



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

**Second Meeting of the Informal Coordination Group of the East  
Caribbean and North Eastern South American  
(E-CAR/SAM-NE ICG/2)**

**(Caracas, Venezuela, 22 to 25 July 2002)**

**Agenda Item 1: Review of ATM matters**

**c) Follow-up of ATM and SAR deficiencies identified in the ATM area**

**Review of the deficiencies in the Air Navigation Area detected in the  
SAM-NE Sub-Region and in the CAR Region Curaçao and Piarco FIRs**

**SUMMARY**

This working paper is intended to note the uniform methodology for identification, evaluation and reporting of deficiencies in the Air Navigation, and to proceed to the review of those deficiencies detected in the ATM area corresponding to the participating States.

**REFERENCES**

- 157<sup>th</sup> Session of the Air Navigation Commission
- Uniform Methodology for the identification, assessment and Reporting of Air Navigation Deficiencies
- Report of the GREPECAS/10 Meeting, Las Palmas, Canary Islands, October 2001

**1. Introduction**

1.1 The Air Navigation Commission, at the eighth meeting of its 157<sup>th</sup> Session (ANC 157-8), proposed that the definition for a shortcoming of a deficiency, as contained in the uniform methodology for the identification, assessment and reporting of air navigation shortcomings and deficiencies, be replaced with a single definition for both situations. The ICAO Council, on 30 November 2001, approved (164-7) the single definition and the necessary consequential editorial changes to the uniform methodology for the identification, assessment and reporting of air navigation deficiencies (**Appendix A** to this working paper).

## **2. Discussion**

2.1 In accordance with information obtained by the ICAO NACC and SAM Regional Offices the deficiencies classified as “A”, “B” and “U” are included as **Appendix B** to this working paper, affecting ATM/SAR air navigation areas in the SAM-NE Sub-region, Curacao FIR and Piarco FIR. Those lists require review by this meeting aimed at updating and completing additional information that might be provided by States and users.

## **3. Action Suggested**

3.1 The Meeting is invited to:

- a) Take note of Appendix A and review Appendix B of this working paper in the corresponding Agenda Item; and
- b) Adopt the necessary measures to overcome the negative impact on operational safety of deficiencies in the SAM-NE Sub-region, Curacao FIR and Piarco FIR

**APPENDIX A**

**UNIFORM METHODOLOGY FOR THE IDENTIFICATION, ASSESSMENT AND REPORTING OF AIR  
NAVIGATION DEFICIENCIES**

(Approved by the Council on 30 November 2001)

**1. INTRODUCTION**

1.1 Based on the information resulting from the assessment carried out by ICAO on the input received from various regions regarding deficiencies in the air navigation field, it became evident that improvements were necessary in the following areas:

- a) collection of information;
- b) safety assessment of reported problems;
- c) identification of suitable corrective actions (technical/operational/financial/organizational), both short-term and long-term; and
- d) method of reporting in the reports of ICAO planning and implementation regional groups (PIRGs).

1.2 This methodology is therefore prepared with the assistance of ICAO PIRGs and is approved by the ICAO Council for the efficient identification, assessment and clear reporting of air navigation deficiencies. It may be further updated by the Air Navigation Commission in the light of the experience gained in its utilization.

1.3 For the purpose of this methodology, the definition of deficiency is as follows:

*A deficiency* is a situation where a facility, service or procedure does not comply with a regional air navigation plan approved by the Council, or with related ICAO Standards and Recommended Practices, and which situation has a negative impact on the safety, regularity and/or efficiency of international civil aviation.

## **2. COLLECTION OF INFORMATION**

### **2.1 Regional office sources**

2.1.1 As a routine function, the regional offices should maintain a list of specific deficiencies, if any, in their regions. To ensure that this list is as clear and as complete as possible, it is understood that the regional offices take the following steps:

- a) compare the status of implementation of the air navigation facilities and services with the regional air navigation plan documents and identify facilities, services and procedures not implemented;
- b) review mission reports with a view to detecting deficiencies that affect safety, regularity and efficiency of international civil aviation;
- c) make a systematic analysis of the differences with ICAO Standards and Recommended Practices filed by States to determine the reason for their existence and their impact, if any, on safety, regularity and efficiency of international civil aviation;
- d) review aircraft accident and incident reports with a view to detect possible systems or procedures deficiencies;
- e) review inputs, provided to the regional office by the users of air navigation services on the basis of Assembly Resolution A33-14, Appendix M;
- f) assess and prioritise the result of a) to e) according to paragraph 4;
- g) report the outcome to the State(s) concerned for resolution; and
- h) report the result of g) above to the related PIRG for further examination, advice and report to the ICAO Council, as appropriate through PIRG reports.

