



International Civil Aviation Organization

NORTH AMERICAN, CENTRAL AMERICAN AND CARIBBEAN OFFICE

**Twentieth Meeting of Directors of Civil Aviation of the Eastern Caribbean
(20th E/CAR DCA)**

Miami, Florida, United States 4 to 7 December 2006

20th E/CAR DCA-IP/24

04/12/06

Agenda Item 5:

Safety Oversight Developments

**ASSOCIATION OF CIVIL AVIATION AUTHORITIES OF THE CARIBBEAN-REGIONAL
AVIATION SAFETY OVERSIGHT SYSTEM (RASOS) ACTIVITIES**

Presented Jointly by RASOS Members: Barbados, Guyana, Haiti, Jamaica, the Organization of Eastern Caribbean States (Antigua and Barbuda, Dominica, Grenada, St. Lucia, St. Kitts and Nevis, St. Vincent and the Grenadines), Suriname, and Trinidad and Tobago, Member States of the Caribbean Community.

SUMMARY

This Information Paper provides a description of the development, activities, achievements and future plans for the Regional Aviation Safety Oversight System developed by the Association of Civil Aviation Authorities of the Caribbean. It describes a cooperative approach to sub-regional safety oversight for small States. The Association is willing to share its knowledge, experience and material with other civil aviation authorities wishing to develop a regional safety oversight organization.

1. Introduction

1.1 The Civil Aviation Authorities of Barbados, Belize, Guyana, Haiti, Jamaica, OECS (Anguilla, Antigua and Barbuda, Dominica, Grenada, Montserrat, St. Lucia, St. Kitts and Nevis, St. Vincent and the Grenadines), Suriname, and Trinidad and Tobago, Member States of the Caribbean Community, signed an agreement in late 2001, formalizing their participation in and support for a cooperative approach to aviation safety oversight. The Agreement provides for the establishment of an "Association of Civil Aviation Authorities of the Caribbean" (ACAAC) under the umbrella of the Caribbean Community (CARICOM) Secretariat. The collective mandate of the eight authorities is to provide aviation safety oversight with specific regard to Annexes 1, 6, and 8 of the Chicago Convention and to assist and facilitate the provision of other aviation services for fourteen small nations in the Caribbean region. Although all participating States are members of CARICOM, membership of CARICOM is not a pre-requisite for membership in the ACAAC. In 2006 the States will widen the ACAAC mandate to include all ICAO Annexes and their organization will take a major step forward in elevating its status by establishing itself as a new entity, the Caribbean Aviation Safety and Security Oversight System (CASSOS) and achieving the designation of this entity as an Institution of the Community by the Conference of Heads of Government pursuant to Article 21 of the *Revised Treaty of Chaguaramas Establishing the Caribbean Community Including the CARICOM Single Market and Economy*. It is expected that the Agreement establishing CASSOS will be signed by Heads of Government of CARICOM.

2. Discussion

2.1 The ACAAC was formed in response to the lack of required organizational capacity and technical skills for any one of the small states to fully meet, on a sustainable basis, the civil aviation safety oversight requirements under the Chicago Convention. The ACAAC agreement responded to the challenge by implementing a regional mechanism, the Regional Aviation Safety Oversight System (RASOS), to share resources and reduce the cost of providing the required airworthiness and flight operations oversight services to individual member states. The implementation of the RASOS and the support provided to it by ICAO, the United States Federal Aviation Administration (FAA) and Transport Canada have seen growth in the existence and availability of the required technical skills in the various states. The RASOS has been working to optimize the use of the region's technical resources. Its focus has been on strengthening the civil aviation authorities, promoting the upgrading and harmonization of regulations, standards, procedural guidance material, inspector training and enhancing the ability of the individual states to fully discharge their safety oversight responsibilities. The sub-regional approach chosen is consistent with the global strategy promoted by ICAO to address safety oversight problems of contracting states.

2.2 In September 2002 the RASOS Board of Directors chose Kingston, Jamaica as the site of an Interim Coordinator's office. The present host organization, the Jamaica Civil Aviation Authority, provides office space and administrative and financial support services while RASOS now has its own bank accounts and is fully funded by equal annual member CAA contributions to cover the costs of the RASOS office staff emoluments and operations.

