International Civil Aviation Organization
CAR/SAM Regional Planning and Implementation Group (GREPECAS)
Seventeenth Meeting of the CAR/SAM Regional Planning and Implementation Group (GREPECAS/17)
Cochabamba, Bolivia (Plurinational State of), 21 to 25 July 2014

Agenda Item 4: **Regional air navigation planning and implementation performance framework: Review of programmes and projects**

4.5 Projects of the AGA programme

FOLLOW-UP OF AERODROME PROJECT ACTIVITIES

(Presented by the Secretariat)

SUMMARY	
This working paper presents to the meeting the progress of the activities carried out by the aerodromes programme projects, and information on the status of implementation of the activities and tasks of said mentioned projects. The updated implementation dates of each project are shown in **Appendices A** and **B** for the CAR Region and in **Appendices C and D** for the SAM Region.	
References: • Report of the AGA/AOP/SG/08 meeting, July 2011 • Report of the GREPECAS/16 meeting, March 2011 • Report of the CRPP/2 Meeting, July 2013	
ICAO strategic objectives	*This working paper is related to the following strategic objectives:* *A – Safety* *C – Environmental protection and sustainable development of air transport*

1. Background

1.1 In accordance with the new GREPECAS organisation, based on programmes and projects, the regional experts of the NACC and SAM Offices were designated as programme coordinators, and CAR and SAM State officials were designated as project coordinators and experts for the development and execution of tasks related to the aforementioned projects.

1.2 In order to optimize the participation of State experts in the projects under Programme F, The PPRC/2 Meeting approved the proposal of the Secretariat to merge:

- Projects AGA F1 and AGA F2 of the CAR Region.
- Projects AGA F1, AGA F2, AGA F4 and AGA F5 of the SAM Region

1.3 The following projects remain under development according to their tasks and activities:

- *Project CAR AGA F1 – Aerodrome certification improvements*

- *Project CAR AGA F2 – Improvements to runway safety*
- *Project SAM AGA F1 – Aerodrome certification*
- *Project SAM AGA F2 - Runway safety improvement*

1.3 During the PPRC/2 Meeting it was discussed the scarce participation of States in the approval of new ICAO Standards and Recommended Practices (SARPs) that affect the aerodromes area. As a result, approved SARPs can be difficult to implement at certain aerodromes and some States have significant noncompliance with the standards. The PPRC/2Meeting also recognized the importance of responding to ICAO when a proposal for amendment to SARPs is circulated to the States in order to avoid future compliance issues with SARPs.

1.4 It was also mentioned during the PPRC/2 Meeting, the lack of experts available to assist the project coordinators, which has been the one of the main reasons for the delay in the tasks which is reflected in the progress of the activities of these projects.

Analysis

2.1 In order to facilitate the review of GREPECAS projects, **Appendices A** and **B** lists the activities for the CAR Region projects and Appendices C and D, the activities for the SAM Region projects.

2.2 The achievement of the Aerodrome Programme projects objectives will depend upon the availability of human resources which are required for the compliance of the projects activities timeline.

2.5 Pursuant to GREPECAS Conclusion 16/49, project coordinators and experts should have support from their respective civil aviation authorities through face-to-face meetings, teleconferences (GoToMeeting), etc. If the necessary human resources, supported by their CAA, are not available, the development of AGA projects will be interrupted and the burden will fall upon the programme coordinator.

3. Status of implementation of CAR projects

3.1 The Project F1 addresses the Aerodrome Certification related matters, which considers 4 main tasks: Training for Aerodrome Inspectors, Establishment of the Aerodrome Certification process, Preparation of Certification Manuals and Issuance of Aerodrome Certification.

3.2 The second Project F2 “Safety Assessment for aerodromes with Non-conformities” was merged with project F1 since both have a common objective, which is to solve the problems confronted by aerodromes to comply with certification. The use of aeronautical studies and alternate methods that technically justify the deviation of an aerodrome standard are included in the aerodrome certification process.

3.3 Project F3, now named F2, is aimed at aerodrome operator control issues rather than factors related with air traffic control. This Project has three parts for its implementation: assessment of the potential risk implied by runway incursions (taxiways), assessment of the potential risk implied by runway excursions (runways) and assessment of the situation of the levelled runway strip portion including the runway end safety area (RESA). These three sections are interrelated and comprise situations before landing operation, landing on the runway, and runway excursions.