### **2.2 States' sources**

2.2.1 To collect information from all sources, States should, in addition to complying with the Assembly Resolution A31-10, establish reporting systems in accordance with the requirements in Annex 13, paragraph 7.3. These reporting systems should be non-punitive in order to capture the maximum number of deficiencies.

## 2.3 Users' sources

2.3.1 Appropriate international organizations, including the International Air Transport Association (IATA) and the International Federation of Air Line Pilots' Associations (IFALPA), are valuable sources of information on deficiencies, especially those that are safety related. In their capacity as users of air navigation facilities they should identify facilities, services and procedures that are not implemented or are unserviceable for prolonged periods or are not fully operational. In this context it should be noted that Assembly Resolution A33-14, Appendix M and several decisions of the Council obligate users of air navigation facilities and services to report any serious problems encountered due to the lack of implementation of air navigation facilities or services required by regional plans. It is emphasized that this procedure, together with the terms of reference of the PIRGs should form a solid basis for the identification, reporting and assisting in the resolution of non-implementation matters.

## 3. REPORTING OF INFORMATION ON DEFICIENCIES

3.1 In order to enable the ICAO PIRGs to make detailed assessments of deficiencies, States and appropriate international organizations including IATA and IFALPA, are expected to provide the information they have to the ICAO regional office for action as appropriate, including action at PIRG meetings.

3.2 The information should at least include: description of the deficiency, risk assessment, possible solution, time-lines, responsible party, agreed action to be taken and action already taken.

3.3 The agenda of each PIRG meeting should include an item on air navigation deficiencies, including information reported by States, IATA and IFALPA in addition to those identified by the regional office according to paragraph 2.1 above. Review of the deficiencies should be a top priority for each meeting. The PIRGs, in reviewing lists of deficiencies, should make an assessment of the safety impact for subsequent review by the ICAO Air Navigation Commission.

3.4 In line with the above, and keeping in mind the need to eventually make use of this information in the planning and implementation process, it is necessary that once a deficiency has been identified and validated, the following fields of information should be provided in the reports on deficiencies in the air navigation systems. These fields are as follows and are set out in the reporting form attached hereto.

### a) Identification of the requirements

As per ICAO procedures, Regional Air Navigation Plans detail inter alia air navigation requirements including facilities, services and procedures required to support international civil aviation operations in a given region. Therefore, deficiencies would relate to a requirement identified in the regional air navigation plan documents. As a first item in the deficiency list, the requirements along with the name of the meeting and the related recommendation number should be included. In addition, the name of the State or States involved and/or the name of the facilities such as name of airport, FIR, ACC, TWR, etc. should be included.

b) Identification of the deficiency

This item identifies the deficiency and would be composed of the following elements:

- i) a brief description of the deficiency;
- ii) date deficiency was first reported;
- iii) appropriate important references (meetings, reports, missions, etc)

c) Identification of the corrective actions

In the identification of the corrective actions, this item would be composed of:

- i) a brief description of the corrective actions to be undertaken;
- ii) identification of the executing body;
- iii) expected completion date of the corrective action<sup>1</sup>; and
- iv) when appropriate or available, an indication of the cost involved.

#### 4. ASSESSMENT AND PRIORITIZATION

4.1 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.

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<sup>1</sup> It should be noted that a longer implementation period could be assigned in those cases in which the expansion or development of a facility was aimed at serving less frequent operations or entailed excessive expenditures.

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.

**5. MODEL REPORTING TABLE FOR USE IN THE REPORTS OF PIRGS**

5.1 Taking the foregoing into account, the model table at the Appendix is for use by PIRGs for the identification, assessment, and prioritisation etc. of deficiencies. It might be preferred that a different table would be produced for each of the different topics i.e. AGA, ATM, SAR, CNS, AIS/MAP, MET. However, all tables should be uniform.

**6. ACTION BY THE REGIONAL OFFICES**

6.1 Before each PIRG meeting, the regional office concerned will provide advance documentation concerning the latest status of deficiencies.

