



INTERNATIONAL CIVIL AVIATION ORGANISATION

**AFI PLANNING AND IMPLEMENTATION REGIONAL GROUP
THIRTEENTH MEETING (APIRG/13)**
(Sal, Cape Verde, 25-29 June 2001)**Agenda Item 5: Shortcomings and deficiencies in the air navigation field in the AFI Region****REVIEW OF THE DEFINITION OF SHORTCOMINGS AND DEFICIENCIES**

(Presented by the Secretariat)

SUMMARY

The Air Navigation Commission (ANC 155-10), during its consideration of the uniform methodology for the identification, assessment and reporting of air navigation shortcomings and deficiencies, agreed that clear guidelines on the current uniform methodology should be developed to assist planning and implementation regional groups (PIRGs) with the reporting of detailed assessments of shortcomings and deficiencies to accommodate States' filing of differences to Standards and Recommended Practices (SARPs) in relation to an air navigation plan. The Commission agreed that a review of the definitions of *shortcoming* and *deficiency* was also necessary. ALLPIRG/4 noted the newly developed guidelines and, as further requested by the Commission, considered a single definition for *shortcomings and deficiencies*. On 5 June 2001, the Commission (157-8) agreed on the proposed single definition and will propose to the Council to approve the uniform methodology as amended to reflect the single definition proposed in paragraph 3.1. The proposed changes to the uniform methodology are shown in the appendix.

Action by the APIRG is contained in paragraph 4.

1. INTRODUCTION

1.1 The uniform methodology for the identification, assessment and reporting of air navigation shortcomings and deficiencies was prepared with the assistance of ICAO's planning and implementation regional groups (PIRGs) and approved by the ICAO Council (C-DEC 154/19) on 23 June 1998 for the efficient identification, assessment and clear reporting of air navigation deficiencies. For the purpose of the methodology, a situation where a facility was not installed or a service was not provided in accordance with an air navigation plan (ANP) was considered to be a shortcoming. A situation where an existing facility or service was partially unserviceable, incomplete or not operated in accordance with applicable ICAO specifications and procedures was considered to be a deficiency.

1.2 In order to enable the ICAO PIRGs to make detailed assessments of shortcomings and deficiencies, States and relevant international organizations provide information to the ICAO regional office for action as appropriate. The PIRGs, in reviewing lists of shortcomings and deficiencies, should make an assessment of the safety impact for subsequent review by the Air Navigation Commission. The purposes of these lists of shortcomings and deficiencies are to assist States in defining their implementation priorities and to indicate what kind of remedial action is required.

1.3 On 28 November 2000, the Air Navigation Commission (ANC 155-10) considered AN-WP/7568 regarding the listing of shortcomings and deficiencies by PIRGs related to differences to SARPs as notified by Contracting States to ICAO, pursuant to Article 38 of the Convention on International Civil Aviation. With this in mind, the Commission provided clear guidelines to assist PIRGs with the reporting of detailed assessments of shortcomings and deficiencies to accommodate States' filing of differences to SARPs in relation to a facility or service required in accordance with an air navigation plan.

1.4 During the discussions surrounding the differences to Standards and Recommended Practices as notified by Contracting States to ICAO, it became evident that the uniform methodology was probably being interpreted in different ways. The Commission suggested that a review of the definitions of *shortcoming* and *deficiency* was necessary. It was acknowledged that this was a complex and high-level policy matter, and that a study should be conducted as soon as possible to develop a single definition.

1.5 The Commission felt that this matter should be brought to the attention of the fourth meeting of the ALLPIRG/Advisory Group (ALLPIRG/4) before making a final decision on the issue.

2. DISCUSSION

2.1 ALLPIRG/4 noted the guidelines and developed Conclusion 4/10 (Reporting of shortcomings and deficiencies) which states that, where a State by virtue of Article 38 has notified ICAO of a difference to SARPs governing the actual provision of facilities and services listed in an air navigation plan, the non-implementation of such a facility or service should not be reported as a shortcoming or a deficiency when it has no negative impact on the safety of international air navigation.