3.4 As part of the first phase of Project F1 related to Aeronautical personnel Training in the CAR Region, three Seminars/Workshops were carried out for Aerodrome inspectors and personnel in charge of the certification of aerodromes. The Regional Workshop on GREPECAS Project F1 - Aerodrome Certification Improvements, was held in the ICAO NACC Regional Office, Mexico City, from 14 to 18 October 2013 focused on the content of the aerodrome manual. The second event was the Aerodromes SMS Implementation Workshop (SMS) – GREPECAS Project F12 Activity held in the ICAO NACC Office, from 18 to 21 March 2014 for Spanish speaking States. In addition, the Aerodrome Inspectors Workshop - GREPECAS Project F1 CAR Activity, was held in Port-of-Spain, Trinidad and Tobago, from 9 to 13 June 2014.

3.5 Regarding the first phase of the project F2 now named Improvements of runway safety, information was gathered from several international airports in the CAR Region to verify compliance with Annex 14, Vol. I, with regards to marking, signs location, lighting, stop bars (if available), graded runway strips and runway end safety area (RESA). It was planned to carry out the Regional Workshop on Geometric Runway Design, Taxiways and aerodrome visual aids, from 9 to 12 July 2013, to inform to participants to the event on the analysis made to the survey and to discuss better practices of some States to avoid and/or improve taxiway designs to prevent runway incursions with the corresponding visual aids complement. However, this event was postponed for the first trimester of 2015 since there was a lack of a significant number of participants on those dates and the unavailability of the project coordinator for year 2014.

3.6 Regarding the two projects currently in execution in the CAR Region, Project F1 – Aerodrome Certification Improvements intends to increase the number of certified aerodromes and reduce the number of deficiencies reported in the GANDD. At present we have increased the number in 5% in relation to 2011 reaching 46 certified airports and the number will increase accordingly. Project F2 – Runway safety Improvement intends to improve aircraft safe operations at aerodromes reducing the number of events related to runway incursions and excursions, as well as the number of deficiencies reported in the GANDD, which high rate is related with the non-compliance of runway strips requirements, RESA and visual aids among others. However due to lack of State´s participation in this project there is no significant progress achieved at this time.

4. Status of implementation in the SAM Region

4.1 Four of the five SAM projects are closely related and are designed to achieve one single objective "Project AGA F1 – Aerodrome certification." The first and most difficult task under F1 has been the development of the Latin American Regulations for Aerodromes (AGA LAR). The AGA LAR set (LAR 139 – Aerodrome Certification, LAR 153 – Aerodrome Operations, and LAR 154 – Aerodrome Design) task has been completed thanks to funds provided by RLA/99/901 SVRSOP Project. Since PPRC/1, under the umbrella of this project, training of Aerodrome Inspectors on the new AGA LAR regulations and the Aerodrome Inspector Manual (MIAGA) have taken place activities from a) to e) and activities f) to j) have been planned for the second semester of 2014:

a) First Aerodrome Inspector course (GSI AGA/1), held in Lima, Peru, from 2 to 13 July 2012;
b) Short GSI AGA course held in Barranquilla, Colombia, from 10 to 14 December 2012;
c) GSI AGA/2 held in Lima, Peru, from 9 to 27 September 2013;
d) Internal Auditor Training Course for Government Aerodrome Inspectors Workshop in Lima, Peru, from 12 to 14 May 2014;
e) GSI AGA/3 held in Montevideo, Uruguay, from 30 June to 18 July 2014;

f) First Aerodrome Inspector course for Instructors, Lima, Peru, from 18 to 22 August 2014;
g) Seminar on LAR AGA for Aerodrome Operators, Lima, Peru, from 25 to 29 August 2014;
h) GSI AGA/4 to take place in Caracas, Venezuela, from 15 September to 3 October 2014;
i) Aerodrome certification trial in Carrasco International Airport in Uruguay, Oct 2014, to test AGA LAR set regulations;
j) Aerodrome Certification Seminar, Lima, Peru, from 10 to 14 November 2014

4.2 "SAM AGA F2 Project – Safety assessment for aerodromes with non-conformities" conducted, since PPRC/1, a workshop on Aeronautical Studies - Obstacles in Bucaramanga, Colombia, from 15 to 19 October 2012, financed by RLA/06/901 and RLA/99/901 Projects. In this regard, a format for obstacle safety assessment workshops has been developed, which is being offered to the States as of this year with the purpose of training and developing, at the same time, a safety assessment for the airport upon request, in this way we are reaching the training and solution of the non-conformities to ICAO SARPS related to Obstacles.

