



ICAO

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WORKING PAPER

ANI/WG/3 — WP/09  
21/03/16

**Third NAM/CAR Air Navigation Implementation Working Group Meeting (ANI/WG/3)**  
Mexico City, Mexico, 4 to 6 April 2016

- Agenda Item 4:**      **Follow-up, Performance Evaluation and Monitoring of the NAM/CAR Regional Performance Based Air Navigation Implementation Plan (NAM/CAR RPBANIP) Targets**
- 4.1      Progress Reports of the Task Forces and the ANI/WG**

**PRELIMINARY PROGRESS REPORT BY ATFM TF**

(Presented by the ATFM TF Rapporteur)

<b>EXECUTIVE SUMMARY</b>	
<p>This Working paper presents the progress achieved by the ATFM Implementation Task Force (TF) since its previous progress report to the Second NAM/CAR Air Navigation Implementation Working Group Meeting (ANI/WG/2) in Puntarenas, Costa Rica, June 2015. This paper includes the results for previously identified deliverables and recommendations for improving the Task Force function and coordination.</p>	
<b>Action:</b>	Action Suggested in Section 3.
<i>Strategic Objectives:</i>	<ul style="list-style-type: none"><li>• Safety</li><li>• Air Navigation Capacity and Efficiency</li></ul>
<i>References:</i>	<ul style="list-style-type: none"><li>• NAM/CAR Regional Performance-Based Air Navigation Implementation Plan (RPBANIP)</li><li>• First NAM/CAR Air Navigation Implementation Working Group Meeting (ANI/WG/1), Mexico City, Mexico, 29 July to 1 August 2013</li><li>• Second NAM/CAR Air Navigation Implementation Working Group Meeting (ANI/WG/2), Puntarenas, Costa Rica, 1 - 4 June 2015</li><li>• ATFM Task Force teleconferences, webinars and e-mail correspondence</li></ul>

## 1. Introduction

1.1 The Air Traffic Flow Management (ATFM) Implementation Task Force was established during the first ICAO NACC Air Navigation Implementation Working Group Meeting (ANI/WG/1) in 2013, to reflect the importance of Traffic Flow Management (TFM) to the Region. The objective of the ATFM TF is to work collaboratively and develop a regional and interoperable ATFM framework in the NAM/CAR Regions that is consistent with ICAO Doc 9971 — *Manual on Collaborative Air Traffic Flow Management* and other related global documents.

1.2 At the ANI/WG/2 Meeting, WP/07 was presented informing the progress and results of the ATFM TF efforts in their Work Programme. At that time, the TF comprised members from five NACC States: Canada, Dominican Republic, El Salvador, Trinidad and Tobago, and the United States; also members of the Civil Air Navigation Services Organization (CANSO) and International Civil Aviation Organization (ICAO). Brazilian Air Navigation Management Center (CGNA)/ Department of Airspace Control (DECEA) has requested participation within the group to discuss lessons learned and best practices.

## 2. ATFM TF Progress and Results

2.1 Since May 2015, the TF held 4 web conference meetings. These meetings included discussions on the FAA regular Caribbean Telcons to encourage participation of the TF Air Navigation Service Providers (ANSPs) in these telcons. These web-conference meetings also included briefings by the TF members, and a briefing on the Contingency Plan by Trinidad and Tobago, and a briefing on the ATFM Progress by COCESNA.

2.2 The ATFM TF Survey was sent to States and members of the TF, the ATFM TF conducted an assessment of the responses and States current ATFM status was completed. The results of that survey are presented to ANI/WG/3 in theIP/13.

2.3 Several ATFM Workshops were completed in 2015, including Panama in May, Cuba in July, and Trinidad and Tobago in November. In addition, Dominican Republic participated in ATFM Workshops hosted by the Federal Aviation Administration (FAA) Air Traffic Control System Command Center (ATCSCC) in October and December. These workshops provided opportunities for States ANSPs and other stakeholders to participate in briefings and discuss best practices for ATFM and Collaborative Decision Making (CDM). Emphasis was consistently placed on fostering greater collaboration on ATFM throughout the Caribbean and need to establish a CDM process in the Region.

