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(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

ATFM IMPLEMENTATION IN NACC REGION

(Presented by IATA)

EXECUTIVE SUMMARY	
This working paper presents proposals to improve the ATFM implementation process in NACC region, including the need of immediate cancelling of the NOTAMs related to severe flow restriction imposed in some FIRs, impacting severely the Airlines Efficiency and, potentially, affecting safety in the involved airspaces.	
Action:	Included in paragraph 4
<i>Strategic Objectives:</i>	<ul style="list-style-type: none">• Safety• Environmental Protection
<i>References:</i>	<ul style="list-style-type: none">• Third Meeting of the GREPECAS Programmes & Projects Review Committee (CRPP/3)• Fourth Meeting of the GREPECAS Programmes & Projects Review Committee (CRPP/4)• GREPECAS/17 Meeting

1. Introduction

1.1 Several GREPECAS have indicated the significant inefficiency caused by the use of NOTAMs as a severe Flow Control measure.

1.2 The GREPECAS/PPRC/4 (Lima, Perú, 12 July 2016 to 14 July 2016) stressed the fact that NOTAMs, by nature, were a static tool that should not be used as a tactical ATFM measure, since they relied on the specific operational scenario and should be flexible and applied as needed. The tactical measures that should be implemented, if so required, were those specified in the ICAO Collaborative ATFM Manual.

1.3 The GREPECAS/PPRC/3 (Mexico, DF, 21 July 2015 to 23 July 2015) took note of the States that have not yet implemented a minimum ATFM service are the States that issue more NOTAMs, establishing the flow control with entrance and exit restrictions in the different FIR bordering points, producing a domino's effect that affects other neighbouring FIRs and some of them without radar equipment, which causes an impact, not only on the capacity but also in safety.

2. Discussion

2.1 Even after all GREPECAS discussions and conclusions, some states are still publishing NOTAM as a severe flow control measures, affecting safety and efficiency in the Region.

2.2 In this sense, it is extremely important that all NOTAM's related to flow control measures be cancelled immediately to preserve safety and efficiency. The ICAO annex 11, Doc9426 and Doc8126 allows the use of NOTAMs in case of implementation of short-term contingency measures due to disruption, or partial disruption, of air traffic services and related supporting services but it shouldn't be confused with ATFM measures.

- In case of need of implementing contingency measures (ATS disruptions), States must proceed in accordance to the contingency plan published in the AIP and corresponding letter of agreement among the involved ATC facilities using a **NOTAM** as a communication means.
- In case of requiring ATFM measures (as per Docs 9971/4444/9426) after following the steps described in high level on the paragraph 2.4.3.3 of this WP, it is expected to use the **ATFM MESSAGE** as a communication means.

2.3 In accordance to Doc 4444 and Annex 11, the air traffic flow management (ATFM) service shall be implemented for airspace where air traffic demand at times exceeds, or is expected to exceed, the declared capacity of the air traffic control services concerned.

2.4 In order to implement an effective set of ATFM measures, as per ICAO Doc 9971, some actions are suggested bellow to be incorporated to the ATFM Program. It's important to note that it is essential to follow all phases of implementation and not jumping straight to the use of improvised flow restrictions, applied by each ATC shift criteria as being done by some States nowadays.

2.4.1 *Strategic Phase*

2.4.1.1 In accordance to ICAO Doc 9971, *“The Strategic phase applies the outcomes of the ATM planning activities and takes advantage of the increased dialogue between Airspace Users and capacity providers, such as ANSPs and airports, in order to analyze airspace, airport and ATS restrictions, seasonal meteorological condition changes and significant meteorological phenomena”*.

2.4.1.2 Taking the aforementioned into account and the fact that the ATFM forms presently used to interchange information among ANSPs seems to be ineffective, it would be important to establish a regular teleconference among ANSPs and users to fulfil the ATFM Strategic needs. This teleconference must involve CAR and SAM Regions (States, ANSPs and Users), taking into consideration the importance of the interface between these regions.