6.2 It is noted that the regional offices should document serious cases of deficiencies to the Air Navigation Commission (through ICAO Headquarters) as a matter of priority, rather than waiting to report the matter to the next PIRG meeting, and that the Air Navigation Commission will report to the Council.

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**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE .... FIELD IN THE ..... REGION**

Identification		Deficiencies			Corrective action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Date of completion	Priority for action*
Requirement of Part..., paragraph (table).. of the air navigation plan	Terra X Terra Y	Speech circuits not implemented Villa X - Villa Y	12 Dec. 2..X	Coordination meeting between Terra X and Terra Y on 16 July 2..X to finalize arrangements to implementation circuit via satellite	Implementation of direct speech circuit via satellite	Terra X	20 Aug. 2..X	A

\* Priority for action to remedy a deficiency is based on the following safety assessments:

“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.

**Appendix B**

**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM AREA IN THE SAM NE REGION**

Identification		Deficiencies			Corrective action			
Requirements	States/ Facilities	Description	Date first reported	Remarks	Description	Executing body	Date of completion	Priority for action*
Aeronautical phraseology use	Brazil	In general, the use of aeronautical phraseology in Spanish and English is under the required levels and it is a relevant factor with regard to ATS incidents	Sep/2000	Aeronautical phraseology will have to be widely disseminated so it may be studied, learnt and well applied by ATC. Brazil is implementing, through an English phraseology course, a quality improvement programme for aeronautical phraseology of air traffic controllers. Also, ATC simulators practices are being carried out in order to solve this deficiency (ATM/1 Committee, July 2001).	Continuous training and supervision in the use of aeronautical phraseology is required.	Indicated State	Continuous	U
	French Guyana	In general, the use of aeronautical phraseology in English is under the required levels and it is a relevant factor with regard to ATS incidents	Sep/2000	Aeronautical phraseology will have to be widely disseminated so it may be studied, learnt and well applied by ATC. The national phraseology (English and French) has been reviewed by a working group in France. The result is the publication of a new official phraseology (English and French); this phraseology has been distributed to each ATC who has received complementary training (25 <sup>th</sup> E/CAR-IWG/May 2001).	Continuous training and supervision in the use of aeronautical phraseology is required	Indicated State	Continuous	U
	Guyana	In general, the use of aeronautical phraseology in English is under the required levels and it is a relevant factor with regard to ATS incidents	Sep/2000	Aeronautical phraseology will have to be widely disseminated so it may be studied, learnt and well applied by ATC.	Continuous training and supervision in the use of aeronautical phraseology is required	Indicated State	Continuous	U
	Suriname	In general, the use of aeronautical phraseology in English is under the required levels and it is a relevant factor with regard to ATS incidents	Sep/2000	Aeronautical phraseology will have to be widely disseminated so it may be studied, learnt and well applied by ATC.	Continuous training and supervision in the use of aeronautical phraseology is required	Indicated State	Continuous	U
	Venezuela	In general, the use of aeronautical phraseology in English is under the required levels and it is a relevant factor with regard to ATS incidents	Sep/2000	Aeronautical phraseology will have to be widely disseminated so it may be studied, learnt and well applied by ATC.	Continuous training and supervision in the use of aeronautical phraseology is required	Indicated State	Continuous	U

