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Agenda Item 5: **Safety Oversight Matters**

**TRANSITION TO A SYSTEM APPROACH FOR AUDITS IN THE ICAO UNIVERSAL
SAFETY OVERSIGHT AUDIT PROGRAMME (USOAP) AND ICAO GASP UNIFIED
STRATEGY ON SAFETY CONCERNS**

(Presented by the Secretariat)

SUMMARY

This paper contains information on 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 system approach for USOAP, as an evolution from Annex-by Annex approach, which has been followed since the inception of the Programme. By highlighting the benefits of applying a system approach for the conduct of ICAO safety audits in term of effectiveness, efficiency and economy, the paragraph also illustrate 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. It also contains information on the proposed ICAO GASP Unified Strategy on Safety Concerns, describing the problems identification, solution, strategy application and implementation.

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 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 these 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 Meeting, a comprehensive report on the discussion related to the continuation of USOAP beyond 2004, and for the implementation of the systems approach for conducting ICAO audits as an evolution from Annex-by-Annex approach, which has been followed since the inception of the Programme.

2. USOAP's activities during the current triennium

2.1 Conducts 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 the State fly all over the world;
- b) operator certified by 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 safe 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 safety concern raised by States, for a 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 the continuing airworthiness of aircraft and need to have the assurance that the States who are signatory to the Convention on International Civil Aviation (Doc 7300) meet the Annex requirement, 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 Annex 11 and 14 is inter-related with the implementation of numerous provisions in various Annexes, and especially with those contained in Annex 1 – *Personnel Licensing*, Annex 2- *Rules of the Air*, Annex 4 *Aeronautical Charts*, Annex 10- *Aeronautical telecommunication* and Annex 15- *Aeronautical Information Services*. The conduct of audits relating to Annexes 11 and 14 cannot be done 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 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 various fields in order to conduct ICAO audits, while under the leadership of ICAO expert; and
- b) the use of national experts will help to share and transfer expertise among the State experts and disseminate standardized application of international SARPs and will generally result in enhanced coordination and relationship among technical experts of Contracting States.

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

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 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 major tool to provide generic assistance to Contracting States, and will continue to be delivered by ICAO at the same 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 enables States to implement SARPs in harmonized manner ensuring a standardized implementation of annex provisions they are designated to support. Guidance material under development in the Safety Oversight Section (SOS) will also address the establishment and management of Regional Safety Oversight System.

2.6 *Analysis of audit results*

2.6.1 An Audit Findings and Differences Database (AFDD) has been developed to achieve findings and differences arising from safety oversight audits and audit follow-ups carried out under the USOAP. Information generated through the AFDD, such as level of aviation activity in a State and the actual findings and differences identified during audits allow SOS to conduct a detailed analysis with the aim of determining possible courses of action for the resolution of safety concerns. The AFDD has provided SOS with the ability to identify safety concerns based on 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 action directed at resolving identified and quantified safety concern. Reports derived from AFDD have been used by the Air Navigation Bureau sections, panels and study groups.

3. Implementation of a system approach for the universal safety Oversight Audit Programme

3.1 Safety oversight audit performed so far have been planned and conducted on an Annex-by-Annex basis, starting with Annex 1, 6 and 8 and a view to progressively introducing other Annexes. While this approach served its purpose and proved to be effective for the establishment of the programme and the initial audits, it has become clear that the 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.

3.1.1 The challenge of ICAO 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 the USOAP to evolve from Annex-by-Annex to a system approach, which would focus on the States overall safety oversight capabilities. The system approach would cover all the safety related Annexes and would provide an improved and cost-effective approach to auditing.

3.1.2 The envisioned system approach to conduct of safety oversight audits would consist of two phases. In the first phase the implementation of Annex provision and the identification of differences would be determined through the review of duly completed State Aviation Activity Questionnaire and Compliance Checklist for all relevant Annexes, and through the review of documents developed by a State to assist in the implementation of SARPs, as well as in the maintaining of 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 capability for safety oversight, this would include an audit of organization, processes, procedures and programmes established and maintained by the State to help it fulfil its safety oversight obligation.

3.1.3 Audits under the system 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 States to carry out its oversight responsibility. The periodicity of the visits, as well as the size of the audit team, would be determined through a review of 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 visit conducted on a need basis.

3.1.4 In view of the benefits to be gained from conducting safety oversight audits under the system approach, and taking into consideration the time required to develop the requisite questionnaire, compliance checklist and protocols, including training material for auditors, and also to avoid an imbalance on the conduct of audits between States, 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 all 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 would be integrated into the systems approach, as it will be adopted in 2005. This includes dispositions related with operational safety which figures in all the Annexes dealing with this theme and will be presented during the 35 period of the Assembly (Montreal, 28 September – 8 October, 2004). With the foreseen expansion of the USOAP to encompass 16 of the 18 ICAO Annexes of the Convention

on International Civil Aviation (Doc 7300), it is inevitable that the volume of workload for the ICAO and the States will be considerably increased.

3.1.5 Under the comprehensive system approach, and given the wide range of subjects to be covered in every audit, it is envisaged that, in many States, ICAO will have to deal with several entities responsible for safety oversight tasks, in addition to the Civil Aviation Authority. To facilitate the task, the states have been requested through the SAAQ, to appoint a National Safety Oversight Coordinator (NSOC), whose responsibility will be to coordinate among the various authorities or department responsible for safety oversight within the State.

