

**INTERNATIONAL CIVIL AVIATION ORGANIZATION
SOUTH AMERICAN REGIONAL OFFICE**

**PREPARATORY MEETING OF THE GREPECAS ATM/CNS SUBGROUP,
ATM COMMITTEE, ATFM TASK FORCE**

(São José dos Campos, Brazil, 3 to 5 August 2005)

Agenda Item 1: Review the documentation on air traffic flow management and the policies established in the global, regional environment and existing national plans on ATFM.

Summary of ATFM matters examined by AP/ATM/10 Meeting

(Presented by the Secretariat)

Summary

This working paper presents a summary of ATFM matters analysed during the AP/ATM/10 Meeting (Lima, Peru, 10 to 14 May 2005).

1. Introduction

1.1 As you may recall, the AP/ATM/10 Meeting analysed, among other matters, ATFM implementation in the CAR/SAM Regions. In this connection, a summary of agenda item 5 of the aforementioned meeting is presented as **Appendix A** to this working paper.

2. Suggested action

2.1 The meeting is invited to take note of Appendix A to this working paper and consider what has been expressed there, as part of the work carried out on ATFM in the region.

APPENDIX A

Agenda Item 5: ATFM Implementation in the CAR/SAM Regions

5.1. The meeting was informed that the ICAO 11th Air Navigation Conference (AN-Conf/11) concluded (Recommendation 1/1 – Endorsement of the global ATM operational concept) that ICAO, the States and the regional planning and implementation groups (PIRGs) should consider the global ATM operational concept as the common global framework for planning the implementation of ATM systems and to concentrate all ATM development work; use this global ATM operational concept as high-level guidance for development of ICAO CNS/ATM related provisions; and develop transition strategies for implementation of ATM systems based on the global ATM operational concept.

5.2. Regarding the above, the AN-Conf/11 also agreed that the operational concept provided a vision that would allow States and Regions to align their planning processes, allow system solution engineering to be directed toward a harmonised and interoperable outcome, allow airspace users and service providers to share data and information to best mutual outcome, and enhance levels of safety, economy and efficiency, for the good of members of the ATM community.

5.3. Likewise, the Conference unanimously agreed that the harmonised implementation of air navigation systems would increase airspace capacity while producing additional benefits, such as more efficient flight profiles and higher safety levels. Therefore, it was agreed that States should implement the regional air navigation plans, recognizing the longer-term vision of the operational concept and the Global Plan, in order to ensure convergence towards a uniform “gate-to-gate” ATM system, and that any implementation plans should fully consider the needs of airspace users.

5.4. Accordingly, the meeting was informed that, in the last few years, the CAR/SAM States, in close coordination with the CAR/SAM Regional Planning and Implementation Group (GREPECAS) and ICAO, have planned and developed an intense programme of activities for the implementation of various ATM functions through the application of CNS/ATM systems, with emphasis on the application of the ATM global operational concept, and using the recommendations formulated by the Eleventh Air Navigation Conference as the frame of reference for future activities.

5.5. In this respect, and in keeping with the analysis of main traffic flows carried out under Project RLA/98/003, Transition to the CNS/ATM Systems in the CAR/SAM Regions, there are airspace sectors that are already having traffic congestion, especially on special and peak periods, basically due to the different capacities of the various ATC systems, or some of them are being affected by traffic congestion, inadequate operation planning at some airports, and airport infrastructure limitations.

5.6. According to the information provided by the Administrations and the analysis carried out under Project RLA/98/003, in view of the foreseen air traffic growth, these measure might not be sufficient to increase airspace capacity and the availability of optimum flight levels to meet the demand in both Regions, despite the improvements made through the implementation of 40 RNAV routes and the restructuring of the ATS route network, the application of longitudinal separation minima of 10 minutes MNT and 80 RNAV, as well as the successful implementation of RVSM and plans to implement RNP in the CAR/SAM Regions.

5.7. The meeting noted that the amendment to the CAR/SAM CNS/ATM Regional Plan, approved by GREPECAS/12, which, in turn, will permit the amendment of the CAR/SAM Air Navigation Plan (ANP) (Basic Vol. and FASID), the implementation of national traffic Flow Management Units (FMUs) in most of the traffic flows of both Regions contained in ATM Evolution Tables by 2008, and of the centralised regional ATFM by 2010.

National traffic flow management units (FMU) and centralised regional ATFM unit

5.8. The meeting recognised that the implementation of national FMUs and of a Centralised Regional ATFM would ensure an optimum air traffic flow in given areas or airspaces in periods when the demand might exceed the available capacity of the ATC system, thus reducing both in-flight and ground delays and avoiding system saturation. This implementation will guarantee a more effective use of the available capacity of airspace and airports, without the need to apply unnecessary restrictions to air operations. **Appendix A** to this part of the Report contains the proposed functions of the centralised regional ATFM unit.

