



**GREPECAS Programmes and Projects Committee (PPRC) Fourth Virtual Meeting
 (ePPRC/04)
 Online, 21 – 22 April 2022**

- Agenda Item 2: Follow-up on the CAR/SAM Planning and Implementation Regional Group (GREPECAS) Programmes and Projects**
2.1 Air Navigation Services (ANS) Implementation Status in the CAR/SAM Regions through the GREPECAS Programmes and Projects (Aerodromes and Ground Aids (AGA), Air Traffic Management (ATM), Aeronautical Information Management (AIM), Communications, Navigation and Surveillance (CNS), Meteorology (MET) and Search and Rescue (SAR))

STATUS OF ATFM IMPLEMENTATION IN CAR/SAM REGIONS

(Presented by the Secretariat)

EXECUTIVE SUMMARY	
This working paper presents a report on the evolution of Air Traffic Management (ATM) implementation activities related to the Air Traffic Flow Management (ATFM) Programme projects for the CAR and SAM Regions.	
Action:	Indicated in Section 4.
<i>Strategic Objectives:</i>	<ul style="list-style-type: none"> • Air Navigation Capacity and Efficiency • Economic Development of Air Transport • Environmental Protection
<i>References:</i>	<ul style="list-style-type: none"> • Doc 9750 - <i>Global Air Navigation Plan (GANP)</i> • Doc 9971 - <i>Manual on Collaborative Air Traffic Flow Management</i> • GREPECAS meetings reports • PPRC and ePPRC meetings reports

1. Introduction

1.1 In follow-up to GREPECAS Decisions 16/45 and 16/47, the ATFM Programme was structured with the following associated projects:

- Improve demand and capacity Balancing (DCB), in the CAR and SAM Regions; and
- Implementation of the Flexible Use of Airspace (FUA) in the CAR Region.

1.2 The progress on the activities of Programme B projects, linked to the implementation of ATFM and DCB, are detailed below:

2. Analysis

2.1 *CAR Region: Projects B1 “Improving the balance between demand and capacity” and B2 “Implementing flexible use of airspace (FUA)”*

2.1.1 Deliverables for these projects are being addressed by the Air Traffic Flow Management Implementation Task Force (ATFM/TF) of the North American, Central American and Caribbean Working Group (NACC/WG). This Task Force conducts monthly teleconferences, as well as annual meetings to follow up and update activities.

2.1.2 Due to the relevance of the activities for the formulation and management of Vol. III of the CAR/SAM Air Navigation Plan (ANP), its impact on GREPECAS projects and, consequently, on its work programme. The ATFM/TF decided to focus its activities on supporting the formulation of Vol. III, as well as in the implementation of a framework for measuring performance in ATM. Additionally, the ATFM/TF periodically monitors the performance and forecasts of air operations for the CAR Region.

2.1.3 An important aspect for the ATFM/TF has been to work on the identification of aerodromes and Air Traffic Control (ATC) areas where the implementation and operation of ATFM will be considered as a basic level service for air navigation in the CAR Region. For this purpose, a survey was prepared for the development of a set of criteria to support the aforementioned identification. The objective is to agree on the CAR Region airspaces where the implementation of ATFM processes would be a basic requirement of the air navigation service, either directly or through agreements with service providers of adjacent airspaces.

2.1.4 Project N° B1 “Improving the balance between demand and capacity (DCB)” will continue, readjusting its indicator to verify the implementation of ATFM only in these airspaces where it will be considered a minimum requirement and incorporating the regionally agreed indicators for the measurement of ATFM performance derived from the work of Vol. III of the CAR/SAM ANP.

2.1.5 Project N° B2 Implementation of Flexible Use of Airspace (FUA) is considered completed. **Appendix A** to this WP shows activities of both projects.

2.2 *SAM Region: Project B1 “Improving the balance between demand and capacity”*

2.2.1 The Meetings of the South American Region Implementation Group (SAM/IG) adjusted the implementation strategy of the ATFM, planning its actions based on practical activities, and recognizing that in during the pandemic airports and airspaces of the Region would not present significant demand-capacity imbalances. Priority was given to the strengthening of the CDM, the monitoring of regional demand as the recovery of air operations is observed, and the management of data and indicators for the ATFM.

