

**INTERNATIONAL CIVIL AVIATION ORGANIZATION**  
**CAR/SAM REGIONAL AIR NAVIGATION PLANNING AND IMPLEMENTATION GROUP**  
**(GREPECAS)**  
**FOURTH MEETING OF THE AERONAUTICAL METEOROLOGY SUBGROUP**  
**(AERMETSG/4)**

(Mexico City, 22 to 26 May 2000)

**Agenda Item 5:           Specific implementation problems in the CAR/SAM Regional Air Navigation Plan (Vol I - Basic ANP and Vol II - FASID), Part MET**

(Presented by the Secretariat)

**Summary**

This paper reviews the situation of air navigation shortcomings and deficiencies in the CAR/SAM Air Navigation Plan (Vol I - Basic ANP and Vol. II - FASID), Part MET and their impact on safety.

**1.                   Introduction**

1.1               Under this Agenda Item , the meeting has been requested to consider the implementation of the CAR/SAM Air Navigation Plan (Vol I - Basic ANP and Vol II - FASID), Part MET, with particular emphasis on shortcomings and deficiencies affecting safety. This paper provides background information on the subject as well as general considerations to improve implementation of the Basic CAR/SAM Regional Air Navigation Plan and FASID.

**2.                   Discussion**

**2.1               Identification of shortcomings and deficiencies by the GREPECAS**

2.1.1           According to its terms of reference, the CAR/SAM Regional Planning and Implementation Group (GREPECAS) has been regularly reviewing the status of implementation of the CAR/SAM Regional Air Navigation Plan at its meetings, according to a methodology approved by the ICAO Council, to identify and assess the safety aspect of air navigation shortcomings and deficiencies in the CAR/SAM Regions. The result is reported to the ICAO Council and notified to the States and user organizations concerned.

2.1.2 The updated list of air navigation shortcomings and deficiencies in the CAR/SAM Regions, is reproduced in **Appendix A** to this paper. The information in Appendix A was originally obtained by a survey carried out in CAR/SAM Regions States as well as by missions to States and inputs from user organizations. Appendix A also provides a definition for the terms “shortcoming” and “deficiency” and categorizes the safety aspects as “urgent priority”, “top priority” and “intermediate priority”. It is appreciated that States make all efforts to improve the situation related to shortcoming and deficiencies. In this regard, the Meeting may wish to review Appendix A.

## 2.2 **Analysis of the identified shortcomings and deficiencies**

2.2.1 In Appendix A there are 7 shortcomings and deficiencies in the MET field, from which 4 cases have URGENT Priority “U” and 3 cases TOP Priority “A”. In accordance with Article 28 of the Convention on International Civil Aviation (Doc 7300), Contracting States undertake, insofar as they may find practicable, to provide in their territory, air navigation facilities and services necessary to facilitate international air navigation. Furthermore, regional air navigation plans set forth the requirements for facilities and services for international civil aviation. These facilities and services should comply with relevant ICAO Standards and Recommended Practices (SARPs). It is recognized that any serious shortcoming or deficiency in the implementation of regional air navigation plans may affect the safety, regularity and efficiency of international air operations, and should, therefore, be eliminated as quickly as practicable.

2.2.2 While implementation of the facilities and services required for international civil aviation is a responsibility of States, there is also a role for the Council and ICAO planning and implementation regional groups (PIRGs) such as GREPECAS, as reflected in Appendix M to Assembly Resolution A32-14. As indicated in Associated Practices Nos. 3 and 5, the Council should arrange for the monitoring of the status of implementation of such regional air navigation plans and, when appropriate, for measures to be taken to facilitate elimination of serious shortcomings in their implementation. Article 69 of the Chicago Convention (Doc 7300) refers to consultations with States directly concerned and other States affected, with a view to finding means by which the situation may be remedied and that Council may make recommendations, while Article 70 addresses arrangements for giving effect to such recommendations and the financing of the costs thereof.

2.2.3 As confirmed by the ICAO Council, the obstacles to overcoming shortcomings and deficiencies in the air navigation field are not so much technical as they are organizational and financial in nature. In this connection, States are urged to take immediate action with regard to organizational and financial issues. One such action is to benefit from the basic cost recovery policy guidance contained in the *Statements by the ICAO Council to Contracting States on Charges for Airports and Air Navigation Services* (Doc 9082). The Council Statements also encourage the establishment of autonomous authorities to operate airports and/or air navigation services at the national level and, notably with regard to air navigation services, at the international level, in the light of their potential to improve overall financial performance and managerial efficiency.

2.2.4 The ICAO Council has recognized that lack of effective financial management, including complete cost identification, is a major reason for the unsatisfactory financial situation of the airport and air navigation services infrastructure in a large number of States. The Manual on Air Navigation Services Economics (Doc 9161) also contains extensive guidance on cost identification and other aspects of financial management and cost recovery, including charges and charges collection. Particularly, Appendix 6 includes guidance to determine aeronautical meteorological services costs.

