



Agenda Item 4: Priorities for the implementation of air navigation and safety improvements

AERODROME CERTIFICATION

(Presented by the Secretariat)

<p style="text-align: center;">Summary</p> <p>This working paper presents the goals and measures proposed for attaining aerodrome certification in the SAM Region:</p> <ul style="list-style-type: none">✓ Development of the set of Latin American Regulations for Aerodromes (AGA LARs) and its harmonisation with State regulations on aerodromes✓ Training of regional aerodrome inspectors based on the Aerodrome Inspector Manual (MIAGA).✓ Implementation of internal audit guides for aerodromes✓ Regional certification of aerodromes, and validation of aerodromes previously certified by the States using the AGA LARs✓ Implementation of aerodrome safety oversight guides	
<p style="text-align: center;">References</p> <ul style="list-style-type: none">• ICAO Annex 14 - Aerodromes, Vol. I – Aerodrome design and operations, 6th edition, July 2013• Second meeting of the Programmes and Projects Review Committee (PPRC/2)• First edition of the revised version of the ICAO Global Aviation Safety Plan (GASP) (Doc 10004, 2013)• Meeting of air navigation and safety directors of the SAM Region, Lima – Peru, 21 to 22 October 2013.	
ICAO strategic objectives:	<i>A – Safety C – Environmental protection and sustainable development of air transport</i>

1. Introduction

1.1 Aerodrome certification has been an ICAO standard since 2001 (Annex 14, Vol. I – *Aerodrome design and operations*), which includes the implementation of a safety management system (SMS) as a prerequisite for certification.

1.2 In the current aerodrome certification scenario in the SAM Region, in accordance with ICAO Doc 8733 – CAR/SAM Air Navigation Plan, out of 100 international airports reported in the South American Region, only (8) have been certified. An amendment is in progress to include four (4) aerodromes in the ANP; however, it is known that there are more international aerodromes that have not been reported to the SAM Regional Office for their inclusion.

1.3 The fast growth of civil aviation activities has exposed the obsolescence of State aerodrome oversight structures, which are based on a civil aviation authority that, in addition to its oversight duties, intervenes in each stage of the operation. The civil aviation activity requires a new approach based on collaboration between the regulatory bodies and service providers with a view to improving safety.

2. Aerodrome certification challenges

2.1 A certification process is essential to ensure a minimum level of safety in the provision of a service and thus is of great importance for the economic activities that are of interest to a State. In this sense, the civil aviation authority must consider aerodrome certification as one more certification amongst those being granted since the beginning of aviation, such as the airworthiness certificate granted to aircraft, personnel certification, operations certification, etc.

2.2 Unfortunately, although aerodrome certification is a standard contained in Annex 14, it has no impact on the operational decisions of airlines. Consequently, the aerodrome operator does not consider certification a priority. Likewise, States tend to minimise the importance of airport certification despite its safety benefits.

2.3 Furthermore, taking into account that most of the existing infrastructure dates back more than 50 years, when design requirements were less stringent than at present, the certification of an aerodrome built under less strict requirements has become a challenge for States, now that full compliance with the design standards contained in Annex 14, Vol. I and in the national regulation is required.

2.4 Accordingly, consideration should be given to the certification of aerodromes that deviate from the standards, using alternate means of compliance that offer the proper level of safety to international civil aviation activities.

2.5 In order to achieve aerodrome certification, civil aviation authorities face the following challenges:

- a) Drafting of national regulations suited to the reality of the State, the corresponding procedures for inspectors, and guidance material for aerodrome operators.
- b) Ensure adequate staffing in the various areas of aerodrome certification and provide the necessary training for proper fulfilment of the assigned certification and oversight function.

2.6 As long as air operations continue to be conducted on inadequate infrastructure, with no mitigation measures to ensure safety, aerodrome certification will continue to be a challenge. Likewise, the level of safety would improve with certified aerodromes, since operators would be constantly monitoring compliance with requirements, and the authority would be able to fulfil its regulatory compliance oversight role.

3. Aerodrome certification and effective implementation (EI)

3.1 The latest activities under the continuous monitoring approach (CMA) during the 2011-2013 period, and the results of the last cycle of the Universal Safety Oversight Audit Programme (USOAP) reveal that the average EI for the South American Region is approximately 70%, the AGA area accounting for 63.54% of the total. Aerodrome certification would significantly increase the EI in the

AGA area. CEs 4 and 7 only reach 50% EI for AGA, which reflects the need to train the personnel in charge of AGA tasks, as well as the number of inspectors capable of certifying and overseeing aerodromes.

4. **Aerodrome certification and safety**

4.1 According to the latest safety surveys, runway excursions are the most frequent occurrence in the South American Region. Although there are many factors involved in runway excursions, from the AGA point of view, it may be the result of failure to meet the standards. In both cases, aerodrome certification would ensure a minimum level of protection and thus contribute to reduce runway excursion occurrences.