2.2.2 On June 2021, Sub Group 3 – ATFM (SG3) of the SAM Airspace Study and Implementation Group (GESEA) was formed, which defined the necessary deliverables to boost the activity of ATFM services. The Report of the SAMI/IG/26 meeting (Virtual, September 2021) contains details of the progress of SG3, and is available at the following link;

<https://www.icao.int/SAM/Pages/MeetingsDocumentation.aspx?m=2021-RLA06901-SAMIG26>

2.2.3 SG3 developed an ATFM Operations Plan (OPSAM) with the aim of structuring actions that allow, during the recovery phase of operations in the SAM Region, to adjust the ATC and Airport capacity to the gradual increase in demand and contribute to the recovery and sustainability of the air transport system at a regional and global level in the new projected scenario.

2.2.4 This mechanism included the creation of a Dashboard with a unique database format to allow the exchange of information on demand and support the establishment of two ATFM SAM Operational Teleconferences (BRISA), one pre-tactical and one Strategic/Post-operations, with the participation of ATFM services and airlines (IATA).

2.2.5 Currently, the Dashboard contains the schedule of air cargo and passenger flights from Argentina, Brazil, Chile, Colombia, Ecuador and Peru, and is ready to be used by States in the organization of the BRISA. While the post-operations information provided by the States is analyzed, the management of Key Performance Indicators (KPIs) related to punctuality, flight efficiency, etc. is being initiated.

2.2.6 Daily dissemination of the ATFM Daily Plans (PDA), via mail and/or on the web by six SAM States, is carried out punctuality. COCESNA also shares its information in this initiative, which supports the regional and interregional CDM process.

2.2.7 Another SG3 deliverable is a revised version of the Guide for the implementation of the ATFM service in the SAM Region. This document is a guide for States to implement, in the first place, national ATFM services or crossborder ATFM that adapt to the magnitude of the flow of air traffic that manage their Air Traffic Services (ATS), and that respond correctly to the solution of the demand/capacity imbalance situation. In addition, work is being done on the revision of the Manual for Calculation of runway and ATS sector capacity.

2.2.8 Details of main activities of the ATFM SAM Implementation Project are presented as **Appendix B** to this WP.

3. Conclusions

3.1 After the substantial reduction in air operations due to the COVID-19 pandemic, the CAR Region is preparing for recovery. In this context, ATFM will continue to be a fundamental tool for strategic decision-making during the recovery process and beyond.

3.2 Under the support of Project RLA/06/901, direct assistance to the States of the SAM Region for the implementation of the ATFM has continued. The tools used for this purpose by the SAM Regional Office have been the virtual implementation meetings (SAM/IG) and the GESEA Contributing Group. This strategy has made it possible to join and guide the States of the Region in strengthening the implementation of ATFM.

3.3 Recognizing that during the pandemic period airports and airspaces of the SAM Region would not present significant demand-capacity imbalances, priority was given to a set of practical activities for the strengthening of the CDM, the monitoring of regional demand as the recovery of air operations is observed, and the Management of data and indicators for the ATFM.

4. Suggested action

4.1 The Meeting is invited to:

- a) Take note of the information provided in this working paper; and
- b) review the activities and the status of projects detailed in Appendices A and B and suggest the actions that deem appropriate.

APENDICE A / APPENDIX A
IMPROVE DEMAND AND CAPACITY BALANCING (DCB) /
MEJORAR EL EQUILIBRIO ENTRE LA DEMANDA Y LA CAPACIDAD (DCB)

