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**Eleventh Meeting of the North American, Central American and the Caribbean Working Group
(NACC/WG/11)**

Guatemala City, Guatemala, September 21-25, 2026

**Agenda Item 3: Presentation of the progress of the action plans of the NACC/WG Task Forces
and the progress in the regional work**

**REGIONAL PROGRESS IN THE IMPLEMENTATION OF
AERONAUTICAL METEOROLOGICAL SERVICES IN THE NAM/CAR REGIONS**

(Presented by the MET/TF Rapporteur)

EXECUTIVE SUMMARY	
This Working Paper presents the progress achieved in the implementation of the 2026 Work Programme of the Aeronautical Meteorology Implementation Task Force (MET/TF), the follow-up on Decisions NACC/WG/10/04, NACC/WG/10/05, and NACC/WG/10/06, as well as Conclusion NACC/WG/10/07, and the proposed update to the Work Programme for the next cycle. The results reviewed during MET/TF/4 include digital exchange of meteorological information, Aircraft-Based Observations (ABO), the application of Annex 3 provisions and PANS-MET, quality management, operational resilience, risk management and adaptation, regional cooperation, and the verification of Basic Building Blocks (BBB).	
Action:	The Meeting is invited to endorse the regional actions requiring coordination among the NACC/WG task forces, States, air navigation service providers, international organizations, and other relevant stakeholders, as well as the updated Work Programme contained in Appendix A, in accordance with numeral 5.
<i>Strategic Objectives:</i>	• Every Flight is Safe and Secure • Aviation is Environmentally Sustainable • Aviation Delivers Seamless, Accessible, and Reliable Mobility for All • No Country Left Behind • The Economic Development of Air Transport Assures the Delivery of Economic Prosperity and Societal Well-Being for All
<i>References:</i>	• Summary of Discussions of NACC/WG/10 • Summary of Discussions of MET/TF/4 • Annex 3 — Aeronautical Meteorological Service for International Air Navigation • Procedures for Air Navigation Services — Meteorology (PANS-MET, Doc 10157)

1. Introduction

1.1 The NACC/WG/10 adopted Decision NACC/WG/10/04 on the regional dissemination of OPMET data in IWXXM format, Decision NACC/WG/10/05 on the promotion of Aircraft-Based Observations (ABO), Decision NACC/WG/10/06 on the integration of meteorological and climatological information to strengthen the operational resilience of air traffic service providers, and Conclusion NACC/WG/10/07 on regional cooperation in aeronautical meteorology. These mandates were incorporated into the 2026 Work Programme of the MET/TF.

1.2 The MET/TF/4, held in Mexico City from 28 to 31 July 2026, reviewed the progress achieved in the execution of the Work Programme. Discussion Papers DP/01, DP/02, and DP/03 consolidated, respectively, the outcomes of the Technical Seminar, the progress of the 2026 Work Programme tasks, and the follow-up on the decisions and conclusions of the NACC/WG/10.

1.3 The review confirmed progress in the regional implementation of IWXXM and METNO; Aircraft-Based Observations; the designation of Meteorological Authorities and Meteorological Service Providers; quality management systems; the Volcano Observatory Notice for Aviation (VONA); quantitative volcanic ash information; SIGMET coordination; operational resilience, risk management, and adaptation; regional cooperation; the update of the Electronic Air Navigation Plan; and the verification of Basic Building Blocks.

1.4 The work of the MET/TF has also supported State-level implementation through guidance material, capacity-building activities, exchange of experiences, technical coordination, and the utilization of specialized capabilities available within the Region. In the field of safety oversight, cooperative experiences among Central American States have been identified involving specialized aeronautical meteorology inspectors from Costa Rica and El Salvador. These experiences should be documented to examine their potential application in other States, in accordance with the corresponding legal, administrative, and liability arrangements.

1.5 Furthermore, the joint project between the NACC and SAM Regional Offices on the cyclical review and verification of Basic Building Blocks for aeronautical meteorology and aeronautical information management provides for the review and validation of a regional methodology during the workshop to be held in Mexico City from 27 to 29 October 2026. This activity aims to harmonize the evaluation, monitoring, and reporting on the implementation of essential air navigation services and capabilities.

1.6 This Working Paper summarizes the progress achieved, identifies the actions requiring support or validation by the NACC/WG, and presents in **Appendix A**, a proposed update to the MET/TF Work Programme.

