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*International Civil Aviation Organization*
CAR/SAM Regional Planning and Implementation Group (GREPECAS)
**Eighth Meeting of the GREPECAS Aeronautical Meteorology Subgroup (AERMETSG/8)**
Santiago, Chile, 9 to 13 October 2006

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**Agenda Item 7: MET requirements for ATM in the CAR/SAM Regions**

(Presented by the Secretariat)


**SUMMARY**

This Working Paper presents a restructuring of the tasks of the MET/ATM/OP Task Force on MET in the CNS/ATM concept based on ATM performance objectives according to the new ICAO global plan initiatives (GPI).


**References**:

- Second Amendment to the Global Air Navigation Plan for the CNS/ATM systems (Doc 9750)
- Report of the Fifth All Planning and Implementation Regional Group (ALLPIRG/5) Meeting (Montreal, Canada, 23-24 March, 2006)
- Summary of Discussions of the Regional North American/Caribbean (NAM/CAR) Air Traffic Management (ATM) Meeting (Santo Domingo, Dominican Republic, 19-21 April 2006).

## 1. Introduction

1.1 The Second Amendment to the *Global Air Navigation Plan for CNS/ATM Systems* (Doc 9750), which will be renamed as the Global Air Navigation Plan (Global Plan), includes the Global Plan Initiatives (GPIs) developed by the Air Navigation Commission on the basis of a roadmap which was aimed at bringing near and medium term benefits to the ATM community, taking advantage of currently available aircraft capabilities and ATC infrastructure and technology.

## 2. Analysis

2.1 Even though the meeting will review the results of the tasks developed by the MET/ATM/OP Task Force on MET in the CNS/ATN concept, it is necessary that the Subgroup takes note that the ICAO Fifth All Planning and Implementation Regional Group (ALLPIRG/5) meeting, held in Montreal, Canada, from 23 to 24 March 2006, in light of budget realities and the new ICAO business planning process, agreed that all future work of the Planning and Implementation Regional Groups (PIRGs) should have to be justified and based on clearly established performance objectives in support of the ICAO Strategic Objectives. Furthermore, all terms of reference of PIRGs are being revised in order to ensure that resources will more appropriately directed and that all work, including that of the Secretariat, must support the business plan. The methods of reporting PIRG work to the Commission and Council are also being revised to ensure that progress could be measured against timelines and to ensure that performance objectives be met.

2.2 In this context, the ALLPIRG/5 Meeting agreed the following Conclusion 5/2:

*That, recognizing that the evolution continues from a systems-based to a performance-based approach to planning and implementation of the air navigation infrastructure, the regional planning groups:*

*a) note that the Global Plan is a significant component in the development of regional and national plans and that, together with the global ATM operational concept, it provides an effective architecture for achieving a harmonized and seamless Global ATM system;*
*b) identify GPIs that most closely align with the well established implementation plans of their respective regions;*
*c) select GPIs that would be most effective in achieving the objectives of the region while ensuring continuation of the work already accomplished;*
*d) implement GPIs that take into account the Initiatives across regions, to align work programmes and to develop national and regional plans that facilitate achieving a Global ATM system;*
*e) utilize the planning tools as the common planning and implementation mechanism, thereby ensuring proper coordination and global integration; and*
*f) review, at each PIRG meetings as a part of its regular agenda, the progress achieved and challenges identified in the implementation of GPIs using a common template.*

2.3 In follow-up to the above discussions, the meeting could agree that the tasks of the referred task force could adopt a performance-based approach for its work programme and take early steps to ensure that its work was fully supportive of the revised business planning processes of ICAO, the directives of the ICAO Council, and the ALLPIRG Conclusions. In order to continue the harmonization of ATM works in the CAR and SAM Regions, is recommended to the meeting the following:

**DRAFT**
**CONCLUSION 8/XX** **WORK PROGRAMMES OF THE MET/ATM/OP TASK FORCE ON MET IN THE CNS/ATM CONCEPT IN ACCORDANCE WITH THE ICAO STRATEGIC PERFORMANCE OBJECTIVES**

That, in support of the evolution from a systems-based to a performance-based approach, the tasks of the MET/ATM/OP Task Force on MET in the CNS/ATM concept, develop and implement work programmes in support of the new CIAO Global Planning Objectives Initiatives (GPIs) related to MET implementation issues.