### *Deliverables and Results*

2.4 The focus for 2015 continued on sharing of best practices, demand and capacity balancing methodology, and developing a regional pre-tactical web conference for all ANSPs and stakeholders to participate and share information. (See **Appendix A** for specific tasking goals/dates of the updated work programme).

*Recommendations for Improving the ATFM Implementation*

2.5 The ATFM TF held its first monthly web-conference in March 2016. It was highlighted the number of changes in the personnel representing several States and organizations on the TF (**Appendix B**). A number of additional States have requested to begin participating on the TF. All NACC States should be invited to provide a representative to the TF.

2.6 The results of the ATFM Survey of States as well as insights gained from the past years multiple web conferences and ATFM Workshops suggest a review and possible re-prioritization of the TF Work Programme, this would facilitate the TF mission of promoting and implementing a regional, interoperable ATFM framework. For instance, the need for establishing bi-lateral/multi-lateral Letter of Agreements (LOAs) between States/ Flow management Units (FMUs) (see Work Programme Activity 2) would seem to be of less immediate priority than promoting pre-tactical operation daily briefings (see Work Programme Activity 7) and establishing basic data exchange between the ANSPs (see Work Programme Activity 4).

**3. Suggested Action**

3.1 The Meeting is invited to:

- a). Evaluate the progress of the ATFM TF detailed in this paper;
- b). support the recommendations for expanding TF participation; and
- c). review and update Work Program timelines and priorities.

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**APPENDIX A**  
**NAM/CAR ATFM TASK FORCE WORK PROGRAMME**

**ATFM Mission Statement**

The ATFM Work Programme (WP) provides specific initiatives for the development of a regional concept of ATFM implementation in NAM/CAR Region. This is consistent with ICAO Doc. 9971 and other related global documents. It takes into consideration the execution of a simple, basic, and incremental approach of promoting, sharing and implementing a regional, interoperable ATFM framework for global harmonization.

**INTRODUCTION**

People, automation, technology and collaboration with system stakeholders (inclusive of academia) will be the core principles of this project. The Work Programme seeks to:

1. Establish consistent regional ATFM planning and operating practices
2. Encourage a collaborative and harmonized approach to ATFM amongst States and Regions
3. Foster a systemic approach to ATFM, inclusive of all ATM community members

The document takes into consideration the diverse range of experience, technology and available resources. Each group tasking will be categorized using the following key:

Short Term: Achievable within 1 year time frame (Tactical)

Medium Term: Accomplishable within 1-2 year time frame (Pre-tactical)

Long Term: Obtainable within 3-5 year time frame (Strategic)

\*\*\* This document shall be a guideline for establishing ATFM NAM/CAR goals and reviewed periodically throughout the year. A formal review each calendar year shall be conducted during the ANI/WG and NACC/WG meeting so as to update/revise/modify its content for currency and applicability.

No	Activity	Objective	Responsible	Deliverable	Date
1	<b><u>Regional assessment of ANSPs</u></b> <ul style="list-style-type: none"> <li>• Identify participants</li> <li>• Capabilities</li> <li>• Experience (entry/intermediate/advance)</li> <li>• FMU/FMP/Ops Sup/Mgr.</li> <li>• What do ANSPs need?</li> <li>• Conduct study of existing/future FMP/FMU and a Regional Centralized FM Center</li> <li>• Note: A review as to the specific methodology to solicit this info (email/survey etc.) will be determined</li> </ul>	Provide a baseline assessment of resources, needs & capabilities	ATFM Task Force Team	Report/document to be determined	Short Term (Dec 2014 – July 2015)
2	<b><u>Procedural Agreements</u></b> <ul style="list-style-type: none"> <li>• Establish bi-lateral/multi-lateral LOAs between States/FMUs</li> <li>• Identify high volume/prefer city pairs/routes</li> <li>• Develop multi-FIR regional network of ATFM coordination</li> <li>• Develop Regional harmonized methodology for the collection, analysis and reporting of demand/capacity, and delay data.</li> <li>• Research guidance on qualifications and competencies for ATFM personnel and develop action plan</li> <li>• Data Exchange Agreements with neighboring States</li> <li>• Data Exchange between ANSPs</li> </ul>	Provide formalize agreements that will facilitate the safe and efficient movement of high density, constrained focused areas	ATFM Task Force Team	Formalized inter/intra ATM agreements that will identify and enhance regional efficiency for the safety and movement of air traffic	Med-Long term (2017)
3	<b><u>Training</u></b> <ul style="list-style-type: none"> <li>• Assess training needs of ANSPs</li> <li>• Establish list of TNG subjects</li> <li>• Solicit instructors</li> <li>• Establish Schedule</li> <li>• Publish/coordinate events</li> <li>• Establish cross TNG, personnel exchange program</li> <li>• Perform ATFM workshops/seminars/visits</li> </ul>	Provide a core foundation to build upon for Regional participants	ATFM Task Force Team	Report listing training accomplishments as noted	Medium - Long Term (2015-2017)

