International Civil Aviation Organization
CAR/SAM Regional Planning and Implementation Group (GREPECAS)
First Meeting of the Programmes and Projects Review Committee (PPRC/1)
Mexico City, Mexico, 25-27 April 2012

Agenda Item 3: Review of GREPECAS Programmes and Projects

3.6 Projects of the Aerodrome Programme

DESCRIPTION AND FOLLOW-UP OF AERODROME PROJECT ACTIVITIES

(Presented by the Secretariat)

SUMMARY	
This working paper presents to the Meeting the projects, as well as information on the status of implementation of the activities and tasks of said projects in the field of aerodrome. The objectives, scope, metrics, strategy, rationale and implementation dates of each project are shown in **Appendix A** for the CAR Region and in **Appendix B** for the SAM Region.	
References: • Report of the AGA/AOP/SG/08 meeting, July 2011 • Report of the GREPECAS/16 meeting, March 2011	
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 The results of the GREPECAS/16 meeting in relation to the new organisation and work methodology proposed by ICAO and approved by member States were presented to the AGA/AOP/SG/8 meeting.

1.2 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.

1.3 The meeting defined projects for the CAR and SAM Regions for a period extending until 2015. Initially, the programme was entitled Aerodrome and Runway Programme, but the AGA/AOP/SG/8 meeting changed it to Aerodrome Programme.

1.4 With regard to the transformation of the AGA/AOP Subgroup, its terms of reference, work programme, and task forces to the aerodrome programme and projects, the State representatives

participating in the meeting reviewed the proposed projects and agreed on adopting the following projects:

CAR Region:
- Aerodrome certification
- Safety assessment for aerodromes with non-conformities
- Improvement of runway safety

SAM Region:
- Aerodrome certification
- Safety assessment for aerodromes with non-conformities
- Improvement of runway safety
- Quality and availability of aeronautical data
- Improvement of physical and operational characteristics of aerodromes

2. Discussion

2.1 In order to facilitate the review of GREPECAS projects, Appendix A lists the projects for the CAR Region and Appendix B lists those for the SAM Region.

2.2 Project description documents contain information on the objectives, scope, metrics, strategy, rationale, related projects, deliverables, responsible parties, resources needed, start and end dates, as well as a section for comments to describe the status of deliverables. Likewise, the GANTT diagram shows, for each project, the time allocated to the various tasks or activities throughout the life cycle of each project.

2.3 The achievement of objectives under the Aerodrome Programme projects depends upon the availability of the human resources required for the fulfilment of activities and compliance with the timelines of such projects.

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

3. Status of implementation of CAR projects

3.1 The three projects under implementation in the CAR Region are mainly related to compliance with the various specifications of Annex 14, aimed at increasing the level of safety at aerodromes, taking into account that security is part of aerodrome planning and operations. The purpose of Project F1 – Aerodrome certification improvements, is to increase the number of certified aerodromes and to improve safety oversight by civil aviation authorities.

3.2 In order to expedite the implementation of the aforementioned projects, several seminars and workshops have been scheduled: A workshop in the Caribbean for aerodrome inspectors, in English, and another one at the NACC Regional Office, in Spanish. A workshop is also being scheduled on aeronautical studies and their application in specified recommended areas.

3.3 Likewise, in order to expedite planning and the assignment of tasks and activities to each project, it is important to consider holding at least one annual meeting of AGA project coordinators and experts.

4. Status of implementation in the SAM Region

4.1 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 was the development of the Latin American Regulations for Aerodromes (AGA LAR). The text of the AGA LAR set (LAR 139 – Aerodrome Certification, LAR 153 – Aerodrome Operations, and LAR 154 – Aerodrome Design) has been completed. This task could be implemented thanks to funds provided by Project RLA SVRSOP 99/901.

4.2 SAM "AGA Project F2 – Safety assessment for aerodromes with non-conformities" conducted a seminar on Aeronautical Studies - RESA in August 2011, funded by Project RLA 06/901. "AGA Project F3 - Runway safety improvement," proposed a strategy for avoiding duplication of efforts and rather supporting national and international AGA initiatives. A workshop on Visual Aids – New Technologies will be held in Lima, on 7 - 11 May 2012, its objective being the reduction of runway incursions by using the appropriate signs.

4.3 SAM "AGA Project F4 – Quality and availability of aeronautical data" has not reported any progress, and SAM "AGA Project F5 – Improvement of physical and operational characteristics of aerodromes" is directly related to aerodrome capacity. Originally an ATM initiative, the methodology developed by the CGNA of Brazil has been adopted for calculating runway and ATS sector capacity. Two courses have been offered by CGNA since 2009 and one course for instructors was organised by the SAM Office. This project has received financial support from project RLA 06/901.

5. Suggested action

5.1 The Meeting is invited to:

a) take note of the information provided in this working paper;
b) review the document and GANTT diagram for each of the projects described in Appendices A and B, respectively, with a view to approving the corresponding planning, progress and implementation;
c) take into account the human resources required for good project implementation;
d) agree on other actions it may deem appropriate.

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APPENDIX A1

PROJECT ON AERODROME CERTIFICATION IMPROVEMENTS IN THE CAR REGION

CAR Region	**PROJECT DESCRIPTION (DP)**	DP N° F1	
Programme	**Title of the Project**	**Start**	**End**
Aerodromes (ICAO Programme coordinator: Jaime Calderón)	Aerodrome Certification Improvements **Project coordinator: Norberto Cabrera (Cuba)** **Experts contributing to the project: Antonio Pérez (Guatemala)**	October 2011	November 2014
Objective	Aerodrome certification will ensure compliance with ICAO SARPs, providing services, equipment, and facilities in accordance with the operations intended for 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 draft the relevant training programmes • Train aerodrome inspectors in reference 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 • Reduction of the number of factors related to incidents/accidents • Reduction of the number of deficiencies • Efficient use of aerodrome resources • Safe manoeuvres under all weather conditions • Reduction of the number of bird/fauna strikes		
Strategy	• Train aerodrome inspectors in the aerodrome certification process, its implementation, the content of the aerodrome manual, SMS implementation, and exemptions • Use of aeronautical studies to conduct a technical analysis that will justify a deviation from the standards, based on the possibility of achieving an equivalent level of safety through other means. And the risk analysis to ensure an equivalent level of safety • Train aerodrome inspectors in their operational oversight duties in the various disciplines involved. All tasks will be performed by experts nominated by CAR States and organisations, under the direction of the project coordinator. Communications amongst project members, and between the project coordinator and the programme coordinator shall be done via teleconference and the Internet. Once the studies are completed, the results will be sent to the ICAO programme coordinator in the form of a final consolidated document for its analysis, review, approval, and presentation to the GREPECAS PPRC.		

Rationale	• ICAO USOAP audits reveal a large number of aerodromes that have not been certified because of lack of qualified personnel in highly specialised 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 projects were defined at the last meeting of the AGA/AOP Subgroup (AGA/AOP/SG/8) and are related to the objective of this DP: • Safety assessment for aerodromes with non-conformities • Improvement of runway safety

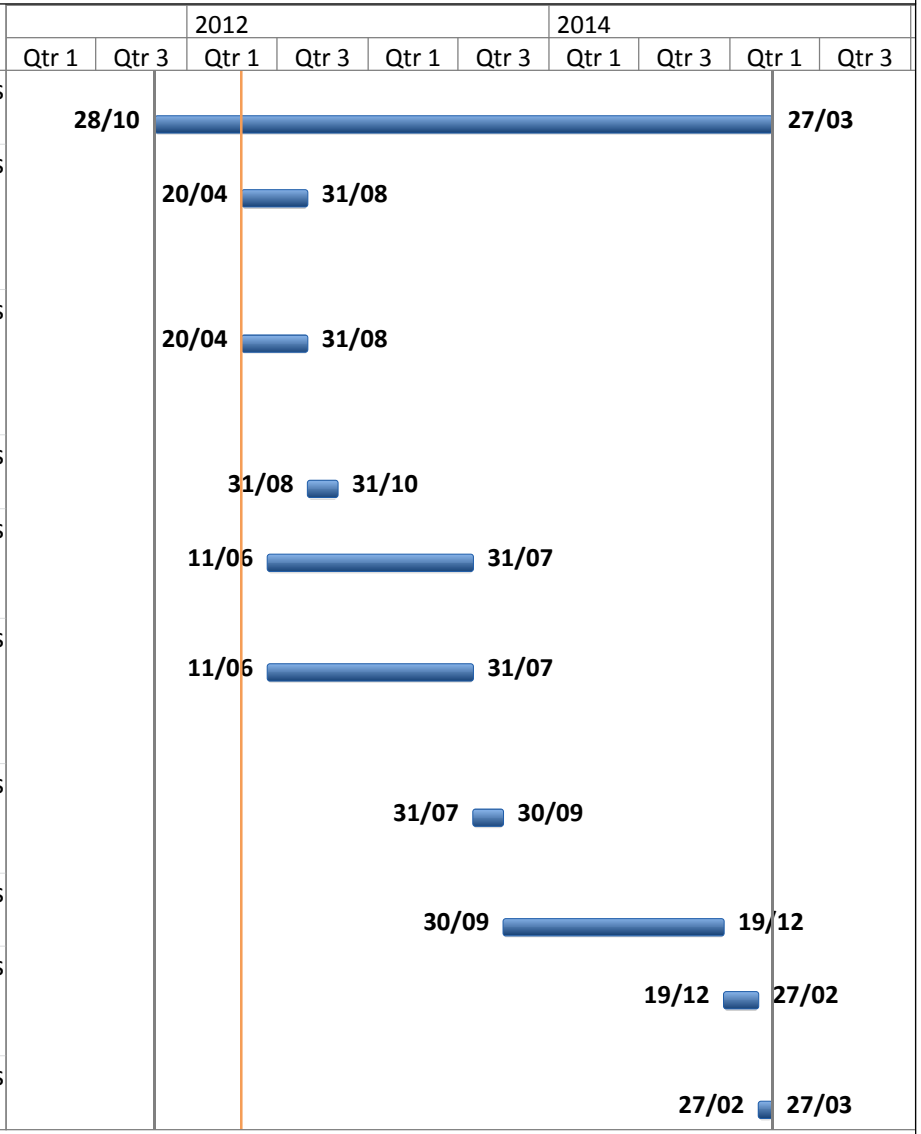
Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation [1]	Date of Delivery	Comments
• Identify the level of implementation of the aerodrome certification process in the CAR Region • Develop an action plan focused on common aerodrome certification issues in the Region	PFF CAR 07	Norberto Cabrera		December 2012	• Holding of the regional workshop on Facing challenges encountered in aerodrome certification, NACC Office, Mexico, 20-23 September 2011 • Some common issues were identified in the CAR Region with respect to aerodrome certification
• Identify training needs and develop the relevant training programmes • Train aerodrome inspectors in the reference documentation	PFF CAR 07	Norberto Cabrera		December 2012	Two workshops for aerodrome inspectors are foreseen: • Saint Maarten on 11-15 June 2012, in English • NACC Regional Office, on 1-4 October 2012, in Spanish
Development of the corresponding certification documentation	PFF CAR 07	TBD		December 2013	Follow-up to the development of certification documentation based on training received by aerodrome inspectors
Implementation of SMS at aerodromes	PFF CAR 07	TBD		December 2013	SMS implementation courses for aerodrome inspectors

[1] **Grey* *Task not started yet*
Green *Activity being implemented as scheduled*
Yellow *Activity started with some delay, but expected to be completed 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
Inspection of aerodrome certification by the aeronautical authority	PFF CAR 07	TBD		October 2014	Before the issuance of the aerodrome certificate, aerodrome operators shall conduct audits and oversight inspections
Issuance of aerodrome certificate	PFF CAR 07	TBD		December 2014	Once the previous steps have been completed, airports may be certified
Resources needed	Designation of experts in the execution of some of the deliverables				

CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP / GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION
PROYECT/PROYECTO F1
IMPROVEMENT ON AERODROME CERTIFICATION / MEJORAS A LA CERTIFICACION DE AERODROMOS