<i>CAR Region / Región CAR</i>	PROJECT DESCRIPTION / DESCRIPCION DEL PROYECTO (DP)	DP N° B1	
<i>Programme / Programa</i>	Title of the Project / Título del Proyecto	Start / Fecha inicio	End / Fecha término
<i>Improve demand and capacity balancing (DCB) / Mejorar el equilibrio entre demanda y capacidad (DCB)</i> (Programme Coordinator / Coordinador del Programa: Eddian Méndez)	<i>Improve demand and capacity balancing (DCB) / Mejorar el equilibrio entre demanda y capacidad (DCB)</i> Project Coordinator / Coordinador del Proyecto: Greg Byus (United States / Estados Unidos) Jorge Centella / Ricardo Martínez (Cuba) Deano Ledford (Jamaica) Curtis Fraser (Trinidad and Tobago) Kapri Kupper (CANSO) Fernando Soto (COCESNA)	2008	2022
Objective / Objetivo	Support the ATFM implementation based on the regional performance objectives of the Performance-based Air Navigation Implementation Plan for NAM/CAR Regions (RPBANIP NAM/CAR). / Apoyar la implementación ATFM con base en los objetivos regionales de performance del Plan de Implementación basada en la Performance para las Regiones NAM/CAR (RPBANIP NAM/CAR).		
Scope / Alcance	Progressive implementation of the ATFM service in CAR Region to ensure demand and capacity balancing (DCB). / Implantación progresiva del servicio ATFM en la Región CAR para asegurar un equilibrio entre demanda y capacidad (DCB).		
Metrics / Métricas	<ul style="list-style-type: none"> • % of States with coordination ATFM procedures implemented / % de Estados con procedimientos de coordinación ATFM implementados. • % of States with Flow Management Unit (FMU) or Flow Management Position (FMP) implemented. / % de Estados con dependencias de Organización de la afluencia (FMU) o puestos de gestión de la afluencia (FMP) implementadas. 		
Strategy / Estrategia	The implementation activities will be coordinated between Project members, the Project Coordinator and the Programme Coordinator. The Programme Coordinator will coordinate with the Project Coordinator requirements of other projects and NAM/CAR implementation working groups. Experts nominated by States, Territories and International Organizations will be incorporated, as required. / La ejecución de las actividades será coordinada entre miembros del Proyecto, el Coordinador del Proyecto y el Coordinador del Programa. El coordinador del Programa coordinará con el Coordinador del Proyecto los requerimientos de otros proyectos y Grupos de Trabajo de Implementación NAM/CAR. Se incorporarán expertos nominados por los Estados, Territorios y Organizaciones Internacional, según sea requerido.		

Targets / Metas	<ul style="list-style-type: none"> • 60% of CAR States with ATFM units or Flow Management Position by December 2014. /on-going 60% de Estados de la Región CAR con unidades ATFM o puestos de gestión de afluencia implementados en Diciembre de 2014 /En progreso • 90% of CAR States with ATFM procedures implemented by December 2016. / on-going 90% de Estados de la región CAR con procedimientos ATFM implementados en Diciembre de 2016 / En progreso
Justification / Justificación	<p>GREPECAS supported the ATFM implementation to ensure an optimun traffic flow when demand exceeds or is expected to exceed the available capacity of the ATS system. / El GREPECAS apoyó la implantación de la ATFM para garantizar una afluencia óptima de tránsito aéreo durante períodos en los cuales la demanda excede o se espera exceda la capacidad disponible del sistema ATS.</p>
Related Projects / Proyectos relacionados	<ul style="list-style-type: none"> • PBN Implementation. / Implementar la Navegación Basada en la Performance (PBN). • Flexible use of airspace. Uso flexible del espacio aéreo. • Improve ATM Situational Awareness. / Mejorar la Conciencia Situacional ATM.

Project deliverables / Resultados entregables del Proyecto	Relationship with RPB- ANIP NAM/CAR / Relación con el RPB-ANIP NAM/CAR	Responsible / Responsable	Status of implementation / Estado de Implantación*	Delivery date / Fecha entrega	Remarks / Comentarios
<p>Define common elements of ATM situational awareness between FMUs;</p> <ul style="list-style-type: none"> ▪ common traffic displays, ▪ common weather displays (Internet), ▪ communications (teleconferences, web), and ▪ regular teleconference /messages methodology advisories <p>/Definir los elementos comunes de conciencia situacional ATM;</p> <ul style="list-style-type: none"> ▪ visualización común de tránsito, ▪ visualización común de condiciones meteorológicas (Internet), ▪ comunicaciones (conferencias telefónicas, web), y ▪ metodología de asesorías regulares mediante conferencias telefónicas 	RPOs 1, 2, 3, 9	States, Territories, International Organizations / Estados, Territorios, Organizaciones Internacionales		Dec 2022 / Dic 2022	Regional teleconferences are carried out on weekly basis through agreed methodology. Additional situational awareness requirements will be defined in the short term. / Se llevan a cabo teleconferencias regionales semanalmente con la metodología acordada. Requisitos adicionales de conciencia situacional ATM serán definidos en el corto plazo.
<p>Develop an ATFM proposal for amendment (PFA) to regional supplementary procedures (Doc 7030) . / Desarrollar una propuesta de enmienda (PFA) a los procedimientos suplementarios regionales (Doc 7030)</p>	RPOs 2, 3	States, Territories, International Organizations / Estados, Territorios, Organizaciones Internacionales		Completed / Completada	ATFM CONOPS presented for approval / CONOPS ATFM presentado para aprobación

