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INTERNATIONAL CIVIL AVIATION ORGANIZATION

ASSEMBLY — 32ND SESSION

TECHNICAL COMMISSION

Agenda Item No. 25: ICAO Global Aviation Safety Plan

ICAO GLOBAL AVIATION SAFETY PLAN (GASP)

SUMMARY

In response to the large number of aviation accidents that occurred in 1996 and in view of the expected growth in air traffic, the Air Navigation Commission noted the need to reduce the accident rate and in 1997 proposed an ICAO Global Aviation Safety Plan (GASP). This paper presents a report on the development of the ICAO Global Aviation Safety Plan and on ongoing activities related to the plan, as well as on priorities for the triennium 1999-2001 in the air navigation field.

Action by the Assembly is in paragraph 7.

REFERENCES

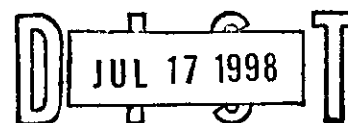
Doc 9662, *Assembly Resolutions in Force* (as of 4 October 1995)
Doc 9422, *Accident Prevention Manual*

1. INTRODUCTION

1.1 While a strong regulatory framework is undoubtedly essential to create a safe aviation system, it is increasingly being recognized that additional safety efforts are required in order to further reduce the already low accident rate.

1.2 In 1984, ICAO published the *Accident Prevention Manual* (Doc 9422). This manual stressed that, in addition to regulatory activities, other methods to prevent accidents had to be developed. Guidance material was provided in the manual for the design of such programmes. ICAO's commitment to a strong accident prevention programme was reaffirmed in 1995 when the Assembly adopted Resolution A31-10, urging all Contracting States to "enhance accident prevention measures, particularly in the areas of personnel training, information feedback and analysis and to implement voluntary and non-punitive reporting systems ..." and to "co-operate with ICAO and other States ... in the development and implementation of accident prevention measures ...".

1.3 Despite the fact that the fatal accident rate has remained at a low level over at least the last ten years, 1996 saw the largest number of accidents in airline operations and the largest number of fatalities on record. The Air Navigation Commission noted that the expected growth in the volume of



international civil aviation would result in an increasing number of aircraft accidents unless the accident rate was reduced. In 1997, the Air Navigation Commission developed an ICAO Global Aviation Safety Plan in response to the challenge presented by this high number of accidents.

1.4 In June 1997, the Council reviewed the Air Navigation Commission's proposals and agreed that a working paper on the ICAO Global Aviation Safety Plan be presented to the Directors General of Civil Aviation (DGCA) Conference held in November 1997. The DGCA Conference noted the development of the ICAO Global Aviation Safety Plan and endorsed its objectives. It also recommended that States be urged to co-operate with ICAO in the development of the ICAO Global Aviation Safety Plan.

2. THE CHALLENGE

2.1 The travelling public is confident that international civil aviation remains a safe mode of travel. While accident rates have remained commendably low, unless there is a reduction in these rates, the expected growth in air travel will cause a corresponding increase in the number of accidents. As aviation accidents are newsworthy events, the public is conscious of the number of accidents, rather than the accident rate. An increase in accident numbers is therefore likely to adversely affect the public's perception of the safety of air travel. The challenge for the aviation community in the future is to reduce the accident rate so as to improve safety, not only in actual fact, but also in the public's perception.

3. OBJECTIVES OF THE ICAO GLOBAL AVIATION SAFETY PLAN

3.1 The ICAO Global Aviation Safety Plan aims to provide the necessary leadership by ICAO and to gain a commitment from Contracting States and the aviation industry as a whole in a collaborative effort to enhance aviation safety, in order to:

- a) achieve a significant decrease in the world-wide accident rate;
- b) enhance the identification of shortcomings and deficiencies in the air navigation field and to assist States to achieve a significant degree of improvement; and
- c) increase and improve ICAO's own capability to compile, assess and disseminate safety-related information.

4. ELEMENTS OF THE ICAO GLOBAL AVIATION SAFETY PLAN

4.1 The Air Navigation Commission has identified the following elements of an ICAO Global Aviation Safety Plan. These elements provide the basis of ICAO's activities in developing an integrated safety management process:

- a) carry out an annual review of the causal factors for accidents world-wide, based on information contained in the ICAO Accident/Incident (ADREP) System. Disseminate the results to States for use in their own accident prevention programmes;

