- **Establish a WMO-wide strategy and implementation framework for AI-related education, training, and skill development to guide Members and training partners**
- Update WMO's competency frameworks to align with the readiness levels and maturity of AI applications
- Curate and facilitate access to high-quality training by maintaining a centralized repository of mature training resources offered by Members, partner institutions and private sector
- **CDP to regularly advise EC or JAG-AI on AI-related capacity development challenges, opportunities and resource prioritization**



Updates from Ext Congress and Joint Advisory Group on AI

Engaging the broad community

- To announce that WMO will work collaboratively with stakeholders to meet a wide variety of global needs by applying AI/ML technologies to strengthen the entire weather, climate, water and environment-related services value chain.
- Resolution 2.3(2)/1 – WMO Call to All Stakeholders to Collaborate on the Development of Artificial Intelligence (AI) and Machine Learning (ML) Environmental Monitoring and Prediction Technologies, Tools and Applications

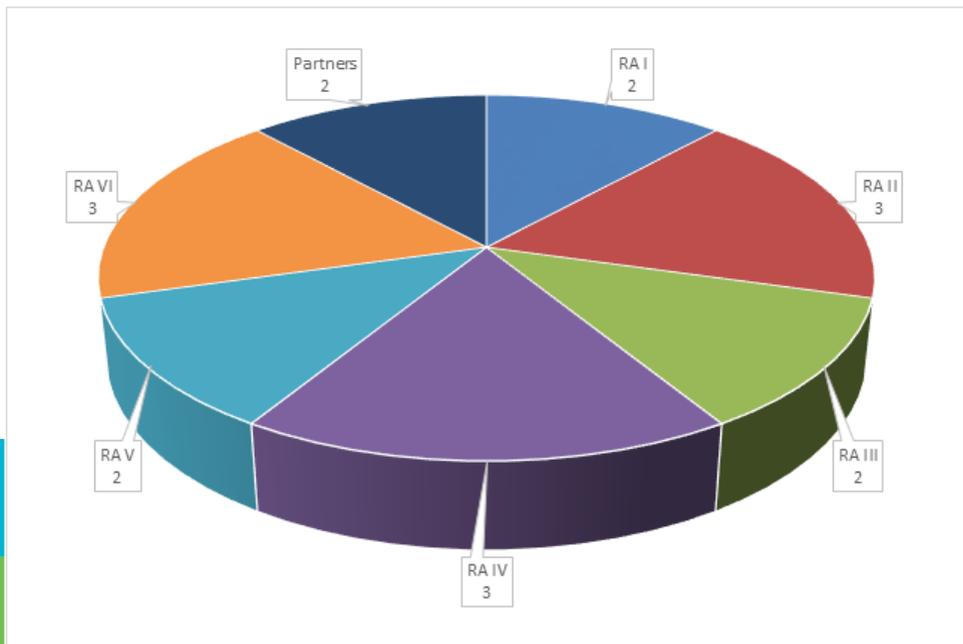
Oversight of WMO activities through JAG-AI: Joint Advisory Group on Artificial Intelligence

- Reporting to INFCOM and RB, JAG-AI to provide advice, oversight, coordination and monitoring of WMO activities in relation to the development and implementation of artificial intelligence (AI) technologies to the meteorological and hydrological value cycle.
- To focus on promotion and acceleration of the integration of AI into the WMO infrastructure and research activities, supporting the development of weather, climate, hydrological, marine and related environmental services.

JAG-AI Terms of Reference

- Monitor, coordinate, and promote WMO activities related to AI technologies, ensuring that WMO benefits from synergetic activities of Members and partners, avoiding duplication of efforts;
- Identify the risks and opportunities of AI's application in NMHSs' workflow and provide advice to the technical commissions and the Research Board;
- **Identify issues that need to be addressed for Members, particularly those from developing countries, to properly utilize the opportunities of AI technology across the entire value cycle and overcome emerging challenges;**
- **Provide guidance on capacity development priorities and training needs to support the implementation, integration and use of AI technologies by all Members;**
- Support the EC Scientific Advisory Panel in developing recommendations on Artificial Intelligence for seamless numerical weather-climate prediction and insights across the value cycle ([Decision 10 \(EC-78\)](#) – Emerging topics important to the WMO mission and mandate).
- Report its activities to the Executive Council annually for its consideration and guidance on policy and financial resource implication.

