

ASSEMBLY — 35TH SESSION

EXECUTIVE COMMITTEE

Agenda Item 16: Improvement of safety oversight

Agenda Item 16.2: Transition to a comprehensive systems approach for audits in the ICAO Universal Safety Oversight Audit Programme (USOAP)

TRANSITION TO A COMPREHENSIVE SYSTEMS APPROACH FOR AUDITS IN THE ICAO UNIVERSAL SAFETY OVERSIGHT AUDIT PROGRAMME (USOAP)

SUMMARY

This paper contains proposals for the continuation and expansion of the ICAO Universal Safety Oversight Audit Programme (USOAP) for 2004 and beyond. A summary of current USOAP activities is presented in paragraph 2. Paragraph 3 addresses the implementation of a comprehensive systems approach for USOAP, as an evolution from the Annex-by-Annex approach which has been followed since the inception of the Programme. By highlighting the benefits of applying a comprehensive systems approach for the conduct of ICAO safety oversight audits in terms of effectiveness, efficiency and economy, the paragraph also illustrates the Council's decision to postpone the expansion planned for 2004 in order to launch an all-encompassing and comprehensive safety oversight audit programme starting in 2005. Action by the Assembly is contained in paragraph 5 of the paper.

REFERENCES

Annex 1	Annex 13
Annex 2	Annex 14
Annex 4	Annex 15
Annex 6	Doc 7300, <i>Convention on International Civil Aviation</i>
Annex 8	Doc 9790, <i>Assembly Resolutions in Force</i>
Annex 10	(as of 5 October 2001)
Annex 11	

1. INTRODUCTION

1.1 Assembly Resolution A32-11 directed the International Civil Aviation Organization (ICAO) to conduct regular, mandatory, systematic and harmonized safety audits of all Contracting States, with the objective of enhancing safety by promoting the implementation by States of International Standards and Recommended Practices (SARPs). The mandate for regular audits foresaw the continuation of the

programme and the term “safety audits” suggested that all safety-related areas should be audited. The expansion of the programme “at the appropriate time”, as recommended by the 1997 Directors General of Civil Aviation Conference, has thus been accepted as an integral part of the future development of the Programme.

1.2 Assembly Resolution A33-8 directed ICAO to continue the ICAO Universal Safety Oversight Audit Programme (USOAP) and to expand it to include audits of Annex 11 — *Air Traffic Services*, and Annex 14 — *Aerodromes*, as of 2004. The Resolution further instructed the Secretary General to undertake a study regarding the expansion of USOAP to other safety-related fields, and in particular, on the conduct of audits of the core elements of Annex 13 — *Aircraft Accident and Incident Investigation*, as soon as possible, without significantly increasing the cost of the expansion.

1.3 Assembly Resolution A33-8 further requested: (i) the Secretary General to adopt a more flexible approach in the implementation of USOAP on a long-term basis, including the strengthening of the regional offices; and (ii) the Council to ensure the long-term financial sustainability of USOAP, phasing-in all of its activities into the Regular Programme Budget, in due course.

1.4 This paper presents, for the consideration of the Assembly, a report on the discussions related to the continuation of USOAP beyond 2004, and for the implementation of the comprehensive systems approach for conducting ICAO audits as an evolution from the Annex-by-Annex approach which has been followed since the inception of the Programme.

2. CURRENT USOAP ACTIVITIES

2.1 Conduct of audits and audit follow-ups relating to Annexes 1, 6 and 8

2.1.1 The conduct of audits and audit follow-ups relating to Annex 1 — *Personnel Licensing*, Annex 6 — *Operation of Aircraft* and Annex 8 — *Airworthiness of Aircraft* continues to be the core of USOAP, as it deals with the most exportable aviation activities for the following reasons:

- a) pilots trained and licensed in one State fly all over the world;
- b) operators certified by one Contracting State operate in many other States; and
- c) aircraft certified and maintained in one State operate in many other States and fly through the airspace over the territory of other Contracting States.

2.1.2 Each Contracting State has, therefore, a vested interest in the safety oversight capabilities of the other Contracting States and especially of those States whose aircraft and personnel operate into its territory and/or its airspace. It is this safety concern raised by States, for good reason, which resulted in the establishment of a universal, regular, mandatory and transparent safety oversight audit programme. Moreover, most ICAO Contracting States have ratified Article 83 bis, and many of them are currently transferring responsibilities for licensing and for the continuing airworthiness of aircraft and need to have the assurance that States who are signatory to the *Convention on International Civil Aviation* (Doc 7300) meet the Annex requirements, and are able to discharge the responsibilities transferred to them.

