



ICAO

International Civil Aviation Organization
North American, Central American and Caribbean Office

DISCUSSION PAPER

ANI/WG/2 — DP/03
03/06/15

Second NAM/CAR Air Navigation Implementation Working Group Meeting (ANI/WG/2)
Puntarenas, Costa Rica, 1 to 4 June 2015

Agenda Item 4 Follow-up on the NAM/CAR Regional Performance Based Air Navigation Implementation Plan (NAM/CAR RPBANIP)

4.1 Progress reports of the Task Forces and the ANI/WG

ANI/WG ATFM IMPLEMENTATION TASK FORCE PROGRESS REPORT

(Presented by ANI/WG ATFM Implementation Task Force Rapporteur)

EXECUTIVE SUMMARY	
<p>This working paper presents the progress achieved by the ATFM Implementation Task Force (TF) since its creation in the ANI/WG/1 Meeting. Following the work programme of the Task Force and its deliverables, the note includes the results for these deliverables and recommendation for improving the Task Force function and coordination.</p>	
<i>Strategic Objectives:</i>	<ul style="list-style-type: none">• Safety• Air Navigation Capacity and Efficiency• Environmental Protection
<i>References:</i>	<ul style="list-style-type: none">• NAM/CAR Regional Performance-Based Air Navigation Implementation Plan (RPBANIP)• First NAM/CAR Air Navigation Implementation Working Group Meeting (ANI/WG/1), Mexico City, Mexico, 29 July to 1 August 2013• ATFM TF teleconferences, webinars and e-mail correspondence

1. Introduction

1.1 During the ANI/WG/2 Meeting the ATFM Task Force met with the PBN Task Force to discuss the feasibility of the two Task Force joining. The group agreed the work being done was relatable and should work together for the advancement of ATFM, CDM and PBN development in the region. The Task Force will remain separate but will exchange information and conduct occasional telcons together. The two working groups discussed the following working papers WP06, PBN Implementation and, WP/07, ATFM implementation working papers.

1.2 The TF deliberated on a number of actions aimed at improving PBN and Air Traffic Flow Management in the CAR Region. The proposed draft conclusion for PBN can be found in WP/06. ATFM draft conclusions can be found in section 4. The TF will also present an updated work programme to the ICAO NACC Office by July 30, 2015. The updates will include the recommended task to improve the effectiveness of ATFM implementation in the Region.

1.3 The Work Programme consists of ten categories that address the main disciplines for enhancing ATFM and Collaborative Decision Making (CDM) knowledge, cooperation Situational Awareness and include key focus areas such as “Improving Demand and Capacity” to “Preferred training methodology.” The main component is to promote regional harmonization, advocate a “systemic approach, and simplify the required deliverables on time. These deliverables are categorized into three bench marks; long term (Strategic), medium (Pre-Tactical), short (Tactical).

1.4 The ATFM Work Programme provides specific initiatives for the development of a regional concept of ATFM implementation for the NAM/CAR Regions. This proposed roadmap 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.

1.5 The composition of the Task Force (TF) members consists of five regional States representing North and Central America along with the Caribbean Region and includes Canada, Dominican Republic, El Salvador, Trinidad and Tobago, and the United States. Of these TF members, the composition includes both Air Navigation Service Providers (ANSPs) and members of the Civil Air Navigation Services Organization (CANSO) and International Civil Aviation Organization (ICAO). CGNA/DECEA has requested participation within the group to discuss lessons learned and best practices in South America.

ATFM TF Progress and Results

1.6 To date, the new group has held five web conferences meetings since November 2014. The first two web conferences meetings were focused on introductions, reviewing the Terms-of-Reference (ToRs) and Work Programme. The purpose was to refocus and ensure the purpose and goals of the TF. The subsequent meetings were used to exchange ideas, improve understanding and progress updates of the Regional States. A face to face meeting occurred on 25-29 May 2015 in Panama City, Panama. The meeting was the first joint ATFM NAM/SAM/CAR workshop. The ATFM workshop was well attended and represented by members of the Caribbean, Central America and South American Regions. The feedback of the content ATFM and CDM best practices provided were well received. A robust conversation occurred on the effectiveness of ATFM and CDM and the need for situational awareness in the region for the ANSP’s and aviation community. Each state was provided an opportunity to discuss their current status and discuss lessons learned and plans for the future. ICAO Leads from SAM, NACC and FAA provided Letter of Agreements (LOA) example to the group to see the level of detail needed for an agreement. ICAO Leads offered their assistance in the development and negotiation process between states. States were encouraged to follow up and explore the feasibility of LOAs with neighbouring ANSP’s and FIRs. The TF reviewed and updated the Work Programme target dates for the ATFM implementation in the region. The Work Programme Target dates needed to be updated due to the temporary suspension of meetings. In December 2014, an ATFM Survey was distributed to the States for assessment of their current ATFM status and future plans. To date, 4 of 5 of the surveys distributed have been returned for review. The overall responses to the surveys are being tallied and will be provided to the ICAO NACC office by July 30, 2015. During the ANI/WG2 meeting Costa Rica, Cuba and Panama requested to be member states within the ATFM Task Force and participate on the monthly telecons.