Develop operational agreements between ATFM units for interregional demand/capacity balancing. / Desarrollar acuerdos operacionales entre unidades ATFM para equilibrar la demanda/capacidad interregional.	RPOs 3	States, Territories, International Organizations / Estados, Territorios, Organizaciones Internacionales		Dec 2022 / Dic 2022	Develop a model of ATFM LOAs based on the ICAO Doc 9971 that includes a Model of ATFM LOA. / Desarrollar un modelo de LOA basado en el Doc 9971 de la OACI que incluya un modelo de LOA ATFM.
Required Resources / Recursos necesarios	CAR Regional Project with the participation of States to support ATFM training aspects. / Proyecto regional CAR con la participación de los Estados para apoyar los asuntos de instrucción ATFM.				

Grey / Gris: Task not started / Tarea no iniciada;

Green / Verde: Activity underway as scheduled / Actividad en progreso de acuerdo con el cronograma;

Yellow / Amarillo: Activity started with some delay but expected to be completed on time / Actividad iniciada con cierto retardo pero estaría llegando a tiempo en su implantación;

Red / Rojo: It has not been posible to implement this activity as scheduled; mitigating measures are required / No se ha logrado la implantación de la actividad en el lapso de tiempo estimado se requiere adoptar medidas mitigatorias.

**IMPLEMENTATION OF FLEXIBLE USE OF AIRSPACE (FUA)
/IMPLEMENTACIÓN DEL USO FLEXIBLE DEL ESPACIO AÉREO (FUA)**

<i>CAR Region / Región CAR</i>	PROJECT DESCRIPTION / DESCRIPCION DEL PROYECTO (DP)	DP N° B2	
<i>Programme Programa</i>	Title of the Project / Título del Proyecto	Start / Fecha inicio	End / Fecha término
<i>Implementation of flexible use of airspace (FUA) / Implementación del uso flexible del espacio aéreo (FUA) (Programme Coordinator Coordinador del Programa: Eddian Méndez)</i>	<p align="center"><i>Implementation of flexible use of airspace (FUA) / Implementación del uso flexible del espacio aéreo (FUA)</i></p> <p align="center">Project Coordinator / Coordinador del Proyecto: Greg Byus (United States / Estados Unidos) Jorge Centella / Ricardo Martínez (Cuba) Deano Ledford (Jamaica) Curtis Fraser (Trinidad and Tobago) Kapri Kupper (CANSO) Fernando Soto (COCESNA)</p>	2008	2019
Objective / Objetivo	<p>Support the implementation for the optimization, balance and equity in the use of airspace between different users and achieve a better civil/military coordination and cooperation, reinforcing air safety based on regional performance objectives of the Performance based Implementation Plan for NAM/CAR Regions (NAM/CAR RPBANIP) / Apoyar la implementación para la optimización, el equilibrio y la equidad en el uso del espacio aéreo entre los diferentes usuarios y lograr una mejor coordinación y cooperación civil/militar reforzando la seguridad operacional, en base a los objetivos regionales de performance del Plan de Implementación basada en la Performance para las Regiones NAM/CAR (RPBANIP NAM/CAR)</p>		
Scope / Alcance	Development of guides for the implementation of flexible use of airspace (FUA) / Elaboración de guías para la implantación del Uso flexible del espacio aéreo (FUA)		
Metrics / Métricas	<ul style="list-style-type: none"> • % of States with civil/military coordination Committees / % de Estados con Comités de Coordinación Civil/Militar • % of reduction in number of permanent reserved airspace / % de reducción del número de espacios aéreos reservados de carácter permanente • Reduction in number of permanent reserved airspace / Reducción del número de espacios aéreos reservados de carácter permanente 		
Strategy / Estrategia	<p>The implementation of activities will be coordinated between members of the Project, the Project Coordinator and the Programme Coordinator. The Programme Coordinator will coordinate with the project coordinator the requirements of other projects and NAM/CAR implementation working groups. Experts nominated by States, Territories and International Organizations will be incorporated to develop tasks as required / La ejecución de las actividades será coordinada entre miembros del Proyecto, el Coordinador del Proyecto y el Coordinador del Programa. El Coordinador del Programa coordinará con el Coordinador del Proyecto los requerimientos de otros proyectos y Grupos de Trabajo de Implementación NAM/CAR. Se incorporarán expertos nominados por los Estados, Territorios y Organizaciones Internacionales para desarrollar las tareas, según se requiera</p>		
Goals / Metas	<ul style="list-style-type: none"> • 80% of CAR Region States having implemented civil/military Coordination Committees for the flexible use of airspace (FUA) /Completed • 80% de los Estados de la Región CAR con Comités de Coordinación Civil/Militar implantados para el Uso flexible del espacio aéreo (FUA) /Completado 		