**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM AREA IN THE SAM NE REGION**

Identification		Deficiencies			Corrective Action			
Requirements	States/ Facilities	Description	Date first reported	Remarks	Description	Executing body	Date of completion	Priority for action*
English proficiency in Air Traffic Services, CAR/SAM/3 Rec. 5/35	Brazil	In general, the use of aeronautical phraseology in Spanish and English is under the required levels and it is a relevant factor with regard to ATS incidents	Sep/2000	Brazil has taken the following measures to fulfill this requirement: 1) publication of a new phraseology chapter in the Brazilian document on Rules of the Air and Air Traffic Services, based on Doc 444 and on the ICAO Manual on Radiotelephony (Doc 9432) 2) Through an English phraseology course, Brazil is implementing a quality improvement programme for aeronautical phraseology of ATCS 3) ATC simulators practices are being carried out in order to solve this deficiency	Immediate and permanent measures are required to overcome this deficiency	Indicated State	2003	U
	French Guyana	There is a general deficiency in the proficiency of English among ATC personnel. This deficiency is a relevant factor in ATS incidents	Oct/1995	There is a National programme in place that consists of the following: 1) Define the minimum average English proficiency level; 2) Assess the level of each ATC controller and after; 3) Definition of an English language programme in three areas: a) Phraseology; b) aeronautical English, and c) General English (25 <sup>th</sup> E/CAR IWG Meeting, May 2001).	Immediate and permanent measures are required to overcome this deficiency	Indicated State	2000	U
	Venezuela	There is a general deficiency in the proficiency of English among ATC personnel. This deficiency is a relevant factor in ATS incidents	Oct/1995	The training programme in English language was implemented from 1996 and continues. Several Air Traffic Controllers have been sent to Miami in order to take radar and English courses. The percentage of trained personnel is of 84%. It is expected to have more courses during 2002 (ATM/1 Committee, July 2001).	Immediate and permanent measures are required to overcome this deficiency	Indicated State	2002	U
Provision of air traffic control service CAR/SAM/3, Rec 5/33	Guyana	NA	NA	ICAO SAM RO, through a Technical Cooperation project, assisted Guyana in the implementation of the Georgetown ACC, implemented on 21 March 2002.	Finalized	Indicated State	21 Mar 2002	U

**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE SAR AREA IN THE SAM NE REGION**

Identification		Deficiencies			Corrective action			
Requirements	States/ Facilities	Description	Date first reported	Remarks	Description	Executing body	Date of completion	Priority for action*
Search and Rescue Facilities, CAR/SAM73 Rec 6/2	Guyana	RCC not implemented. Lack of SAR qualified personnel. Inadequate SAR organization	Oct/1995	GREPECAS/5 A working methodology to prepare an aeronautical SAR Plan, and the possible implementation of an aeronautical RCC were suggested to the Guyana CAD. In order to carry out this task, the administration should use as guidance material, Appendix H, Vol. I of Doc 9731-AN/958. Implementation of an aeronautical RCC is the lack of trained personnel in search and rescue services within the Guyana CAD. In order to solve this deficiency, the administration should enable at least two officials to study SAR courses abroad, who, upon their return, shall draft an aeronautical SAR plan and prepare as much personnel as possible, with SAR knowledge, who could be ATCOs; and finally, implement the RCC according to the State's needs operating on a 24-hour basis. Also, some guidelines to be adopted by the administration, where SAR requirements, functional areas and establishment of posts responsible for the implementation, were suggested (Mission L-0144, July 2001).	Needs to comply with FASID Table SAR 1	Indicated State	TBD	U

**Appendix B**

**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM AREA IN THE CAR - E REGION**

Identification		Deficiencies			Corrective action			
Requirements	States/ Facilities	Description	Date first reported	Remarks	Description	Executing body	Date of comple tion	Priority for action*
Curaçao ACC air-ground communications in order to give Area Control Services	Netherlands Antilles	IATA Reports indicated difficulties to communicate in VHF with the Curaçao ACC in the NW part of the Curaçao FIR during RNAV trials in the CAR/SAM Regions	May/2001	Second Meeting/Workshop of ATM Authorities and Planners Lima, May 2001 C/CAR WG/2, Haiti, February 2002	To supply an improved coverage of the air-ground communications of the Curaçao ACC; i.e. HF equipment, in the Northwest part of the Curaçao FIR, according to Annex 11	Indicated State	TBD	U
Use of aeronautical phraseology	Netherlands Antilles	In general, the use of aeronautical phraseology in Spanish and English is under the required levels and it is a relevant factor with regard to ATS incidents	Sept/2000	ATS/SG/9 Meeting	A continuous training and supervision in the use of aeronautical phraseology is required.	Indicated State		

**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE SAR AREA IN THE E-CAR REGION**

<b>Identification</b>		<b>Deficiencies</b>			<b>Corrective action</b>			
<b>Requirements</b>	<b>States/ Facilities</b>	<b>Description</b>	<b>Date first reported</b>	<b>Remarks</b>	<b>Description</b>	<b>Executing body</b>	<b>Date of completion</b>	<b>Priority for action*</b>
Search and Rescue Facilities CAR/SAM/3 Rec. 6/2	Trinidad and Tabago	SRR partially implemented	Oct/1995	GREPECAS/5	Needs to comply with FASID Table SAR 1.	Indicated State	TBD	U