Deliverables and Results

1.7 The focus for 2015 has been to share best practices, address demand and capacity balancing methodology, and develop a regional pre-tactical web conference for all ANSPs and stakeholders to participate and share information. Presentations from the States on current technology and planned ATFM plans. (See Appendix B for specific tasking goals/dates final work programme).

Recommendations for Improving the ATFM Implementation

1.8 Keys points to establish a harmonized, collaborative and progressive NAM/CAR ATFM action plan:

- Continue to build a core foundation of understanding for the principles of ATFM/CDM
- Cross boundary Data Exchange for harmonization and situational awareness
- Letter of Agreement between ANSP's and FIR's and Standard Operating Practices
- Incorporate the key ANSPs that comprise the region (Area Control Centres (ACCs)/ Approach Control Offices (APPs)/ Aerodrome Control Tower (TWRs))
- Invite aviation stakeholders to contribute (airlines, business,GA, airport operators, military organizations etc.)
- Simplify tasking so as to obtain measurable and realistic achievable goals
- Foster an open, collaborative approach regarding information sharing
- Implement short term enhancements and strategies that will be cost sensitive and provide instantaneous regional benefit to the aviation community, i.e., Operational Status web page, combining weather forecasting services, regional harmonized approach for traffic situation displays for States to utilize, and basic arrival/departure management tools used to provide common situational status
- Develop and cultivate a “Collaborative Culture” where ANSPs, FIRs stakeholders, and industry participants can contribute in the development of Seamless ATFM system in the region
- ICAO ANI/WG partner with the FAA ATO International to develop a Regional based ATFM/CDM Workshop to include Aeronautical Meteorology best practices
- Consider the ATFM Task Force meet biannually, starting summer 2016. The TF leadership will provide technical assistance support and standard recommended practices (SARPS) for ATFM/CDM. The meetings will allow for in-depth collaboration and promote the advancement of ATFM practical measures which lead to a seamless global harmonized ATFM operation

2. Draft Conclusions

DRAFT CONCLUSION
ANI/WG/2/XX

THE IMPROVEMENT OF THE EFFECTIVENESS OF THE ATFM TASK FORCE

In order to improve the effectiveness of the ATFM TF, CAR Region:

- a) update the POCs for the ATFM TF by 30 July 2015; and
- b) recognize the members of the taskforce nominated be provided with the appropriate time and resources in order to participate in Telcons/GoTo Webinars and attend meetings/training events that contribute toATFM;

ICAO NACC Office:

- a) accept the recommendation of the taskforce to partner with FAA ATO International Office to develop a Regional based ATFM/CDM Workshop for technical interchange meetings; and
- b) consider the ATFM Task Force recommendation to meet biannually, first meeting beginning in summer 2016 to meet Port of Spain 2018 date. The TF leadership in liaison with ICAO NACC Office will provide technical assistance support and standard recommended practices (SAPRS) for ATFM/CDM. The meetings will allow for in-depth collaboration and promote the advancement of ATFM practical measures which lead to a seamless global harmonized ATFM operation.

CAR States should:

- a) nominate a ATFM project leader of their State to coordinate activities with Rapporteur; and
- b) identify and report to the relevant project leaders of ANSPs/FIRs that they need to collaborate with to bolster ATFM
 - i) Report implementation and progress activities to the ATFM Task Force project leaders

The ATFM Task Force will:

- ii) Coordinate with the project leaders from each region and report back to the ICAO NACC office on the progress of the entire Region
- iii) Coordinate/Liaise with the ICAO NACC Office to ensure the collaboration between ANSPs/FIRs are facilitated.

3. Suggested Action

3.1 The Meeting is invited to:

- a) review and approve the updated ATFM TF's ToRs Membership and Work Programme included in **Appendix A** and **Appendix B**, respectively;
- b) evaluate the progress of the ATFM TF detailed in this paper;
- c) support the recommendations for improving ATFM Implementation made by the ATFM TF; and
- d) note the proposal regarding additional technical assisted missions; and provide comments on this proposal

APPENDIX A

TASK FORCE ON THE IMPLEMENTATION OF AIR TRAFFIC FLOW MANAGEMENT (ATFM)

1. *Background*

1.1 In order to streamline the implementation activities for specific air navigation matters, the ANI/WG, in its first meeting agreed to form an ATFM Implementation Task Force. This TF shall complete the implementation of ATFM in accordance with the implementation plan, as well as update and report its progress to the ANI/WG based on its action plan for these works.

2. *Responsibilities*

2.1 The Task Force is responsible for:

- a) Project Work Plan and Timetable;
- b) Coordinating the implementation and support of the ATFM system; and
- c) Identify and improve ATFM operations.