2.2.5 Under Agenda Item 13 of RAN CAR/SAM/3 (Buenos Aires, 5-15 October 1999), it was noted that lists of shortcomings and deficiencies occurring in the field of aeronautical meteorology had been compiled by most ICAO PIRGs. However, the methodology of identifying these shortcomings and deficiencies differed from one region to another and no standardized prioritization scheme had been applied in the field of aeronautical meteorology. Therefore, Recommendation 13/9 was formulated by the meeting in order to ICAO carry out a standard presentation of shortcomings and deficiencies occurring in the field of aeronautical meteorology, to be used by the PIRGs worldwide.

2.2.6 The meeting is invited to note that ICAO is prepared, upon special request, to assist States in identifying such forms of regional cooperation that might aid them in remedying shortcomings and deficiencies in the air navigation field. Such assistance may *inter alia*, be provided through ICAO's Technical Cooperation Programme.

3. **Action by the AERMETS/4**

3.1 The meeting is invited to:

- a) take note of the information provided, and as a preliminary measure, of the task developed by GREPECAS when determining and evaluating the shortages and deficiencies in the field of air navigation in the CAR/SAM areas;
- b) review and, if necessary, update the attached list of shortcomings and deficiencies as well as the priority which same has been assigned with regard to operational safety.

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**APPENDIX A****LIST OF AIR NAVIGATION SHORTCOMINGS AND  
DEFICIENCIES IN THE CAR/SAM REGIONS****EXPLANATION OF THE TABLE****Identification:**

1. **Requirements:** *Air navigation facilities, services and procedures contained in the Regional Air Navigation Plan.*
2. **States/facilities and services:** *States responsible for implementation and the facilities, services and procedures to be implemented.*

**Shortcomings/Deficiencies:**

3. **Description:** *Brief description of the shortcoming/deficiency. For the purpose of this methodology, a situation where a facility is not installed or a service is not provided in accordance with a regional air navigation plan is considered to be a shortcoming. A situation where an existing facility or service is partially unserviceable, incomplete or not operated in accordance with appropriate ICAO specifications and procedures is considered to be deficiency. The net effect of either a shortcoming or a deficiency is a negative impact on safety, regularity and/or efficiency of international civil aviation.*
4. **Date first reported:** *Date of first notification of the shortcoming/deficiency.*
5. **Status of Implementation:** *S = Shortcoming, D = Deficiency.*
6. **Remark on the Source of the information:** *Important references that generated the information (for example: meeting, mission report, information supplied by a State or by a user, etc.).*

**Corrective action:**

7. **Description:** *A brief description of the corrective action to be adopted.*
8. **Executing body:** *Body responsible of the execution.*
9. **Date of completion:** *Date (established by the State or States involved or Planning and Implementation Group in conformity with the State) foreseen for the completion of the corrective action.*

10. **P = Assessment and prioritization:**

A general guideline would be to have three levels of priority organized on the basis of safety, regularity and efficiency assessment as follows:

“U” priority = **Urgent** requirements having a **direct** impact on **safety** and requiring **immediate** corrective actions.

Urgent requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is urgently required for air navigation safety.

“A” priority = **Top priority** requirements **necessary** for air navigation **safety**.

Top priority requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is considered necessary for air navigation safety.

“B” priority = **Intermediate** requirements **necessary** for air navigation **regularity and efficiency**.

Intermediate priority requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is considered necessary for air navigation regularity and efficiency.

**FORM FOR NOTIFICATION OF AIR NAVIGATION SHORTCOMINGS AND DEFICIENCIES  
IN THE MET FIELD IN THE CAR/SAM REGIONS**

Identification		Shortcomings and deficiencies				Corrective measures			
Requirements	State/Facilities	Description	Date first reported	(S / D)	Remarks	Description	Executing Body	Date of Completion	Priority of action
1	2	3	4	5	6	7	8	9	10
Provision of Annex 3, Cap. 10, para. 10.1.1	Antigua & Barbuda, Aruba, Bahamas, Barbados, Costa Rica, Dominican Republic, El Salvador, French Antilles, Grenada, Guyana, Haiti, Netherland Antilles, Saint Lucia, Trinidad and Tobago and United States.	Operational difficulties among ATS/MET dependencies	22/05/96	D	Elaborate letters of agreement among ATS/MET authorities and establish ATS/MET coordination	Ensure a close and efficient coordination among ATS/MET dependencies	The indicated States.	To be determined	A
Provisions of Annex 3, Cap. 5, para. 5.7.1 and 5.8.2	Aruba, Antigua and Barbuda, Bahamas, Barbados, Belize, Bolivia, Colombia, Costa Rica, Chile, Dominican Republic, El Salvador, French Antilles, Grenada, Guatemala, Haiti, Netherland Antilles, Saint Lucia and Trinidad and Tobago	Lack of efficiency in the exchange of air notifications	22/05/96	D	Establish local agreements related to air notifications exchange procedures among ATS/MET dependencies and the operators	Ensure the efficient exchange of air notifications	The indicated States	To be determined	A
CAR/SAM ANP requirement, Part IV, Meteorology, para. 4.1	Belize, Dominican Republic, French Guiana, Haiti, Jamaica, Netherland Antilles, and Trinidad & Tobago	ATS/MET notification points do not appear in the corresponding AIP.	22/05/96	S		Include in the AIP of the States ATS/MET notification points	The indicated States	To be determined	A

