



International Civil Aviation Organization

**THIRTEENTH MEETING OF THE
ASIA/PACIFIC AIR NAVIGATION PLANNING AND
IMPLEMENTATION REGIONAL GROUP (APANPIRG/13)
Bangkok, Thailand, 9 to 13 September 2002**

Agenda Item 4: Deficiencies in the Air Navigation Field

RESOLUTION OF REGIONAL AIR NAVIGATION DEFICIENCIES

(Presented by the Secretariat)

SUMMARY

The Air Navigation Commission (ANC) and the Council of ICAO, as a part of consideration of PIRG reports, review the list of deficiencies and also update periodically the uniform methodology for the identification, assessment and reporting of air navigation shortcomings and deficiencies in light of the experience gained in its utilization. During a review recently, the ANC and Council observed that many regional air navigation deficiencies continued to persist for a number of years thus causing concern and consequently took series of actions which calls for follow-up measures by PIRGs and Sates. Furthermore, recognizing that some parts of uniform methodology were being interpreted in different ways, the Commission developed a new single definition of a *deficiency* to replace the current *shortcomings and deficiencies*. This new definition along with consequential editorial changes necessary to the uniform methodology are presented in the appendix of this working paper for implementation by APANPIRG.

Action by the APANPIRG is proposed at paragraph 5.

1. BACKGROUND

- a. 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.
- b. 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 the lists of shortcomings and deficiencies, make an assessment of the safety impact for subsequent review by the Air Navigation Commission and the Council. The purposes of these lists of shortcomings and deficiencies have been to assist States in defining their implementation priorities and to indicate that remedial action is required.

2. CONCERNS EXPRESSED BY THE ANC AND COUNCIL

2.1 In discussing the ways and means of resolving the air navigation deficiencies, the Council, taking into account the comments of ANC, recently observed that many regional air navigation deficiencies continue to persist for a number of years thus causing concern. While recognizing that the non-availability of funds was one of the stumbling blocks in eliminating the deficiencies by the States, the Council agreed that the States should be reminded of their responsibility under Article 28 of the Chicago Convention for providing safe air navigation services. Furthermore, States should increase their efforts in overcoming the delay in mitigating the air navigation deficiencies identified by Planning and Implementation Regional Groups (PIRGs) related to the safety issues covered by the Global Aviation Safety Plan (GASP) (copy attached at appendix B hereto), particularly in the field of maintenance of air navigation facilities and to accord priority to this matter through the allocation of adequate financial and human resources.

3. FOLLOW-UP ACTION TAKEN BY THE SECRETARIAT

3.1 As a follow-up to the of the ICAO Council decision, the Secretariat has initiated the following tasks:

- a) addressed a letter from the Secretary General to the Ministers of Civil Aviation, as shown in appendix C hereto, enclosing a list of existing air navigation deficiencies for each State, if any, and requesting States to put in place a plan of action to eliminate the deficiencies; and
- b) under the framework of a Special Implementation Project, the President of the Council would consider allocating priority to the projects that eliminate regional air navigation deficiencies.

4. SINGLE DEFINITION

4.1 Furthermore, during the review of uniform methodology by the ANC, it became evident that some parts of the methodology were being interpreted in different ways. The Commission, consequently, developed a new single definition for Council consideration proposing that the definition for a shortcoming or 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.

4.2 The introduction of this new single definition of '*deficiency*' as detailed below, which in effect replaces "*shortcoming and deficiency*" and consequential editorial changes to the uniform methodology as presented in the appendix A hereto, were approved on 30 November 2001 by the Council of ICAO.

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.

5. **ACTION BY APANPIRG**

5.1 The meeting is invited to:

- a) urge States to allocate sufficient resources in resolving the air navigation deficiencies; and
- b) note and implement the revised uniform methodology, including the new single definition of “*deficiency*”, as presented in the appendix A hereto in addressing the air navigation deficiencies of Asia/Pacific regions.

.

— — — — —

APPENDIX A PROPOSED AMENDMENTS

UNIFORM METHODOLOGY FOR THE IDENTIFICATION, ASSESSMENT AND REPORTING OF AIR NAVIGATION ~~SHORTCOMINGS AND 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 ~~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 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 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.~~ the following is the definition of deficiency:

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.

APPENDIX A**2. COLLECTION OF INFORMATION****2.1 Regional office sources**

2.1.1 As a routine function, the regional offices ~~are expected to~~ **should** 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, **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 ~~A31-5~~ **A33-14**, 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~~ **A33-14**, Appendix M and several decisions of the Council obligate users of air navigation facilities and services to report any ack 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) iii) appropriate important references (meetings, reports, missions, etc)

APPENDIX A

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

* 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.

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 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	12/02/2.. X	S REMOVE THIS COLUMN IN FULL	Co-ordination meeting between Terra X and Terra Y on 16/07/2..X to finalize arrangements to implementation circuit via satellite	Implementation of direct speech circuit via satellite	Terra X	August 20..X	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.

