Organización de Aviación Civil Internacional
Oficina para Norteamérica, Centroamérica y Caribe

NOTA DE ESTUDIO

NACC/WG/11 — NE/17
18/09/26

Décimo Primera Reunión del Grupo de Trabajo de Norteamérica, Centroamérica y el Caribe (NACC/WG/11)

Ciudad de Guatemala, Guatemala, del 21 al 25 de septiembre de 2026

Cuestión 3 del Orden del Día: **Presentación de los avances de los planes de acción de los Grupos de Tarea integrantes del NACC/WG y los avances en los trabajos regionales.**

FORTALECIMIENTO DEL INTERCAMBIO DIGITAL REGIONAL DE INFORMACIÓN METEOROLÓGICA MEDIANTE IWXXM Y METNO

(Presentada por los Relatores del COMM/TF y MET/TF)

RESUMEN EJECUTIVO

Este documento da seguimiento a las actividades desarrolladas por los grupos de tarea COMM/TF y MET/TF en apoyo de la implementación regional del Modelo de Intercambio de Información Meteorológica de la OACI (IWXXM) y la difusión de datos OPMET en las Regiones NAM/CAR. La nota presenta los resultados alcanzados en materia de interoperabilidad AMHS, conversión TAC-IWXXM, validación e intercambio de información meteorológica digital, así como capacidades regionales identificadas para el procesamiento y utilización de productos IWXXM. Asimismo, se presentan consideraciones relacionadas con mecanismos regionales de coordinación para el intercambio internacional de información OPMET, incluyendo los Avisos Meteorológicos (METNO), como parte de las actividades de seguimiento asociadas a la Decisión NACC/WG/10/04.

Acción:	Según se presenta en el numeral 4
Objetivos Estratégicos:	• Todos los vuelos son seguros y protegidos • La aviación es sostenible en términos medioambientales • Movilidad fluida, accesible y confiable • Ningún país se queda atrás • El desarrollo económico del transporte aéreo garantiza la generación de prosperidad económica y el bienestar social para todos
Referencias:	• Sumario de Discusiones de la NACC/WG/10. • Sumario de Discusiones de la MET/TF/4. • Anexo 3, Servicio meteorológico para la navegación aérea internacional. • Procedimientos para los Servicios de Navegación Aérea, Meteorología (PANS-MET, Doc 10157).

1. Introducción

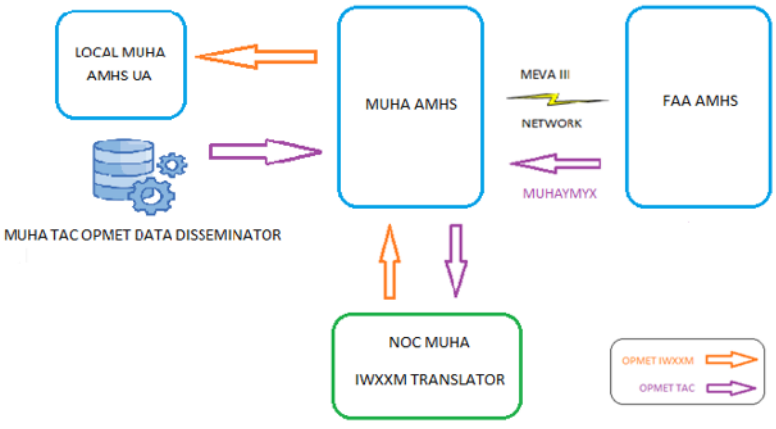
1.1 The NACC/WG/10 Meeting identified the dissemination of OPMET IWXXM data to the Washington Regional OPMET Centre (ROC) as a high-priority objective within the transition process toward the regional exchange and dissemination of OPMET information in IWXXM format. To support this effort the NACC/WG/10 adopted Decision NACC/WG/10/04, "Action Plan for the Implementation of OPMET IWXXM Data Dissemination." The Decision established the regional framework for coordinating efforts among States, NACC/WG Task Forces and participating organizations to advance toward a regional digital meteorological information exchange environment.

1.2 During the MET/TF/3 Meeting, with the objective of supporting the implementation and dissemination of OPMET IWXXM data within the CAR Region, an Ad Hoc Group composed of Cuba, the United States, Mexico and the Caribbean Meteorological Organization (CMO) was established. Among its activities was the development of a regional project to deploy a temporary TAC-to-IWXXM translation service capable of generating OPMET IWXXM data on behalf of those States and Territories that do not yet possess such capabilities, until they develop their own production and exchange mechanisms.