Identification		Shortcomings and deficiencies				Corrective measures			
Requirements	State/Facilities	Description	Date first reported	(S / D)	Remarks	Description	Executing Body	Date of Completion	Priority of action
1	2	3	4	5	6	7	8	9	10
CAR/SAM ANP, Part IV, Meteorology, para. 3.1	Dominican Republic Ecuador, Grenada, Guyana, Haiti, Honduras, Netherland Antilles, Trinidad & Tobago and Venezuela	Do not transmit regularly the AIREPs in accordance with requirements.	22/05/96	S	Keep a strict supervision and control of the operational ATS/MET staff to keep them informed on the importance of AIREPs and on the need to disseminate them where required.	Disseminate air notifications to required locations in accordance with the Table MET 2 requirements.  <b>Ecuador:</b> This is partially accomplished, since reports from crews are not received.  <b>Venezuela:</b> Presently there is compliance with the established in relation to air notifications, disseminating them through the Telecommunications Regional Centre and the AFTN network.	The indicated States	To be determined  August 2000	U
CAR/SAM ANP requirements, Part IV, para. 7.1 and Annex 3 provision, Chapter 7, para. 7.2.1	Dominican Republic and Haiti	There is no follow-up on local procedures for issuance of SIGMETs	22/05/96	D	MWOs should review the local procedures for the issuance of SIGMETs and control of its issuance on a periodical basis	Ensure the correct elaboration of SIGMETs and their dissemination in accordance with the requirements of Tables MET2 and MET2A	The indicated States	To be determined	U

Identification		Shortcomings and deficiencies				Corrective measures			
Requirements	State/Facilities	Description	Date first reported	(S / D)	Remarks	Description	Executing Body	Date of Completion	Priority of action
1	2	3	4	5	6	7	8	9	10
CAR/SAM ANP Requirements, Part IV, para. 8.1	Anguilla, Argentina, Antigua & Barbuda, Aruba, Bahamas, Barbados, Bolivia, Brazil, Chile, Colombia, Dominican Republic, Ecuador, El Salvador French Antilles, French Guiana, Grenada, Guatemala, Guyana, Haiti, Jamaica, Netherland Antilles, Panama, Paraguay, Peru, Saint Lucia, Suriname, Trinidad & Tobago, Uruguay and Venezuela	There are deficiencies in the OPMET exchange	20/06/96  22/06/96	D	Review the OPMET exchange procedures, both in the meteorology and communications areas	Ensure that OPMET exchange is made in accordance with requirements of Tables MET 2 and MET 2A  <b>Panama:</b> Since December 1998 the exchange has improved in an 80%, except with Bolivia.  <b>Venezuela:</b> Tables MET 2 and MET 2A have been reviewed in order to verify the established exchange.	The indicated States	To be determined	U



Identification		Shortcomings and deficiencies				Corrective measures			
Requirements	State/Facilities	Description	Date first reported	(S / D)	Remarks	Description	Executing Body	Date of Completion	Priority of action
1	2	3	4	5	6	7	8	9	10
CAR/SAM ANP requirement, Part IV - Meteorology, para. 2.6	Antigua & Barbuda, Anguilla, Argentina, Aruba, Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, French Guiana, Grenada, Guatemala, Guyana, Haiti, Jamaica, Mexico, Netherland Antilles, Nicaragua, Panama, Paraguay, Peru Saint Lucia, Saint Vincent, Suriname, Trinidad & Tobago, Uruguay, U.S.A. and Venezuela	There are requirements of specialized meteorology personnel in the aeronautical meteorology field and of an increase of the number of aeronautical meteorologists. 5	22/06/96	S	To use CAR/SAM technical cooperation regional projects for the training of aeronautical meteorology.	To make the best efforts to have the adequate number of personnel duly trained in aeronautical meteorology.  <b>Argentina:</b> More specialized meteorologists.  <b>Ecuador:</b> They use CAR/SAM regional technical cooperation projects for training in aeronautical meteorology.  <b>Venezuela:</b> Presently they have available approximately 86% of the staff.	The indicated States	To be determined  2005	U
CAR/SAM ANP Requirements, Table AOP 1	Antigua and Barbuda, Belize, Costa Rica, Cuba, Dominican Republic, El Salvador, Grenada, Guyana, Haiti, Jamaica, Mexico, Nicaragua, Saint Lucia, Trinidad & Tobago	RVR have not been implemented.	22/06/96	S		To ensure the implementation of required RVR.	The indicated States	To be determined	U

\* Note: This table includes information of the States having replied to the survey carried out by the Task Force on problems affecting the provision of MET services of the AERMETS G.