— — — — —

APPENDIX B**THE ICAO GLOBAL AVIATION SAFETY PLAN (GASP)****1. OBJECTIVES**

1.1 The objectives of the ICAO Global Aviation Safety Plan are to:

- a) reduce the number of accidents and fatalities irrespective of the volume of air traffic; and
- b) achieve a significant decrease in worldwide accident rates, placing emphasis on regions where these remain high.

1.2 This should be achieved by:

- a) identifying repetitive causes for accidents on a worldwide and a regional basis and recommending specific actions;
- b) enhancing identification of all elements that can impair safety, such as shortcomings and deficiencies in the air navigation system or lack of compliance with ICAO Standards and Recommended Practices (SARPs), and recommending corrective actions; and
- c) enhancing the cooperation between Contracting States or groups of States with ICAO in order to improve ICAO's own capability to compile, assess and disseminate safety-related information.

1.3 The ICAO Global Aviation Safety Plan will therefore identify those tasks and programmes likely to produce the best safety dividend in terms of reducing accident numbers and rates both on a worldwide and on a regional basis. It is intended that GASP will serve all parties involved in aviation safety both as a planning and as a tracking tool, in order to enable them to list in a public document the above-mentioned tasks and programmes and to check on the progress achieved in these areas of ICAO activity. In order to make GASP easily accessible, the document will be distributed on a regular basis by ICAO through a State letter and on the ICAO Web site.

2. FUNDAMENTALS

2.1 The three fundamentals of the GASP are as follows:

- 1st Fundamental Reviewing the causal factors of aircraft accidents worldwide in order to identify specific safety issues which must be addressed to reduce accident numbers and rates. Particular attention is given to the reasons for regional variations in accident rates;
- 2nd Fundamental Keeping abreast of the activities of existing safety groups in order to identify safety issues which have global perspectives. In doing this, GASP focuses on those safety initiatives that offer the best safety dividend in terms of reducing accident numbers and rates; and

APPENDIX B

- 3rd Fundamental Promoting safety awareness worldwide by facilitating the effective sharing and use of aviation safety data and information.

3. ELEMENTS

- 3.1 **Carry out an annual review of the causal factors in accidents and incidents using all available sources of information, including the ICAO Accident/Incident Data Reporting (ADREP) System. (1st Fundamental)**

Related Tasks

- a) Identify specific safety issues;
- b) Identify the safety issues that result in disparities in accident rates on a regional level;
- c) Develop safety indicators to readily identify trends in safety performance; and
- d) Disseminate the results of these activities for use in accident prevention programmes by States and industry.

- 3.2 **Recommend safety actions in response to findings of the ICAO Universal Safety Oversight Audit Programme (USOAP). (1st and 2nd Fundamentals)**

Related Tasks

- a) Review the safety critical elements identified by the ICAO Universal Safety Oversight Audit Programme (USOAP);
- b) Assist States in developing appropriate safety oversight structures;
- c) Assist States in developing easy to understand regulatory material;
- d) Promote and prioritize the expansion of USOAP to other safety-related fields; and
- e) Where necessary, update existing SARPs or develop new SARPs.

- 3.3 **Enhance the identification of, and address, deficiencies in the air navigation field provided by all sources, including ICAO Planning and Implementation Regional Groups (PIRGs), and Regional Safety Groups. (2nd Fundamental)**

Related Tasks

- a) Review, and where possible, provide guidance and assistance to States in the implementation of appropriate safety actions.

3.4 **Review and improve existing safety database systems to facilitate the dissemination of safety-related information. (3rd Fundamental)**

Related Tasks

- a) Participate in the Global Aviation Information Network (GAIN) Government Support Team (GST) to explore ways to reduce impediments, legal or otherwise, to the communication of safety-related information;
- b) Develop Annex provisions and guidance material for voluntary incident reporting systems;
- c) Develop appropriate means to ensure the non-punitive nature of voluntary incident reporting systems;
- d) Develop appropriate means to ensure non-disclosure of confidential safety information;
- e) Participate in industry activities, such as the CAST/ICAO taxonomy working group, to develop common taxonomies to facilitate the worldwide coding, storage and dissemination of safety-related information;
- f) Update Annex provisions in order to facilitate the collection and dissemination of safety-related information;
- g) Provide relevant safety-related information on an ICAO Web site; and
- h) Consider the establishment of a comprehensive data analysis and information dissemination network.