2. Progress achieved in the implementation of the 2026 Work Programme

2.1 **Digital exchange of meteorological information.** Tasks on IWXXM, the ATS Message Handling System (AMHS), and digital access to meteorological information allowed progress in interoperability testing, conversion of traditional alphanumeric code messages to IWXXM, validation of digital information, and coordination for the international exchange of OPMET data. Cuba and the United States conducted testing on the exchange and publication within Information Management

environments; COCESNA confirmed extended AMHS capabilities, File Transfer Body Part, and IWXXM processing; and progress was made on the proposal for a regional METNO process. These outcomes support Decision NACC/WG/10/04 and require continuity through joint work between the MET/TF and the COMM/TF.

2.2 Aircraft-Based Observations. Coordination with the World Meteorological Organization, SURV/TF, COCESNA, and SENEAM enabled the evaluation of the potential of Automatic Dependent Surveillance - Contract (ADS-C), Automatic Dependent Surveillance - Broadcast (ADS-B), Mode S Enhanced Surveillance (EHS), Routine Aircraft Meteorological Reports, and ASTERIX-based exchange mechanisms. This work broadened the regional approach beyond AMDAR and confirmed the role of air navigation service providers as partners to identify, enable, and share sources of aircraft meteorological observations. Follow-up on Decision NACC/WG/10/05 requires actions directed at air navigation service providers and a regional dialogue with the World Meteorological Organization, CANSO, aircraft operators, civil aviation authorities, meteorological services, data link providers, and other relevant stakeholders.

2.3 Application of ICAO provisions and institutional strengthening. The MET/TF developed guidance material for the designation of Meteorological Authorities and Meteorological Service Providers and reviewed the application of provisions regarding VONA, quantitative volcanic ash information, space weather information, digital exchange, and access to World Area Forecast System (WAFS) products. Transition to ISO 9001:2026 and mechanisms to assess the quality, timeliness, and operational utility of aeronautical meteorological services were also reviewed.

2.4 Operational resilience, risk management, and adaptation. Discussions and presentations at MET/TF/4 addressed the use of meteorological and climatological information for air traffic management, air traffic flow management, capacity management, contingency planning, multi-hazard early warning systems, and operational decision-making. The scope encompasses air navigation service providers, airports, airspace, and other components of the aeronautical system. The work on climate risk assessment and adaptation continues in coordination with the ENV-SUS/WG and supports the follow-up on Decision NACC/WG/10/06. Its development shall proceed progressively, based on methodologies, results, and case studies that are sufficiently mature for regional consideration.

2.5 Regional cooperation and State-level implementation. SIGMET coordination, activities promoted by the Tulum Meteorological Watch Office, the expected expert exchanges, and the cooperation with other NACC/WG groups facilitated the application of regional and national solutions. These efforts contribute to the follow-up on Conclusion NACC/WG/10/07. Coordination with the AGA/TF resulted in Job Card AGATF.004.01 regarding the operational needs of Aerodrome Meteorological Offices in airport development, expansion, or modernization projects. This activity formalized a line of coordination between aeronautical meteorology and aerodromes.

2.6 Cyclical review and verification of Basic Building Blocks. Regional work progressed toward a joint methodology for aeronautical meteorology and aeronautical information management, linking implementation evidence, safety oversight, quality control and assurance, aeronautical publications, notification of differences, and follow-up on corrective actions. The October 2026 NAM/CAR/SAM workshop to be held in Mexico Regional Office, will allow the review and validation of the methodology, examination of its application by States, and agreement on corresponding follow-up measures. In terms of safety oversight, the capabilities developed by specialized inspectors from Costa Rica and El Salvador provide a reference for examining transnational cooperation mechanisms to support

States with limited resources, without replacing national responsibilities. Costa Rica's work includes a structured training programme for air navigation service inspectors specialized in meteorology, featuring initial, recurrent, and specialized training to conduct auditing, inspection, continuous oversight, and corrective action follow-up activities.

3. Considerations for the update of the Work Programme

3.1 The results reviewed by MET/TF/4 confirm that the tasks of the 2026 Work Programme remain relevant, although several require adjustments in scope, deliverables, task leads, timelines, and coordination mechanisms with other NACC/WG groups.