ID	Task Name	Duration
1	PROJECT: IMPROVEMENT TO AERODROME CERTIFICATION / PROYECTO: MEJORAS A LA CERTIFICACIÓN DE AERÓDROMOS	891 days
2	a) Identify the aerodrome certification process level of implementation in the CAR Region / Identificar el nivel de implementación del proceso de certificación de aeródromos en la región CAR	96 days
3	Collect information through surveys, on the aerodrome certification status of implementation / Recabar información sobre el estado de implementación de la certificación de aeródromos mediante encuestas	96 days
4	Identify and group aerodromes with common problems / Identificar y agrupar los aeródromos con problemas comunes	44 days
5	b) Train aerodrome inspectors on reference documentation / Capacitar inspectores de aeródromos en la documentación de referencia	298 days
6	Workshops for aerodrome inspectors and training on documents related with aerodrome certification / Talleres para inspectores de aeródromos y capacitación en los documentos relacionados con la certificación de aeródromos	298 days
7	c) Preparation of corresponding certification documentation / Preparación de la documentación de certificación corespondiente	44 days
8	d) SMS implementation / Implementación del SMS	320 days
9	e) Aerodrome certification inspection by aeronautical authority / Inspección de certificación de aeródromos por la autoridad aeronáutica	51 days
10	f) Issuance of aerodrome certification / Emisión del certificado de aeródromo	21 days



APPENDIX A2

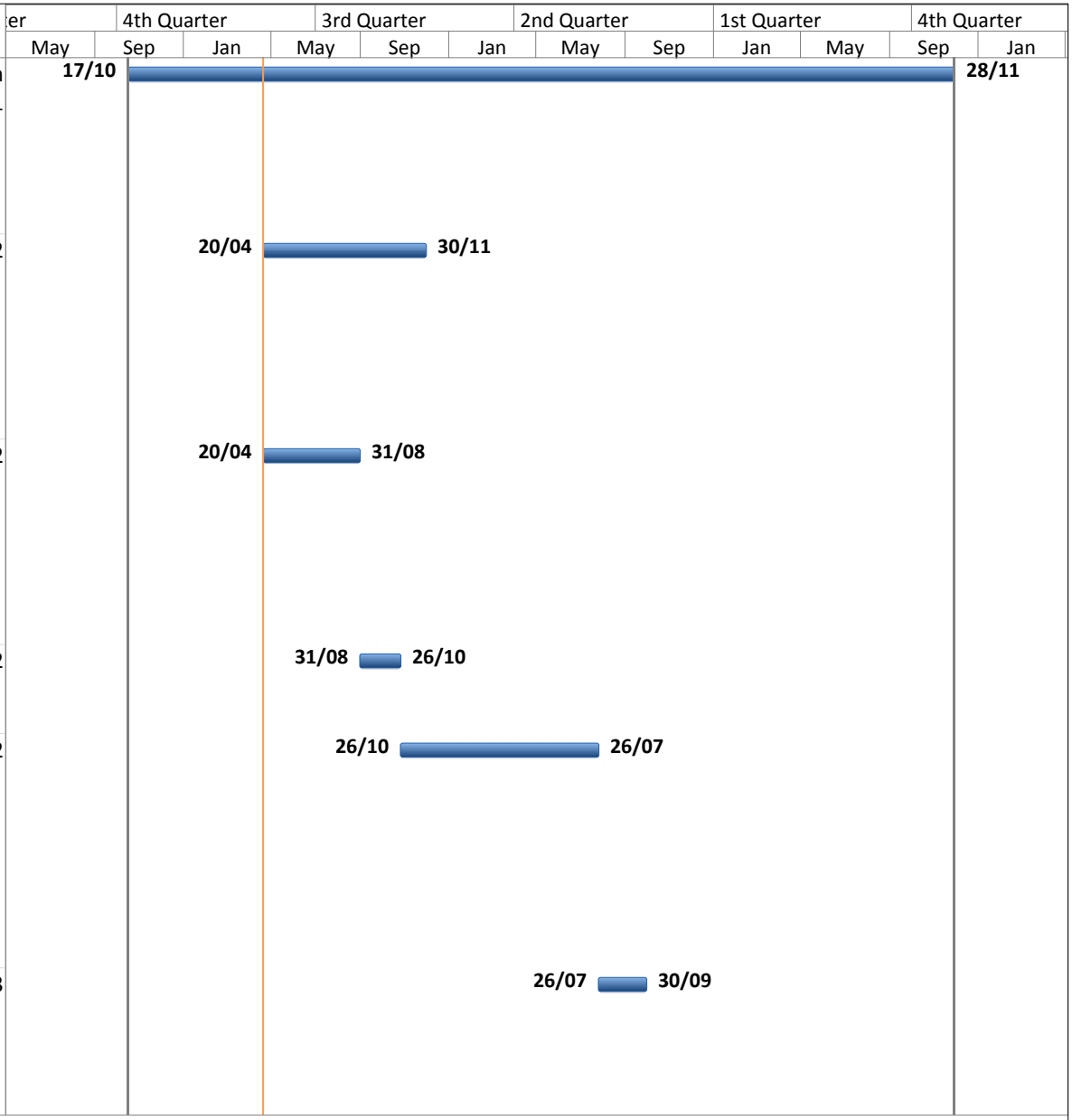
PROJECT ON SAFETY ASSESSMENT OF AERODROMES WITH NON-CONFORMITIES IN THE CAR REGION

CAR Region	**PROJECT DESCRIPTION (DP)**	**DP N° F2**	
Programme	**Titulo del Proyecto**	**Fecha inicio**	**Fecha término**
Aerodromes (ICAO programme coordinator: Jaime Calderón)	Safety Assessment for Aerodromes with Non-Conformities **Project coordinator: Francia Peña (Dominican Republic)** **Experts contributing to the project: Jorge Andrés Parra (Costa Rica), Félix Estrada (Guatemala)**	October 2011	November 2014
Objective	For aerodromes that do not comply with a standard or specified method, after conducting an aeronautical study, when permitted, and/or a risk analysis, to be able to determine the conditions and procedures required to ensure a safety level equivalent to that specified by the standard or recommended practice		
Scope	• Implementation of aeronautical studies in the areas where allowed by aerodrome regulations • Assessment of risk analysis • Exemption of an aerodrome operator from compliance with given provisions of aerodrome regulations		
Metrics	• Number of exempted aerodromes subject to compliance with the conditions and procedures specified by the civil authority in the aerodrome certificate and that are necessary for continued safety		
Strategy	The project has three phases: • Identify regional airports with physical and operational characteristics that do not meet some ICAO SARPs. • Implement procedures for exempting an aerodrome operator from compliance with given provisions of the aerodrome regulations. All tasks will be carried out by experts nominated by States and organisations of the CAR Region, under the leadership of the project coordinator. Communications amongst project members and between the project and programme coordinators will 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 submission to the GREPECAS PPRC.		
Rationale	• States have difficulties with aeronautical studies due to lack of guidance material for their implementation. • States have difficulties with the conduction of risk analyses in the different areas due to lack of guidance material. This project contributes to the implementation of CAR PFF AGA 07 of the CAR Performance-Based Air Navigation Plan (RPBANIP).		
Related projects	The following projects were defined at the last meeting of the AGA/AOP Subgroup (AGA/AOP/SG/8) and are related to the project described in this DP: • Aerodrome certification • Improvement of runway safety		

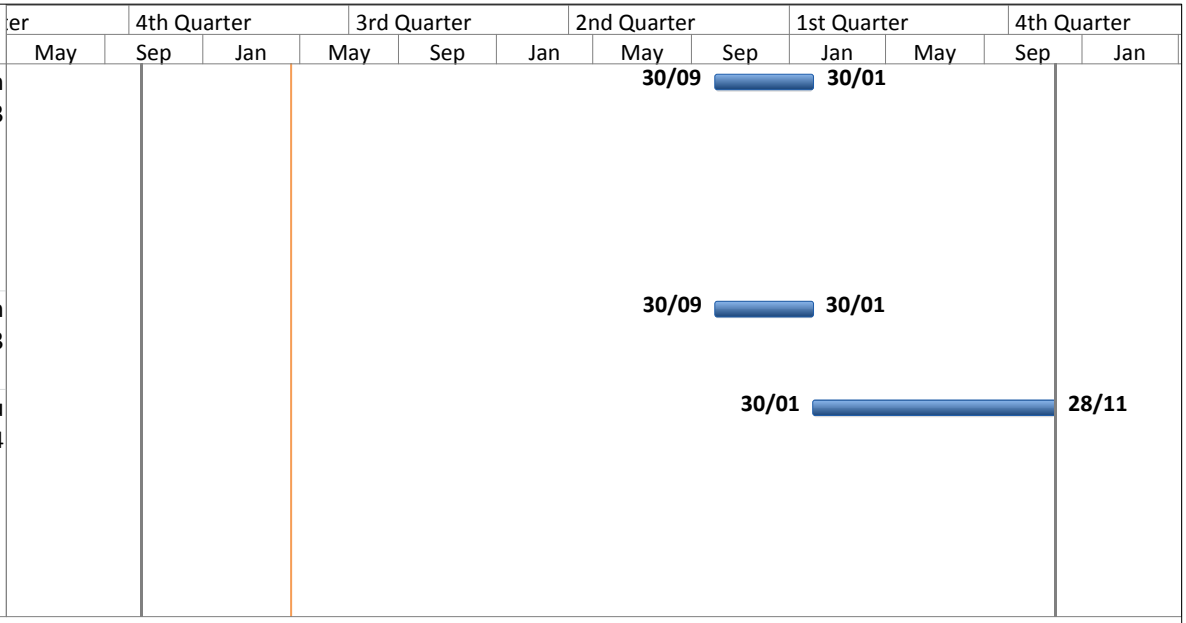
Project Deliverables	Relationship with the regional performance -based plan (PFF)	Responsible Party	Status of Implementation[1]	Date of Delivery	Comments
Identify regional aerodromes with physical and operational characteristics that do not comply with any of the ICAO SARPs	PFF CAR 07	Francia Peña		October 2012	Form to be circulated to States requesting information on airports that do not comply with any standard, in order to group them based on shared issues
Develop procedures that include guidance on the assessment of non-conformities, and establish an action plan to address issues	PFF CAR 07	TBD		November 2013	Drafting of guidance material on aeronautical studies and risk analyses
Implementation of procedures for exempting an aerodrome operator from compliance with certain provisions of aerodrome regulations	PFF CAR 07	TBD		November 2014	Certify aerodromes that may be subject to exemptions by virtue of aeronautical studies and/or risk analyses showing to the State an acceptable level of safety
Resources needed	Designation of experts for the execution of some of the deliverables				

[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

ID	Task Name	Duration	Start
1	**PROYECTO: EVALUACIÓN DE LA SEGURIDAD OPERACIONAL EN AERÓDROMOS CON NO-CONFORMIDADES/SAFETY ASSESSMENT IN NON-COMPLIANT AERODROMES PROJECT**	815 days	Mon 17/10/11
2	a) Identificar los aeropuertos regionales con características físicas y operacionales que no cumplan con alguna SARP/Identify regional airports with physical and operational chracteristics not-compliant with any SARP	161 days	Fri 20/04/12
3	Recabar información sobre aeródromos con no conformidades con las SARPs mediante encuestas y revisión de la GANDD/Collect information on non-compliant with SARP aerodromes through surveys and GANDD revision	96 days	Fri 20/04/12
4	Identificar/agrupar aeródromos con problemas comunes/Identify/group aerodromes with common problems	41 days	Fri 31/08/12
5	b) Desarrollar procedimientos con orientaciones para las no conformidades/establecer medidas corectivas para resolver deficiencias identificadas/Develop procedures including non-compliance guidance/establish corrective measures to solve deficiencies	196 days	Fri 26/10/12
6	Revisar metodologías existentes para atender los problemas de no conformidades/Review existing methodoogies to atttend non-compliance problems	47 days?	Fri 26/07/13



ID	Task Name	Duration	Start
7	Desarrollar material de orientación para la implementación de estudios aeronáuticos en las áreas específicas recomendadas/Develop guidance material for the implementation of aeronautical studies in specific recommended areas	89 days	Mon 30/09/13
8	Material de orientación para la evaluación de riesgos/Guidance material for risk assessment	89 days	Mon 30/09/13
9	c) Implementación de procedimientos para la exención al aeródromo del cumplimiento de determinadas disposiciones/Implementation of procedures to excempt the aerodrome of complying with certain	217 days	Thu 30/01/14