Justification / Justificación	GREPECAS supported the implementation of flexible use of airspace (FUA) for the optimization of ATS airspace and air traffic flow management (ATFM) efficiency / El GREPECAS apoyó la implantación del uso flexible del espacio aéreo (FUA) para optimizar la eficiencia del espacio aéreo ATS y la gestión de la afluencia del tránsito aéreo (ATFM).
Related Projects / Proyectos relacionados	<ul style="list-style-type: none"> • Implement PBN / Implementar la PBN • Improve balance between demand and capacity / Mejorar el equilibrio entre la demanda y capacidad • Improve ATM situational awareness / Mejorar la Conciencia Situacional ATM

Project deliverables / Entregables del Proyecto	Relationship with RPB-ANIP / Relación con el RPB-ANIP NAM/CAR	Responsible / Responsable	Status of implementation / Estado de Implantación*	Delivery date / Fecha entrega	Remarks / Comentarios
Conduct a regional review of special use of airspace / Llevar a cabo una revisión regional del espacio aéreo de uso especial.	RPOs 1, 2, 3	PBN TF		Completed / completada	Revision of the special use of airspace will be carried out in 2019 / La revisión del espacio aéreo de uso especial se llevara a cabo en 2019
Required Resources / Recursos necesarios	CAR Regional Project with the participation of States to support civil-military coordination for the flexible use of airspace (FUA) / Proyecto regional CAR con la participación de los Estados para apoyar la coordinación civil-militar para el uso flexible del espacio aéreo (FUA)				

Grey / Gris: Task not started / Tarea no iniciada;

Green / Verde: Activity underway as scheduled / Actividad en progreso de acuerdo con el cronograma;

Yellow / Amarillo: Activity started with some delay but expected to be completed on time / Actividad iniciada con cierto retardo, pero estaría llegando a tiempo en su implantación;

Red / Rojo: It has not been posible to implement this activity as scheduled; mitigating measures are required / No se ha logrado la implantación de la actividad en el lapso de tiempo estimado se requiere adoptar medidas mitigatorias.