2.4 The Secretariat will timely make necessary coordinations in order to receive feedback and charts would then be created to be placed on an interactive web site. Upon endorsement and further refinement, the major areas would serve as the core work programmes for the CAR and SAM Regions.

2.5 In view that the Strategic Objectives of ICAO are applicable to the regional and global ATM community, integrating work programmes and terms of reference of different regional and inter-regional Working Groups should be reviewed, taking into consideration the new Global Plan Initiatives (GPIs) and related ICAO on-line planning tools associated with ATM planning and implementation work.

2.6 These planning and implementation works should be reorganized aiming to optimize human resources, financial savings, as well as encouraging the use of electronic communication means between expert of States such as the Internet, video conference, teleconferencing, e-mail, telephone and facsimile.

2.7 The new ICAO global plan initiatives (GPI) related with MET implementation issues, are presented en **Appendix A** to this working paper.

3. **Actions suggested to the meeting**

3.1 The Meeting is invited to:

a) note the information contained in this working paper;

b) adopt the Draft Conclusion expressed in paragraph 2.3; and

c) agree other actions as necessary.

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## APPENDIX A

**(GPI-19) METEOROLOGICAL SYSTEMS**

**Objective**: To improve the availability of meteorological information in support of a seamless global ATM system.

**Related ATM objectives**: nil

### Description of strategy

1.84 Enhancements of the World Area Forecast System (WAFS), the International Airways Volcano Watch (IAVW) and the ICAO tropical cyclone warning system to improve the accuracy, timeliness and usefulness of the products issued will facilitate optimization of the use of airspace. Increasing use of data-link to downlink and uplink meteorological information to assist in the automatic sequencing of aircraft on approach will contribute to the maximization of capacity.

1.85 The global ATM system will require immediate access to real-time, global meteorological information. Such stringent requirements will dictate that most meteorological systems must be automated. Automatic downlink of MET information included in ADS messages will provide accurate upper wind fields and real-time wind profiles. The use of data-link to uplink information related to meteorological conditions to aircraft on approach and departure should increase, including the implementation of Digital-Automatic Terminal Information Service (D-ATIS) and D-VOLMET.

1.86 The foregoing enhancements will provide ATC units with access to accurate background upper wind fields for display, both in the form of WAFS global upper wind forecasts and "real-time" wind fields and wind profiles derived from the wind information reported automatically by aircraft using automatic dependent surveillance (ADS), and to reports and forecasts of hazardous weather, particularly volcanic ash, tropical cyclones, thunderstorms, clear-air turbulence, icing and wind shear. This information will assist ATM in tactical decision-making for aircraft surveillance, air traffic flow management, and flexible/dynamic aircraft routing, and will contribute to the optimization of the use of airspace.

1.87 To achieve this, States and regions will have to implement the following improvements in accordance with planned dates:

1) *WAFS*: binary universal form for the representation of meteorological data (BUFR)-coded significant weather (SIGWX) forecasts; improvements to the spatial and temporal resolutions of WAFS forecasts; and GRIB2-coded forecasts of turbulence, icing and convective clouds

2) *IAVW:* selected State volcanological observatories

3) *Tropical cyclone* (TC) warning system: graphical tropical cyclone advisories

4) *Data link:* ICAO provisions related to the use of data link taking due account of the implementation of ADS and SSR Mode S data link; replacement of VOLMET broadcasts by D-VOLMET in the regions where appropriate data link communications are available.