



ICAO

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

WORKING PAPER

NACC/DCA/07 — WP/18
31/08/17

**Seventh Meeting of the North American, Central American and Caribbean Directors of Civil Aviation
(NACC/DCA/07)**

Washington, D. C., United States, 19 – 21 September 2017

Agenda Item 5: NAM/CAR Regional Safety/Air Navigation/Aviation Security Implementation Matters

5.2 Effectiveness of air navigation implementation mechanisms

AIR TRAFFIC FLOW MANAGEMENT (ATFM) CURRENT SITUATION

(Presented by the Secretariat)

EXECUTIVE SUMMARY	
This working paper presents the current situation of the Air Traffic Flow Management (ATFM) implementation in the region, and the alternative actions aiming to fulfil the targets agreed at a regional level in the CAR/SAM Regions.	
Action:	The suggested actions are presented in Section 6.
Strategic Objectives:	<ul style="list-style-type: none">• Safety• Air Navigation Capacity and Efficiency
References:	<ul style="list-style-type: none">• <i>2016–2030 Global Air Navigation Plan (GANP) (Doc 9750) – AN/963</i>• <i>Manual on Collaborative Air Traffic Flow Management (Doc 9971)</i>• <i>Port-of-Spain Declaration</i>• <i>Caribbean/South American ATFM Concept of Operations (CAR/SAM ATFM CONOPS)</i>• <i>Caribbean/South American (CAR/SAM) Air Traffic Flow Management (ATFM) Manual</i>• <i>ASIA/PACIFIC Regional Air Traffic Flow Management Concept of Operations</i>

1. Introduction

1.1 Air Traffic Flow Management (ATFM) is an enabler of Air Traffic Management (ATM) efficiency and effectiveness. It contributes to the safety, environmental sustainability, efficiency, and cost-effectiveness of an ATM system. ATFM aims at enhancing safety by ensuring the delivery of safe densities of traffic and by minimizing traffic surges. Its purpose is, when needed, to balance traffic demand and available capacity.

1.2 ICAO has established ATFM as one of its air navigation priorities, and strives to provide extensive support to the much needed development of flow management worldwide. The ICAO NACC Regional Office has been supporting ATFM implementation, providing basic guidelines and technical expertise to States and International Organizations from the region to foster ATFM implementation and Collaborative Decision Making (CDM).

2. Background

2.1 Due to the nature of ATFM and its impact in adjacent Flight Information Regions (FIRs), the CAR and SAM Regions, under the framework of the CAR/SAM Regional Planning and Implementation Group (GREPECAS), considered addressing interregional ATFM implementation to ensure safety and efficiency in air traffic flow, removing barriers for the expected air transport growth.

2.2 As a result, in June 2007 the ATM/CNS Subgroup of the GREPECAS published the Caribbean/South American ATFM Concept of Operations (CAR/SAM ATFM CONOPS). This document describes the ATFM operational concept to be applied in both regions. Later on, in October 2010, the same Subgroup of the GREPECAS published the *CAR/SAM ATFM Manual*, in line with the CAR/SAM ATFM CONOPS. This manual is meant to assist the CAR/SAM States/Territories to establish a common understanding of the role of each of the parties involved in the effective provision of the ATFM service, taking into account the optimization in the use of the resources available for an adequate response in order to ensure the quality of the service and the efficiency of the ATM system (capacity management).

2.3 In July 2013, during the first NAM/CAR Air Navigation Implementation Working Group (ANI/WG) meeting, an ATFM Implementation Task Force was activated in order to streamline related air navigation implementation activities. The purpose of this Task Force is to complete ATFM implementation in accordance with the NAM/CAR Regional Performance Based Air Navigation Implementation Plan (RPBANIP) objectives. Finally, in April 2014, the *Port-of-Spain Declaration* was signed and included, within its Regional Air Navigation Targets, the following target for ATFM implementation: *100% of Flight Information Regions (FIRs) within which all Area Control Centres (ACCs) to have ATFM measures available by December 2018.*

3. Current Situation

3.1 The CAR/SAM ATFM CONOPS, and the derived documents, and planning, were based on the concept of a centralized ATFM organization (a centralized facility responsible for the provision of ATFM within a specific area that could reach more than one State). In order to maximize its efficiency, it was considered that the centralized ATFM facility should have the responsibility for providing service to the maximum extension of airspace possible. In accordance with ATFM planning in the CAR and SAM Regions, it was expected to have at least two centralized ATFM facilities; one for each region.

3.2 This concept, very convenient in principle, has proved to be hard to agree with and, as a result, ATFM implementation has not been completed as planned, this delaying the expected benefits, while the air traffic is in continuous growth. At this point, the probability of reaching the *Port-of-Spain Declaration* target for ATFM is very low.

3.3 Based on the ANI/WG Terms of Reference (ToRs), the ATFM Task Force has been working to give continuity to the ATFM regional implementation strategy. However, some States consider that the results do not fulfil their expectations and that the CAR/SAM implementation strategy is not consistent with the last version of the *Manual on Collaborative Air Traffic Flow Management* (Doc 9971).

4. Experience with Other Regions

4.1 In September 2015, the Asia/Pacific Regional ATFM Concept of Operations was published, initially developed under a collaborative effort involving the Civil Aviation Authority of Singapore and research and industry partners, and further developed through expansion of the stakeholder group to include other Air Navigation Service Providers (ANSPs) (AEROTHAI, Department of Civil Aviation Malaysia, Hong Kong Civil Aviation Department), IATA and major airlines.

4.2 The Asia/Pacific Region is comprised of independent ANSPs, each with ATM authority for its respective FIR and no overarching authority for the entire region. The ATFM Concept for the Asia/Pacific Region is based on a model of distributed authority throughout the region. Each individual ANSP will be responsible for issuing Traffic Management Initiatives (TMIs) to balance demand with capacity for airports and airspace within its FIR. Aircraft Operators will adhere to the ATFM policies, rules, and guidelines as defined by the ANSP.

4.3 The multi-nodal ATFM network concept applied in Asia/Pacific is directly opposed to the ATFM centralized concept proposed for CAR/SAM. While the multi-nodal ATFM concept is not free of challenges for operation, it allows more tangible steps towards implementation.

5. Conclusion

5.1 The CAR/SAM ATFM CONOPS is conceived as a dynamic document, expected to be in continuous progress, allowing constant improvement based on experience gained from aeronautical disciplines and activities, enabling its harmonious implementation in the CAR/SAM Regions, ensuring air operations efficiency and maintaining agreed levels of safety. However, since its publication in June 2007, ten years ago, the document has not changed, failing to adapt to the operational reality of both regions. The same has occurred with the CAR/SAM ATFM Manual.

5.2 Accordingly, the NACC and SAM Regional Offices will work to review the CAR/SAM ATFM CONOPS and will update the CAR/SAM ATFM Manual as necessary. The foreseen update of these documents will provide proper guidance for ATFM implementation in the CAR/SAM regions and the inclusion of all current ATFM implementation efforts in accordance with an ATFM and Performance-Based Measures (PBN) coordinated implementation.

6. Suggested Actions

6.1 The Meeting is invited to:

- a) take note of the ATFM implementation status in the CAR/SAM Regions; and
- b) support the ICAO actions (NACC and SAM Regional Offices) to review the ATFM implementation strategy in the CAR/SAM Regions.

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