APPENDIX A3

PROJECT ON THE IMPROVEMENT OF RUNWAY SAFETY IN THE CAR REGION

CAR Region	**PROJECT DESCRIPTION (DP)**	**DP N° F3**	
Programme	**Title of the Project**	**Start**	**End**
Aerodromes (ICAO programme coordinator: Jaime Calderón)	Improve runway safety **Project coordinator: George Legarreta (Estados Unidos)** **Experts contributing to the project: TBD**	October 2011	November 2014
Objective	The establishment of Runway Safety Teams (RSTs) with the participation of different stakeholders in aerodrome operations and service providers, with tasks enabling a reduction of the number of incidents/accidents due to runway incursions/excursions to ensure safe and efficient operations at aerodromes in the Region.		
Scope	The runway safety project is aimed at aerodromes rather than at factors related to air traffic control (ATC). This project has three parts covering: mitigation actions for runway incursions (RI), runway excursions (RE) and runway strip levelling, as well as the runway end safety area (RESA). These 3 sections are interrelated, taking into account the phase before landing on the runway, the runway landing operation, and runway excursion.		
Metrics	• Number of aerodromes with runway safety teams (RST) • Number of runway incursions/excursions per number of annual aerodrome operations • Reduction of the number of factors related to incidents/accidents		
Strategy	For the purpose of project execution, 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 rubber under wet runway surface conditions. In this regard, the project will provide guidance material that includes procedures for identifying excursions due to 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 runway strip portion, and 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 EMAS. 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	• Some States in the CAR Region have implemented practical improvements to avoid runway incursions, but they are not practical for mitigating excursions. • There is a high rate of runway excursions, and the establishment of runway safety teams (RSTs) is deemed essential. • The purpose of the project is for airport operators to bring together those involved in aerodrome operations and service providers in order to take action 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 projects were defined at the last meeting of the AGA/AOP Subgroup (AGA/AOP/SG/8), and are related to the project described in this DP: • Aerodrome certification • Safety assessment of aerodromes with non-conformities

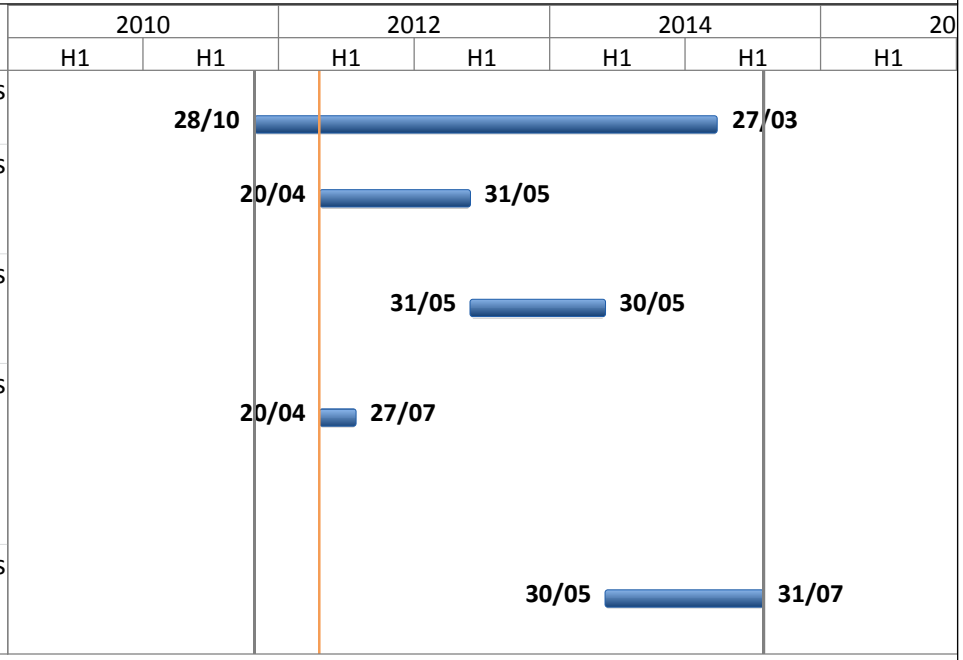
Project Deliverables	**Relationship with the regional performance -based plan (PFF)**	**Responsible Party**	**Status of Implementation[1]**	**Date of Delivery**	**Comments**
Drafting of a form for taking inventory of each taxiway into the runway, including the geometry of the taxiway into the runway, as well as markings, signs, 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		April 2013	• The form was developed and it will be circulated to States until 13 April 2012, requesting that information be sent by end of June. • By the end of August, a report will be ready on the information received from States. • As to the date of delivery, it was considered that signalling and the placement of signs might take up to one year.

[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
Implementation of actions to mitigate runway excursions by providing good runway surface conditions, avoiding contamination on its surface, introducing the recommended changes and longitudinal gradients, repainting of faded signs, and replacement of inoperative runway lights, as well as through daily inspections.	PFF CAR 07	George Legarreta		November 2013	The project will provide guidance material that includes procedures for identifying excursions due to rubber accumulation and for its removal
Implementation of actions to mitigate damage caused to the aircraft incurring in excursion, through compliance in the levelled portion of the runway strip and in the 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	TBD		November 2014	For RESAs that are not sufficient and cannot be fully corrected, the project will provide guidance material on the use of the declared distances and the installation of the EMAS.
Resources needed	Designation of experts for the execution of some of the deliverables				

CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP / GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION (GREPECAS)
PROJECT/PROYECTO F3
IMPROVE RUNWAY SAFETY / MEJORAR LA SEGURIDAD OPERACIONAL EN PISTA

ID	Task Name	Duration
1	PROJECT: IMPROVE RUNWAY SAFETY / PROYECTO: MEJORAR LA SEGURIDAD OPERACIONAL EN PISTA	891 days
2	a) Mitigating actions to avoid runway incursion / Acciones de mitigación para evitar las incursiones en pista	291 days
3	b) Mitigating actions to avoid runway excursion / Acciones de mitigación para evitar las excursiones de pista	261 days
4	Surveys on current signalling, sign placing, etc. to prevent aerodrome runway incursions and excursions / Encuestas para conocer estado actual de la señalización, colocación de letreros, etc. para prevenir incursiones y excursiones de pista en aeródromos	71 days
5	c) Evaluate current runway strip and RESA conditions / Evaluar las condiciones actuales de la franja de pista y RESA	306 days



APPENDIX B1

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:* *Carlos Garcia Pepe (Uruguay)* *Experts contributing to the project:* *Vicente Uribe (AEROCIVIL - Colombia)* *Giovano Palma (ANAC – Brazil)* *Emilio Rodriguez Amada (DINAC Paraguay)*	2010	2015
Objective	Aerodrome certification will enable safer and more efficient operations through compliance with ICAO SARPs to ensure an adequate operational aerodrome management.		
Scope	Regulations and documentation in support of the implementation of ICAO SARPs with a view to the certification of aerodromes in the Region: • Harmonisation of the Latin American Regulations on Aerodromes (AGA LARs) with State aerodrome regulations. • Train regional aerodrome inspectors based on the Aerodrome Inspectors Manual (MIAGA). • Implementation of guides for internal auditing of aerodromes. • Certification of aerodromes at regional level and certification validated by the AGA LARs for aerodromes previously certified by States. • Implementation of safety oversight guides for aerodromes.		
Metrics	• Percentage of certified aerodromes • Number of trained inspectors • Percentage of certified aerodromes validated by the AGA LAR		

Strategy	• Develop the Latin American Regulations for Aerodromes (AGA LAR) • Develop the Aerodrome Inspector Manual (MIAGA) • Harmonise State regulations with the AGA LAR • Train aerodrome inspectors of the Region with the MIAGA • Establish an aerodrome internal audit process for operators, based on the SMS • Validate the existing aerodrome certification with the AGA LAR • Certification process oversight 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	• Airport certification difficulties in the Region are mainly due to the fact that 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. • Lack of trained personnel within State civil aviation authorities to conduct airport certification and oversight.
Related projects	The following projects were defined at the last meeting of the AGA/AOP Subgroup (AGA/AOP/SG/8), and are related to the project described in this DP: • Safety assessment for aerodromes with non-conformities • Improvement of runway safety • Quality and availability of aeronautical data • Improvement of aerodrome physical and operational characteristics

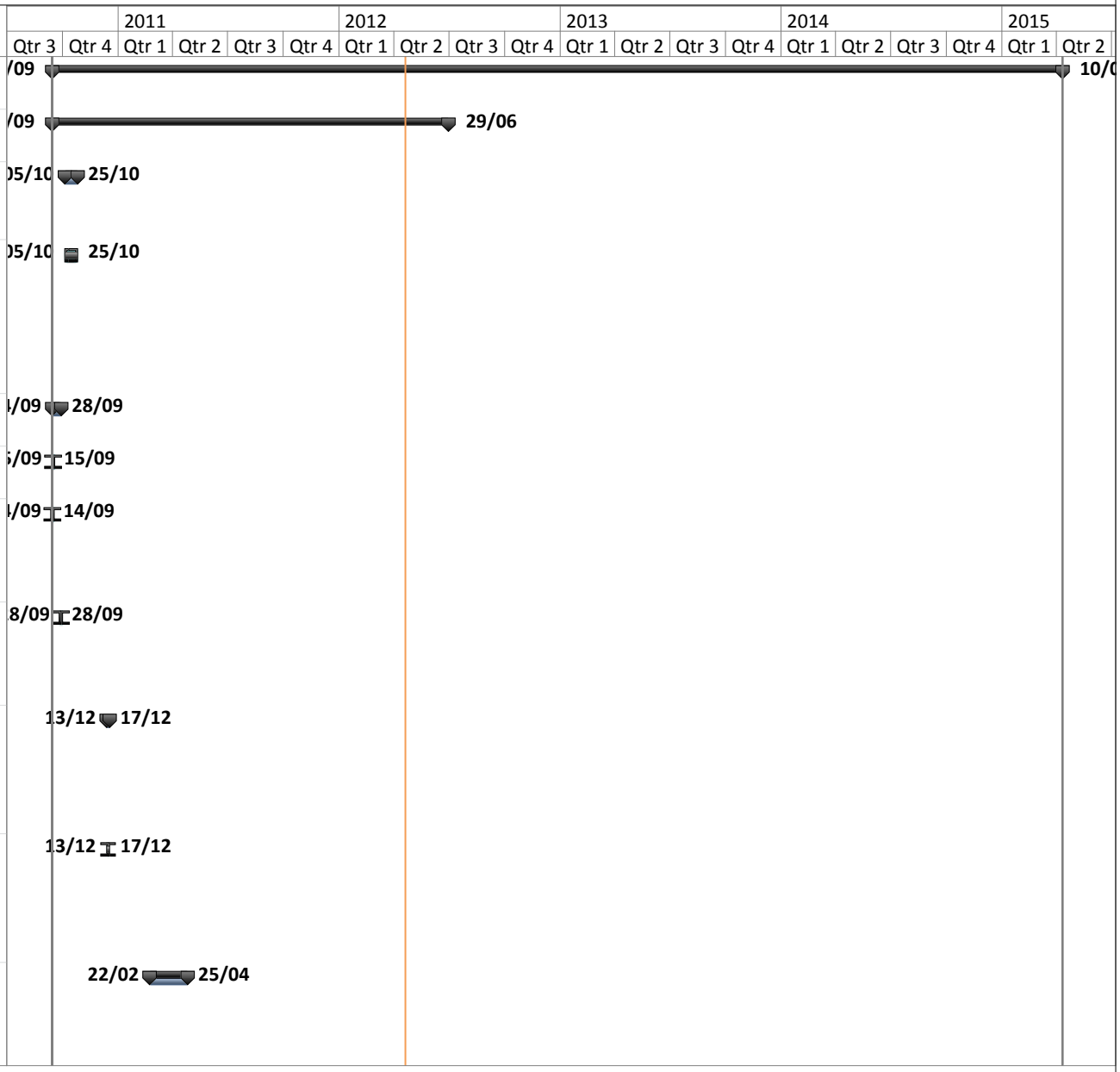
Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation [1]	Date of Delivery	Comments
AGA LAR set	PFF SAM AGA 02	Carlos Garcia Pepe	**90%**	March 2012	The texts of the AGA LAR set (LAR 139, LAR 153, and LAR 154) have been completed and are in the approval process
Development of the MIAGA	PFF SAM AGA 02	Carlos Garcia Pepe	**40%**	June 2012	The support of an expert to develop the MIAGA has been requested
Training programme for aerodrome inspectors	PFF SAM AGA 02	Adolfo Medina	**25%**	2013	The aerodrome inspector workshop – basic (Phase I) was held on 14-18 February in Panama. The course for government aerodrome inspectors (Phase II and II) is scheduled for 2-13 July 2012 and will include the presentation of the AGA LARs and the MIAGA. It is expected that 25 regulators will be trained as aerodrome inspectors. An AGA expert has been requested to develop the programme for the course. Trained inspectors will receive OJT (Phase IV) in 2013
Harmonisation of the AGA LARs	PFF SAM AGA 02	States - Regional System		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	Augusto Diaz		2013	Prior to certification, airport operators must conduct internal audits. A guide will be developed to assist airport operators with self-inspections.
Regional aerodrome certification programme	PFF SAM AGA 01, 03, 04 y 05	TBD		2015	Once the harmonisation process is underway and related projects are completed, airports in the Region may be certified based on the AGA LARs.
Validation of aerodrome	PFF SAM	TBD		2015	Aerodromes certified under the State regulations may