4.3 "SAM AGA F3 Project - Runway safety improvement," proposed a strategy for avoiding duplication of efforts and rather supporting national and international AGA initiatives. Since PPRC/1 a Visual Aids – New Technologies workshop was held in Lima, from 7 - 11 May 2012, one of its objectives being the reduction of runway incursions by using the appropriate signs. Support was also provided to the organization of the Runway Safety Seminar in the SAM Region held in Quito, Ecuador, from 16 to 19 July 2012, and States/Aerodromes are being assisted in the creation of the RST.

4.4 "SAM AGA Project F4 – Quality and availability of aeronautical data" has originated a regional survey. However, there was very poor response from the States which impact the development of the project.

4.5 Concerning "SAM AGA Project F5 – Improvement of physical and operational characteristics of aerodromes" directly related to aerodrome capacity, the progress in this project have been related to the organized airport development on a national basis in each State. In this regard, a Seminar/Workshop on National Airport Infrastructure Development Plan and Airport Master Plans was held in Lima, Peru, from 17 to 20 June 2013, gathering experts from the Region to discuss the current regional challenges regarding airport capacity.

4.6 Considering the progress obtained in SAM AGA Project F1 and aimed at implementing the projects in the ASBU format, it was proposed the Projects merging AGA F1, AGA F2, AGA F4 and AGA F5 in one new project AGA F1 – Aerodrome Certification related with efficiency and implementation of modules B0 ACDM (80), B0 A-SMGCS (75), B0 AIXM (30) and B0 AMAN/DMAN (15). Project SAM AGA F3, related to safety, is maintained and would become SAM AGA F2.

4.7 On the other side, since GREPECAS AGA programme and projects have suffer changes and adjustments to improve the scope of the targets, a change in coordinators was necessary to share the job among the States.

5. Suggested action

5.1 The meeting is invited to:

a) take note of the information provided in this working paper;

b) analyze the document and Appendices A, B, C and D respectively, with a view to approving the corresponding planning, progress and implementation;

c) consider the progress achieved in AGA projects, the human resources required for good and efficient project development, and the implementation of ASBU methodology;

d) agree on other actions that are deemed appropriate.

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APPENDIX A

PROJECT ON AERODROME CERTIFICATION IMPROVEMENTS IN THE CAR REGION

CAR Region	**PROJECT DESCRIPTION (PD)**	PD N° F1	
Programme	**Title of the Project**	**Start**	**End**
Aerodromes (ICAO Programme Coordinator: Jaime Calderon)	Aerodrome Certification Improvements **Project Coordinator: Norberto Cabrera (Cuba)** **Experts contributing to the project: Jorge Puquirre (El Salvador)**	October 2011	December 2016
Objective	Aerodrome certification will ensure compliance with ICAO SARPs, providing operational services, equipment and installations according to the operations intended at the aerodrome and facilitating safe and efficient aircraft operations.		
Scope	• Identify the level of implementation of the aerodrome certification process in the CAR Region • Identify training needs and develop relevant training programmes • Provide training to aerodrome inspectors with regards to aerodrome related documentation • Prepare the corresponding certification documentation • Implementation of SMS at aerodromes • Aerodrome certification inspection by the aeronautical authority • Issuance of the aerodrome certificate		
Metrics	• Number of aerodromes certified • Number of reported deficiencies in the GANDD		
Strategy	• Provide training to aerodrome inspectors in the aerodrome certification process, its implementation, the content of the aerodrome manual, SMS implementation, and exemptions. • Conduct an aeronautical study when aerodrome standards cannot be met and a technical analysis that will provide justification on the grounds, that an equivalent level of safety can be attained by other means when specifically recommended in Annex 14, Volume I. • Provide training to aerodrome inspectors in their operational oversight duties including the various related disciplines. All tasks are performed by experts nominated by CAR States under the discretion of the project coordinator. Communications among project members and between the project coordinator and the programme coordinator are done via teleconference and internet.		
Goals:	With this project it is expected to assist States in their main implementation goals as follows: • Achieve 48% of aerodrome certification in the CAR Region. • Diminish 50% of the GANDD reported deficiencies in the CAR Region.		