2.2 **Conduct of audits relating to Annexes 11, 13 and 14, starting in 2004**

2.2.1 In accordance with Assembly Resolution A33-8, the Secretariat conducted preparatory work towards the expansion of USOAP to Annexes 11, 13 and 14, slated to start in 2004. This work confirmed that the implementation of the provisions contained in Annexes 11 and 14 is inter-related with the implementation of numerous provisions in various Annexes, and especially with those contained in Annex 1, Annex 2 — *Rules of the Air*, Annex 4 — *Aeronautical Charts*, Annex 10 — *Aeronautical Telecommunications*, and Annex 15 — *Aeronautical Information Services*. The conduct of audits relating to Annexes 11 and 14 cannot be done effectively in isolation, and auditing Annex 13 by itself would not be cost-effective.

2.3 **Provision of training to safety oversight auditors**

2.3.1 ICAO does not have the resources to employ all the auditors that are required to conduct safety oversight audits. It has, out of necessity, to resort to the secondment of experts from States, both short and long-term, to complement its own staff.

2.3.2 One of the major activities of SOA has been the provision of training to its own auditors, officers from the regional offices and relevant sections of the Organization, and experts seconded from Contracting States. Training on a regular basis is also necessary to maintain the competency of the auditors and to meet the ISO requirements under which SOA has been certified. It is expected that in the future, the provision of training to experts from States will be increased, for two reasons:

- a) seconded auditors from States will need to become a major source of expertise in the various fields for the conduct of ICAO audits, while under the leadership of an ICAO expert; and
- b) the use of national experts will help to share and transfer expertise among State experts and disseminate standardized application of international SARPs and will generally result in enhanced coordination and cooperation among technical experts of Contracting States.

2.4 **Delivery of seminars and workshops on safety oversight management systems**

2.4.1 Safety oversight management system seminars and workshops are conducted in all ICAO regions two or three times a year to provide State officials with practical examples which guide them in the establishment and management of an effective safety oversight system.

2.4.2 Support for continuing and increasing the number of seminars and workshops has been voiced by Contracting States, the ICAO Council and the Air Navigation Commission on several occasions. Seminars and workshops have been regarded as a major tool to provide generic assistance to Contracting States, and should be delivered by ICAO at an increased rate in the future, subject to the availability of the requisite funds.

2.5 **Development of guidance material related to safety oversight**

2.5.1 The development and provision of technical guidance material is one more of the support tools made available to Contracting States by ICAO. Guidance material enable States to implement SARPs in a harmonized manner ensuring a standardized implementation of the Annex provisions they are designed

to support. Guidance material under development in the Safety Oversight Audit Section (SOA) will also address the establishment and management of Regional Safety Oversight Systems.

2.6 **Analysis of audit results**

2.6.1 An Audit Findings and Differences Database (AFDD) has been developed to archive findings and differences arising from safety oversight audits and audit follow-ups carried out under USOAP. Information generated through the AFDD, such as the level of aviation activity in a State and the actual findings and differences identified during audits, allows SOA to conduct a detailed analysis with the aim of determining possible courses of action for the resolution of safety concerns. The AFDD has provided SOA with the ability to identify safety concerns based on the safety oversight critical elements. The information derived can also be used to assess possible impact on the safety of aircraft operations at various levels, thus enabling ICAO, international organizations, groups of States and individual States, to prioritize actions directed at resolving identified and quantified safety concerns. Reports derived from the AFDD have been used by the Air Navigation Bureau sections, panels and study groups.

3. **IMPLEMENTATION OF A COMPREHENSIVE SYSTEMS APPROACH FOR THE UNIVERSAL SAFETY OVERSIGHT AUDIT PROGRAMME**

3.1 **Concept**

3.1.1 Safety oversight audits performed so far have been planned and conducted on an Annex-by-Annex basis, starting with Annexes 1, 6 and 8 and with a view to progressively introducing other Annexes. While this approach served its purpose and proved effective for the establishment of the Programme and the initial audits, it has become clear that continuing along the same line to assess the capabilities of Contracting States for safety oversight and the implementation of safety-related provisions would be both lengthy and expensive.

3.1.2 The challenge faced by the Organization is to firmly establish and maintain an effective and efficient safety oversight audit programme, while keeping the overall operating expenses at an acceptable level. On the basis of the experience gained so far, the Council is now of the opinion that it is time for USOAP to evolve from an Annex-by-Annex to a comprehensive systems approach, which would focus on the States' overall safety oversight capabilities. The comprehensive systems approach would cover all safety-related Annexes and would provide an improved and cost-effective approach to auditing.

3.1.3 The envisioned comprehensive systems approach to the conduct of safety oversight audits would consist of two phases. In the first phase, the implementation of Annex provisions and the identification of differences would be determined through the review of duly completed State Aviation Activity Questionnaire and Compliance Checklists for all relevant Annexes, and through the review of documents developed by a State to assist it in the implementation of SARPs, as well as in maintaining an effective safety oversight system. In the second phase, the State being audited would be visited by an ICAO audit team, who would validate the information provided by the State and also conduct an on-site audit of the State's overall capability for safety oversight. This would include an audit of the organization, processes, procedures and programmes established and maintained by the State to help it fulfil its safety oversight obligations.