2. Discussion

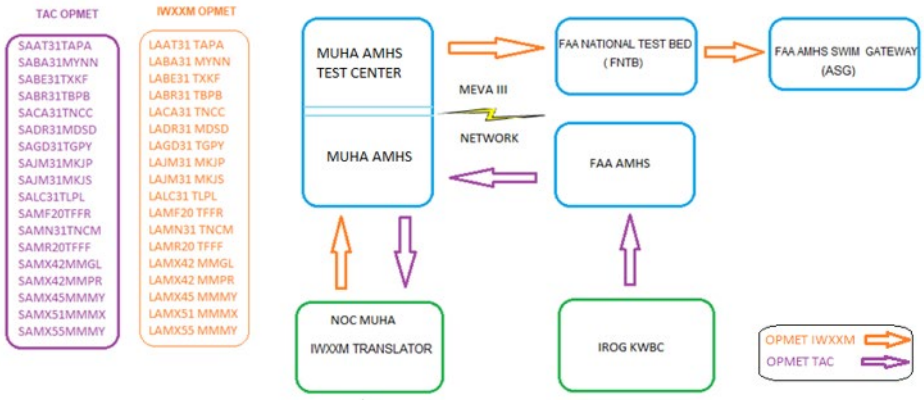
2.1 In support of the regional implementation strategy for the dissemination of OPMET IWXXM data through the Air Traffic Services Message Handling System (AMHS) to System Wide Information Management (SWIM) environments, as part of the transition process for the provision of OPMET data, the COMM/TF and MET/TF, through the Ad Hoc Group established for this purpose, have conducted the following activities in support of the implementation of NACC/WG/10 Decision 10/04 and the strengthening of regional capabilities for digital meteorological information exchange:

a) IWXXM translation testing and local dissemination through AMHS of international and national TAC OPMET bulletins (METAR, SPECI, TAF and SIGMET) received by the Cuban National OPMET Centre (MUHA NOC). This activity enabled the validation of TAC-to-IWXXM conversion processes and the assessment of local IWXXM product generation and dissemination capabilities using existing AMHS infrastructure.

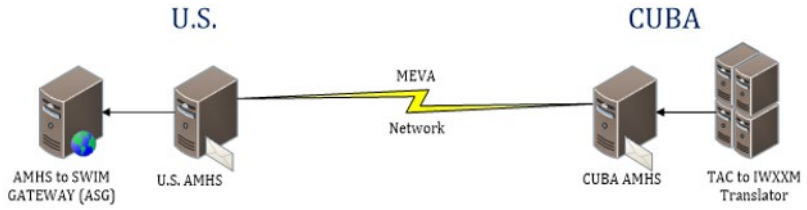


b) IWXXM translation testing of TAC OPMET bulletins (METAR) issued by meteorological services in the CAR Region and forwarded to MUHA by the Washington Inter-Regional OPMET

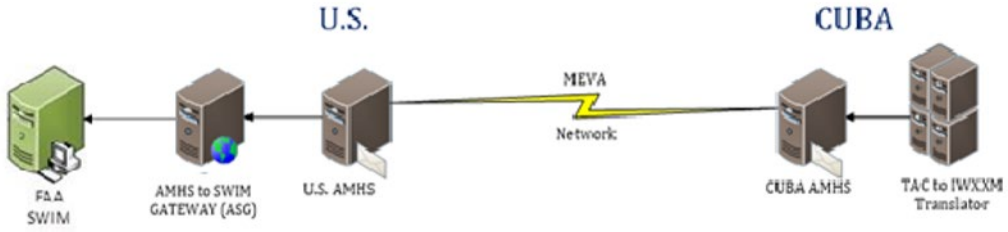
Gateway (IROG). International dissemination of the resulting XML files to FAA/NWS test environments through AMHS. This activity enabled the evaluation of regional OPMET information conversion to IWXXM format and the validation of its international exchange through AMHS.



c) Phase III interoperability testing between IACC, FAA and NWS for the exchange of IWXXM data through AMHS. The XML files transmitted from Cuba to the FAA were generated through the translation process described in subparagraph b).



d) Phase IV interoperability testing between IACC, FAA and NWS for the dissemination of test IWXXM data through AMHS. During the testing activities, multiple reports were transmitted from Cuba to the United States, received by the AMHS-SWIM Gateway (ASG), successfully validated and ultimately published within the United States SWIM infrastructure. The XML files transmitted from Cuba to the FAA were generated through the translation process described in subparagraph b)



2.2 The tests conducted using the translation of national and international TAC OPMET bulletins into OPMET IWXXM format demonstrated the importance of correctly encoding TAC reports in

order to successfully generate XML files compliant with the IWXXM model. The most common causes of failure identified were:

- Incorrect encoding of cloud layers, for example, ///CB or ///TCU instead of //////CB or //////TCU.
- Reporting of present weather phenomena not included in the Technical Regulations, Volume II (WMO-No. 49) and published in: http://codes.wmo.int/49-2/AerodromePresentOrForecastWeather
- Reporting of recent weather phenomena not included in the Technical Regulations, Volume II (WMO-No. 49), and published in http://codes.wmo.int/49-2/AerodromeRecentWeather
- Incorrect encoding of the validity period in TAF and SIGMET reports.
- Incorrect encoding of the temperature group when temperature information is not available in observations. For example, XX/XX instead of /////.
- Reports containing visibility, Runway Visual Range (RVR), present weather conditions, or cloud information together with CAVOK.