[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*

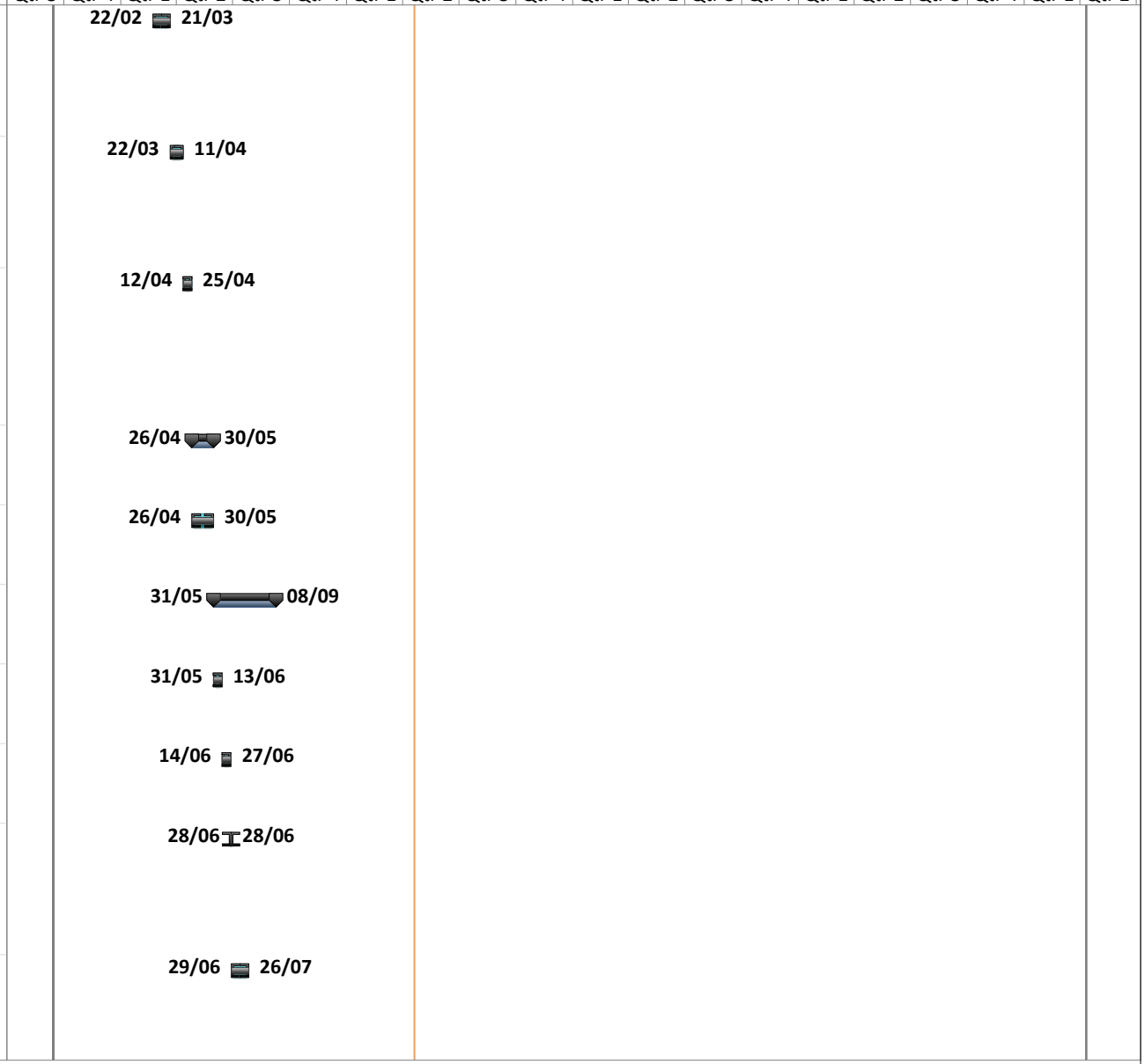
Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation [1]	Date of Delivery	Comments
certificates based on the AGA LARs	AGA 01, 03, 04 y 05				apply for validation of their aerodrome certificate based on the AGA LARs.
Guide on certification process oversight	PFF SAM AGA 01, 03, 04, and 05	GREPECAS		2015	
Resources needed	Designation of experts for the execution of some of the deliverables; financial resources for organising training courses, certification trials, and meetings				

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP
PROYECTO CERTIFICACIÓN DE AERÓDROMOS / AERODROMES CERTIFICATION PROJECT

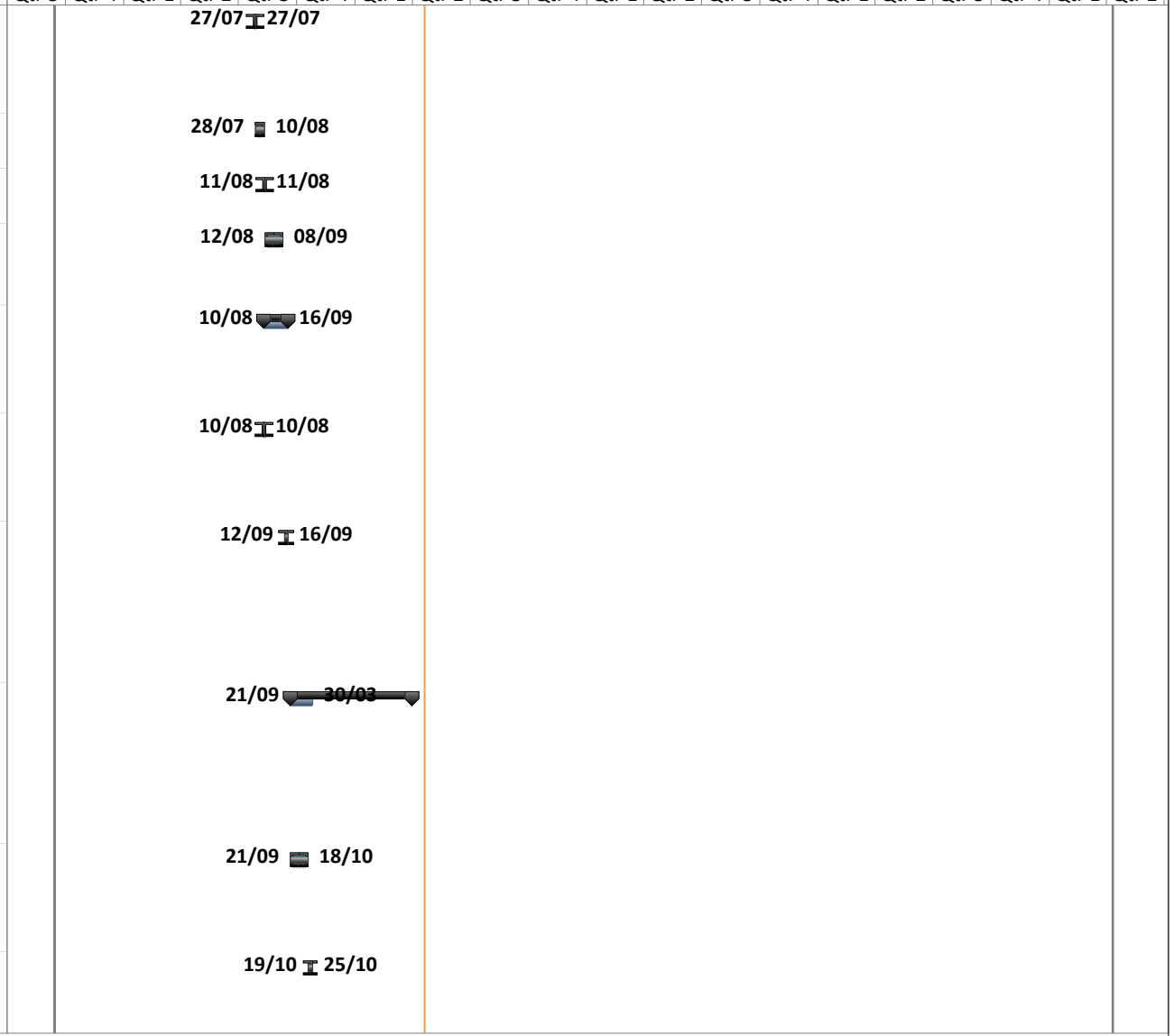
ID	Task Name	Duration
1	**PROYECTO CERTIFICACIÓN DE AERÓDROMOS / AERODROMES CERTIFICATION PROJECT**	**1194 days**
2	**Conjunto LAR AGA y MIAGA / LAR AGA Set & MIAGA**	**469 days**
3	**Panel de Expertos de Aeródromos y Ayudas Terrestres (PEAGA) / AGA Expert Panel (PEAGA)**	**15 days**
4	Solicitar Estados miembros del SRVSOP, designar especialistas para el Panel de Expertos de Aeródromos y Ayudas Terrestres (PEAGA) / Request States SVRSOP members to designated experts for the AGA Panel (PEAGA)	15 days
5	**Comité Técnico (CT) del SRVSOP AGA / Technical Committee (TC) AGA SVRSOP**	**11 days**
6	Miembros CT del SRVSOP AGA / TC members AGA SVRSOP	1 day
7	Solicitar/Contratar Especialista para desarrollar estructura del LAR AGA / Request espert to develop LAR AGA structure	1 day
8	Aceptación del Estado/Especialista para desarrollar estructura del LAR AGA / States/expert acceptance to develop LAR AGA structure	1 day
9	**Desarrollo por parte del Comité Técnico de la estructura de cada LAR, incluyendo sus capítulos y secciones / Development by the CT the structure for each LAR, including chapters & sections**	**5 days**
10	Desarrollar la estructura LAR AGA y elaborar tablas de referencias cruzadas del LAR AGA (Anexo 14) / Develop LAR AGA structure & make cross reference tables for LAR AGA (Annex 14)	5 days
11	**Consulta de la estructura de cada LAR al Panel de Expertos respectivo – Primera ronda de consulta / First round of consultations**	**45 days**