Rationale	• ICAO USOAP audits reveal a large number of aerodromes that have not been certified because of lack of qualified personnel in highly specialized areas, and lack of knowledge of relevant regulations • Aerodromes that were built a long time ago with no consideration of ICAO SARPs This project contributes to the implementation of CAR PFF 07 of the CAR Performance-based Air Navigation Plan (RPBANIP)
Related Projects	The following project was defined in the last meeting of the AGA/AOP/SG/8 and is related to the objective of this DP: • Improvement of runway safety

Project Deliverables	**Relationship with the regional performance-based plan (PFF)**	**Responsible**	**Status of Implementation** [1]	**Date of Delivery**	**Comments**
• Identify the level of implementation of the aerodrome certification process in the CAR Region. • Develop an action plan focused on common aerodrome certification issues in the CAR Region.	PFF CAR 07	Norberto Cabrera		December 2012	Finalized. The Regional Workshop on Overcoming the Challenges faced by States with Aerodrome Certification was held in the NACC Office, Mexico, 20-23 September 2011, to identify the level of aerodrome certification implementation in the CAR Region. • Some common issues were identified in the CAR Region with regards to aerodrome certification and a training programme was developed for aerodrome inspectors according to States requirements.
• Identify training needs and develop the relevant training related programmes. • Provide training to aerodrome inspectors in aerodrome related documentation	PFF CAR 07	Norberto Cabrera		December 2012	Finalized. Two workshops were carried out for aerodrome inspectors and one on the use of aeronautical studies. • Saint Maarten, 11-15 June 2012, in English • NACC Regional Office, 1-4 October 2012, in Spanish • ICAO NAM/CAR Workshop on the use of Aeronautical Studies in the Aerodrome Certification Process, 21-24 August 2012.

Project Deliverables	Relationship with the regional performance -based plan (PFF)	Responsible	Status of Implementation [1]	Date of Delivery	Comments
Development of the aerodrome certification related documentation	PFF CAR 07	Norberto Cabrera		December 2014	The Regional Workshop on GREPECAS Project F1 - Aerodrome Certification Improvements, was held in the ICAO NACC Regional Office, Mexico City, from 14 to 18 October 2013 focused on the content of the aerodrome manual. In addition, the Aerodrome Inspectors Workshop - GREPECAS Project F1 CAR Activity was held in Port-of-Spain, Trinidad and Tobago, from 9 to 13 June 2014.
SMS Implementation at aerodromes	PFF CAR 07	Norberto Cabrera		December 2014	The Aerodromes SMS Implementation Workshop (SMS) – GREPECAS Project F12 Activity was held in the ICAO NACC Office, from 18 to 21 March 2014 for Spanish speaking States to determine the status of implementation of SMS in the CAR Region.
Aerodrome Certification inspection by the Civil Aviation Authority.	PFF CAR 07	Norberto Cabrera		December 2016	Previous to the issuance of an Aerodrome Certificate, the regulatory body should carry out audits and continuous surveillance.
Issuance of the aerodrome certificate.	PFF CAR 07	Norberto Cabrera		December 2016	Once all the previous steps are implemented the aerodromes can be certified.
Resources needed	Designation of experts by States are needed in the execution of some of the deliverables				

APPENDIX B

PROJECT ON IMPROVE RUNWAY SAFETY IN THE CAR REGION

CAR Region	**PROJECT DESCRIPTION (DP)**	**DP N° F2**	
Programme	**Title of the Project**	**Start**	**End**
Aerodromes (ICAO Programme Coordinator: Jaime Calderon)	Improve runway safety **Project coordinator: George Legarreta (USA)** **Experts contributing to the project: None**	October 2011	December 2015
Objective	The objective of the project is to examine aerodromes in the CAR Region to verify Annex 14 compliance mainly on the provision of markings, signage, lighting, runway strips and runway end safety areas in order to reduce the number of runway incursions and excursions related events. In addition the Project will provide guidelines to aerodrome operations personnel, to avoid and reduce the number of related incidents and provide mitigation measures.		
Scope	The runway safety project is aimed at aerodromes rather than at factors related to air traffic control (ATC). This project has three parts including: mitigation actions for runway incursions (RI) and runway excursions (RE) and the compliance of standards and recommended practices for the runway strip and the runway end safety area (RESA). These 3 parts are interrelated, taking into account the phase before landing on the runway principally the landing surface of the runway, taxiways for aircraft entering the runway, and the areas prepared for runway excursion.		
Metrics	• Number of aerodromes certified • Reduce the number of reported deficiencies in the GANDD that affect the 3 parts of this project. • Number of events regarding runway incursions and excursions.		
Strategy	For the purpose of the project implementation, the following three stages are considered: • Stage 1: Focuses on an inventory of each taxiway into the runway, the geometry of the taxiway into the runway, as well as markings, signs and lighting at the taxi-holding position (stop bars, runway safety lights), and the location of the runway holding position. This part also includes daily inspections of the movement area at the taxiway entry points, markings, signs, and lighting. • Stage 2: Focuses on actions to mitigate runway excursions by ensuring good runway surface conditions, avoiding contamination, and replacing inoperative runway lights, as well as through daily inspections. One of the main problems in runway excursions is the accumulation of water or rubber under wet runway surface conditions. In this regard, the project will provide guidance material that includes procedures for identifying excursions due to ponding of water on the runway and rubber accumulation and for its removal. • Stage 3: Focuses on actions to mitigate damage caused to aircraft exiting the runway, through provision and compliance with a levelled and object free runway strip portion, and compliance with the provision of runway end safety areas (RESA) in accordance with Annex 14, Vol. 1. In order to determine if facilities meet the standards, the GANDD will be used to gather information on specific deficiencies related to the runway strip and the RESA. The GANDD will enable grouping in deficiency type and, based on that, definition of action plans.		

