



ATFM/TF/2
WP/07
30/06/06

International Civil Aviation Organization
UNDP/ICAO Regional Project RLA/98/003
Transition to CNS/ATM Systems in the CAR and SAM Regions

**SECOND MEETING OF THE GREPECAS ATM/CNS SUBGROUP ATM COMMITTEE AIR
TRAFFIC MANAGEMENT TASK FORCE (ATFM/TF/2)**

(Bogotá, Colombia, 6 to 8 July 2006)

Agenda Item 5: Review of ATFM/TF Terms of Reference and Work Programme

**ATFM PERFORMANCE OBJECTIVE FOR THE CAR AND SAM REGIONS IN RELATION
TO THE ICAO GLOBAL PLAN INITIATIVES (GPI)**

(Presented by the Secretariat)

SUMMARY

This working paper presents the restructuring of ATFM tasks concerning ATM performance objectives, according to the new ICAO global plan initiatives (GPI).

References:

- *Second Amendment to the Global air navigation plan for CNS/ATM systems (Doc 9750)*
- *Report of the Fifth Meeting of all Planning and Implementation Groups (ALLPIRG) (ALLPIRG/5) (Montreal, Canada, 23-24 March 2006)*
- *Report of the NAM/CAR Regional ATM Meeting (Santo Domingo, Dominican Republic, 17-21 April 2006)*

1 Introduction

1.1 At the NAM/CAR Regional ATM Meeting, held in Santo Domingo, Dominican Republic, 17 to 21 April 2006, the Head of the Air Traffic Management Section at ICAO Headquarters made a comprehensive presentation about the Second Amendment to the *Global air navigation plan for CNS/ATM systems (Doc 9750)*, which, in the future, will be called Global Air Navigation Plan (Global Plan). The global plan initiatives (GPI) contained in the revised Global Plan were drafted by the Air Navigation Commission on the basis of a roadmap and making use of available capabilities and ATM infrastructure and technology.

1.2 The Fifth Meeting of all Planning and Implementation Groups (ALLPIRG)/Advisory Group (ALLPIRG/5), held in Montreal, Canada, 23 to 24 March 2006, in light of budgetary realities and the new ICAO business planning process, agreed that all future work of the Regional Planning and Implementation Groups (PIRGs) should be justified and based on clearly-established performance objectives that support the ICAO Strategic Objectives. Likewise, all the terms of reference of the PIRGs are being reviewed to ensure that resources will be channelled in the most appropriate manner and that all the work, including that of the Secretariat, will support the business plan. The methods used to report on PIRG work to the Commission and to the Council are also being reviewed to make sure that progress is measured against deadlines and that performance objectives are met.

2.2 Within this context, the ALLPIRG/5 meeting formulated Conclusion 5/2 as follows:

That, recognising the continued evolution from a system-based approach to a performance-based approach to the planning and implementation of air navigation infrastructure, the regional planning groups:

- a) take note that the Global Plan is a significant component of the drafting of regional and national plans, and that, together with the ATM global operational concept, provides an effective infrastructure to attain a global harmonised and seamless ATM system;*
- b) identify the GPIs that are more closely aligned with the implementation plans established in their respective regions;*
- c) select the most effective GPIs to attain regional objectives, while ensuring that the work done will continue;*
- d) implement GPIs that take into account initiatives in other regions, in order to align work programmes and develop national and regional plans that contribute to a global ATM system;*
- e) use planning tools as a common planning and implementation mechanism, thus ensuring proper coordination and global integration; and*
- f) Review, at each PIRG meeting, as part of the agenda, the progress made and challenges identified in GPI implementation, applying a common template.*

2 Analysis

2.1 As a follow-up to the aforementioned discussions, and considering that ATFM tasks are required in the CAR/SAM Regions, the NAM/CAR ATM meeting held in Santo Domingo agreed to adopt a performance-based approach to its work programme, and to take steps to make sure that its work fully supports planning processes, ICAO Council directives, and ALLPIRG conclusions. Considering the need to continue harmonising ATM work in the CAR and SAM Regions, it is recommended that the meeting adopt the following:

**Draft Conclusion XX UPDATE OF ATFM TASKS ACCORDING TO ICAO
STRATEGIC PERFORMANCE OBJECTIVES**

That, in order to support the evolution from a system-based approach to a performance-based approach, CAR/SAM States/Territories/International Organisations draft and implement work programmes to support the ATFM performance objective, as shown in **Appendix A** to this working paper, for the planning of ATFM tasks.

2.2 The Secretariat will coordinate as necessary, and subsequently, the corresponding graphs will be developed and posted on an interactive web site. Once approved and refined, the main tasks will serve as a common ATFM work programme for the CAR and SAM Regions.

2.3 Since ICAO Strategic Objectives apply to the regional and global ATM community, the integration of work programmes and terms of reference of the various ATM working groups should be examined, taking into account the new Global Plan Initiatives (GPIs).