2.3 RASOS developed a corporate strategic plan for the period 2004-2008 and has embarked on several harmonization initiatives. The decision to share the technical resources resulted in a pool of more than 40 trained technical inspectors potentially available to each Authority rather than just the 3 to 10 that are normally on staff in any one of the small organizations. The pool of inspectors provide safety oversight services to air operators including 7 international and regional airlines operating over 70 transport category aircraft such as the Airbus 340 and 320 series, Boeing 747, MD-80, B-737 and DHC-8, four flight training units, two AME training organizations, 25 general aviation and air taxi operators, over 2000 licensed airmen; and 21 international and over 75 domestic aerodromes. Their commercial air operations span 25 nations and there are more than 70 operating stations, 25 foreign repair stations, and 10 foreign training centers requiring certification, inspection and surveillance. All of the participating states are now more advanced in upgrading the capability of their civil aviation oversight organizations. For example, with respect to the FAA International Aviation Safety Assessment program, Jamaica was in Category One at the time RASOS was established, Suriname advanced to Category One in 2003, Trinidad and Tobago achieved Category One in mid 2005 and the Organization of Eastern Caribbean States is expected to advance to Category One following its IASA final assessment in early 2006. Those still working toward Category One will be assisted by RASOS as it continues to perform technical reviews and needs assessments of each authority and provides technical assistance on what is now becoming a routine basis.

2.4 The establishment of a Regional Safety Oversight Coordinator's Office to organize, coordinate and manage the technical resources of the various national authorities and to supplement their skill base was agreed upon as the most appropriate mechanism to discharge the obligations of the states. The RASOS was the first step toward the development of a sustainable regional authority similar to that promoted and supported by ICAO in Europe, Africa and Latin America. This has now been officially proposed and is looked on favorably by the CARICOM Secretariat as being completely in keeping with the objectives of the CARICOM Revised Treaty of Chaguaramas and in particular the establishment of the CARICOM Single Market and Economy (CSME) that has been the subject of attention from the highest political levels in the Caribbean region.

3. International Assistance

3.1 Assistance from the United States Federal Aviation Administration was offered in September 2002 on the basis of a Memorandum of Cooperation between the FAA and the Caribbean Community and was accepted at the First Meeting of the RASOS Board of Directors held in Georgetown, Guyana in September 2002. A team comprised equally of technical experts from RASOS Member States and the FAA completed a regional safety oversight needs assessment report in December 2002 that provided the necessary framework to proceed with a structured work plan to enhance the capabilities of all member States authorities. From 2003-2005 US State Department funds from the Third Border Initiative paid for numerous training courses for inspectors and other technical staff, ICAO courses were delivered in the region with regard to aerodrome certification and dangerous goods and PEL, Transport Canada assisted with some compliance and enforcement training and FAA provided extensive in country assistance by technical experts aimed at advising and assisting Members to achieve IASA category one. This assistance included mentoring of inspectors and technical advice provided during re-certification of air operators. Ongoing FAA technical assistance pursuant to Technical Assistance Agreements is aimed at completion of an airman question bank data base project in which a regional question bank for common written examinations will be provided for the next five years via a specially constructed Web based sub-system of the FAA national airman examination question data base technical questions augmented by RASOS Members' incorporation of their own law questions and specific aircraft maintenance engineer questions into the system. Transport Canada has also assisted with training of civil aviation medical examiners and cabin safety inspectors.

4. RASOS Achievements 2001-2006

4.1 Considerable effort was expended during the period as each RASOS Member State rewrote or amended and updated their Civil Aviation Acts and Regulations and now, in 2006, all are based on adaptations of the ICAO Model Civil Aviation Regulations thus paving the way for further development of common regional regulations. Work is now advanced in development of a common enforcement manual. During 2003-2005 the focus was on training of technical staff and the FAA and ICAO hosted numerous training courses in North America and within the region for the RASOS group's inspectors, and Transport Canada assisted with compliance and enforcement training. Courses were conducted in the Caribbean region and in North America. Specific training included initial flight operations and airworthiness inspector courses, aerodrome certification, dangerous goods awareness, and ALAR-CFIT training. Various specialty flight operations and airworthiness inspector courses including inspection of foreign work stations, aging aircraft and corrosion, air operator certification, check airman and designated examiner, and approval of training organizations were completed. Training was completed in aviation security, cabin safety inspection, accident investigation, evaluation of aviation management systems, and aircraft type ratings. PEL officers, inspectors and civil aviation medical examiners completed Trainair PEL courses held in the region and in Oklahoma City. In all, the initial two years of RASOS saw several hundred person-weeks of training being delivered to over 40 safety oversight technical personnel, over 20 aerodrome operator staff and to several air operator technical persons. While training will always be important it is now a lower priority need as the existing cadre of safety oversight technical staff has acquired most of the required skills and competencies needed. While all newly hired safety oversight staff will still need to complete the same types of courses, the RASOS group is now focusing more closely on harmonization and resource sharing issues and on addressing technical and safety training needs for aerodrome operator personnel. Working groups and standing committees were tasked to review and make recommendations to the Board regarding changes and enhancements to achieve a greater degree of standardization and commonality among the seven RASOS members. The working groups and standing committees have been active in the areas of aerodrome certification; personnel licensing; safety regulations, standards and compliance; foreign repair station approvals; inspection methodology and reporting forms; flight test standards, flight test examiner/check airmen guidance and flight test reporting forms.