3.2 Tasks related to IWXXM should maintain alignment with Decision NACC/WG/10/04 and incorporate pre-operational testing, the use of extended AMHS and File Transfer Body Part, the regional METNO process, origin data quality, and readiness for SWIM environments.

3.3 The task on Aircraft-Based Observations should maintain alignment with Decision NACC/WG/10/05 and establish actions targeted at air navigation service providers. In coordination with the World Meteorological Organization, it should also consider the potential organization of a regional event involving civil aviation authorities, meteorological services, aircraft operators, data link providers, and other relevant stakeholders like CANSO.

3.4 The regional event should enable stakeholders to:

- a) examine existing and emerging sources of aircraft meteorological observations;
- b) identify available technical capabilities in the NAM/CAR Regions;
- c) analyze technical, institutional, and financial constraints;
- d) examine implementation cases and opportunities; and
- e) recommend regional follow-up actions.

3.5 The task on resilience should maintain alignment with Decision NACC/WG/10/06 and proceed progressively, prioritizing sufficiently developed deliverables, methodologies, and case studies. Coordination with the AMCB/TF, AGA/TF, and ENV-SUS/WG must respond to defined operational needs and avoid duplication of efforts.

3.6 Tasks on quality management, safety oversight, and the verification of Basic Building Blocks should incorporate the outcomes of the NAM/CAR/SAM project. The establishment of a regional mechanism to identify specialized aeronautical meteorology inspectors, document their competencies, and facilitate their participation in assistance, inspection, or evaluation activities in other States, subject to the corresponding agreements, should also be evaluated.

3.7 **Appendix A** presents the initial update to the Work Programme. The proposal maintains alignment with the tasks approved by MET/TF/3 and identifies, for each task, the achieved outcome, its impact, implementation status, and proposed follow-up.

4. Proposed Work Programme

4.1 Based on the outcomes of MET/TF/4, it is proposed to maintain the task structure of the Work Programme and update its content to reflect the progress achieved, pending activities, and required coordination mechanisms.

4.2 The updated Work Programme is contained in **Appendix A**. The task leads, participants, deliverables, and timelines shall be confirmed during implementation and adjusted when the NACC/WG adopts new conclusions and decisions.

4.3 The proposed update does not replace the tasks approved by MET/TF/3. It maintains their traceability and modifies their scope when achieved outcomes, identified needs, or the involvement of other technical groups so require.

5. Action suggested to the Meeting

5.1 The Meeting is invited to:

- a) note the progress achieved in the implementation of the 2026 MET/TF Work Programme and its contribution to the follow-up on Decisions NACC/WG/10/04, NACC/WG/10/05, and NACC/WG/10/06, as well as Conclusion NACC/WG/10/07;
- b) continue supporting the joint work between the MET/TF and COMM/TF for the regional implementation of IWXXM, interoperability through AMHS, SWIM readiness, and the establishment of the regional METNO process;
- c) urge air navigation service providers and competent entities to evaluate surveillance, communications, and data exchange capabilities that can support Aircraft-Based Observations;
- d) support coordination between ICAO and the World Meteorological Organization to organize a regional event on Aircraft-Based Observations, with the participation of relevant task forces, air navigation service providers, CANSO, civil aviation authorities, meteorological services, aircraft operators, data link providers, and other relevant stakeholders;
- e) note the work on operational resilience, risk management, and adaptation, and support its progressive development in coordination with relevant groups;
- f) endorse the cyclical review and verification of Basic Building Blocks for aeronautical meteorology and aeronautical information management, including the validation and application of the regional methodology;
- g) support the evaluation of a regional mechanism to identify and facilitate the utilization of safety oversight inspectors specialized in aeronautical meteorology, including the documentation of cooperative experiences; and
- h) approve the updated MET/TF Work Programme contained in **Appendix A**.