JAG-AI Members



* Does not include Co-chairs

** Partners: ECMWF, HMEI

Expert	Institution	Country
Michel Jean (co-chair)	President INFCOM	Canada
Amanda Lynch (co-chair)	Chair Research Board	USA
Maria Laura Bettolli	University of Buenos Aires	Argentina
Catherine de Burgh-Day	Bureau of Meteorology	Australia
Radenko Pavlovic	Environment and Climate Change Canada	Canada
Feng Liang	China Meteorological Administration	China
Ghisliane Echeverry Prieto	Instituto de Hidrología, Meteorología y Estudios Ambientales	Colombia
Jonathan Zoetrum	Meteorological Department Curaçao	Curacao
Roland Potthast	Deutscher Wetterdienst	Germany
Michael Andreas Purwoadi	Badan Meteorologi, Klimatologi, dan Geofisika	Indonesia
Angela Corina	Presidenza del Consiglio dei Ministri	Italy
Kotaro Bessho	Japan Meteorological Agency	Japan
Sigita Škapare	Latvian Environment, Geology and Meteorology Centre	Latvia
Lucy Mtilatila	Department of Climate Change & Meteorological Services	Malawi
Stephanie Landman	South African Weather Service	South Africa
Omar Al Yazeedi	National Centre of Meteorology	UAE
ECR (TBC)		
Monica Yougman	NOAA-NWS	USA
Tony McNally	ECMWF	Partner Organization
HMEI representative (TBC)		

JAG-AI Update

- **First meeting held on Jan 27th, 2026**
- **Immediate priorities**

Awareness of AI activities in WMO

- WIPPS Pilot Projects, Operational capabilities, Services applications and needs, Research activities

Principles and mechanisms regarding work with the private sector, including ethical aspects

- Define a concrete path forward for collaborative work

Training and capacity development

- Strategy for access and support for gaps identified in both development and implementation

Guidance on scaling AI from pilot projects to operational implementation

- From pilot projects to implementation

- **Outcomes:**
 - JAG-AI tasked secretariat to explore options for engagement with private sector
 - JAG-AI discussed initial recommendations on basic infrastructure requirements for Members to implement and use AI-based product and services
 - JAG-AI supported proposal to have permanent observers from relevant WMO bodies and structures
 - **CDP asked to identify a representative**
 - Agreed to monthly meetings until EC-80 in June 2026, and every two months thereafter
 - **Next meeting is Feb 26, 2026**

Training Action Plan to guide Secretariat's support to AI-related training activities - in development

Outcome: enable NMHSs to **understand, adopt, operate, verify, and progressively tailor AI-enabled weather forecasting and service applications through structured, trusted, and scalable training activities**

Objectives

- A **recognized, modular AI learning framework** or learning pathway aligned with the needs of operational meteorology;
- A **curated and quality-assured portfolio** of AI learning resources accessible through WMO's digital learning platform;
- **A defined scope:** A coordinated training pipeline that supports Members from **initial awareness to operational autonomy**, aligned with WMO AI pilot programmes;
- **A governance/experts' validation/review mechanism supported by CDP and JAG-AI and other relevant governance/technical bodies** to ensure alignment of WMO's education and training activities with WMO's AI policy and implementation pathways.

Principles

- **Operational relevance first**
AI trainings should be anchored in forecasting, warning services, climate services, and information service for decision support, not abstract AI theory.
- **Progressive readiness**
Training pathways should reflect heterogeneous readiness levels among Members, from basic understanding to advanced in-house development.
- **Leverage before building**
WMO will prioritize leveraging, curation, adaptation, and federation of existing high-quality training resources from advanced NMHSs and operational centres before developing new content.
- **Trust, verification, and ethics**
Training materials, including the AI-powered tools on which participants are trained, must be technically credible, validated, transparent, and ethically sound, consistent with WMO standards.

Actions

- **AI Learning Framework or learning pathway**
Develop a lightweight, modular AI learning framework and curriculum
- **Curated AI Learning Ecosystem (Moodle-Centered)**
Position WMO's Moodle platform as the central access point for AI-related learning, focusing on aggregation, curation, and guidance, not duplication of the efforts of Members in developing training resources and activities.
- **Training Linked to AI Pilots and Operations**
Use WMO-led and WMO-supported AI pilots as anchors for practical, hands-on training.
- **Verification, Trust, and Ethical Capacity**
Verification, Trust, and Ethical Capacity

Next steps

- Action plan to ramp up with guidance from the JAG-AI
- CDP asked to identify a representative