	For RESAs that are insufficient and that cannot be corrected, the project will provide guidance material on the use of declared distances and possible placement of proven arrestor system per Annex 14, Volume I. All tasks are carried out between the project coordinator and programme coordinator respectively. There is no support by States experts. Communication between project coordinator and the programme coordinators are done through teleconference and the Internet.
Goals	With this project it is expected to assist States in their main implementation goals as follows: • Achieve 48% of aerodrome certification in the CAR Region. • Diminish 50% of the GANDD reported deficiencies in the CAR Region that affect the 3 parts of this project.
Rationale	• Some States in the CAR Region have implemented best practices to avoid runway incursions however there is a high ratio of noncompliance with surface markings, visual aids, lighting, runway strips and RESAs among others. • There is lack of best practices for mitigating runway excursions; the project will provide guidelines on mitigating measures. • There is a high rate of runway excursions, and the establishment of runway safety teams (RSTs) is deemed essential. • With the project it is expected from the airport operators compliance with Annex 14 Volume I and to bring together all involved in aerodrome operations and service providers in order to take written corrective actions for improving runway safety. This project contributes to the implementation of PFF CAR 07 of the CAR Performance-Based Air Navigation Plan (RPBANIP)
Related projects	The following project was defined in the last meeting of the AGA/AOP/SG/8, and is related to the project described in this DP: • Aerodrome certification

Project Deliverables	**Relationship with the regional performance-based plan (PFF)**	**Responsible**	**Status of Implementation** [1]	**Date of Delivery**	**Comments**
Development of a formulaire to carry out an inventory of each taxiway entering onto the runway, including the geometry of the taxiway entering onto the runway, as well as markings, signage, and lighting of the taxi-holding position (stop bars, runway safety lights), and the location of the runway-holding position.	PFF CAR 07	George Legarreta		July 2015	Activities were initiated and will extend to December 2013. • The formulaire was developed and circulated to States on 5 July 2012 (EMX0375), having received approximately 15% of the aerodromes included in the ANP. • During the workshop planned for first semester 2015 the final results of the survey will be presented and will require participants to provide information.

Project Deliverables	Relationship with the regional performance -based plan (PFF)	Responsible	Status of Implementation [1]	Date of Delivery	Comments
Implementation of mitigating actions for runway excursions by providing good runway surface conditions, avoiding surface contamination, and provide changes and the recommended longitudinal slopes, repainting faded markings, and replacement of inoperative runway lights, as well as carrying out daily inspections.	PFF CAR 07	George Legarreta		July 2015	The project will provide guidance material including procedures for identifying runway excursions due to rubber buildup and removal. These topics will be discussed during the workshop planned for first semester 2015.
Implementation of mitigating actions due to damage caused to aircraft overrunning the runway through compliance with the graded portion of the runway strip and runway end safety area (RESA) with Annex 14, Vol. 1. The GANDD will enable grouping by type of deficiency and thus determining action plans.	PFF CAR 07	George Legarreta		December 2016	For insufficient RESAs and cannot be fully adjusted, the project will provide guidance material on the use of the declared distances and the installation of proven arrestor systems such as the EMAS.
Resources needed	Designation of experts by States for the execution of some of the deliverables				