SAM REGION; PROJECT B1 – IMPROVE DEMAND-CAPACITY BALANCING

<i>SAM Region</i>	PROJECT DESCRIPTION (DP)	DP N° B1 Rev. for e-PPRC/4 April 2022	
Programme	Project Title	Start	End
<p><i>Air traffic flow management (ATFM)</i></p> <p><i>(Programme coordinator: ATM RO Fernando Hermoza Hubner)</i></p>	<p><i>Improve demand-capacity balancing</i></p> <p><i>Project coordinator: Marcos Pecanha (Brasil)</i></p>	2012	2026
Objective	<p>Avoid overloading the ATC and airport systems, strengthening safety, taking into consideration the reduction in the number of delays caused by meteorological and traffic conditions, thus reducing fuel consumption and contaminating emissions. Likewise, improve prediction and management of surplus demand for services in ATC sectors and aerodromes.</p>		
Scope	<p>The scope of this project establishes that ATFM implementation should start with airport and airspace monitoring in order to identify significant increases in ground delays and in-flight holding, as well as bottlenecks (ATC sector, runway, apron, and airport facilities).</p> <p>Furthermore, capacity calculation and air traffic demand analysis are important elements to improve demand/capacity balancing.</p>		
Metrics	<ul style="list-style-type: none"> • % States that have calculated runway and ATC sector capacity • % States that have implemented ATFM in flow management units (FMUs) or flow management positions (FMPs) • % States complying implementation by Phases, according ATFM implementation regional guidance. 		
Strategy	<p>Project activities define ATFM implementation in the SAM Region through an airspace demand and capacity analysis, taking into account that States that are in the process of implementation shall coordinate with the ATM community to define the actions required for ATFM implementation. The infrastructure and the database, as well as the policy, standards, and procedures, are important components for the execution of this Project.</p>		

<p>Goals</p>	<ul style="list-style-type: none"> • SAM States with experts trained in runway and airspace capacity (ATC sector) calculation • ATFM performance oversight plan • CAR/SAM inter-regional coordination
<p>Rationale</p>	<p>GREPECAS considered that early ATFM implementation should ensure optimum air traffic flow to or through certain areas during periods in which demand exceeded or was expected to exceed the available capacity of the ATC system. Therefore, the ATFM system should reduce aircraft delays, both in flight as well as on the ground, and avoid system overload.</p>
<p>Related projects</p>	<ul style="list-style-type: none"> • Automation.

Project deliverables	Relationship with the performance-based regional plan (PFF) or ASBU module	Responsible party	Status of implementation*	Delivery date	Comments
1. Assess the progress made in the ATFM implementation work programme	B0-NOPS	Programme coordinator		2026	On-going task
2. Calculation of airspace (ATC sector) capacity	B0-NOPS	Juarez Franklin Gouveia	FINALISED	SAM/IG/9 FINALISED see ITEM 9	Brazil and Colombia submitted their studies.
3. List of airspace sectors that have periods in which demand exceeds the existing capacity, including, if necessary, simulations by the States	B0-NOPS	Juarez Franklin Gouveia	FINALISED	SAM/IG/9 SAM/IG/10 FINALISED see ITEM 9	Brazil and Colombia submitted their studies.
4. List of operational factors affecting demand and airspace capacity for the optimisation of existing capacity, including simulations, if necessary.	B0-NOPS	Juarez Franklin Gouveia	FINALISED	SAM/IG/9 FINALISED see ITEM 9, 14 y 15	Brazil and Colombia submitted their studies. Brazil, Paraguay, and Peru presented data at the SAM/IG/11 meeting.
5. Definition of the common elements of situational awareness	B0-NOPS	Paulo Vila	FINALISED	2012 FINALISED see ITEM 14	The States that exchange information are: Chile, Colombia, Paraguay, and Venezuela.

Project deliverables	Relationship with the performance-based regional plan (PFF) or ASBU module	Responsible party	Status of implementation*	Delivery date	Comments
6. Training of personnel in strategic ATFM airspace measures	B0-NOPS	Project RLA/06/901		2022	<p>In 2010, an ATFM/CDM course was conducted in Brazil with the participation of several States.</p> <p>In March 2009, a course on runway and ATC sector capacity calculation was conducted in Brazil.</p> <p>In 2012, a course for instructors on runway and ATC sector capacity calculations was conducted in Lima.</p> <p>An ATFM seminar has been delivered in June 2018.</p> <p>A Workshop/Meeting on ATFM Regional Data Management and Indicators is scheduled for 2022</p>
7. List of factors affecting the implementation decision	B0-NOPS	Programme coordinator	FINALISED	2010 FINALISED see ITEM 15	<p>The following causes were identified at the SAM/IG/11 meeting:</p> <ul style="list-style-type: none"> - States that do not have the requirement or the need to implement ATFM; - Budgetary and organisational reasons; - Lack of personnel specifically devoted to ATFM activities; - The personnel responsible for ATFM are involved in other functions.
8. Updating of runway capacity calculations	B0-NOPS	Programme coordinator		2024	<p>2018: 85% of States have updated runway capacity calculations. Guyana and Suriname are still lacking capacity calculations.</p> <p>Due to the pandemic, in the period 2020-2021 the capacities and characteristics of demand have evolved throughout the Region. An update on runway capacity calculations is required in all States.</p>