2.4.2 *Pre-tactical phase*

2.4.2.1 In line with ICAO Doc 9971, *“the ATFM pre-tactical phase encompasses measures taken one day prior to operations. During this phase, the traffic demand for the day is analyzed and compared to the predicted available capacity. The ATFM plan, developed during the strategic phase, is adapted and adjusted accordingly”*. In this sense, it would be important to establish a straight and frequently contact among FMC/FMP, in order to adjust the ATFM plan accordingly. Taking into consideration the present implementation status of the FMU/FMP, the pre-tactical phase is only implemented in a few Sates.

2.4.2.2 It is important to reemphasize that in case of prediction of a major disruption in the ATC in this phase, the contingency Plan must be applied in accordance with what was mentioned in 2.3.

2.4.2.3 The need of immediate coordination among States in Pre-tactical and Tactical phase, in case of, for example, an implementation of a ATFM measure like MIT , should be fulfilled through a mechanism that allows to hold a immediately teleconference among all involved stakeholders (States, ANSP, Users, Airports, etc).

2.4.3 *Tactical phase*

2.4.3.1 As per ICAO Doc 9971, *“during the ATFM tactical phase, measures are adopted on the day of the operation. Traffic flows and capacities are managed in real time. The ATFM Daily Plan is amended taking due account of any event likely to affect it”*.

2.4.3.2 Also in accordance with Doc. 9971, *“there are many types of ATFM measures. Their lifetime typically spans the pre-tactical and tactical phases of the ATFM timeline”*. So, these measures must be directly coordinated by the FMU/FMP, in accordance with actual scenario. It is important to insert these actions into the letter of agreement and empower the Traffic Flow Manager, in order to allow them to take the necessary actions to guarantee an optimum traffic flow, based on actual traffic demand.

2.4.3.3 The requirements to consider before the application of ATFM measures are the following:

- a) Implementation of an ATFM Flow Unit/Cell
- b) Calculation and declaration of the ATC Sectors and aerodromes (as required), in accordance with Doc. 4444, Doc. 9971 and Annex 11.
- c) Development of a Strategic “ATFM planning and operational management” process.
- d) Establishment or update the letter of agreements between FMP/FMU/ATCs.
- e) Publication of the applicable ATFM Message and procedures in the AIP (ENR 1.9)
 - Including Off-load route available (designation, conditions)

2.4.3.4 In relation to the application of ATFM Message, it is necessary to establish a Regional Agreement, in order to harmonize the adoption of such messages, avoiding that each state or group of states establish a particular set of messages.

2.4.4 *Post-operations analysis*

2.4.4.1 In accordance to Doc. 9971, *“the final step in the ATFM planning and management process is the post-operations analysis phase. During this phase, an analytical process is carried out to measure, investigate and report on operational processes and activities. This process is the cornerstone of the development of best practices and/or lessons learned that will further improve the operational processes and activities. It shall cover all ATFM domains and all the external units relevant to an ATFM service.”*

2.4.4.2 The post-operational analysis will allow all involved stakeholders to take the appropriate measure to balance demand and capacity, using best practices and lessons learned to improve safety and efficiency. For example, it is unacceptable to have contingency measures imposing severe restriction to the traffic flow for a very long time, if a simple post-operations analysis indicates a need of an immediate action to solve a specific problem, such as, lack of personnel, VHF Frequency, radar, etc. Some of these planning and implementation actions would take time to be effective, but it will never materialize unless there is adequate analysis and immediate action.

3. ATFM Workshop

3.1.1 Taking into consideration the information provided in this working paper, it is suggested that a CAR/SAM ATFM workshop be held in 2018, in order to harmonize all States activities in the Strategic, Pre-tactical, tactical and Post-operations phases of ATFM, including ATFM planning and operational management, ATFM messages, etc.

3.1.2 It is significantly important that this workshop includes CAR and SAM Regions, in order to avoid a lack of harmonization between both regions, mainly in the States located in their interface.

4. Suggested action

4.1 The Meeting is invited to:

- a) take note of the information contained in this working paper;
- b) eliminate immediately all NOTAMs related to Flow Control Measures;
- c) in case of being necessary to implement contingency measures, they should be applied in accordance to the contingency plan published and corresponding letter of agreement among the involved ATC facilities; and
- d) hold a CAR/SAM ATFM workshop in 2018, in order to harmonize all States activities in the Strategic, Pre-tactical, tactical and Post-operations phases of ATFM, including ATFM planning and operational management, ATFM messages, etc.