3.5 **Collaborate with States and the aviation industry to identify additional safety measures. (2nd Fundamental)**

Related Tasks

- a) Liaise with the Commercial Aviation Safety Team (CAST) in the United States, the Joint Strategic Safety Initiative (JSSI) in Europe, the global aviation information network (GAIN) in the United States and any other potential safety initiatives;
- b) Participate in industry / government safety initiatives addressing specific safety issues;
- c) Identify the high priority safety-related tasks on the basis of their impact on improving safety to determine if developing safety initiatives have a global perspective and warrant inclusion in the Technical Work Programme (TWP) of the Organization in the Air Navigation Field;
- d) Hold regular consultations with aviation industry leaders. The purpose of these consultations, which gather representatives of industry and international organizations together with the ANC and supported by members of the ICAO

Secretariat, is to:

- i) update all participants on progress achieved on safety issues in the context of GASP;
- ii) exchange information and, in the light of the experience gathered by the industry, review all data and proposals which could justify further GASP initiatives; and
- iii) give the industry and international organizations an opportunity to update GASP.

3.6 **Develop solutions to identified safety issues. (2nd and 3rd Fundamentals)**

Related Tasks

- a) Develop Annex provisions regarding new technology equipment to be installed on board aircraft;
- b) Incorporate the findings of industry task forces (such as CFIT and ALAR) into ICAO provisions;
- c) Develop guidance material for flight data analysis programmes required for the operators of large commercial aircraft;
- d) Update Annex provisions regarding terrain portrayal on approach charts and electronic terrain data for cockpit displays;
- e) Ensure airport and airspace capacity enhancement developments are safe;
- f) Develop provisions concerning the enhancement of air-ground communication procedures, including minimum skill-level requirements in the common usage of the English language in ATC communications;
- g) Provide guidance on and monitor the introduction of safety management systems for aerodromes and air traffic services;
- h) Expand the USOAP programme to include Annexes 11 and 14;
- i) Establish and foster regional safety groups;
- j) Develop SARPs aimed at improving the technical reliability of aircraft;
- k) Continue to incorporate human factors considerations in ICAO regulatory provisions and guidance material;
- l) Develop SARPs or guidance material to address the runway incursion problem; and
- m) Develop provisions concerning the enhancement of ATM equipment, procedures and human performance.



INTERNATIONAL CIVIL AVIATION ORGANIZATION
ORGANISATION DE L'AVIATION CIVILE INTERNATIONALE
ORGANIZACIÓN DE AVIACIÓN CIVIL INTERNACIONAL
МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ГРАЖДАНСКОЙ АВИАЦИИ
منظمة الطيران المدني الدولي
国际民用航空组织

999 UNIVERSITY STREET, MONTREAL, QUEBEC, CANADA H3C 5H7

Tel.: (514) 954-8219
Fax: (514) 954-6077

Internet: icaohq@icao.org
Sitatex: YULCAYA

Telex: 05-24513
Cables: ICAO MONTREAL

TEL: +1 (514) 954-8219 ext. 5855

Ref.: M 6/1-02/79

27 September 2002

Subject: Addressing air navigation deficiencies

Action required: As suggested in paragraph 3 below

Sir/Madam,

1. I have the honour to draw to your attention that the ICAO Planning and Implementation Regional Groups (PIRGs), as part of their work programme, are identifying, assessing and addressing the air navigation deficiencies through a uniform methodology which was approved by the ICAO Council at the 19th meeting of its 154th Session on 23 June 1998.
2. In discussing the ways and means to resolving the air navigation deficiencies, the Council recently observed that many deficiencies continue to persist for a number of years thus causing concern. While recognizing that problems with funding could be one of the delaying factors in eliminating the deficiencies by the States, it was decided that the States should be reminded of their responsibility under Article 28 of the *Convention on International Civil Aviation* (Doc 7300) for providing safe air navigation services. Furthermore, States should increase their efforts in overcoming the delay in mitigating the air navigation deficiencies identified by Planning and Implementation Regional Groups (PIRGs). It was also stated that some of the deficiencies may have a negative effect on the safety issues covered by the Global Aviation Safety Plan (GASP) which was transmitted to States by my State letter AN 6/37-02/11 dated 31 January 2002. Problems with maintenance of air navigation facilities have also caused serious concerns. The Council requested that measures be taken to accord priority to this matter through the allocation of adequate financial and human resources.
3. On my advice, the ICAO Regional Director accredited to your State has analysed the regional air navigation deficiencies and as a result prepared the attached list of existing deficiencies in your State. As you can see from the attachment, your State is experiencing deficiencies in the field of air navigation. Hence, I urge you to formulate a plan of action to eliminate those deficiencies by allocating sufficient resources. ICAO itself remains active in providing some form of assistance in eliminating the deficiencies through Technical Cooperation Projects and Special Implementation Projects. We hope to expand our involvement through the soon to be established International Financial

Facility for Aviation Safety (IFFAS). Meanwhile, I wish to express confidence in your personal interest in developing and implementing the action plan of your State to eliminate the deficiencies in the air navigation field.

Accept, Sir/Madam, the assurances of my highest consideration.


R.C. Costa Pereira
Secretary General

Attachment:

A — List of air navigation deficiencies in your State