Project deliverables	Relationship with the performance-based regional plan (PFF) or ASBU module	Responsible party	Status of implementation*	Delivery date	Comments
					<p>The draft of the ATC Sector and runway Capacity Calculation Manual is being updated for 2022, it is expected to be adopted in May 2022.</p> <p>A Workshop/Meeting on Capacity Calculation Methodology for the ATFM is scheduled for 2022</p>
9. Updating of airspace (ATC sector) capacity calculations	B0-NOPS	Programme coordinator		2024	<p>2018: 6 States of the Region have performed ATC sector capacity calculations prior to implementation, 5 have not performed the activity, and information is still to be received from 3 States.</p> <p>Due to the pandemic, in the period 2020-2021 the capacities and characteristics of demand have evolved throughout the Region. An update on airspace capacity calculations is required in all States.</p> <p>The draft of the ATC Sector and runway Capacity Calculation Manual is being updated for 2022, it is expected to be adopted in May 2022.</p> <p>A Workshop/Meeting on Capacity Calculation Methodology for the ATFM is scheduled for 2022</p>

Project deliverables	Relationship with the performance-based regional plan (PFF) or ASBU module	Responsible party	Status of implementation*	Delivery date	Comments
10. Airspace monitoring processes Traffic demand analysis processes Standards on FMU/FMP procedures Implementation of preliminary ATFM measures Implementation of TMIs ATFM messaging Coordination of special events Civil/military exemptions and coordination	B0-NOPS	CGNA course Project RLA/06/901	FINALISED	November 2014 FINALISED	Completed on time
11. Replication of ATFM courses at national level	B0-NOPS	States	FINALISED	15/05/2015 FINALISED	The States replicated ATFM courses at national level.
12. ATFM measures during the Rio 2016 Olympic and Paralympic Games in Brazil	B0-NOPS	Brazil	FINALISED	13/05/2016 FINALISED	Details of the AIC of Brazil can be found in: http://publicacoes.decea.gov.br/?i=publicacao&id=4339
13. CONOPS ATFM CAR SAM updated and approved by GREPECAS	B0-NOPS	Programme Coordinator	FINALISED	July 2019 FINALISED	SAMIG/23 (June 2019) reviewed the draft. Approved by PPRC/5 meeting
14. ATFM operations Plan	B0-NOPS	Programme coordinator	FINALISED	September 2021 FINALISED	Plan adopted at SAMIG/26 Meeting, September 2021
15. Guide for the implementation of the ATFM in the SAM Region 2022- 2026	B0-NOPS	Programme coordinator	FINALISED	September 2021 FINALISED	Guide adopted at SAMIG/26 Meeting, September 2021 Stipulates implementation by phases

Project deliverables	Relationship with the performance-based regional plan (PFF) or ASBU module	Responsible party	Status of implementation*	Delivery date	Comments
16. Manual for calculating Runway Capacity and ATC Sector for the SAM Region	B0-NOPS	Programme coordinator		SAMIG/27	Draft update started in October 2021
17. PHASE ATFM I implementation	B0-NOPS	Programme coordinator		On going	
18. PHASE ATFM II-A implementation	B0-NOPS	Programme coordinator		On going	
19. PHASE ATFM II-B implementation	B0-NOPS	Programme coordinator		31 December 2022	
20. PHASE ATFM III implementation	B0-NOPS	Programme coordinator		31 December 2023	
21. PHASE ATFM IV implementation	B0-NOPS	Programme coordinator		31 December 2025	
22. Integration within eANP VOL III management project	B0-NOPS	GREPECAS		4Q - 2022	
Resources needed	Designation of experts for the execution of some of the deliverables.				

*Status of implementation; according colors in fourth column

- Grey** **Task not started**
- Green** **Activity underway as scheduled**
- Yellow** **Activity started with some delay but expected to be completed on time**
- Red** **It has not been possible to implement this activity as scheduled; mitigation measures are required**

— END —