No	Activity	Objective	Responsible	Deliverable	Date
4	<b><u>Tools, technology &amp; automation</u></b> <ul style="list-style-type: none"> <li>• Research development of Ops web page</li> <li>• Flight plan processing</li> <li>• Identifying ATFM suite of tools such as Prediction &amp; Monitoring Tools</li> <li>• Explore Meteorological Products</li> <li>• Est. Sub-Team for research/development of future concept of regional ATFM system</li> <li>• Est. a test bed for testing and implementing future technologies for modelling</li> </ul>	Ongoing research development. Mid-Long term objective which will evaluate, strategic goals for Regional ANSPs regarding integration & harmonization of ATFM tools & technologies. This should incorporate the capability for growth & airspace modelling	ATFM Task Force Team	An integrated, comprehensive pre-tactical web based conference which includes various stakeholders	Med-Long term (2015-2017)
5	<b><u>Schedule Regional ATFM Workshops</u></b> <ul style="list-style-type: none"> <li>• Enhance cooperation</li> <li>• Share best practices and ideas</li> <li>• Forecast future growth/needs</li> <li>• Encourage academia and industry participation</li> </ul>	Provide a foundational baseline of refresher & supplemental training for personnel involved in ATFM. To be accomplished in concert with stakeholder community	ATFM Task Force Team	Schedule ATFM workshops, seminars, webinars and symposiums for the purposes of furthering ATFM education	Med-Long term (2015-2017)
6	<b><u>Improve Demand and Capacity Balancing (DCB)</u></b> <ul style="list-style-type: none"> <li>• Establish coordination with key stakeholders</li> <li>• Identify major traffic flows/city pairs</li> <li>• Research airport/sector capacity calculation</li> <li>• Compare with ICAO ATFM Global Doc</li> <li>• Id high density airports/sectors</li> <li>• Develop mitigation strategies</li> </ul>	Provide initial steps needed to work with aviation stakeholders, identify major city pairs and focus on constrained density areas	ATFM Task Force Team	Report/document identifying these objectives for aviation stakeholders	Med - Long term 2015 - 2016
7	<b><u>Pre-Tactical Operation Daily Briefing</u></b> <ul style="list-style-type: none"> <li>• Solicit input from ANSPs &amp; stakeholders</li> <li>• Develop Ops Briefing checklist</li> <li>• Select Ops Telcon platform (GoTo or ATCSCC)</li> <li>• Train/practice web conferences</li> <li>• Research Traffic Management Initiatives</li> <li>• Standardization</li> <li>• Notification</li> <li>• Implementation</li> <li>• Documentation</li> <li>• Review analysis</li> <li>• Publication of the Daily ATFM Plan</li> </ul>	Provide a venue for ANSPs, stakeholders and the aviation community to participate, engage & collaborate in ops info sharing	ATFM Task Force Team	An integrated, comprehensive pre-tactical web based conference which includes various stakeholders	Mid-Long Term (2015 - 2016)
8	<b><u>Flexible Use Airspace</u></b> <ul style="list-style-type: none"> <li>• Perform assessment of where FUA can be utilized/benefit</li> <li>• Identify civil/military coordination entities</li> <li>• Arrange for permanent liaison and cooperation between civil ATS and air defense units.</li> <li>• Conduct regional review of SUA</li> <li>• Assess use of airspace management process</li> <li>• Review use of dynamic airspace processes</li> <li>• Institute dynamic ATC sectorization and notification for demand and capacity</li> <li>• Develop performance measurement programme</li> <li>• Review/establish LOAs between FMUs/Military</li> <li>• Data Sharing between Civil and Military Units</li> </ul>	Identify and facilitate the cooperation between Civil/Military Organizations for the movement of Air Traffic	ATFM Task Force Team	Develop training, formalize LOA's, and pre-tactical coordination between organizations	Mid-Long Term 2015 - 2017