3.2 *Auditing Staff*

3.2.1 The effective implementation of a system approach to 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 for the job to overcome this problem and in order to minimize the cost while fully attending to the requirements of the system approach to the conduct of safety oversight audits, States able to do so are encourage to provide the Organization with long-term seconded officers for a period of three years to complement the auditing staff recruited by ICAO.

4. **ICAO GASP UNIFIED STRATEGY- SAFETY CONCERNS**

4.1 **Problem Statement**

4.1.1 Analysis of the one hundred and thirty one audit follow-up missions revealed that Contracting States continue to make progress in the implementation of their corrective action plans and the resolution of safety concerns. However, while these results are encouraging, the audit follow-up missions have also revealed that a number of States have not made much progress in the resolution of safety concerns identified at the time of the initial audits. It should be also noted that some Contracting States have not submitted a proposed corrective action plan since their initial audit. The fact remains, that after the follow-up missions, approximately 24 per cent of the audited States experience difficulties in the implementation of their corrective action plans in relation to operations regulations, development of guidance material, qualified technical personnel and resolution of safety issues.

4.1.2 The audits have also revealed organization-related problems, arising mainly from a lack of commitment by Governments to support their corresponding civil aviation authorities at the desired level. Where such deficiencies exist, some of the consequences are incorrect and insufficient safety performance to ensure safety.

4.2.1 **Proposed solution- Building Safety Oversight**

4.2.2 The provision of support to States is not a new idea or a new exercise as ICAO, some States and other organizations have been giving this kind of support to States requesting it, in most cases, through dedicated assistance project. However, this approach has not always been as efficient and effective as intended to correct deficiencies. The main difference with the unified strategy is the partnership approach to analyse causes, develop an implement solution in a more business- like type approach. ICAO as a partner could assist in the development of business case to rectify safety- related deficiencies in individual or group of States.

4.2.3. The partnership may range from a State specific cooperation project example, experts working directly with the State authority. Other approach is involving a group of States sharing experts for the developments of regulation, procedures and training, or project developed by the ICAO Technical Cooperation Bureau (TCB) as the Cooperative Development of Operational safety and Continuing Airworthiness (COSAP). Other States have chosen an establishment of a sub-regional organization responsible for performance of Safety oversight tasks in all the member States, like ACSA in Central America and RASOS in the Caribbean region.

4.2.4 The root cause of problems will need to be analysed in the partnership approach involving: Air Navigation Bureau (ANB) and the appropriate regional office, together with the States concerned. The ICAO regional offices are best positioned and best qualified due to its finger on the pulse of its Region to bring objectivity in the analysis process. The TCB is the principal source to provide expertise and additional resources as required for the development of solution.

4.2.5 Another area that ICAO would explore under unified strategy is how further cooperation and partnership can be established with the industry, air navigation service providers and financial institutions with objective of assisting States in improvement their safety oversight capability.

4.3 **Implementation**

4.3.1 Implementation of the business plan is the most critical aspects of the strategy. Overall coordination will be provided by the ANB. TCB will identify donors and sources of expertise and financing as required and manage implementation as required. States may, as they see fit, submit an application for a loan or grant to IFFAS on bases of remedial business plan.

4.3.2 Regional Offices will monitor progress of the implementation, identify any emerging difficulties with the progress, including critical path and major milestones, and provide feedback information to the partners involved in the remedial process. ICAO Headquarters will update the information concerning the safety oversight capability of a State on bases of information from ICAO regional offices and make it available to other Contracting State. Similarly, the partners will use the feedback information received from regional offices to adjust the business plan as required to overcome difficulties encountered.

5. **Conclusion**

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

5.2 Support to the 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.

5.3 Audits in the expansion areas of Annexes 11 and 14 cannot be done in isolation, as the provisions contained therein are closely inter-related with provisions contained in several other Annexes, as presented in paragraph 2.2.1 above which should be address at the same time.

5.4 A system approach to conducting safety oversight audit would address safety-related provisions contained in safety related Annexes by focusing 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 Checklist. It also offers the potential for cost saving, in long-term, when compared to Annex-by-Annex approach.

5.5 The ICAO GASP Unified Strategy-Safety Concerns would address partnership of ICAO, States, users, air navigations service providers, industry, financial institutions and other stake holders to analyse causes, develop an implementation solution in order to foster a safe international civil aviation system and to assist States in resolving safety-related deficiencies, and improving aviation safety.

6. Suggested Action

6.1 The Directors of Civil Aviation are invited to take note of the contents of this information paper and for the process of preparation and conduct of the expansion of the ICAO Universal Safety Oversight Audit Programme (USOAP) to the Annexes 11, 13 and 14 considering the application of the administrative experiences gained during the initial ICAO USOAP Annexes 1, 6 and 8, in order to expedite processing of the SOA pre-audit questionnaires required.

6.2 It is suggested that the Directors of Civil Aviation take note of the ICAO GASP Unified Strategy-Safety Concerns to foster a safe international civil aviation system among the States and in order to improve the aviation safety in the Region.