2.4 Work should be reorganised to optimise human resources and economic savings, and to encourage the use of electronic means of communication among experts from the States, such as the internet, videoconferencing, teleconferencing, e-mail, and fax.

2.5 The new ICAO global planning initiative (GPI) concerning ATFM aspects appears in Appendix B to this working paper.

3. Suggested action

3.1 The meeting is invited to:

- a) take note of the information contained in this working paper;
- b) adopt the Draft Conclusion shown in paragraph 2.1; and
- c) adopt other measures that it may deem necessary.

APPENDIX A

ATFM PERFORMANCE OBJECTIVE FOR THE CAR AND SAM REGIONS

Improve demand and capacity balancing

Benefits

The benefits of this performance objective are:

- reduction in weather- and traffic-induced holding, leading to reduced fuel consumption;
- improved and smoother traffic flows;
- improved predictability;
- improved management of excess demand of service in ATC sectors and aerodromes;
- improved operational efficiency;
- enhanced airport capacity;
- enhanced airspace capacity; and
- improved safety management.

Strategy (2008)

- identify key stakeholders (ATC service providers and users, military authorities, airport authorities, aircraft operators and relevant international organisations) for purposes of coordination and cooperation, using a CDM process;
- identify and analyse traffic flow problems and develop methods for improving efficiencies, for instance, through:
 - improved airway structure (unidirectional routes), communications, surveillance, aerodrome capacity, and letters of agreement;
- identify on-going regional traffic flow problems and develop methods for improving efficiency on an as needed, gradual basis;
- define common elements of situational awareness;
 - common traffic displays, common weather displays (Internet), communications (teleconferences, web), daily teleconference advisories;
- develop methods to establish demand/capacity forecasts;
- develop a regional strategy and work programme for ATFM implementation; and
- monitor implementation progress.

GPIs

The above is supported by GPI/6: air traffic flow management.

APPENDIX B

Table 1. Global plan initiatives and their relationships to the major groupings

GPI		En-route	Terminal Area	Aerodrome	Supporting Infrastructure
GPI-1	Flexible use of airspace	X	X		
GPI-2	Reduced vertical separation minima	X			
GPI-3	Harmonize level systems	X			
GPI-4	Align upper airspace classifications	X			
GPI-5	Area Navigation (RNAV) and Required Navigation Performance (RNP)	X	X	X	
GPI-6	Air traffic flow management	X	X	X	
GPI-7	Dynamic and flexible ATS route management	X	X		
GPI-8	Collaborative airspace design and management	X	X		
GPI-9	Situational awareness	X	X	X	X
GPI-10	Terminal area design and management		X		
GPI-11	RNP and RNAV SIDs and STARs		X		
GPI-12	FMS-based arrival procedures		X		X
GPI-13	Aerodrome design and management			X	
GPI-14	Runway operations			X	
GPI-15	Match IMC and VMC operating capacity		X	X	X
GPI-16	Decision support systems	X	X	X	X
GPI-17	Implementation of data link applications	X	X	X	X
GPI-18	Electronic information services	X	X	X	X
GPI-19	Meteorological systems	X	X	X	X
GPI-20	WGS-84	X	X	X	X
GPI-21	Navigation systems	X	X	X	X

GPI		En-route	Terminal Area	Aerodrome	Supporting Infrastructure
GPI-22	Communication network infrastructure	X	X	X	X
GPI-23	Aeronautical spectrum	X	X	X	X

(GPI-6) AIR TRAFFIC FLOW MANAGEMENT

Scope: The implementation of strategic, tactical and pre-tactical measures aimed at organizing and handling traffic flows in such a way that the totality of the traffic handled at any given time or in any given airspace or aerodrome is compatible with the capacity of the ATM system.

Related ATM objectives: Centralized ATFM; Inter-regional cooperative ATFM; Establishment of ATFM databases; Application of ATFM strategic planning; Application of pre-tactical ATFM planning; Application of tactical ATFM planning

Description of strategy

1.35 The implementation of demand/capacity measures, commonly known as air traffic flow management (ATFM), implemented on a regional basis where needed, will enhance airspace capacity and improve operating efficiency.

1.36 In the event that traffic demand regularly exceeds capacity, resulting in continuing and frequent traffic delays, or when it becomes apparent that forecast traffic demand will exceed the available capacity, the appropriate ATM units, in consultation with aircraft operators, should consider implementing steps aimed at improving the use of the existing system capacity, and developing plans to increase capacity to meet the actual or forecast demand. Any such planning to increase capacity should be undertaken in a structured and collaborative manner.

1.37 States and regions should evolve to a collaborative based approach to capacity management. The ATM Operational Concept envisages a more strategic approach to ATM overall, and through collaborative decision-making, a reduction in the reliance on tactical flow management. It is inevitable that tactical flow intervention will continue to be required; however closer coordination between airspace users and ATM service providers can reduce the need for routine tactical intervention which is often disruptive to aircraft operations.