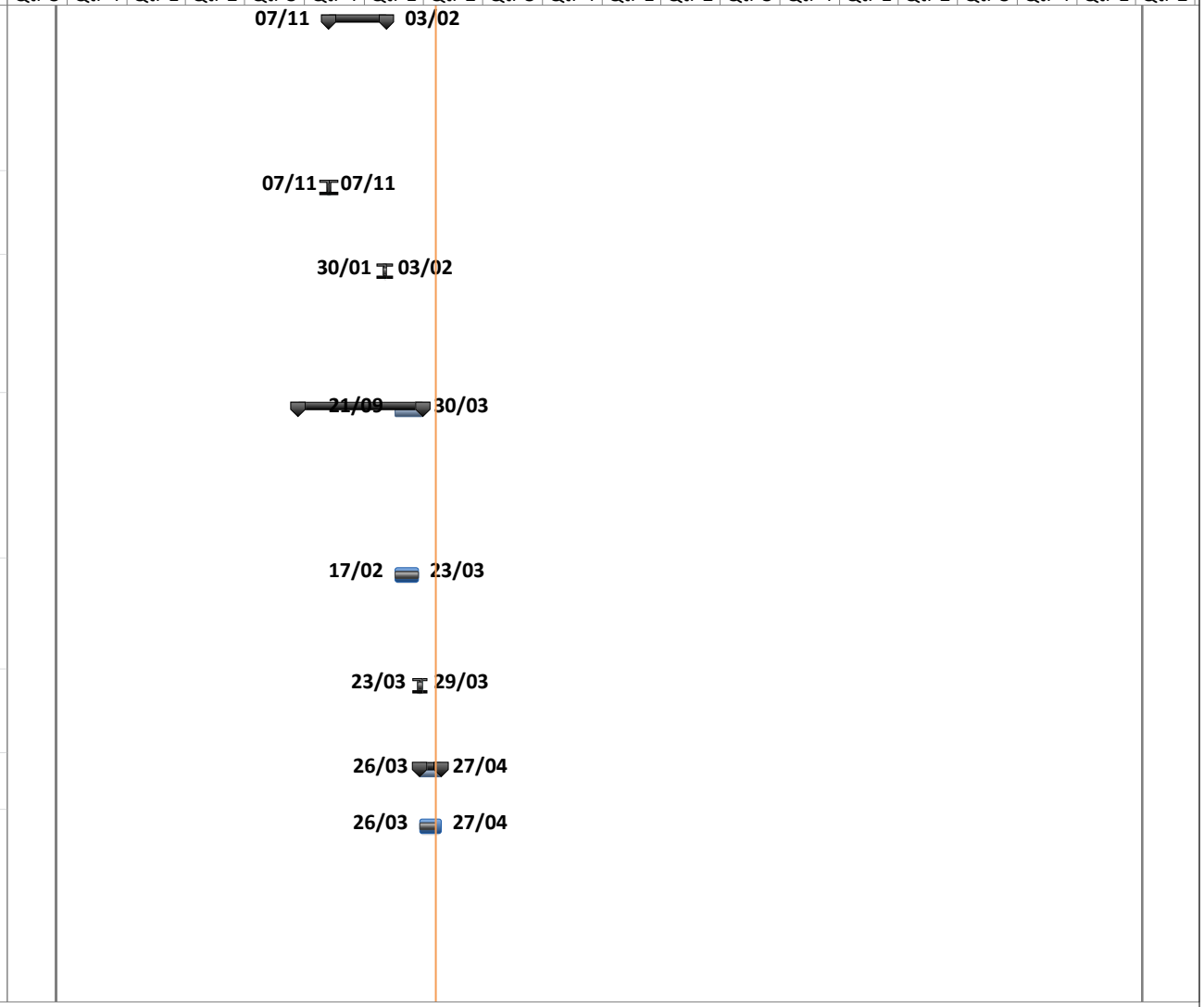
ID	Task Name	Duration
12	Circular la estructura al Comité Técnico (CT) y a los miembros del PEAGA - Primera ronda de consulta / Circulate thestructure among the CT & PEAGA members - First round of consultation	20 days
13	Incorporar oportunidades de mejora a la estructura en base a los comentarios del CT y PEAGA / Incorporate the oportunity for improvement of the structure based on the CT & PEAGA comments	15 days
14	Circular el documento que registre los comentarios y respuestas a los miembros del PEAGA, para su pronunciamiento / Circulate the document with the comments & responses from the PEAGA members	10 days
15	**Desarrollo del texto completo de cada LAR del conjunto LAR AGA / Development of the text for each LAR from the LAR AGA set**	**25 days**
16	Desarrollar borrador del texto del conjunto LAR AGA / Develop the draft text from the LAR AGA set	25 days
17	**Consulta del texto de cada LAR al Panel de Expertos respectivo – Segunda ronda de consulta / Second round of consultation**	**73 days**
18	Revisión del borrador del texto del conjunto LAR AGA / Revision of the draft text of the LAR AGA set	10 days
19	Desarrollo de las tareas para cada miembro del PEAGA / Development of the task for every member of PEAGA	10 days
20	Circulación de tareas a los especialistas del PEAGA para segunda ronda de consulta / Circulate the task assigned to the PEAGA experts for the second round of consultation	1 day
21	Desarrollo de las tareas por parte de cada experto del PEAGA – Segunda ronda de consulta / Second round of consultation	20 days



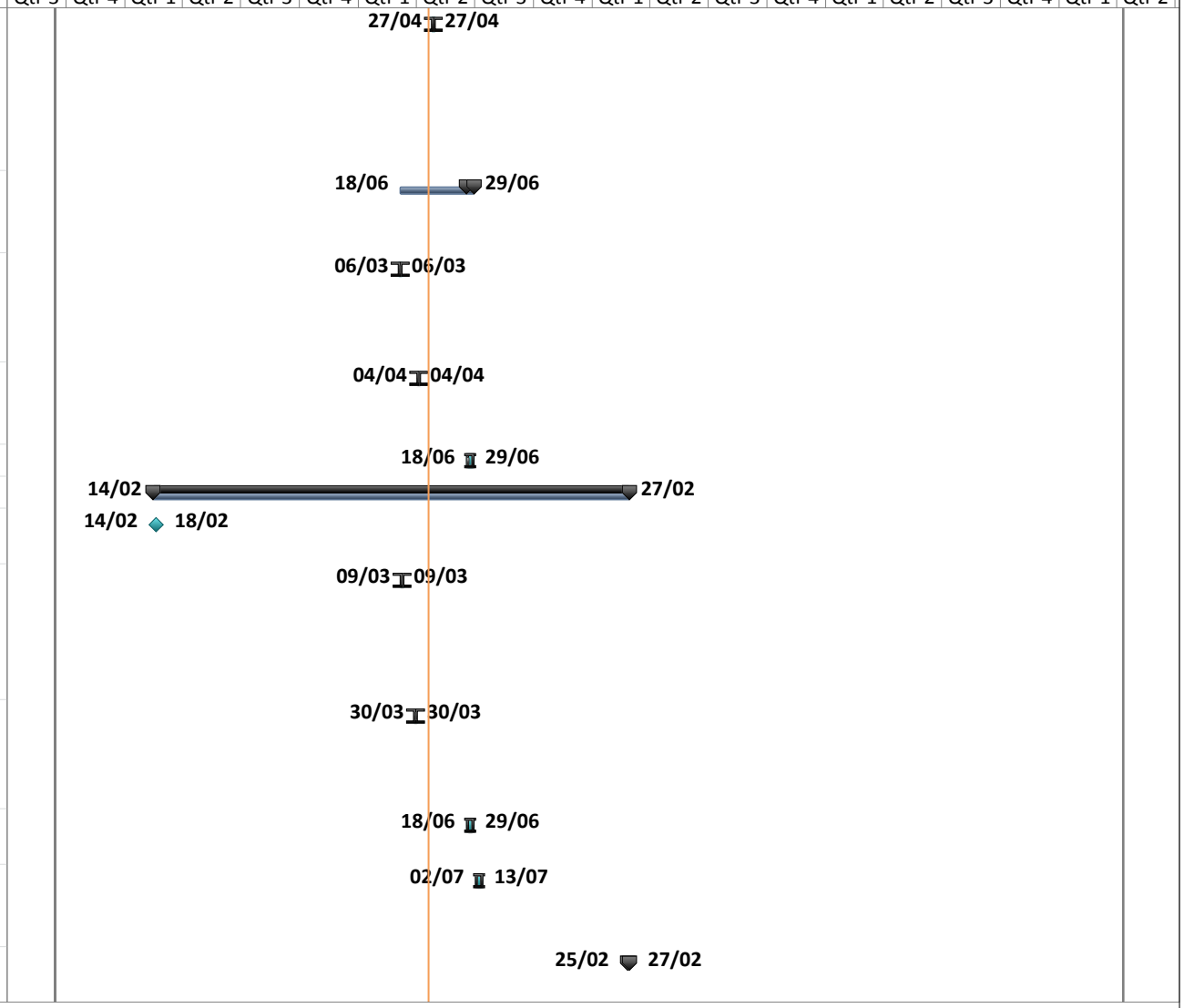
ID	Task Name	Duration
22	Presentación de comentarios a través de Notas de Estudio (NE) al Comité Técnico / Presentation of comments through WP to TC	1 day
23	Revisión de las NE por el Comité Técnico / Revision of WP for TC	10 days
24	Publicación en la Web de las NE / Publication of the WP on the web	1 day
25	Revisión de las NE entre el Comité Técnico y los miembros del PEAGA / Revision of the WP by the CT & PEAGA	20 days
26	**Reunión del Panel de Expertos para la revisión del conjunto LAR AGA (RPEAGA/1) / Experts Panel Meeting for the revision of the LAR AGA set (RPEAGA/1)**	**28 days**
27	Convocatoria a la Primera Reunión del Panel de Expertos de Aeródromos (RPEAGA/1) / Call for the PEAGA First Meeting (RPEAGA/1)	1 day
28	Primera Reunión del Panel de Expertos de Aeródromos (RPEAGA/1). Presentación de NE y análisis y aceptación del LAR AGA / First PEAGA Meeting (RPEAGA/1) Presentation of the WP, analysis & acceptance of LAR AGA	5 days
29	**Aceptación del texto completo del LAR 139 por las Autoridades de Aviación Civil (AAC) de los Estados del SRVSOP – Tercera ronda de consulta / Acceptance of the compelte text LAR 139 by the SRVSOP member states CAA - Third consultation round**	**138 days**
30	Circular el LAR 139 para aceptación de las AAC - Tercera ronda de consulta / LAR 139 circulation for CAA aceptance - Third round of consultation	20 days
31	Evaluación de los comentarios de las AAC por parte del CT / CAA comments evaluation by the TC	5 days



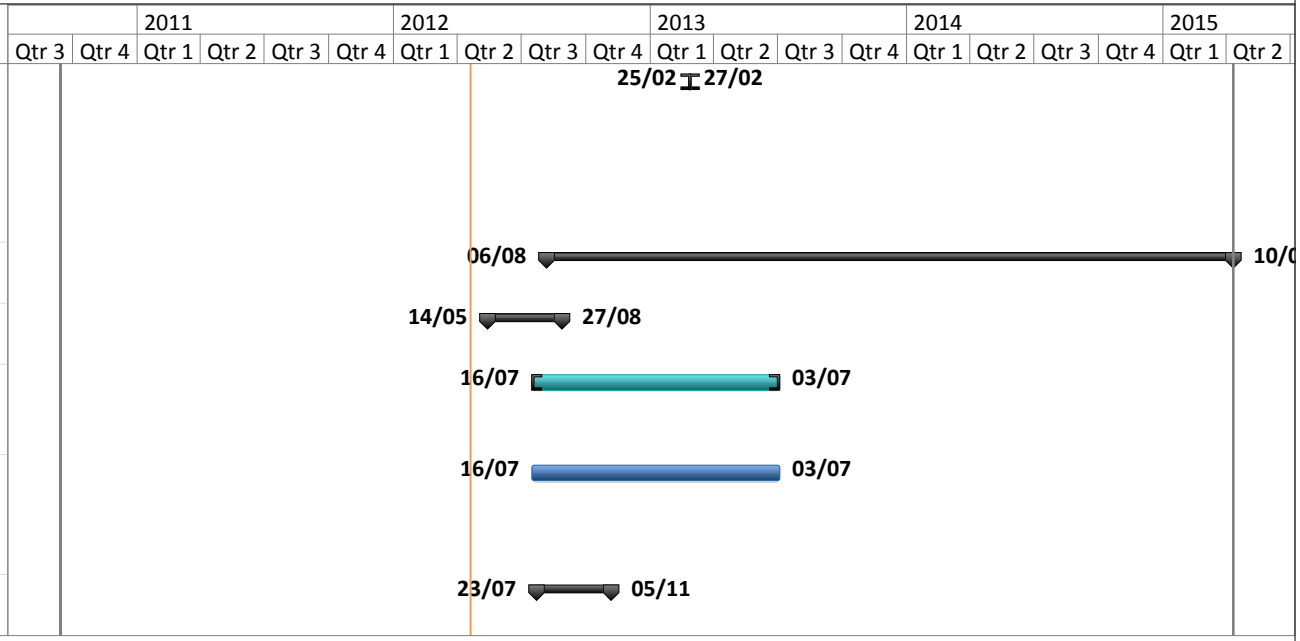
ID	Task Name	Duration
32	**Segunda Reunión del Panel de Expertos para la revisión de los LAR 153, LAR 154 y comentarios al LAR 139, (RPEAGA/2) / Experts Panel meeting for the evaluation of LAR 153, LAR 154 & comments to LAR 139 (RPEAGA/2)**	**65 days**
33	Convocatoria a la Segunda Reunión del Panel de Expertos de Aeródromos (RPEAGA/2) / Call to RPEAGA/2	1 day
34	Segunda Reunión del Panel de Expertos de Aeródromos (RPEAGA/2). Presentación de NE y análisis y aceptación del conjunto LAR AGA / RPEAGA/2. WP presentation, analysis and acceptance of LAR AGA set	5 days
35	**Aceptación del texto completo del LAR 139 modificado, LAR 153 y LAR 154 por la AAC de los Estados del SRVSOP – Tercera ronda de consulta / Acceptance of complete text - modified LAR 139, LAR 153 & LAR 154 by the CAA - Third round of consultation**	**138 days**
36	Circular el LAR 139, LAR 153 y LAR 154 para aceptación de las AAC - Tercera ronda de consulta / Circulation of LAR 139, LAR 153 & LAR 154 for CAA acceptance - Third	26 days
37	Evaluación de los comentarios de las AAC por parte del CT / CAA comments evaluation by the TC	5 days
38	**Aprobación del Conjunto LAR AGA / LAR AGA Set approval**	**25 days**
39	Presentación del LAR AGA y la estrategia de armonización y/o adopción a la JG24 para aprobación de los Estados por el metodo Expreso / LAR AGA presentation and armonization / adoption strategy to the JG24 for States approval using the express methodology	25 days