APPENDIX C

PROJECT ON AERODROME CERTIFICATION

SAM Region	**PROJECT DESCRIPTION (DP)**	**DP N° F1**	
Programme	**Title of the Project**	**Start**	**End**
Aerodromes *(ICAO programme coordinator: Lia Ricalde)*	Aerodrome Certification *Project coordinator:* *Riardo Aguirre (Colombia)* *Experts contributing to the project:* *Alejandro Álvarez/ José Martinez Cal (ANAC – Argentina)* *René Delgado (DGAC – Bolivia)* *Marcos Pecanha /Edwilson Sena dos Santos (DECEA – Brazil)* *Rodrigo Silva / Renzi Jara (DGAC - Chile)* *Aldemar Pinzón (AEROCIVIL - Colombia)* *Augusto Diaz (DGAC – Ecuador)* *Hugo Mendoza / Roque Florentín (DINAC – Paraguay)* *Adolfo Medina / Juan Flor (DGAC – Peru)* *Carlos García Pepe (DINACIA – Uruguay)*	2010	2015
Objective	Improvement in the efficiency, capacity and safety of airport operations.		
Scope	• CDM at the airport • Implementation of aeronautical data quality and availability • Aerodrome certification at regional level • Airport planning • Airport capacity calculation of international airports • Heliport safe operations		
Metrics	• Percentage of international aerodromes with A-CDM implemented • Percentage of deficiencies eliminated regarding the non-compliance of the CAR/SAM Air Navigation Plan • Percentage of international aerodromes with updated obstacle data • Percentage of certified international aerodromes • Percentage of trained AGA inspectors • Percentage of international aerodromes with master plans • Percentage of international aerodromes with calculated aerodrome capacity • Percentage of heliports with operational approval		

Strategy	• Develop guidelines for A-CDM implementation at the airports • Develop a regional action plan ensuring the provision of aeronautical data by the airport operator to the AIM, with the corresponding quality requirements • Update the aerodrome obstacle data in WGS-84 system • Harmonise State regulations with the AGA LAR set • Identify most common non-conformities at the airports of the region related with ICAO SARPs • Develop guidance for safety assessment of the non-conformities related with ICAO SARPs • Train regional aerodrome inspectors with the MIAGA • Establish an aerodrome internal audit process for operators, based on the SMS • Validate the existing regional international aerodrome certification with the AGA LAR set • Certification process oversight • Develop airport planning guidance manuals • Develop environmental management procedures in coordination with Regional Committees • Calculate the existing capacity of main international airports of the Region • Develop and apply procedures for aerodrome capacity optimization • Develop regulations to ensure safe operations at heliports
Rationale	• Airport certification difficulties in the Region are mainly due to the fact that most existing airports were built before the issuance of the ICAO SARPs that establish certification requirements. • The new commercial aircraft fleet has more requirements than the critical aircraft that were used at the time of the original design. • Difficulties in the adjustment and updating of State aeronautical legislation related to aerodromes to facilitate aerodrome certification. • Difficulties for safety and risk assessment required for each non-conformity • Lack of trained personnel within State civil aviation authorities to conduct safety risk assessment; aerodrome certification and oversight • The region shows an unexpected increase in the volume of passenger and cargo operations, as a result of which the main airports of the region are almost or already saturated • It is foreseen that the new generation of wide-body aircraft will be operating at the main airports of the region • Improving aerodrome infrastructure takes time, thus the need to optimise aerodrome existing capacity • This project contributes to the implementation of modules ASBU B0 ACDM, B0 A-SMGCS, B0 AIXM and B0 AMAN/DMAN and PFF SAM AGA 02, AGA 03, AGA 04, AGA 05, ATM 05, CNS 02, CNS 04, MET 02, MET 04, AIM 01 and AIM 02, *Air Navigation System Performance-Based Implementation Plan for the SAM Region (SAM PBIP)*
Related projects	• Improvement of runway safety

Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation [1]	Date of Delivery	Comments
Updating of FASID Table AOP1, Doc 8733 CAR/SAM ANP	PFF SAM AGA 01 and ANRF B0 AIXM	AGA RO	**90%**	2014	Amendments to CAR/SAM Regional Air Navigation Plan, SAM 13-5 and 14-1 to Vol. I Basic and SAM 13-6 AND 14-2 TO Vol. II FASID, have been approved, updating the information contained in the list of aerodromes and Table AOP1, respectively. With these amendments the deficiencies of the aerodromes of the Region related to non-compliance of the CAR/SAM ANP have been reduced. The implementation of a last amendment for this year is foreseen, which would complete the adjustment of the information contained in the ANP.
Master plans	PFF SAM AGA 01 and ANRF B0 A-CDM	States/ Aerodromes	**25%**	2015	Training in master plans and national airport development was carried out in 2013, with the purpose that the States update their master plans if available or develop them for the airports of the States.
Regional strategy for quality implementation and availability of aerodrome aeronautical data	PFF SAM AGA 01 and ANRF B0 AIXM	Vicente Uribe	**25%**	2014	A strategy proposal has been developed to be implemented by States in order to reach the required aeronautical data quality
Survey of aerodrome obstacles based on WGS-84 system	PFF SAM AGA 01 and ANRF B0 AIXM	States/ Aerodromes	**0%**	2014	In collaboration with AIM
Development and approval of the AGA LAR set	PFF SAM AGA 02 and ANRF B0 A-CDM	Carlos Garcia Pepe	**100%**	2012	The texts of the AGA LAR set (LAR 139, LAR 153, and LAR 154) were developed by the SRVSOP AGA Experts Panel and approved by the General Board.