4.2 Common qualifications and training standards for inspectors have been enunciated to facilitate resource sharing, that is, the trans national use of inspectors, and procedures for designation and delegation of authority and for requesting, tasking and deploying trans national inspectors have been published. The RASOS Policy and Procedures Manual, developed to guide the management and operation of RASOS is now used to guide staff in their duties. Inspector guidance material, although not completely common at this time, is shared freely between Members and development of common guidance material is expected to follow the development of common regulations.

4.3 RASOS completed the “regional” certification of an aircraft maintenance engineer training organization as inspectors from several RASOS States formed a joint team and conducted the certification. It is now an approved training organization (ATO) for several RASOS States. RASOS, ICAO and the ICAO Council representative from St. Lucia subsequently assisted the school to apply for TRAINAIR approval and ICAO TRAINAIR staff completed an inspection of the ATO which is expected to be listed globally as an approved TRAINAIR institution. Plans are to continue this regional activity and conduct regional certifications of flight training organizations. As described in 3.1 above, the FAA has been assisting and participating with RASOS Members in a regional project aimed at developing web based computerized written knowledge examinations for flight crew, dispatchers and aircraft maintenance engineers based on random selection of questions from a data base developed by the FAA and the RASOS Members that will mean there is a common set of examinations for the RASOS Members by the end of 2006. This is expected to lead to mutual recognition and acceptance of licenses within the group. RASOS also has a project to computerize the production of ICAO Annex 1 compliant personnel licenses in a common format and incorporating acceptable security features in both the production and in the license. As small States with small numbers of licensed personnel in any one State it would be expensive for each State to contract its own medical assessor for civil aviation medical examination reports and the RASOS Members are setting up a regional medical assessor program.

4.4 In 2006 four of the seven RASOS Members meet the IASA Category One standards. With mutual assistance from Members in Category One it is expected that the remainder should achieve full compliance by the end of 2007. RASOS has performed four reviews of its Members using experienced inspectors from the region and checklists derived from IASA checklists. Reports are sent to the individual Members and RASOS uses the results to determine any region-wide needs. These reviews have assisted members to prepare for IASA audits.

4.5 RASOS is using a survey checklist to have individual aerodromes in the region describe their technical assistance and training needs and intends to facilitate strategic interventions where possible to alleviate any needs or deficiencies. This is aimed at achieving a higher level of compliance with ICAO aerodrome certification standards and a higher level of safety in the region.

5. Use of Internet Technology and Communications

5.1 The RASOS web site contains both public information and secure members only sections. The public sections describe the organization, achievements, contain some of the briefing material and slides presented at recent ICAO regional DCA meetings, press articles and news. The members only section has two levels of security for the regional CAA inspectors, the Directors and RASOS staff. The latter contains minutes, financial reports, working group reports and administrative information and pertinent regional technical information. The inspectors’ section contains downloadable inspection forms, some common guidance material, flight test forms and other data required by the region’s technical staff such as the regional collation of each RASOS state’s civil aircraft register. The web site also hosts a safety newsletter, links to contact RASOS section and provides a secure 128 bit encrypted e-mail service for the Directors, RASOS staff and all technical safety inspectors in the RASOS group and other selected officials who have been working with RASOS. It is developing as a very strong tool for communication and information and data sharing and for providing a public identity for the organization.

5.2 RASOS will be using internet technology to deliver and mark written knowledge examinations for personnel licensing in all Members’ headquarters offices by early 2007..

5.3 RASOS is working to develop its own regional inspection planning, tracking and reporting system as well as an incident and accident reporting system. While this will protect national security, confidentiality and sovereignty as required, it will provide a valuable tool for analysis and tracking of trends and allow development of appropriate safety interventions.

5.4 RASOS is working to develop a regional safety management system that will utilize internet technology.

6. Technical Focus

6.1 RASOS has now provided or coordinated direct technical support to Jamaica, the Republic of Guyana, Barbados, the Organization of Eastern Caribbean States, the Republic of Suriname and the Republic of Trinidad and Tobago. In developing its technical expertise RASOS was assisted by two FAA technical aviation experts and one FAA aviation legal expert who worked on a collaborative basis with RASOS and also bilaterally to assist member States with aviation safety oversight improvements. The FAA assistance focus was aimed at aiding the CAA to achieve compliance with the ICAO Annexes 1, 6 and 8 and at successful FAA IASA audits and upgrade of CAAs to IASA Category One. The RASOS focus includes the FAA Annex 1, 6 and 8 objectives but is also more widely focused on compliance with all 18 ICAO Annexes including air traffic services, accident investigation, aerodrome safety and aviation security as well as on CARICOM regional development including support to CARICOM regional transportation, work and trade objectives. RASOS is set up employ regional flight operations and airworthiness technical experts and an administrative support person as well as to operate in cooperation with the technical experts from the FAA or other donor organizations who have been assigned to work with the RASOS program.