ID	Task Name	Duration
40	Envío a los Estados del LAR AGA y estrategia de armonización y/o adopción para que den inicio a dicha estrategia / LAR AGA & armonization/adoption strategy delivery to the States to initiate the process	1 day
41	**Desarrollo del Manual de Inspector de Aerodromos (MIAGA) / Development of the Aerodrome Inspector Manual (MIAGA)**	**10 days**
42	Solicitar Especialista para desarrollar el Manual del Inspector de Aerodromos (MIAGA) / Request expert to develop the Aerodrome Inspector Manual (MIAGA)	1 day
43	Aceptación del Estado/Especialista para desarrollar el MIAGA / Acceptance by the State/expert the development of the	1 day
44	Desarrollar el MIAGA / MIAGA development	10 days
45	**Capacitación / Training**	**533 days**
46	Taller de Inspector de Aerodromos - Fase I / Aerodrome Inspector Workshop - Phase I	0 days
47	Solicitar Especialista para desarrollar el Curso de Inspector Gubernamental de Aerodromos (GSIAGA) - Fase II & III / Request expert for the development of the the Aerodrome Inspector Course - Phase II & III (GSI AGA)	1 day
48	Aceptación del Estado/Especialista para desarrollar el Curso GSI AGA / Acceptance by the State/Expert to develop the GSI AGA course	1 day
49	Desarrollo del curso GSI AGA / Development of the GSI AGA course	10 days
50	Curso de Inspector Gubernamental de Aerodromos - Fase II y III / GSI AGA Course - Phase II & III	10 days
51	**Ensayos de auditoría de certificación / Certification audit trials (OJT)**	**3 days**



ID	Task Name	Duration
52	Finalizada la capacitación de los expertos, el CT procederá a programar los ensayos de auditoría de certificación de aerodromos (Fase IV OJT) / Once training is completed aerodrome certification audits will scheduled (Phase IV OJT)	3 days
53	**Armonización o adopción / Armonization or adoption**	**700 days**
55	**Guía de Auditorías internas para Aeródromos / Internal audit guidelines for aerodromes**	**76 days**
60	**Programa Regional de Certificación de Aeródromos / Regional aerodrome certification programme**	**253 days**
61	**Validación de Certificación de Aeródromos existente con el conjunto LAR AGA / Validation of existing aerodrome certification with LAR AGA set**	**253 days**
62	**Guía de vigilancia del proceso de certificación / Guideline for certification process surveillance**	**76 days**



APPENDIX B2

PROJECT ON SAFETY ASSESSMENT OF AERODROMES WITH NON-CONFORMITIES

SAM Region	**PROJECT DESCRIPTION (DP)**	**DP N° F2**	
Programme	**Title of the Project**	**Start**	**End**
Aerodromes *(ICAO programme coordinator: Lia Ricalde)*	Safety assessment of aerodromes with non-conformities *Project coordinator: Tárik Pereira de Souza (ANAC - Brazil)* *Experts contributing to the project: Carlos Garcia Pepe (Uruguay)*	2010	2015
Objective	Certification of aerodromes that do not comply with ICAO SARPs, through an aerodrome safety assessment		
Scope	Develop regulations and documentation for the safety assessment of those conditions that do not enable the aerodrome to comply with ICAO SARPs, with a view to attaining certification: • Aerodromes with non-conformities • Guiding manual for the certification of aerodromes with non-conformities • Aerodromes certified with non-conformities		
Metrics	• Number of aerodrome inspectors training to certify aerodromes with non-conformities • Number of certified aerodromes with deviations		
Strategy	• Identify the most common non-conformities in the physical and operational characteristics of the airports in the Region • Develop a procedure for the certification of aerodromes with deviations that includes guidance on the assessment of non-conformities • Train aerodrome inspectors in the assessment of aerodromes with non-conformities • Implement the procedure for certifying with deviations • Monitor the implementation of the procedure 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	• The difficulties in airport certification at regional level at mainly because most of the existing airports were built before ICAO SARPs on certification requirements were issued. • The new commercial aircraft fleet has greater requirements than the critical aircraft used at the time of the original design • Difficulties for the safety and risk assessment required for each non-conformity • Lack of trained personnel within State civil aviation authorities for the conduction of the corresponding safety assessment		

Related projects	The following projects were defined at the last meeting of the AGA/AOP Subgroup (AGA/AOP/SG/8), and are related to the project described in this DP: • Aerodrome certification • Improvement of runway safety • Quality and availability of aeronautical data • Improvements to aerodrome physical and operational characteristics

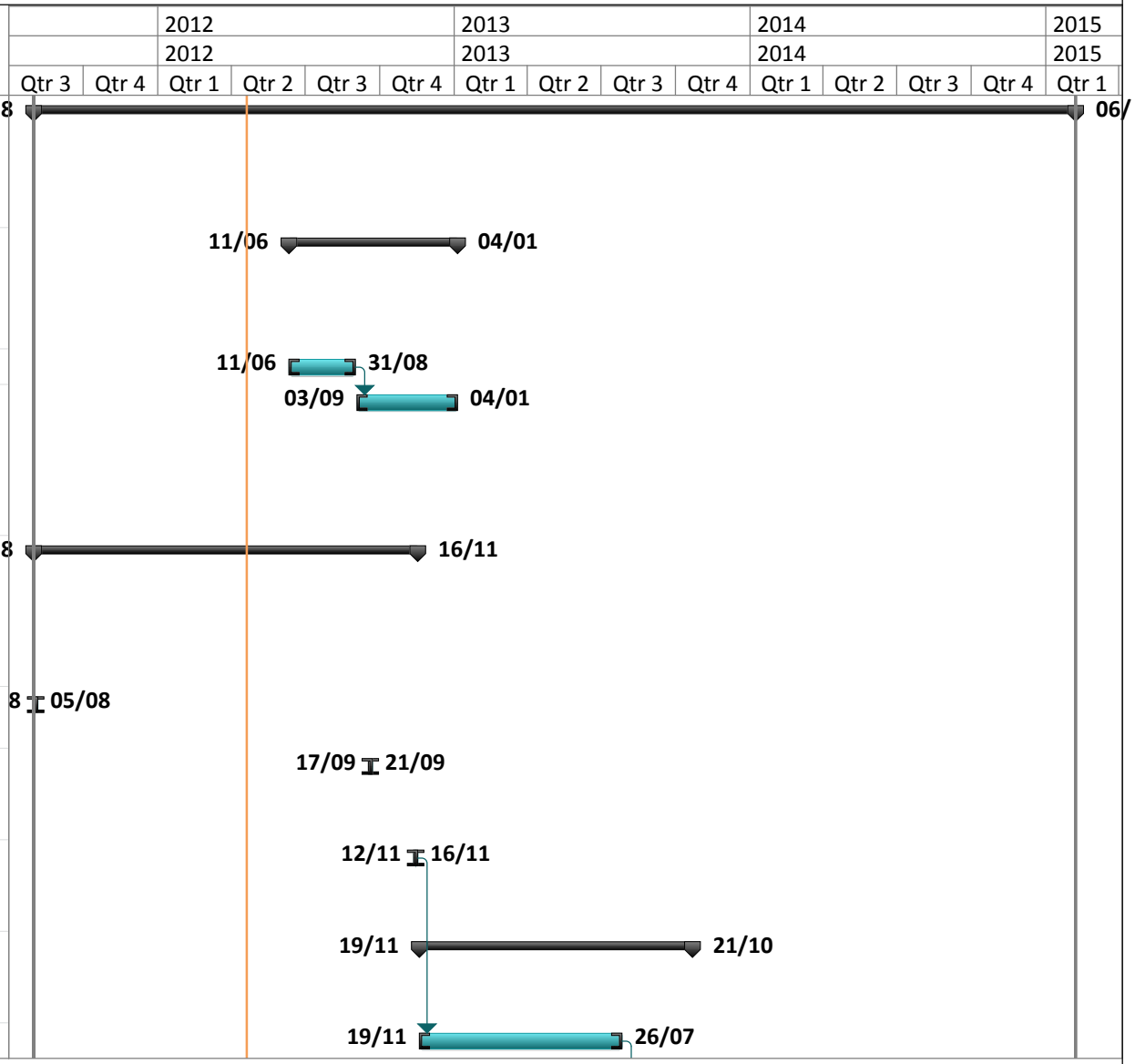
Project Deliverables	**Relationship with the regional performance-based plan (PFF)**	**Responsible Party**	**Status of Implementation**[1]	**Date of Delivery**	**Comments**
List of the most common non-conformities in the Region	PFF SAM AGA 03	Tarik Pereira de Souza		December 2012	Conduct a survey amongst 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	Rodrigo Ribeiro		2013	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, and 05	AGA Officer		2013	Aerodrome inspectors will be trained based on the Guidance Manual developed for the certification of aerodromes with non-conformities.
Timetable for the certification of aerodromes with deviations	PFF SAM AGA 01, 03, 04, and 05	States		2015	Regional certification of previously identified aerodromes with non-conformities

[1] *Grey* *Tasks 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
Resources needed	Designation of experts for the execution of some of the deliverables, financial resources for organising training courses, meetings and at least two certification trials for aerodromes with deviations.				

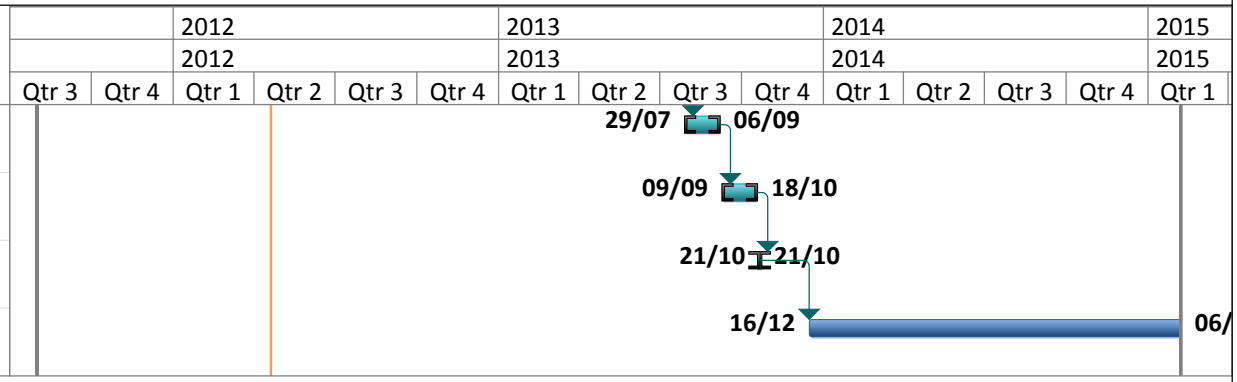
GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
PROYECTO EVALUACIÓN DE LA SEGURIDAD OPERACIONAL PARA AERÓDROMOS CON NO-CONFORMIDADES/SAFETY ASSESSMENT FOR NON-COMPLIANT AERODROMES PROJECT

ID	Task Name	Duration
1	**PROYECTO EVALUACIÓN DE LA SEGURIDAD OPERACIONAL PARA AERÓDROMOS CON NO-CONFORMIDADES/SAFETY ASSESSMENT FOR NON-COMPLIANT AERODROMES**	**920 days**
2	**Relación de no conformidades mas comunes en los Aerodromos de la Región/List of most common Aerodrome no-compliances in the Region**	**150 days**
3	Encuesta regional / regional survey	60 days
4	Analisis de la encuesta y elaboracion de las no conformidades mas comunes en la region / Analysis of the survey and development of list with most common no compliances in the region	90 days
5	**Programa de capacitación para inspectores para la certificación de aeródromos con no-conformidades/Training programme for inspectors for non-compliant aerodromes certification**	**340 days**
6	Taller de Estudios Aeronauticos - RESA / Aeronautical Studies Workshop - RESA	5 days
7	Taller de Estudios Aeronauticos - Obstaculos / Aeronautical Studies Workshop - Obstacles	5 days
8	Curso-Taller para la Evaluacion de la Seguridad Operacional para los Inspectores de Aerodromos	5 days
9	**Manual guía para la certificación de aeródromos con no-conformidades/Guidance manual for non-compliant aerodromes**	**241 days**
10	Recolectar información /Collect information	180 days



GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
PROYECTO EVALUACIÓN DE LA SEGURIDAD OPERACIONAL PARA AERÓDROMOS CON NO-CONFORMIDADES/SAFETY ASSESSMENT FOR NON-COMPLIANT AERODROMES PROJECT

ID	Task Name	Duration
11	Entrega de propuesta de borrador / Delivery of draft proposal	30 days
12	Revision de la propuesta borrador / Review of draft proposal	30 days
13	Entrega documento final / Delivery of final document	1 day
14	Cronograma de certificación de aeródromos con desviaciones	300 days



APPENDIX B3

PROJECT ON IMPROVEMENT OF RUNWAY SAFETY

SAM Region	**PROJECT DESCRIPTION (DP)**		**DP N° F3**	
Programme	**Title of the Project**		**Start**	**End**
Aerodromes *(ICAO programme coordinator: Lia Ricalde)*	Improve Runway Safety *Project coordinator:* *Experts contributing to the project:*	*Alfredo Chavez Baca (Peru)* *Hugo Vieira de Vasconcelos (Brazil)*	2011	2014
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	The following projects were defined at the last meeting of the AGA/AOP Subgroup (AGA/AOP/SG/8), and are related to the project described in this DP: • Safety assessment for aerodromes with non-conformities • Improve runway safety • Quality and availability of aeronautical data • Improvement of aerodrome physical and operational characteristics

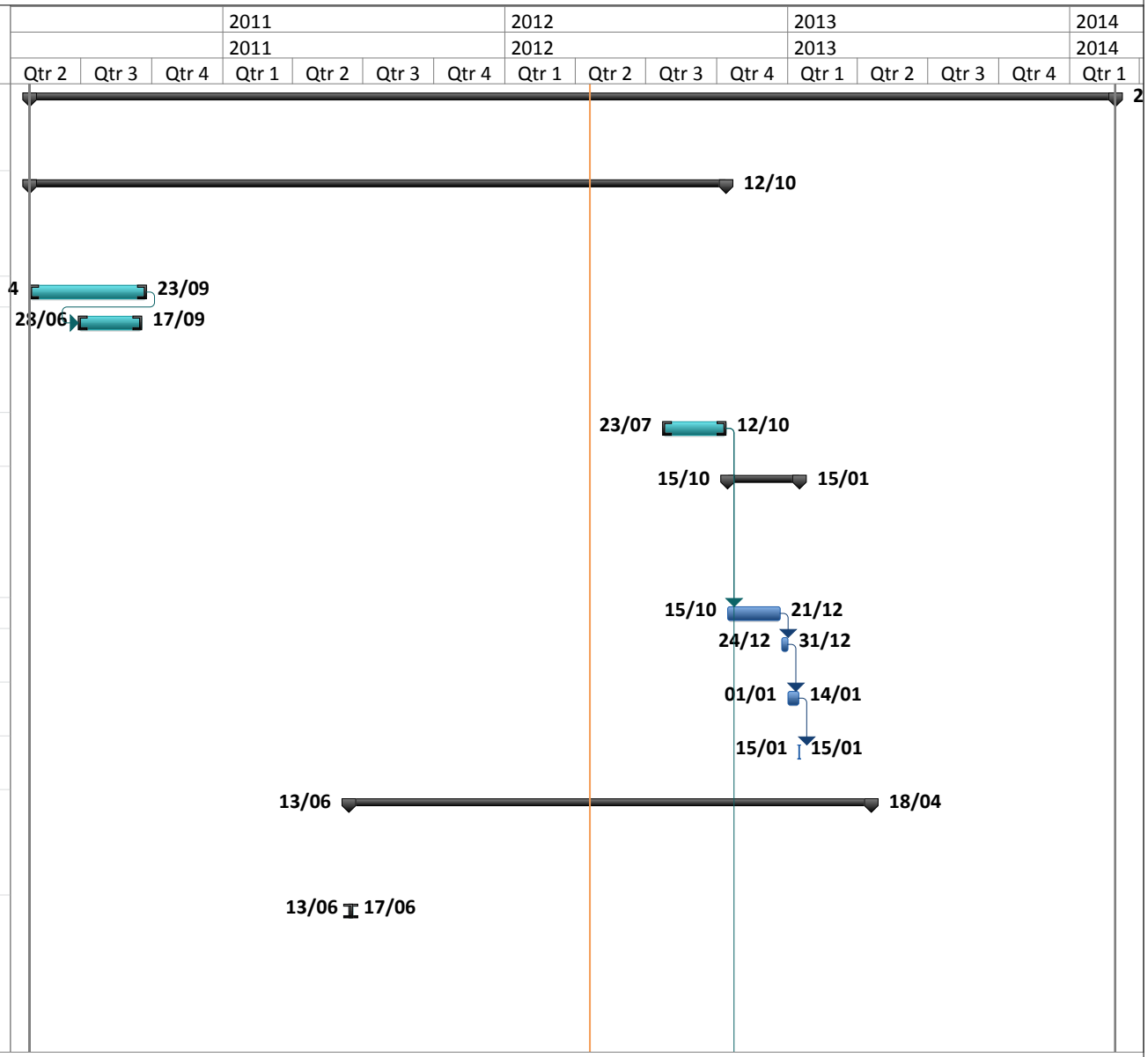
Project Deliverables	**Relationship with the regional performance-based plan (PFF)**	**Responsible Party**	**Status of Implementation** [1]	**Date of Delivery**	**Comments**
Regional safety management plan for runway incursions/excursions	PFF SAM AGA 01, 02, 03, 04, 05	Alfredo Chavez		December 2012	Analyse 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.
Guidance Manual on regional runway safety management plan implementation oversight	PFF SAM AGA 05	GREPECAS		2013	Assist RSTs in their safety oversight task from the AGA perspective
Training programme to improve runway safety	PFF SAM AGA 05	SAM AGA	**60%**	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. Workshop on the Guidance manual on oversight of the safety management implementation plan.

[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		2014	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.				

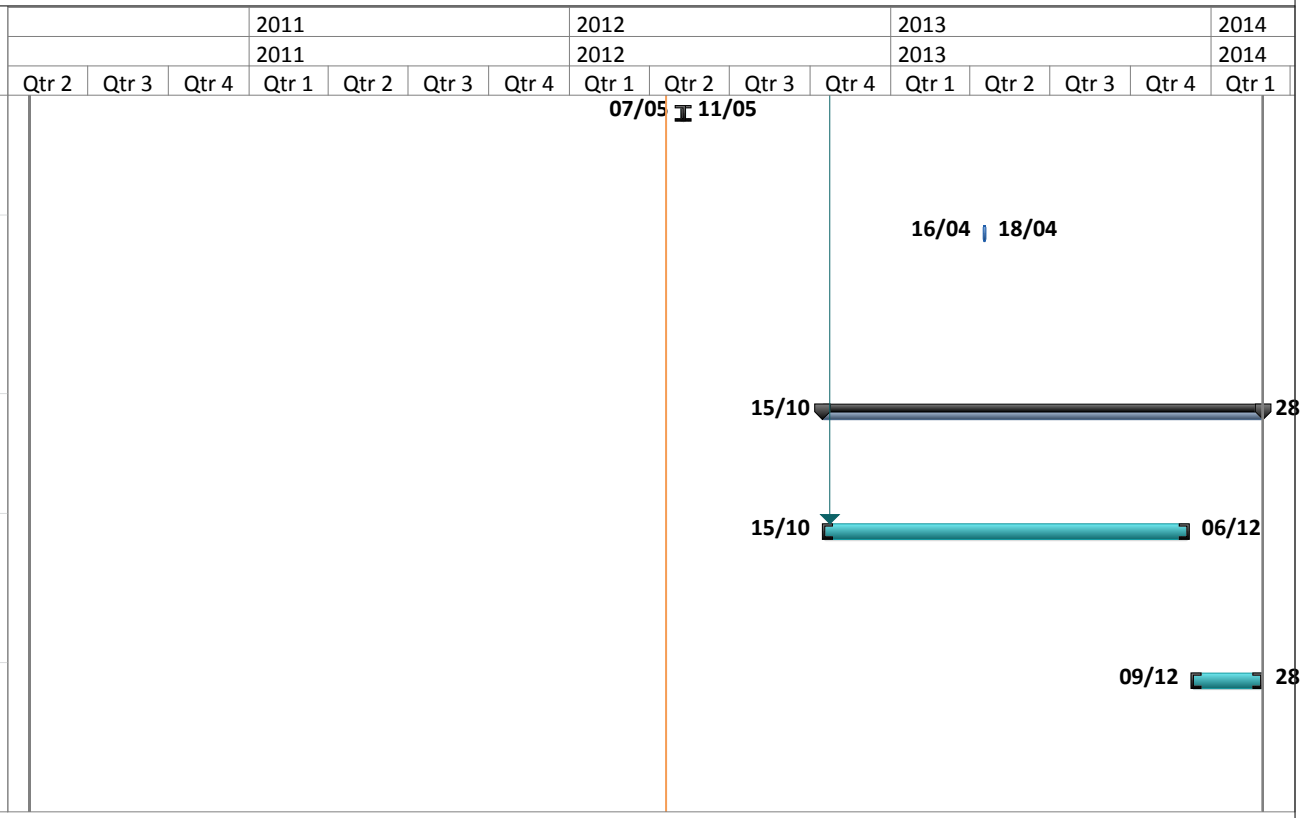
GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
PROYECTO MEJORAR LA SEGURIDAD OPERACIONAL EN LA PISTA / ENHANCE RUNWAY SAFETY PROJECT

ID	Task Name	Duration
1	**PROYECTO MEJORAR LA SEGURIDAD OPERACIONAL EN LA PISTA / ENHANCE RUNWAY SAFETY PROJECT**	**1005 days**
2	**Plan Regional de Gestión de seguridad Operacional para Incursiones/Excursiones de Pista / Regional Plan for Runway Incursions/Excursions Safety Management**	**645 days**
3	Encuesta Regional / Regional survey	109 days
4	Analisis de encuesta y preparacion de relacion de las mejroes practicas en la region / Survey responses analysis and list of best practices in the Region	60 days
5	Elaboracion de medidas de mitigacion Development of mitigation measures	60 days
6	**Manual Guía para la vigilancia de la implantación del plan regional de gestión de la seguridad operacional de pistas/Guidance manual for surveillance of the implementation of the regional runway safety management plan**	**67 days**
7	Recolectar información /Collect information	50 days
8	Entrega de propuesta de borrador / Delivery of draft proposal	6 days
9	Revision de la propuesta borrador / Review of draft proposal	10 days
10	Entrega documento final / Delivery of final document	1 day
11	**Programa de capacitación para mejorar la seguridad operacional en pistas /Training programme for inspectors for runway safety enhancement**	**484 days**
12	Seminario/Taller sobre el Sistema de Gestión de Seguridad Operacional (SMS) y Evaluación del Riesgo del Peligro de Fauna Silvestre - Incursiones en pista / Seminar/Workshop on SMS & Evaluation of Wildlife Hazard - Runway Incursion	5 days



GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
PROYECTO MEJORAR LA SEGURIDAD OPERACIONAL EN LA PISTA / ENHANCE RUNWAY SAFETY PROJECT

ID	Task Name	Duration
13	Taller de Ayudas Visuales para la Aeronavegación - Incursiones de pista / Air Navigation Visual Aids Workshop - Runway Incursions	5 days
14	Taller sobre el Manual Guía para la vigilancia del plan de implantación de gestión de la seguridad operacional / Workshop on Guidance Manual for regional implementation of the runway safety manangement plan	3 days
15	**Cronograma de implementación de medidas de mitigación en los aeródromos/Implementation schedule for the implementation of mitigation measures at aerodromes**	**360 days**
16	Asistencia en la conformacion de los Equipos de Seguridad Operacional de los Aeropuertos (RST) / Assistance in the implementation of the Airports RWY safety teams (RST)	300 days
17	Cronograma de implementacion de medidas de mitigacion por los RST de los aeropuertos / Implementation schedule for the implementation of mitigation measures at aerodromes by the RST	60 days



APPENDIX B4

PROJECT ON QUALITY AND AVAILABILITY OF AERONAUTICAL DATA

SAM Region	**PROJECT DESCRIPTION (DP)**	**DP N° F4**	
Programme	**Title of the Project**	**Start**	**End**
Aerodromes *(ICAO programme coordinator: Lia Ricalde)*	Quality and Availability of Aeronautical Data *Project coordinator:* *Vicente Uribe (Colombia)* *Experts contributing to the project:* *TBD*	2012	2014
Objective	Efficient aerodrome operations based on aeronautical data quality assurance.		
Scope	Documentation in support of the quality and availability of aeronautical data at the aerodromes of the Region: • Reduction of aerodrome deficiencies related to non compliance with the CAR/SAM ANP • Regional strategy for the implementation of quality and availability of aerodrome aeronautical data • Aeronautical data provided by the airport operator to AIM with the corresponding quality requirements • Updated obstacle data at aerodromes		
Metrics	• Percentage of resolved deficiencies related to Doc. 8733, Vol. II FASID, table AOP 1 • Percentage of international aerodromes with updated obstacle data based on the WGS-84 system • Percentage of international aerodromes that have a master plan		
Strategy	• Develop a regional action plan to update the quality of the information contained in Doc 8733, CAR/SAM Air Navigation Plan, Vol. II FASID, Table AOP1; • Establish and implement a process to ensure the provision of aeronautical data by the airport operator to AIM, with the corresponding quality requirements • Update aerodrome obstacle data based on the WGS-84 system 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	• The CAR/SAM ANP requires updating and quality of the aeronautical data of the international airports listed therein. There are many deficiencies due to non-compliance with the ANP, which, in many cases, is already obsolete and requires a comprehensive revision by States. • Aerodrome obstacles based on the WGS-84 also require updating.		