[1] *Grey* *Task not started yet*
Green *Activity being implemented as scheduled*
Yellow *Activity started with some delay, but expected to be implemented on time*
Red *Activity not implemented on time; mitigation measures are required*

Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation [1]	Date of Delivery	Comments
Amendment 1 to AGA LAR set	PFF SAM AGA 02 and ANRF B0 A-CDM	Carlos Garcia Pepe	**100%**	2013	Amendment 1 to AGA LAR set included amendment 11 to Annex 14, Vol I.
Amendment 2 to AGA LAR set	PFF SAM AGA 02 and ANRF B0 A-CDM	Alejandro Alvarez	**90%**	2014	Amendment 2 to AGA LAR will be proposed for approval in the SRVSOP General Board, after completing the first aerodrome certification trial.
Harmonization / Adoption of AGA LAR set	PFF SAM AGA 02 and ANRF B0 A-CDM	States	**0%**	2015	SRVSOP Member States will initiate harmonization/adoption of the AGA LAR set when the standard is verified during the certification trials.
Development of the MIAGA	PFF SAM AGA 02 and ANRF B0 A-CDM	Carlos Garcia Pepe / Alejandro Alvarez	**100%**	2014	The AGA Inspector Manual (MIAGA) was finalized in 2012 and its first revision was completed in 2014.ñ
List of the most common non-conformities in the Region	PFF SAM AGA 03 and ANRF B0 A-CDM	Virgilio de Matos Santos Castelo Branco	**0%**	2015	Conduct a survey amongst the States, requesting information on the most common non-conformities that prevent the certification of international aerodromes
Guidance manual on the certification of aerodromes with non-conformities	PFF SAM AGA 03 and ANRF B0 A-CDM	Virgilio de Matos Santos Castelo Branco	**0%**	2015	The guidance manual will be developed based on the information retrieved from the questionnaire and will include available safety assessment tools for the most common non-conformities in the Region and what cases qualify for assessment for the purpose of obtaining the certification with deviations
Training programme for inspectors on the certification of aerodromes with non-conformities	PFF SAM AGA 01, 03, 04, 05 and PFF SAM AGA 03 and ANRF B0 A-CDM	AGA Officer	**50%**	2015	Aerodrome inspectors have been trained in 2011 in an Aeronautical Studies Workshop carried out in Lima on physical characteristics, also in 2012 an Aeronautical Studies – Obstacle Workshop was carried out in Colombia. In 2013 the SRVSOP has started to offer risk assessment workshops to interested States.

Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation [1]	Date of Delivery	Comments
Harmonisation of the AGA LARs	PFF SAM AGA 02 and ANRF B0 A-CDM	States - Regional System	**0%**	2015	It is expected that the harmonisation between the States and the AGA LARs will be carried out in accordance with the timetable approved by the General Board
Guide on aerodrome internal audits	PFF SAM AGA 02 and ANRF B0 A-CDM	TBD	**0%**		
Regional aerodrome certification programme	PFF SAM AGA 01, 03, 04, 05 and ANRF B0 A-CDM	TBD	**0%**		
Certification validation of existing aerodromes based on the AGA LARs	PFF SAM AGA 01, 03, 04, 05 and ANRF B0 A-CDM	TBD	**0%**		
Oversight of the certification process	PFF SAM AGA 01, 03, 04, 05 and ANRF B0 A-CDM	TBD	**0%**		
Calculation of capacity of the main international aerodromes of the Region	PFF SAM AGA 01, 03, 04, 05 and ANRF B0 AMAN/DMAN, B0 A-SMGCS	TBD	**0%**		
Guidance Manual for runway and apron capacity optimization	PFF SAM AGA 01, 03, 04, 05 and ANRF B0 AMAN/DMAN, B0 A-SMGCS	TBD	**0%**		

Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation [1]	Date of Delivery	Comments
Guidance Manual for heliport operations	ANRF B0 A-CDM	TBD	**25%**	2015	Develop guidance material for heliport safe operations. Draft standards for heliports have been developed and will be presented in the next AGA Experts Panel meeting in November 2014.
Resources needed	Designation of experts for the execution of some of the deliverables; financial resources for organising training courses, aerodrome certification trials, including aerodromes with non-conformities to ICAO SARPs, and meetings				

APPENDIX D

PROJECT ON IMPROVEMENT OF RUNWAY SAFETY

SAM Region	**PROJECT DESCRIPTION (DP)**	**DP N° F2**	
Programme	**Title of the Project**	**Start**	**End**
Aerodromes *(ICAO programme coordinator: Lia Ricalde)*	Improve Runway Safety *Project coordinator:* *Augusto Díaz Albuja (DGAC - Ecuador)* *Experts contributing to the project:* *Roque Florentín (DINAC - Paraguay)* *Carlos García Pepe (DINACIA – Uruguay)*	2011	2015
Objective	Reduce runway incursions/excursions at aerodromes in order to improve runway safety.		
Scope	Regulations and documentation to support the implementation of ICAO SARPs in order to improve runway safety at aerodromes in the Region: • Strategy to prevent and mitigate accidents and incidents due to runway incursions/excursions from the AGA perspective • AGA assistance to aerodrome safety committees (RSTs) in their runway safety tasks • Guides on aerodrome safety oversight		
Metrics	• Percentage of reduction in runway incursions/excursions in the aerodromes of the Region. • Percentage of aerodromes in the Region that have aerodrome safety teams (RSTs).		
Strategy	• In coordination with other bodies engaged in runway safety, analyse runway incursion/excursion statistics and prioritise AGA responsibilities • Establish a work relationship with regional AGA committees: ALACPA (pavement) and CARSAMPAF (wildlife hazard prevention) • Assist aerodrome safety committees (RSTs) in the Region and ensure the participation of the AGA component • Develop a safety management plan to prevent and mitigate runway incursions/excursions based on the analysis mentioned in the previous paragraph • Develop guides on oversight of the implementation of safety management plans in the aerodromes of the Region • Implement the safety management plan All tasks will be carried out by experts nominated by CAR States and organisations, under the leadership of the project coordinator. Communication amongst project members and between the project and programme coordinators shall be via teleconference and the Internet. Upon completion of the studies, the results will be sent to the ICAO programme coordinator as a final consolidated document for its analysis, revision, and approval, and for submission to the GREPECAS PPRC.		

Rationale	• Runway safety is a problem that affects all areas of air navigation • Different bodies are working to improve runway safety from different perspectives. The purpose of this project is to support the existing initiatives and to work in a coordinated manner, contributing form the point of view of AGA • Although there are better practices in SAM States, there is no harmonisation to expedite their implementation in the airports of the Region. The purpose of this project is to develop a strategy to be used by States to reduce runway incursions/excursions in their airports.
Related projects	• Aerodrome Certification

Project Deliverables	**Relationship with the regional performance-based plan (PFF)**	**Responsible Party**	**Status of Implementation** [1]	**Date of Delivery**	**Comments**
Regional safety management plan for runway incursions/excursions	PFF SAM AGA 01, 02, 03, 04, 05	Alfredo Chavez	**0%**	2013	Analyse existing statistics and prioritise the main AGA factors that cause runway incursions/excursions, and develop a runway safety prevention and mitigation plan from the AGA perspective.
Training programme to improve runway safety	PFF SAM AGA 05	SAM RO	**100%**	2013	SMS/PAF workshop on 13-17 June 2011 in Panama to prevent runway incursions. Workshop on air navigation visual aids on 7-11 May in Lima, Peru to prevent runway incursions. Also, in July 2012 the RRSS Seminar was held in Quito, Ecuador and annual meetings (March 2013, Lima) on RST implementation in the airports of the Region are being held.
Guidance Manual on runway safety team (RST) implementation at aerodromes	PFF SAM AGA 05	GREPECAS	**100%**	2013	ICAO HQ has developed a guidance manual for RSTs.

[1] *Grey* *Task not started yet*
Green *Activity being implemented as scheduled*
Yellow *Activity started with some delay, but expected to be implemented on time*
Red *Activity not implemented on time; mitigation measures are required*

Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation [1]	Date of Delivery	Comments
Timetable of implementation of mitigation measures at aerodromes	PFF SAM AGA 05	States/Aerodromes	**10%**	2015	Assist RSTs in their safety prevention and mitigation tasks from the AGA perspective.
Resources needed	Designation of experts in the execution of some of the deliverables, financial resources for organising training courses and meetings.				