3. *Working Methods*

3.1 The Task Force

- a) will present its work programme containing activities in terms of objectives, responsibilities, deliverables and timelines;
- b) will avoid duplication of work within the ANI/WG and maintain close coordination among the existing entities to optimize the use of available resources and experience;
- c) may designate, as necessary, Ad hoc Groups to work on specific topics and activities and organize tasks and activities clearly defined;
- d) will co-ordinate its works to maximize efficiency and reduce costs via electronically, written correspondence, telephone and teleconference calls and hold meetings, when necessary; and
- e) will report and coordinate the progress of assigned tasks to the ANI/WG.

4. *Membership: As of June 1 , 2015*

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APPENDIX B
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.

<u>No</u>	<u>Activity/Actividad</u>	<u>Objective/Objetivo</u>	<u>Responsible/Responsable</u>	<u>Deliverable/Entregable</u>	<u>Date/Fecha</u>
1	<u>Regional assessment of ANSPs</u> <ul style="list-style-type: none"> - Identify participants - Capabilities - Experience (entry/intermediate/advance) - FMU/FMP/Ops Sup/Mgr. - What do ANSPs need? - Conduct study of existing/future FMP/FMU and a Regional Centralized FM Center - Note: A review as to the specific methodology to solicit this info (email/survey etc.) will be determined 	Provide a baseline assessment of resources, needs & capabilities	ATFM Task Force Team	Report/document to be determined	Short Term (Dec 2014 – July 2015)
2	<u>Procedural Agreements</u> <ul style="list-style-type: none"> - Establish bi-lateral/multi-lateral LOAs between States/FMUs - Identify high volume/prefer city pairs/routes - Develop multi-FIR regional network of ATFM coordination - Develop Regional harmonized methodology for the collection, analysis and reporting of demand/capacity, and delay data. - Research guidance on qualifications and competencies for ATFM personnel and develop action plan - Data Exchange Agreements with neighboring States - Data Exchange between ANSPs 	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)

No	Activity/Actividad	Objective/Objetivo	Responsible/Responsable	Deliverable/Entregable	Date/Fecha
3	Training <ul style="list-style-type: none"> - Assess training needs of ANSPs - Establish list of TNG subjects - Solicit instructors - Establish Schedule - Publish/coordinate events - Establish cross TNG, personnel exchange program - Perform ATFM workshops/seminars/visits 	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)
4	Tools, technology & automation <ul style="list-style-type: none"> - Research development of Ops web page - Flight plan processing - Identifying ATFM suite of tools such as Prediction & Monitoring Tools - Explore Meteorological Products - Est. Sub-Team for research/development of future concept of regional ATFM system - Est. a test bed for testing and implementing future technologies for modelling 	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	Schedule Regional ATFM Workshops <ul style="list-style-type: none"> - Enhance cooperation - Share best practices and ideas - Forecast future growth/needs - Encourage academia and industry participation 	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	Improve Demand and Capacity Balancing (DCB) <ul style="list-style-type: none"> - Establish coordination with key stakeholders - Identify major traffic flows/city pairs - Research airport/sector capacity calculation - Compare with ICAO ATFM Global Doc - Id high density airports/sectors - Develop mitigation strategies 	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	Pre-Tactical Operation Daily Briefing <ul style="list-style-type: none"> - Solicit input from ANSPs & stakeholders - Develop Ops Briefing checklist - Select Ops Telcon platform (GoTo or ATCSCC) - Train/practice web conferences - Research Traffic Management Initiatives - Standardization - Notification - Implementation - Documentation - Review analysis - Publication of the Daily ATFM Plan 	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	Flexible Use Airspace <ul style="list-style-type: none"> - Perform assessment of where FUA can be utilized/benefit - Identify civil/military coordination entities - Arrange for permanent liaison and cooperation between civil ATS and air defense units. - Conduct regional review of SUA - Assess use of airspace management process - Review use of dynamic airspace processes - Institute dynamic ATC sectorization and notification for demand and capacity - Develop performance measurement programme - Review/establish LOAs between FMUs/Military - Data Sharing between Civil and Military Units 	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/Actividad	Objective/Objetivo	Responsible/Responsable	Deliverable/Entregable	Date/Fecha
9	Contingency Planning - Interoperability - Seamless continuity plan	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	ANI/WG Decision 1/3 Provide progress report/update for Chairperson reference NACC/WG/4	Liaison with Regional Coordination Group	TF Rapporteur	Work Programme and Revised ToR to ICAO R/O	June 2016
References: - Manual on Collaborative Air Traffic Flow Management (Doc 9971) - Caribbean/South American Air Traffic Flow Management Concept of Operation (CAR/SAM CONOPS ATFM) - Global Air Traffic Management Operational Concept (Doc 9854) - Manual on Air Traffic Management System Requirements (Doc 9882) - Manual on Global Performance of the Air Navigation System (Doc 9883) - Manual on Flight and Flow – Information for a Collaborative Environment (Doc 9965) - Civil/Military Cooperation in Air Traffic Management (Cir 330-AN/189) - Procedures for Air Navigation Services — Air Traffic Management (PANS-ATM, Doc 4444)					