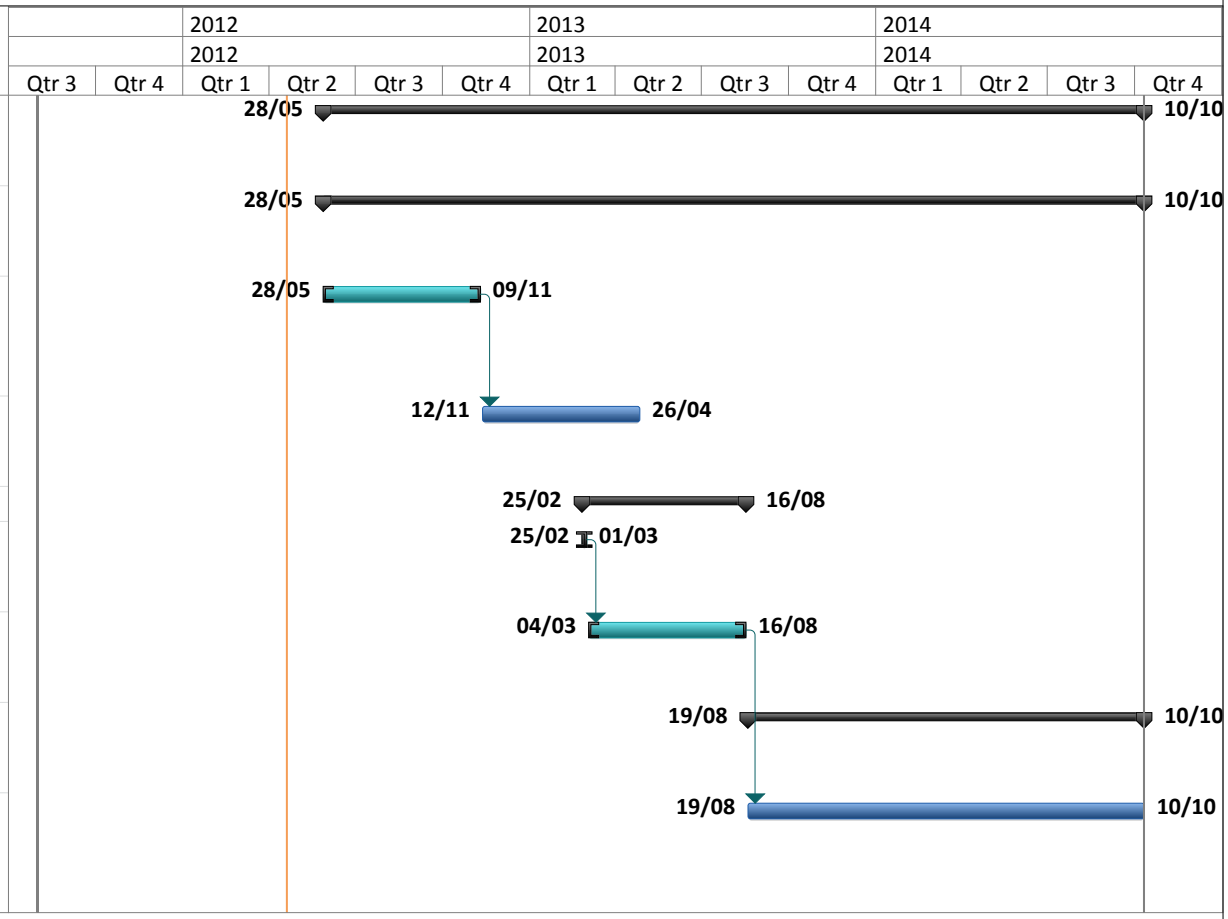
Related projects	The following projects were defined at the last meeting of the AGA/AOP Subgroup (AGA/AOP/SG/8), and are related to the project described in this DP: • Aerodrome certification • Safety assessment of aerodromes with non-conformities • Improve runway safety • Improvement of aerodrome physical and operational characteristics

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	Vicente Uribe		2013	Survey amongst States on the status of national airport development as compared to FASID Table AOP1, updating through amendments.
Master plans	PFF SAM AGA 01	States/ Aerodromes		2013	States should have an updated Airport Development Plan that includes the master plans of international airports. Training in master plans. en Planes Maestros. Development of guiding manual.
Survey of aerodrome obstacles based on WGS-84	PFF SAM AGA 01	States/ Aerodromes		2014	In collaboration with AIM
Resources needed	Designation of experts for the execution of some of the deliverables, financial resources for the purpose of organising training courses and meetings.				

[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 mreasures are required*

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
PROYECTO CALIDAD Y DISPONIBILIDAD DE LOS DATOS AERONÁUTICOS / QUALITY AND AVAILABILITY OF AERONAUTICAL DATA PROJECT

ID	Task Name	Duration
1	**Calidad y Disponibilidad de los Datos Aeronáuticos/Quality and Availability of Aeronautical Data**	**620 days**
2	**Actualizacion de la Tabla AOP1 del FASID, Doc. 8733 ANP CAR/SAM/Update of FASID AOP1 Table, Doc. 8733 CAR/SAM ANP**	**620 days**
3	Analisis de Deficiencias AGA relacionadas a incumplimiento de la tabla AOP1 del FASID, Doc. 8733 / Analysis of AGA deficiencies related to no compliance with AOP1 Table, FASID, Doc. 8733	120 days
4	Enmiendas AGA a la tabla AOP1 del FASI, Doc. 8733 / AGA Amendments to the AOP1 Table, FASID, Doc. 8733	120 days
5	**Planes Maestros**	**125 days**
6	Taller para desarrollo de Planes Maestros/Workshop for the development of Master Plans	5 days
7	Manual Guia para el desarrollo de Planes Maestros / Guidance Material for the development of Master Plans	120 days
8	**Levantamiento de obstáculos en los aeródromo en el sistema WGS-84 / Survey of obstacles at aerodromes in WGS-84 system**	**300 days**
9	Plan de acción para el levantamiento de obstáculos en los aeródromo en el sistema WGS-84 / Action plan for removal of obstacles at aerodromes in WGS-84 system	300 days



APPENDIX B5

PROJECT ON THE IMPROVEMENT OF AERODROME PHYSICAL AND OPERATIONAL CHARACTERISTICS

SAM Region	**PROJECT DESCRIPTION (DP)**	DP N° F5	
Programme	**Title of the Project**	**Start**	**End**
Aerodromes (ICAO programme coordinator: Lia Ricalde)	Improvement of Aerodrome Physical and Operational Characteristics Project coordinator: Eduardo Henn Bernardi (Brazil) Experts contributing to the project: Aldemar Pinzon (Colombia)	2011	2015
Objective	Develop guides and operational criteria to increase aerodrome capacity with efficiency		
Scope	Documentation to support the improvement of aerodrome physical and operational characteristics • Guide for calculating runway and apron capacity • Guide for calculating runway and apron capacity and demand • Training of instructors for the course on calculation of aerodrome capacity • Development of a user-friendly software/programme for calculating capacity • Guide on practical improvements for optimising runway and apron capacity		
Metrics	• Number of States whose aerodrome capacity has been calculated • Number of airports with optimised runway and apron capacity • Number of aerodromes with increased capacity as a result of improvements in their infrastructure and/or procedures • Percentage of operations delayed, by aerodrome		
Strategy	• Development of the methodology for calculating aerodrome capacity • Training of instructors to replicate capacity calculation procedures • Implement capacity calculation procedures, and assess those aerodromes whose installed capacity is almost saturated • Develop procedures to optimise runway and apron capacity at aerodromes • Develop environmental management procedures in coordination with regional committees • Apply the procedures for optimising runway and platform capacity at aerodromes • Establish the requirements applicable to aerodrome operators for the implementation of surface movement guidance and control systems • Monitor the optimisation of runway and apron capacity 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	• 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 • Improving aerodrome infrastructure takes time, thus the need to optimise existing capacity • It is foreseen that the new generation of wide-body aircraft will be operating at the main airports of the Region
Related projects	The following projects were defined at the last meeting of the AGA/AOP Subgroup (AGA/AOP/SG/8), and are related to the project described in this DP: • Aerodrome certification • Safety assessment of aerodromes with non-conformities • Runway safety improvement • Quality and availability of aeronautical data

Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation [1]	Date of Delivery	Comments
Methodology for calculating runway and ATC sector capacity	PFF SAM AGA 04	CGNA	**100%**	July 2011	Currently, the AGA and ATM areas are working towards the adoption of the CGNA methodology for calculating runway and ATC sector capacity
Course developed for instructors on the calculation of runway and ATC sector capacity	PFF SAM AGA 04	CGNA	75%	April 2012	A course for instructors was conducted In November 2011 and is to be concluded in April 2012. The participants that passed the course will be certified as instructors by CGNA.
Methodology for calculating runway and apron capacity	PFF SAM AGA 04	Eduardo Bernardi		2013	The part on the calculation of apron and taxiway capacity is expected to be incorporated into the methodology

[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
Software/programme for calculating runway and apron capacity	PFF SAM AGA 04	Eduardo Bernardi		2013	The methodology developed should migrate towards a programme with a user-friendly interface that reduces methodological subjectivity
Methodology for calculating runway and apron capacity	PFF SAM AGA 04	Eduardo Bernardi		2014	Once the States can calculate the capacity of their aerodromes using the same method, demand calculation may be added
Guidance manual on runway and apron capacity optimisation	PFF SAM AGA 04	TBD		2015	The best practices of the Region would be used to develop a guide on runway and apron optimisation
Resources needed	Designation of experts for the execution of some of the deliverables, financial resources for organising training courses and meetings.				

ID	Task Name	Duration
1	**Mejoras de las Características Físicas y Operacionales del Aeródromo/Physical & Operational Characteristics Improvement for Aerodromes**	**1010 days**
2	**Metodología para cálculo de capacidad de pistas y sectores ATC/Methodology for calculation of runway capacity and ATC sectors**	**400 days**
3	Curso sobre cálculo de capacidad para pistas y sectores ATC / Course for calculation of runway capacity and ATC sectors	5 days
4	Curso desarrollado para instructores de cálculo de capacidad para pistas y sectores ATC/Course for instructors in calculation of runway capacity and ATC sectors	5 days
5	Desarrolllo de herramienta para el calculo de capacidad de pistas y sectores ATC basada en metodologia del CGNA de Brasil / Development of tool for calculation of runway capacity and ATC sectors based on the Brazilian CGNA methodology	10 days
6	**Metodología para cálculo de capacidad y demanda de pistas y plataformas/Methodology for calculation of capacity and request for runways and aprons**	**610 days**
7	Metodología para cálculo de capacidad y demanda de pistas y plataformas/Methodology for calculation of capacity and request for runways and aprons	400 days
8	Software/programa para cálculo de capacidad de pistas y plataformas/Software for calculation of runway and apron capacity	90 days
9	Manual Guía para la optimización de la capacidad de pistas y plataformas/Guidance manual for runway and apron capacity optimization	120 days