Aspects to consider for ATFM implementation

5.9. The meeting recognised that the regional implementation of ATFM will be a complicated and painstaking process, and will require the active participation of all stakeholders. In this respect, in order to expedite the ATFM planning and implementation process, the ATFM Task Force (ATFM/TF) of the ATM Committee of the GREPECAS ATM/CNS Subgroup, when developing its Work Programme, should consider and redefine, *inter alia*, those aspects shown in Appendix A already mentioned and **Appendix B** to this part of the report and in the guidelines for regional ATFM implementation proposed by Uruguay, which appear in **Appendix C** to this part of the report.

5.10. The meeting also felt that the Terms of Reference and Work Programme of the ATFM/TF, shown in **Appendix D** to this part of the report, shall be redefined, taking into account that item d) of the work programme of the ATFM/TF, would be reviewed by the Institutional Aspects Task Force of GREPECAS.

5.11. Notwithstanding the above, the meeting considered that it would be advisable for members of the ATFM/TF to attend the meetings of the Institutional Aspects Task Force as observers, to coordinate as necessary, planning to carry out the meeting of the referred Task Force from 19 to 21 September 2005 in Caracas, Venezuela.

5.12. The meeting was informed by COCESNA that, due to its geographical location near important poles of industrial, commercial and tourist development within the CAR Region, Central America is experiencing a continuous growth in commercial aviation, which brings, besides economic benefits, a strong impact in the efficiency of the ATS services, also in services and airports facilities, this is more evident during certain months, days and hours, in specific geographical areas, routes and airports of the Central America FIR.

5.13. The meeting recognized that, just like in other areas, ATFM implementation in the Central American Region demands, *inter alia*, economic resources, ATM/CNS infrastructure, project management capacity, as well as an adequate environment where the collaboration of air operators, ATS providers and other similar entities is necessary.

5.14. In this regard, COCESNA considered that it was an advantageous situation, since the resources available in COCESNA and the Central American States, as well as the currently being implemented by COCESNA, would give the necessary support for achieving the ATFM operation in the short term, considering the horizon established in the ATM Evolution Tables for the CAR/SAM regions, as approved by GREPECAS.

5.15. The meeting took note of the financial and human resources that the organization has available, as well as of the strategy for ATFM implementation in the Central America FIR. Detailed information on these matters is contained in **Appendix E** to this part of the Report.

5.16. The meeting took note of the current air traffic flow management capabilities of the air navigation management centre (CGNA) located in Sao José Dos Campos, Brazil, and of the action taken for ATFM purposes through the CGNA operational system.

5.17. The meeting considered that the information presented was very valuable and decided that it should be included in **Appendix F** to this part of the report for consideration by the ATFM/TF.

5.18. Likewise, the meeting took note of the ATFM plans of Colombia, which considered that the establishment of technical and operational standards to permit the inter-operability between air traffic control units was important.

5.19. The meeting took note of the points of view expressed at the RAAC/9 Meeting (Santiago de Chile, April 2005) by the Directors of Civil Aviation of the South American Region regarding the institutional aspects for the management and control of multinational systems and facilities, and particularly on ATFM implementation.

5.20. When discussing this matter, it was noted that, given the nature of AFTM implementation, the institutional aspects for the management and control of multinational systems and facilities, were important for the planning, development and implementation process of this service.

5.21. In this sense, the meeting agreed that air traffic flow management (ATFM) could be considered as an initial system/service for this purpose, since:

- a) ATFM is directly related to the component of the ATM operational concept that corresponds to airspace organisation and management;
- b) it is related to other components of the concept; and
- c) the technology for ATFM implementation is already available in the Region.

5.22. The meeting took note that, in the opinion of the Directors of Civil Aviation of the SAM Region, the following scenarios could be foreseen in the CAR/SAM/NAM Regions for the establishment of institutional arrangements, and which could be considered within the programming for ATFM implementation:

- a) Sub-region integrated by Canada, Mexico and United States of America;
- b) Central America with COCESNA, its regional mechanism;
- c) The Caribbean; and
- d) South America.

5.23. The United States communicated to the meeting that, based on the experience obtained and in view of the important benefits of the ATFM for users and ATS providers, they will decidedly support and collaborate by bilaterally and multilaterally agreements with the States/Territories and International Organizations of the CAR/SAM Regions that are planning ATFM implementation, in which corresponding contacts for agreements with COCESNA, Dominican Republic and other civil aviation administrations have already been initiated.