2.2 ALLPIRG/4 also recognized that difficulties arose as to the use of two definitions. In particular, according to the uniform methodology, the net effect of either a shortcoming or a deficiency is a negative impact on the safety, regularity and/or efficiency of international civil aviation. As the net effect for both conditions is the same, it is very difficult for PIRGs to distinguish between situations to be classified as a shortcoming or a deficiency subject to the status of implementation.

2.3 ALLPIRG/4 agreed that a single definition for *deficiency* should be prepared for incorporation into the uniform methodology. ALLPIRG/4 felt that the word *deficiency* should be retained in a new single definition, as the negative connotation associated with the word had political and financial leverage to assist with the corrective action required.

2.4 In light of the above, ALLPIRG/4 developed a new single definition for ANC and Council consideration: "A *deficiency* is a situation where a facility, service or a procedure is not provided in accordance with ICAO Standards and Recommended Practices which has a negative impact on the safety, regularity and/or efficiency of international civil aviation."

2.5 The three levels of prioritization of deficiencies organized on the basis of safety, regularity and efficiency, as contained in Section 4 of the uniform methodology, will remain unchanged. This will ensure a means of prioritizing deficiencies to assist States with the urgency of remedial action required.

2.6 In this regard, *implementation* is defined by the ICAO Council (C-DEC 121-7 and C-DEC 121-8) as follows: “Facilities and services specified in the air navigation plan provided, installed, functioning and operated in accordance with appropriate ICAO specifications and procedures.”

3. **PROPOSED DEFINITION**

3.1 Based on the above, the Commission (157-8) considered the definition and agreed on 5 June 2001 to propose to Council to approve the uniform methodology as amended to reflect the single definition developed:

A deficiency is a situation where a facility, service or procedure is not provided in accordance 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.

4. **ACTION BY THE APIRG**

4.1 The APIRG is invited to:

- a) note the changes to the uniform methodology proposed to the Council

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APPENDIX

PROPOSED AMENDMENTS

UNIFORM METHODOLOGY FOR THE IDENTIFICATION, ASSESSMENT AND REPORTING OF AIR NAVIGATION ~~SHORTCOMINGS AND DEFICIENCIES~~ **RELATED TO AIR NAVIGATION PLANS**

(Approved by the Council on 23 June 1998)

1. INTRODUCTION

1.1 Based on the information resulting from the assessment carried out by ICAO on the input received from various regions regarding ~~shortcomings and~~ 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 ~~shortcomings and~~ 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, a situation where a facility, ~~is not installed or a service or procedure~~ is not provided in accordance 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**, is considered to be a ~~shortcoming~~ **deficiency**. ~~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 a 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.~~

2. COLLECTION OF INFORMATION

2.1 Regional office sources

2.1.1 As a routine function, the regional offices are expected to maintain a list of specific ~~shortcomings and~~ 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 ~~shortcomings and~~ 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;
- 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 A31-5, Appendix M;
- f) assess and prioritize 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 ~~shortcomings and~~ 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 A31-5, 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 ~~SHORTCOMINGS AND~~ DEFICIENCIES

3.1 In order to enable the ICAO PIRGs to make detailed assessments of ~~shortcomings and~~ 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 ~~shortcoming and~~ 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 ~~shortcomings and~~ 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 ~~shortcomings and~~ deficiencies should be a top priority for each meeting. The PIRGs, in reviewing lists of ~~shortcomings and~~ 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 ~~shortcoming or~~ deficiency has been identified and validated, the following fields of information should be provided in the reports on ~~shortcomings and~~ 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, ~~shortcomings or~~ deficiencies would relate to a requirement identified in the regional air navigation plan documents. As a first item in the ~~shortcoming/~~ 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 ~~shortcoming or~~ deficiency

This item identifies the ~~shortcoming or~~ deficiency and would be composed of the following elements.

- i) a brief description of the ~~shortcoming or~~ deficiency;
- ii) date ~~shortcoming or~~ deficiency was first reported;
- iii) Status of implementation; ie, ~~S = shortcoming~~
~~D = deficiency~~
- iv) 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* ; 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.

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, prioritization etc. of ~~shortcomings and~~ 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 ~~shortcomings and~~ deficiencies.