2.3 The successful results achieved through the tests conducted by Cuba, the FAA and the United States National Weather Service (NWS) represent significant progress in the work of the MET-COMM Ad Hoc Group toward the development of a regional project for the implementation of a temporary TAC-to-IWXXM OPMET data translation service in support of NACC/WG/10 Decision 10/04. In this context, upon completion of the pre-operational testing phase, the MUHA National OPMET Centre (NOC) reaffirmed its willingness to perform such translation on behalf of other Caribbean States, subject to the establishment of the corresponding bilateral arrangements and with ICAO support.

2.4 Considering the results of the testing activities described in paragraph 2.1 d) of this paper, activity b) of NACC/WG/10 Decision 10/04 is ready to move forward. This will require pre-operational testing based on the periodic transmission of messages with “Non-Operational” status over a period of weeks or months prior to the operational use of the data.

2.5 In August 2026, NACC States and Organizations were requested, through their representatives in the COMM/TF and MET/TF, to complete or update information related to the indicators used to measure the level of implementation of the Air Traffic Services Message Handling System (AMHS) and the dissemination of Operational Meteorological (OPMET) data in accordance with the ICAO Meteorological Information Exchange Model (IWXXM). The Central American Corporation for Air Navigation Services (COCESNA) reported that, following the modernization of its TopSky-AIS module, it now has the capability to process OPMET IWXXM data received through AMHS.

2.6 Based on the information provided, it is recommended that Cuba and COCESNA proceed to the next phase of the interoperability tests that they have been conducting since 2022. This would represent a significant step in support of NACC/WG/10 Decision 10/04 and would contribute to the progressive introduction of IWXXM data generated by one entity into other operational environments. It would also provide an opportunity to further assess regional capabilities for the processing, exchange and utilization of IWXXM information through AMHS-based environments.

3. Conclusion

3.1 The dissemination of OPMET IWXXM data within the North American and Caribbean Regions progressed during the 2025-2026 period, although activities remain pending to complete the transition toward the operational dissemination of OPMET IWXXM data. While the FAA/NWS-Cuba partnership successfully completed Phase IV of the testing programme, MUHA OPMET IWXXM data are not yet being operationally disseminated to the Washington Regional OPMET Centre (ROC).

3.2 In order to advance the provision of OPMET IWXXM data through AMHS, using AMHS-SWIM Gateways (ASG) for dissemination into SWIM environments within the NAM/CAR Regions, it is necessary to identify existing AMHS-SWIM capabilities available within States and organizations of the Region. Each implementation may involve different scenarios depending on the available IWXXM processing and encoding capabilities. However, whenever IWXXM data received via AMHS can be published within the corresponding SWIM environment, the necessary coordination should be initiated to conduct interoperability and pre-operational testing activities in support of the dissemination of available OPMET IWXXM data.

3.3 Furthermore, the progress reported by COCESNA demonstrates the existence of additional regional capabilities that could contribute to the gradual expansion of IWXXM-based digital meteorological information exchange within the Region.

3.4 In addition, the implementation of regional coordination mechanisms for the management and notification of changes associated with the international exchange of OPMET information, including Meteorological Notices (METNO), may contribute to strengthening regional coordination and supporting future activities related to the operational exchange of digital meteorological products.

4. Recommended Actions

4.1 The Meeting is invited to:

a) coordinate actions between the COMM/TF, MET/TF and AIM/TF to identify SWIM environments within the NACC Region capable of receiving IWXXM data through AMHS;
b) coordinate additional actions required to conduct the next phase of testing with the FAA in preparation for the operational dissemination and use of OPMET IWXXM data generated by the MUHA NOC;
c) encourage States and Organizations within the Region to identify and communicate existing capabilities related to IWXXM processing, AMHS Extended, File Transfer Body Part (FTBP) support, and AMHS-SWIM integration mechanisms that may support future regional interoperability activities and digital meteorological information exchange;
d) take note of the capabilities reported by COCESNA for processing OPMET IWXXM data received through AMHS and support the continuation of interoperability activities contributing to the regional implementation of IWXXM;
e) support the development and implementation of a regional Meteorological Notice (METNO) mechanism for the coordinated management and notification of changes associated with OPMET bulletins and IWXXM information, in accordance with the activities identified during MET/TF/4.

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