- b) prioritize the following safety-related tasks which form part of the Technical Work Programme (TWP) of the Organization in the Air Navigation Field:
 - 1) introduction of the global navigation satellite system (GNSS) for non-precision approaches;
 - 2) continuation of the controlled flight into terrain (CFIT) prevention programme, including the introduction of predictive terrain hazard warning systems (such as enhanced ground proximity warning systems (EGPWS) and minimum safe altitude warning (MSAW) systems);
 - 3) introduction of requirements for the implementation of airborne collision avoidance systems (ACAS);
 - 4) increased use of standard air traffic control (ATC) phraseology;
 - 5) introduction of global air traffic management; and
 - 6) continued integration of human factors considerations into the aviation environment.
- c) review and improve existing safety database systems and consider the establishment of a comprehensive data analysis and information dissemination network;
- d) address shortcomings and deficiencies identified in the air navigation field, including:
 - 1) collection of information;
 - 2) assessment of reports; and
 - 3) identification of technical and operational remedies.
- e) introduce improvements to safety oversight through the ICAO safety oversight programme (SOP), including:
 - 1) correction of deficiencies identified by the SOP;
 - 2) enhancement and expansion of the SOP; and
 - 3) introduction of quality assurance to the SOP.
- f) collaborate with States and the aviation industry to identify additional safety measures. An essential part of this process is the dissemination of safety-related information to those who need it most.

5. DISCUSSION WITH INDUSTRY

5.1 Element f) listed above called for, *inter alia*, collaboration with the aviation industry to identify additional safety measures. Accordingly, in September 1997 the Air Navigation Commission met with industry representatives. This informal meeting produced a number of conclusions and recommendations. Conclusions not already covered in the ICAO Global Aviation Safety Plan included:

- a) the fact that, while safety initiatives are currently carried out by a variety of aviation organizations, there is a lack of a global integrated safety strategy;
- b) there is a need to remove obstacles to the collection and dissemination of safety data;
- c) there is a need to encourage and foster the establishment of sub-regional safety groupings working in full co-ordination with ICAO Headquarters; and
- d) there is a need to encourage the global harmonization of safety standards.

5.2 A working level meeting on safety data collection, analysis and exchange was held with industry representatives in April 1998. This meeting identified a number of accident types considered significant in terms of accident avoidance strategies. In addition, the meeting emphasized the need to expedite the work towards standardizing the categorization of data contained in aviation safety databases world-wide in order to facilitate the interchange of safety-related information.

5.3 At the end of June 1998, a second informal meeting was held between the Air Navigation Commission and industry representatives. This meeting endorsed the concept of GASP and the elements contained there in, and reiterated the need for ICAO to take a leadership role in addressing the following additional topics:

- a) the development of standardized safety indicators and taxonomies for aviation safety data;
- b) encourage States to utilize the capabilities of the new technologies on board aircraft including the elimination of non-precision approaches;
- c) encourage the use of flight data analysis programmes for accident prevention purposes; and
- d) encourage States to ensure that environmental concerns do not adversely impact on operational safety.

6. CONCLUSIONS

6.1 Many of the elements listed in this working paper are currently on ICAO's technical work programme. The speed with which they are being progressed varies, depending on a number of factors, including competing priorities, available resources, etc. The thrust of the ICAO Global Aviation Safety Plan is therefore to identify and prioritize those tasks and programmes likely to produce the best safety dividend in terms of reducing the fatal accident rate for airline operations world-wide.

7. ACTION BY THE ASSEMBLY

7.1 The Assembly is invited to consider the information in this paper and to adopt the draft resolution on the ICAO Global Aviation Safety Plan.

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APPENDIX

DRAFT ASSEMBLY RESOLUTION

ICAO Global Aviation Safety Plan (GASP)

Whereas the primary objective of the Organization continues to be that of ensuring the safety of international civil aviation world-wide;

Recognizing that the world-wide rate for fatal accidents in air transport operations has been stagnant at a low level for a number of years;

Noting that the expected increase in the volume of international civil aviation will result in an increasing number of aircraft accidents unless the accident rate is reduced;

Realizing that the public's perception of aviation safety is largely based on the number of aircraft accidents rather than the accident rate;

Recognizing that improvements in the accident rate will require new approaches on the part of all participants in the aviation industry, including ICAO, States, aircraft manufacturers and operators;

Noting with concern that controlled flight into terrain (CFIT) accidents continue to be the most significant type of accident in airline operations;

The Assembly

1. *Stresses* the need for a reduction in the rate of fatal accidents in air transport operations;
2. *Endorses* the establishment of the ICAO Global Aviation Safety Plan;
3. *Endorses* the concept of concentrating the safety-related activities of ICAO on those safety initiatives, planned or currently underway, that offer the best safety dividend in terms of reducing the accident rate;
4. *Endorses* the review and improvement of existing safety database systems and the establishment of a comprehensive data analysis and information dissemination network, taking into account the need to adequately protect privileged information and its sources;
5. *Encourages* the free communication of safety-related information amongst users of the aviation system, including the reporting of accident and incident data by States to the ICAO Accident/Incident Data Reporting (ADREP) system;
6. *Considers* that the enhancement of the safety oversight programme (SOP), the introduction of carriage requirements for airborne collision avoidance systems (ACAS) and predictive terrain hazard warning systems in aircraft, and the implementation of minimum safe altitude warning (MSAW) systems offer the best safety dividend in the short term; and
7. *Instructs* ICAO to provide a progress report on the ICAO Global Aviation Safety Plan to the next Assembly.