3.1.4 Audits under a comprehensive systems approach would be tailored to the level and complexity of aviation activities in the State to be audited, taking into account the mechanisms put in place by the State to carry out its safety oversight responsibilities. The duration and periodicity of the visits, as well

as the size of the audit teams, would be determined through a review of the information contained in documents provided by the State, including the completed State Aviation Activity Questionnaire and the Compliance Checklist. As a basis, all Contracting States would be visited at least once in any six-year period, with follow-up visits conducted on a need basis.

3.1.5 Under the comprehensive systems approach, ICAO regional offices will play a major role in their respective regions. The main role of the regional offices will be to conduct follow-up missions to ascertain the status of implementation of States' corrective action plans, in addition to maintaining close contact with audited States as part of their regular mission. Technical staff from the regional offices will be trained as safety oversight auditors to assist in the conduct of audits and to conduct follow-up missions.

3.1.6 In view of the benefits to be gained from conducting safety oversight audits under the comprehensive systems approach, and taking into consideration the time required to develop the requisite questionnaire, compliance checklists and protocols, including training material for auditors, the Council proposed that the expansion of the Programme to Annexes 11, 13 and 14, initially planned to start in 2004, be postponed to 2005 in order to further expand the audit programme to encompass the safety-related provisions in the Annexes to the Convention. In this regard, it should be noted that the continuation of audit activities related to Annexes 1, 6 and 8, as well as the preparatory work conducted for the expansion of USOAP to Annexes 11, 13 and 14 will be integrated into the comprehensive systems approach as it is adopted in 2005.

3.2 **Auditing Staff**

3.2.1 The effective implementation of a comprehensive systems approach in the conduct of safety oversight audits would require the availability of a sufficient number of qualified and experienced auditors in the various areas that would be subject to audit. ICAO cannot afford the resources to employ all the auditors which would be needed to do the job. To overcome this problem, and in order to minimize costs while fully attending to the requirement of the comprehensive systems approach to the conduct of safety oversight audits, States able to do so are encouraged to provide the Organization with long-term seconded officers for a period of three years to complement the auditing staff recruited by ICAO.

3.3 **Financial impact of the proposed action**

3.3.1 The draft Programme Budget for 2005, 2006, and 2007 reflects the financial implications of the implementation of the comprehensive systems approach, which also takes into consideration that ICAO cannot afford to employ all the required experts as presented in paragraph 3.2.1. Accordingly, the draft budget requirements for USOAP over the next triennium (2005-2006-2007) are based on the following assumptions:

- a) USOAP staff will be complemented by sharing professional staff members with other ANB sections and the regional offices, and by long-term seconded auditors from States, made available for at least the duration of the triennium, and based at ICAO Headquarters;
- b) providing all initial auditor training in 2005;
- c) conducting, on average, audits of thirty-two Contracting States (sixteen missions) per year, with a view to completing all audits in a six-year cycle;

- d) conducting an average of three safety oversight management seminar/workshops a year; and
- e) as much as possible, using qualified auditors from the regional offices and short-term seconded experts in an effort to minimize the cost of transportation.

3.3.2 Considering the assumptions presented above, the proposed budget for USOAP is estimated at U.S.\$ 8.6 million for the triennium, which is almost the same amount that was required to audit the three initial Annexes. However, with a total savings of approximately U.S.\$ 1 200 000 expected to be achieved in 2004 as a result of the postponement of the expansion of the Programme and other efficiencies, the requirement for new funding for the Programme from the Regular Programme Budget in the next triennium is estimated at U.S.\$ 7.4 million.

4. CONCLUSIONS

4.1 While the Annex-by-Annex approach used so far for the conduct of audits served its purpose and proved effective for the initial establishment of the Programme, continuing along the same lines would be lengthy and expensive.

4.2 Support to States through the conduct of safety oversight management seminar/workshops and the development of relevant guidance material is the only assistance made available at virtually no cost to Contracting States and should continue.

4.3 Audits in the expansion areas of Annexes 11 and 14 cannot be done effectively in isolation, as the provisions contained therein are closely interrelated with provisions contained in several other Annexes, as presented in paragraph 2.2.1 above, which should be addressed at the same time.

4.4 A comprehensive systems approach to conducting safety oversight audits would address the safety-related provisions contained in all safety-related Annexes by focussing on the State's overall safety oversight capability and specific safety critical areas, while assessing the implementation of all provisions through the review of the Compliance Checklists applicable to each Annex. It also offers the potential for cost savings, in the long-term, when compared to an Annex-by-Annex approach.