6.2 It is noted that the regional offices should document serious cases of ~~shortcomings and~~ deficiencies to the Air Navigation Commission (through ICAO Headquarters) as a matter of priority, rather than

*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.

waiting to report the matter to the next PIRG meeting and that the Air Navigation Commission will report to the Council.

REPORTING FORM ON AIR NAVIGATION ~~SHORTCOMINGS AND~~ DEFICIENCIES IN THE ... FIELD IN THE ... REGION

Identification		Shortcomings and deficiencies				Corrective action			
Requirements	States/facilities	Description	Date first reported	Implementation status (S, D)*	Remarks	Description	Executing body	Date of complete	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	12/02/9X	S REMOVE THIS COLUMN IN FULL	Co-ordination meeting between Terra X and Terra Y on 16/07/9X to finalize arrangements to implementation circuit via satellite	Implementation of direct speech circuit via satellite	Terra X	August 199X	A

*S = shortcoming D = deficiency

** Priority for action to remedy a shortcoming or 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.

– END –

ATTACHMENT

GUIDELINES FOR LISTING OF DEFICIENCIES IN RELATION TO A DIFFERENCE FILED

1. In accordance with the uniform methodology, the non-implementation of facilities or a service required for air navigation as listed in the regional air navigation plan (ANP) but not provided, should be listed as a shortcoming or deficiency. However, there are certain exceptions to the rule.

In a case where safety is not affected and an alternate facility or service is available, PIRGs should not list the non-implementation as a shortcoming or deficiency.

2. This could be illustrated with the case of the world geodetic system – 1984 (WGS-84). WGS-84 is required for accurate navigation using satellite navigation. The accuracy is critical in the approach and landing phase of flight. It could therefore be argued that if an alternate means to satellite navigation, such as an instrument landing system (ILS), is available at the destination, no safety issue will arise. The only point with non-implementation of WGS-84 will be limiting the choice of systems. It should be noted that, without WGS-84 implementation, it will not be possible to apply the concept of RNP using GNSS.

3. In cases like this, the PIRGs may consider that, if safety is not compromised, there is no need to list non-implementation of an element of an air navigation plan as a shortcoming or deficiency. This is supported by the legal opinion in paragraphs 4, 5 and 6 below.

4. According to the legal opinion, the uniform methodology is not to be confused with the procedure established in Article 38 of the Convention on International Civil Aviation. In particular, deficiencies regarding compliance with particular Standards should be listed even if the State concerned would have duly filed a related difference, as the *de facto* non-compliance with Standards and Recommended Practices has to be reported according to the established methodology. Lists of shortcomings and deficiencies are set up in order to factually establish the level of implementation of facilities and services specified in regional ANPs and associated procedures, which would not amount to infractions of Articles 37 and 38 of the Convention if related differences had been duly filed with respect to the Standards concerned. In fact, this should not give rise to any particular difficulty in principle, since the said lists would then merely acknowledge situations as officially confirmed by the States concerned through the filing of differences.

5. It was understandable that certain Contracting States may not favour the idea that the non-implementation of a Standard which has been notified to ICAO as a difference be nevertheless qualified as a *deficiency* since, from a legal viewpoint, they would be fully entitled to such a departure from the Standard concerned. It should also be noted that, in a strict legal sense, a State could not be compelled to take corrective action in this case unless safety was obviously endangered, as the State concerned would be fully entitled to depart from the Standard at issue by virtue of Article 38.

6. It can be further argued that, even if a State is under obligation to promptly notify ICAO of differences from SARPs, the lack of implementation of air navigation systems in this context should not be considered or listed in the reporting form as an air navigation shortcoming or deficiency where there is no negative impact on safety, regularity and/or efficiency of international air navigation, as assessed by a planning and implementation regional group (PIRG).

7. In summary, to accommodate States filing differences in relation to a facility or service required in accordance with an air navigation plan, it will be necessary for PIRGs to consider the following guideline when making detailed assessments of shortcomings and deficiencies:

“Where a State by virtue of Article 38 has notified ICAO of a difference to SARPs governing the actual provision of Facilities and Services listed in an air navigation plan, the non implementation of such a facility or service should not be reported as a deficiency when it has no negative impact on safety, regularity and/or efficiency .”

– END –