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APPENDIX A
UPDATED MET/TF WORK PROGRAMME PROPOSAL

Task	Updated Description	Main Participants	Expected Deliverable
T01 – Regional IWXXM and OPMET Data Exchange Implementation	Continue regional activities supporting the implementation of the ICAO Meteorological Information Exchange Model (IWXXM), Air Traffic Services Message Handling System (AMHS) interoperability, SWIM readiness, and regional Meteorological Notice (METNO) procedures.	MET/TF, COMM/TF, States, CMO, COCESNA, ICAO	Regional implementation status report, METNO coordination mechanism, interoperability testing activities and support for digital OPMET exchange.
T02 – Aircraft-Based Observations (ABO)	Continue regional activities supporting Aircraft-Based Observations through coordination with the World Meteorological Organization (WMO), Air Navigation Service Providers (ANSPs), SURV/TF and other stakeholders. Activities should include the evaluation of AMDAR, ADS-C, ADS-B, Mode S Enhanced Surveillance (EHS), Meteorological Routine Air Reports (MRAR) and other regional capabilities.	MET/TF, SURV/TF, WMO, ANSPs, CANSO, States, operators, data-link service providers	Regional ABO assessments, technical coordination activities, identification of implementation opportunities and a regional OACI-WMO ABO event involving relevant stakeholders.
T03 – Quality Management Systems and Quality Oversight	Support the implementation and transition to ISO 9001:2026 and promote the application of quality management and quality oversight practices in aeronautical meteorological services.	States, Meteorological Authorities, Meteorological Service Providers	Exchange of regional experiences, implementation support and guidance related to quality management systems.
T04 – ICAO Annex 3 and PANS-MET Implementation	Support implementation activities related to ICAO Annex 3 and PANS-MET provisions, including Volcano Observatory Notice for Aviation (VONA), Quantitative Volcanic Ash Information (QVA), Space Weather Information Service (SWIS) and associated implementation requirements.	States, ICAO, VAACs, MWOs, Meteorological Service Providers	Guidance, implementation support material and regional awareness activities.
T05 – Meteorological Authorities and	Promote implementation of the guidance material developed to support the designation, implementation and oversight of	States, Civil Aviation Authorities,	Follow-up on implementation of institutional arrangements and sharing of

Task	Updated Description	Main Participants	Expected Deliverable
Meteorological Service Providers	Meteorological Authorities and Meteorological Service Providers.	Meteorological Authorities	implementation experiences.
T06 – Digital Access to WAFS Products	Continue support activities related to digital access to World Area Forecast System (WAFS) products, including WIFS API implementation and future service evolution.	States, Meteorological Service Providers, ICAO	Regional familiarization and support activities related to WAFS digital services.
T07 – Contingency Planning and Multi-Hazard Early Warning Systems (MHEWS)	Strengthen coordination between meteorological services, contingency planning activities and Multi-Hazard Early Warning Systems supporting continuity of aviation services.	States, CMO, ANSPs, Airport Operators	Guidance, case studies and regional coordination activities supporting resilience and contingency planning.
T08 – Operational Resilience, Risk Management and Adaptation	Promote the integration of meteorological and climatological information in support of Air Traffic Management (ATM), Air Traffic Flow Management (ATFM), operational resilience, risk management and adaptation to meteorological and climate-related hazards.	MET/TF, AMCB/TF, AGA/TF, ENV-SUS/WG, States, ANSPs	Regional guidance, operational use cases, case studies and follow-up activities supporting resilience, risk management and adaptation.
T09 – Regional SIGMET Coordination	Continue activities supporting regional coordination among Meteorological Watch Offices (MWOs), adjacent Flight Information Regions (FIRs), Volcanic Ash Advisory Centres (VAACs) and operational stakeholders.	States, MWOs, VAACs, ICAO	Enhanced coordination arrangements, harmonization activities and regional collaboration mechanisms.
T10 – Regional Cooperation	Continue promoting technical cooperation, expert exchanges, training activities and implementation support among States and regional organizations.	States, ICAO, CMO, regional partners	Technical cooperation activities, expert exchanges and implementation support initiatives.
T11 – Electronic Air Navigation Plan (eANP)	Support maintenance and updating of meteorological information contained in the Electronic Air Navigation Plan.	States, ICAO	Updated regional information and coordinated amendment activities.
T12 – Basic Building Blocks (BBB) Cyclical Review and	Support the implementation of the NAM/CAR/SAM methodology for cyclical review and verification of Basic Building Blocks (BBB) for	NACC Office, SAM Office, States, MET and AIM specialists,	Regional methodology, validation workshops, periodic implementation reports and assessment of

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Task	Updated Description	Main Participants	Expected Deliverable
Verification Mechanism	Meteorology and Aeronautical Information Management, including links with safety oversight, quality management, implementation monitoring and corrective action follow-up.	inspectors, auditors	mechanisms supporting the use of specialized aeronautical meteorology inspectors and regional cooperation arrangements.

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