5. ACTION BY THE ASSEMBLY

5.1 The Assembly is invited to:

- a) note the information contained in paragraph 2, relating to the current activities of the ICAO Universal Safety Oversight Audit Programme;
- b) note the information contained in paragraph 3, relating to the further expansion of the USOAP to conduct audits of the safety-related provisions contained in all safety-related Annexes to the *Convention on International Civil Aviation*, applying a comprehensive systems approach;
- c) note the information contained in paragraph 3, relating to the postponement of the expansion of the Programme from 2004 to 2005; and

- d) adopt the Resolution contained in the Appendix to this working paper relating to the evolution of USOAP to conduct audits of the safety-related provisions contained in all safety-related Annexes using a comprehensive systems approach.

APPENDIX

DRAFT RESOLUTION A35-X (to supersede Resolution A33-8)

TRANSITION TO A COMPREHENSIVE SYSTEMS APPROACH FOR AUDITS IN THE ICAO UNIVERSAL SAFETY OVERSIGHT AUDIT PROGRAMME (USOAP)

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

Whereas promoting the implementation of international standards contributes to this objective;

Whereas Article 37 of the Convention requires each Contracting State to collaborate in securing the highest practicable degree of uniformity in regulations and practices in all matters in which such uniformity will facilitate and improve air navigation;

Recalling that the 32nd ordinary session of the Assembly resolved that a universal safety oversight audit programme be established, comprising regular, mandatory, systematic and harmonized safety oversight audits to be carried out by ICAO;

Whereas the ICAO Universal Safety Oversight Audit Programme (USOAP) has been successful in meeting the mandate given by Resolution A32-11;

Recalling the objectives of the ICAO Universal Safety Oversight Audit Programme, which seeks to ensure that Contracting States are adequately discharging their responsibility for safety oversight;

Recalling that ultimate responsibility for safety oversight rests with Contracting States, who shall continuously review their respective safety oversight capabilities;

Recalling that Assembly Resolution 32-11 requested the Council to present proposals for the funding of the programme on a long-term basis;

Recalling that Assembly Resolution 33-8 instructed the Secretary General to undertake a study regarding the expansion of the Programme to other safety-related fields;

Recalling that Assembly Resolution 33-8 requested the Council to ensure the long-term financial sustainability of the USOAP, phasing in all of its activities into the Regular Programme budget, in due course;

Recognizing that the implementation of the USOAP has been instrumental in the identification of safety concerns and in providing recommendations for their resolution;

Recognizing that the effective implementation of State action plans is essential to enhance the overall safety of global air navigation;

Recognizing that the continuation and expansion of the USOAP to cover all safety-related Annex provisions is essential to promote the adequate implementation of safety-related Standards and Recommended Practices;

Recognizing that the Secretary General has taken appropriate steps to ensure the establishment of an independent quality assurance mechanism to monitor and assess Programme quality.

The Assembly:

1. *Expresses* its appreciation to the Secretary General on the successful implementation of the ICAO Universal Safety Oversight Audit Programme;
2. *Resolves* that the ICAO Universal Safety Oversight Audit Programme be further expanded to include the safety-related provisions contained in all safety-related Annexes to *the Convention on International Civil Aviation* as of 2005;
3. *Requests* the Secretary General, from 1 January 2005, to restructure the ICAO Universal Safety Oversight Audit Programme to adopt a comprehensive systems approach in conducting safety oversight audits in all Contracting States;
4. *Requests* the Secretary General to restructure the safety oversight audit reports to reflect the critical elements of a safety oversight system, as presented in ICAO Doc 9734 — *Safety Oversight Manual, Part A - The Establishment and Management of a State's Safety Oversight System*;
5. *Requests* the Secretary General to adopt a more flexible approach in the implementation of the Programme on a long-term basis;
6. *Requests* the Secretary General to continuously ensure the maintenance of the quality assurance mechanism established to monitor and assess Programme quality;
7. *Calls* on all Contracting States able to do so to assign qualified and experienced technical staff to ICAO on a long-term secondment basis with a view to enabling the Organization to continue to successfully implement the Programme;
8. *Urges* all Contracting States to submit to ICAO, in a timely manner, and keep up-to-date, all the information and documentation associated with the preparation and conduct of an audit, to ensure the effective and efficient implementation of the Programme;
9. *Urges* all Contracting States to cooperate with ICAO and as much as practicable to accept audit missions as scheduled by the Organization in order to facilitate the smooth functioning of the Programme;
10. *Urges* all Contracting States to accept the primacy of USOAP audit results as meeting the established international Standards, Recommended Practices and Procedures, when considering the need for additional or supplementary safety oversight audits by States;
11. *Declares* that Resolution A33-8: *Continuation and expansion of the ICAO Universal Safety Oversight Audit Programme* has been superseded by this Resolution;
12. *Requests* the Council to report to the next ordinary session of the Assembly on the overall implementation of the Programme.