5. **Proposed solutions**

5.1 In the **short term**, the aerodrome certification strategy started with the development of a set of Latin American Regulations for Aerodromes (AGA LARs) under the umbrella of the SRVSOP, with a view to providing States with regulations suited to the regional reality. The Aerodromes Panel, with the assistance of the SRVSOP Technical Committee, has developed a set of regulations for aerodromes, a first version of which has already been approved by the SRVSOP General Board and which, based on the commitments of the SRVSOP member States, should be then harmonised with, or adopted into, the national regulations by member States:

- ✓ LAR 154 – Aerodrome Design
- ✓ LAR 153 – Aerodrome Operation
- ✓ LAR 139 – Aerodrome Certification

5.2 The Aerodrome Inspector Manual (MIAGA) has also been drafted based on the principles of the Regional System and the set of AGA LARs. The MIAGA is a tool to guide the government Aerodrome Inspector as to the way of conducting certification and oversight activities, and is one of the requirements of a Safety Oversight System (Critical Element # 5).

5.3 A harmonised regional standard, as well as common procedures and training, would also enable the creation of a regional data bank of government aerodrome inspectors so that, in the **medium term**, they would be able to assist the States that do not have sufficient trained inspectors for aerodrome certification.

5.4 For airports that deviate from the standard, safety assessment methodologies are being applied in order to certify such aerodromes, making sure that air operations are conducted with the proper level of safety.

5.5 Finally, for the **medium and long term**, multinational teams of inspectors could perform the certification and continuous monitoring of aerodromes.

5.6 For States that are not members of the SRVSOP, the aerodrome certification strategy will be direct assistance by the Regional Office.

6. **Deadlines for effective implementation of the proposed solutions**

6.1 For effective implementation of the proposed solutions, the following deadlines have been established:

- ✓ short term, 31 December 2016;

- ✓ medium term, from 1 January 2017 to 31 December 2019; and
- ✓ long term, from 1 January 2020 to 31 December 2022.

7. **Performance indicators, proposed goals, and action plans**

7.1 *Certified aerodromes*

7.1.1 The indicator to be used is the percentage of certified aerodromes. The Meeting of Air Navigation and Safety Directors of the SAM Region considered that the goal of 38% of certified aerodromes to be achieved in the short term in the Region was too high and decided to reduce it to 20% (see the **Appendix**). One of the difficulties pointed out was the need to implement a complete SMS at the aerodrome as a condition for certification. However, it is expected that all aerodromes listed in the ANP will be certified in the long term.

7.1.2 The action plan includes the establishment of an aerodrome internal audit process by the operators and continuous aerodrome monitoring processes.

7.2 *Training of government aerodrome inspectors*

7.2.1 In order to mitigate the effects of a lack of trained personnel and the turnover of aerodrome inspectors in the respective authorities, training for government inspectors has been foreseen. The performance indicator will be the number of inspectors required for aerodrome certification (covering the seven aerodrome areas: pavements, horizontal and vertical signalling, lighting and electrical systems, wildlife strike hazard, obstacles, physical characteristics, and SSEI).

7.2.2 The Action plan includes training on the AGA LARs and the MIAGA, auditing techniques, and on-the-job training.

7.3 *Aerodromes with a certification validated with the set of AGA LARs*

7.3.1 Once the harmonisation/adoption of the AGA LARs by the States has been completed and at least a group of government inspectors has been trained in all aerodrome areas, States may receive assistance in the certification processes.

7.3.2 The indicator to be used is the percentage of certified aerodromes, in accordance with 7.1.1.

8. **Suggested action**

The Meeting is invited to:

- a) take note of the information contained in this working paper; and
- b) review and comment on:

- ✓ the aerodrome certification performance indicator;
- ✓ the proposed aerodrome certification performance goals; and
- ✓ the proposed aerodrome certification action plans.

APPENDIX

AERODROME CERTIFICATION PLAN

STATE	No. AERODROMES (Doc. 8733, Vol. II, FASID, Table AOP 1)	AERODROME CERTIFICATION			AUTHORITY IN CHARGE
		Certificates	Short Term 2016	Medium and Long Term 2019 - 2022	
Argentina	16		1	15	ANAC
Bolivia	4	3		1	DGAC
Brazil	27	1	1	20	ANAC
Chile	8 ¹		1	7	DGAC
Colombia	8 ²		3	7	AEROCIVIL
French Guiana	1			1	CAA
Guyana	2	2			CAA
Ecuador	4	1	1	2	DGCA
Panama	5 ³			5	DGCA
Paraguay	2		1	1	DINAC
Peru	8	1	1	6	DGCA
Suriname	2		1	1	CAA
Uruguay	6		1	5	DINACIA
Venezuela	7		1	6	INAC
TOTAL	100	8	12	80	

¹ SCIP has been added to CAR/SAM ANP (amendment approved)

² The inclusion of SKBG, SKPI, SKSM is in process of amendment (not added in the ANP yet)

³ The inclusion of MPPA is in process of amendment (not added in the ANP yet)

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