7. Conclusions

7.1 The direct beneficiaries of the ACAAC's RASOS organization are the participating States of CARICOM and other States or Territories in the region that might become part of the regional oversight mechanism during the next few years. Other beneficiaries are the owners and operators of aircraft in these States and Territories and the users of the air services including the tourism sector of the economies. External benefits flow to the States from the improved aviation safety environment resulting from the upgraded aviation infrastructure and the increased surveillance and enforcement of the safety standards established by ICAO.

7.2 The RASOS organization is now maturing after almost four years of operating experience and is facilitating the establishment of a self-sufficient regional safety oversight system in an area of high economic priority to all participating States as well as to other States whose airlines operate into the region. ACAAC and its RASOS are a regional success story and this will continue as it metamorphoses into CASSOS, a truly regional institution. Despite the current sustained level of member funding being sufficient to fund the RASOS office and its operations the organization will continue to need technical support and funding for both future operations projects and normal growth as well as for the planned expansion into involvement with all aspects of aviation.

7.3 The immediate benefit of regional cooperation is evident from the constantly improving track record of results of the ICAO and FAA safety oversight audits of member CAAs. Benefits are also accruing to members from the mutual technical cooperation, mutual technical assistance, attainment of greater numbers of trained and qualified technical inspectors, and the valuable technical expertise contributions made while assisting all seven Authorities in their efforts to achieve and sustain ICAO and FAA IASA compliance with international aviation safety oversight standards. A strong regional safety oversight team has been forged.

7.4 ACAAC-RASOS shares the following experiences and insights with States considering development of a regional safety oversight capability or participation in an existing regional organization:

- i) Political will and support and commitment of the participating Civil Aviation Authorities must exist for the concept to succeed.
- ii) RASOS benefited from the framework of the Revised Treaty of Chaguaramas which places specific obligations on Member States to cooperate, and in particular, Chapter Six of the Revised Treaty aimed at harmonization in the region and development of a single market and economy. Formal agreements such as this afford the highest chance of success for a regional safety oversight organization.
- iii) Sustainable funding is a necessity. It needs not be extremely expensive, but it must be sufficient to pay for core operations on an ongoing regular and reliable basis.
- iv) International assistance will very likely be required to get the project moving, part of that must involve training and skill transfer to the regional organization's members personnel.

- v) Well enunciated goals and realistic targets must be set for the organization. Goals may change over time as situations change or as new goals are added to meet new demands.
- vi) Regular open communications must be established at all levels within the regions and official records must be kept of all activities and of the personnel involved in trans national inspections.
- vii) Do not underestimate the time it can take to reach the first stage above, it took many years before the situation was exactly right for the start of RASOS, but once it was started it moved very quickly.
- viii) The concept is relatively inexpensive compared to the alternatives, simple in its execution, and it works very successfully.
- ix) States considering participation in an existing regional organization should ensure that there will be sufficient commonality of language for ease of communications and should be prepared to work toward commonality of regulations, standards, procedures and guidance material to ensure they will fit within the regional group.
- x) There should be no legal barriers to the use of trans national inspectors or technical experts.

7.5 International support for RASOS and the future CASSOS is desired and international interest is now focused on this young and dynamic organization. The ACAAC RASOS offers one model that may be used by other states interested in developing mutual cooperation in safety oversight. The ACAAC and its RASOS branch are ready to provide any information and advice to interested organizations. Interested civil aviation regulatory organizations are invited to contact the RASOS Office for additional information or to arrange a visit.

(ACAAC) Regional Aviation Safety Oversight System
 4 Winchester Road
 Kingston 10, Jamaica
 West Indies
 Telephone: 876-960-4364 Facsimile 876-929-4532
 e-mail: rasos@cwjamaica.com or contactus@rasos.org Web Site: www.rasos.org

8. Action by the Meeting

8.1 The Meeting is invited to:

- a) note the information contained in this information paper and in particular to recognize the ACAAC and RASOS as a regional organization aimed at enhancing the level of aviation safety of civil aviation in the region as well as facilitating other mutually accepted initiatives for the good of the Caribbean region and the Caribbean Community.
- b) note the substantial progress achieved by the ACAAC and RASOS in improving safety oversight in its Member States.
- c) note the future developments of ACAAC RASOS following its next major step forward after it becomes a formal institution of the Caribbean Community.
- d) extend all possible support to ACAAC RASOS and, in future, CASSOS, in accessing technical support and resources to further its work.
- e) consider that ACAAC-RASOS membership is not limited to CARICOM Members.