No	Activity	Objective	Responsible	Deliverable	Date
9	<b><u>Contingency Planning</u></b> <ul style="list-style-type: none"> <li>• Interoperability</li> <li>• Seamless continuity plan</li> </ul>	Establish a foundational baseline of education to construct a regional continuity plan of operation in the event of catastrophic occurrence	ATFM Task Force Team	This can be accomplished via ongoing training webinars, presentations and refresher training	Short-Med Term (2015 - 2017)
10	<b><u>ANI/WG Decision 1/3</u></b> <ul style="list-style-type: none"> <li>• Provide progress report/update for Chairperson reference NACC/WG/4</li> </ul>	Liaison with Regional Coordination Group	TF Rapporteur	Work Programme and Revised ToR to ICAO R/O	June 2016
<b><u>References:</u></b> <ul style="list-style-type: none"> <li>• Manual on Collaborative Air Traffic Flow Management (Doc 9971)</li> <li>• Caribbean/South American Air Traffic Flow Management Concept of Operation (CAR/SAM CONOPS ATFM)</li> <li>• Global Air Traffic Management Operational Concept (Doc 9854)</li> <li>• Manual on Air Traffic Management System Requirements (Doc 9882)</li> <li>• Manual on Global Performance of the Air Navigation System (Doc 9883)</li> <li>• Manual on Flight and Flow – Information for a Collaborative Environment (Doc 9965)</li> <li>• Civil/Military Cooperation in Air Traffic Management (Cir 330-AN/189)</li> <li>• Procedures for Air Navigation Services — Air Traffic Management (PANS-ATM, Doc 4444)</li> </ul>					

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## APPENDIX B

State/Territory/IO	ATFM TF Member Name	Remarks
Piano, Dan	Canada	
Salazar, Vanessa	CANSO	
Vanegas, Javier	CANSO	
Espino, Edy	COCESNA	New
Luna, Pablo	COCESNA	
Soto, Fernando	COCESNA	
Peña, Roosevelt	Dominican Republic	
Legagneur, Mario Eric	Haiti	
Vidal, Marco	IATA	
Siu, Julio	ICAO	New
Finlayson, Christopher	Jamaica	
Malcolm, Courtney	Jamaica	
Avila, Arturo Enríquez	Mexico	
Pérez Galindo, Alvaro Edgar	Mexico	
Fraser, Curtis	Trinidad and Tobago	
Mohammed, Riaaz	Trinidad and Tobago	
Peters, Curtis	Trinidad and Tobago	New
Richardson, Mike	United States	New and Rapporteur
Tanino, Midori	United States	Act. Rapporteur
Hinkson, Marsha	Belize	Proposed
Torres, Gilberto	Belize	Proposed
Coello, Camilo Zuniga	Costa Rica	Proposed
Sequeira, Mario	Costa Rica	Proposed
Centella, Jorge	Cuba	Proposed
Hernandez, Rolando Cruz	El Salvadore	Proposed
Iglesias, Valdemar Antonio	El Salvadore	Proposed
Jax, Jerry	Guatemala	Proposed
Nunez, Erik Fernando	Honduras	Proposed
Pavon, Heriberto	Honduras	Proposed
Molina, Holman Humberto	Nicaragua	Proposed
Savallos, Jorge Luis	Nicaragua	Proposed

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