



INTERNATIONAL CIVIL AVIATION ORGANIZATION
South American Regional Office - Regional Project RLA/06/901

Assistance for the implementation of a Regional ATM System, taking into account the ATM operational concept and the corresponding CNS technological support

Eighth Workshop/Meeting of the SAM Implementation Group (SAM/IG/8)
(Lima, Peru, 10-14 October 2011)

SAM/IG/8-WP/09

18/09/11

Agenda Item 5: Implementation of air traffic flow management (ATFM) in the SAM Region

REGIONAL ACTIVITIES RELATED TO ATFM

(Presented by the Secretariat)

Summary	
This working paper presents information on the regional activities related to the ATFM Programme and its associated projects, <i>Improve demand/capacity balancing</i> and <i>Flexible use of airspace</i> , which shall be analysed by the SAM Implementation Group for their implementation in the Region.	
References: <ul style="list-style-type: none">• Report of the Second Meeting of the CNS/ATM Subgroup (Mexico City, Mexico, 16-19 November 2010);• GREPECAS/16 meeting report (Punta Cana, Dominican Republic, 25-29 April 2011).• Seventh Workshop/Meeting of the SAM Implementation Group (SAM/IG/7) – Regional Project RLA/06/901, Lima, Peru, 23-27 May 2011	
ICAO strategic objectives:	A – Safety C – Environmental protection and sustainable development of air transport

1 Background

1.1 At the SAM/IG/7 meeting, it was noted that GREPECAS/16 had proposed a new organisation based on programmes and projects, with the elimination of the existing subgroups, including the CNS/ATM Subgroup. With respect to the projects formulated by the CNS/ATM Subgroup, it was felt that they should be implemented independently: one for the CAR Region and another one for the SAM Region, with one Project Coordinator for the CAR Region and another Project Coordinator for the SAM Region.

1.2 For the implementation of ATFM, an ATFM Programme has been identified, with two associated projects: *Improve demand/capacity balancing* and *Flexible use of airspace*. The SAM/IG/7 meeting reviewed the work programmes and their respective deliverables, and Mr. Marco Vidal, of Peru, was designated Coordinator of the project “*Flexible use of airspace*”. No Coordinator was designated for the project “*Improve the demand/capacity balancing*,” which was left vacant.

2 Discussion

Course on Runway and ATC Sector Capacity Calculation for instructors

1.3 Amongst the tasks to be fulfilled, as agreed by the SAM/IG/7 meeting, another course on Runway and ATC Sector Capacity Calculation for instructors of the SAM States will be conducted to train more people in runway and ATC sector capacity calculation. Some countries have already made the calculation for the runway at one airport, as an exercise, but it needs to be done for the other airports and ATC sectors.

1.4 In this sense, a Course on Runway and ATC Sector Capacity Calculation for instructors, to be held in Lima, on 24-28 September 2011, has been included in Regional Project RLA/06/901, with a view to providing guidance to students as to the practical application of runway capacity calculation and the factors that determine the variation of its indices, which will be used as parameters for maintaining a balanced operation at the aerodromes of interest.

ATFM Teleconferences

1.5 The ATFM Implementation Group had considered the need to study, starting at the SAM/IG/6 meeting, the possibility of holding daily teleconferences amongst SAM States. Likewise, the States, for different reasons, were not prepared to have daily teleconferences, but it was concluded that weekly ATFM teleconferences should be held between flow management units or flow management positions (FMU/FMP), as agreed at the SAM/IG/5 meeting.

1.6 Due to communication problems with the line provided by Boeing, it was noted that States had used SKYPE or e-mail as alternate means of communication. The SAM/IG/7 meeting agreed to formalise the use of both media until an agreement was reached as to the most appropriate or definitive means to be used.

1.7 In this regard, the Meeting should consider the need to use other alternate means for establishing a more effective and stable communication for ATFM teleconferences.

3 Suggested action

3.1 The Meeting is invited to:

- a) take note of the information presented herein;
- b) review the tasks of the projects of the *ATFM* programme shown in **Appendix A** to this working paper;
- c) designate the coordinator of project “*Improve demand/capacity balancing*”;
- d) assess the use, if necessary, of other alternate means for conducting the ATFM teleconferences; and
- e) analyse other associated matters it may deem appropriate.

APPENDIX / APENDICE
PROJECT WORK PROGRAMME / PROGRAMA DE TRABAJO DEL PROYECTO

PROGRAMME/PROGRAMA:

ATFM

PROJECT/PROYECTO:

B1. IMPROVE DEMAND AND CAPACITY BALANCING / MEJORAR EL EQUILIBRIO ENTRE LA DEMANDA Y LA CAPACIDAD

PROJECT COORDINATOR/

COORDINADOR DEL PROYECTO:

No.	Tarea / Task	Inicio Fin / Start End	Responsable/ Responsable	Estado / Status	Deliverable / Entregable
1	2	3	4	5	6
B 1.1	Develop a CAR/SAM ATFM Roadmap taking into consideration inter-regional harmonization Desarrollar una Hoja de Ruta ATFM CAR/SAM, tomando en cuenta la armonización inter-regional	2010 - 2011	B1 Project / Proyecto B1	Completed/ Finalizada	CAR/SAM ATFM Roadmap Hoja de ruta ATFM CAR/SAM
B 1.2	Identify key stakeholders (ATC service providers and users, military authorities, airport authorities, aircraft operators and relevant international organisations) for purposes of coordination and cooperation, using a CDM process Identificar a las partes interesadas clave (proveedores y usuarios de servicio ATC, autoridades militares, autoridades aeroportuarias, operadores de aeronaves y organizaciones internacionales relevantes) para coordinación y cooperación mediante un proceso CDM;	2008	GREPECAS	Completed/ Finalizada	Key stakeholders for purposes of coordination and cooperation, using a CDM process identified Partes interesadas clave para coordinación y cooperación mediante un proceso CDM identificadas
B 1.3	Develop methods to establish demand/capacity forecasting; Elaborar métodos para establecer pronósticos de demanda/capacidad	2007- 2012	B1 Project / Proyecto B1	Completed/ Finalizada	Methods to establish demand/capacity forecasting Métodos para establecer pronósticos de demanda/capacidad

No.	Tarea / Task	Inicio Fin / Start End	Responsable/ Responsible	Estado / Status	Deliverable / Entregable
1	2	3	4	5	6
B 1.4	Develop regional procedures for efficient and optimum use of aerodrome and runway capacity Desarrollar procedimientos regionales para un uso eficiente y optimo de la capacidad de aeródromo y de pista	2008- 2012	B1 Project / Proyecto B1	Valid/ Válida	Regional procedures for efficient and optimum use of aerodrome and runway capacity/ Procedimientos regionales para un uso eficiente y optimo de la capacidad de aeródromo y de pista
B 1.5	Develop a regional ATFM procedural manual to manage demand/capacity balancing Desarrollar un manual regional de procedimientos ATFM para la gestión del equilibrio entre demanda y capacidad	2008- 2011		Completed/ Finalizada	Regional ATFM procedural manual to manage demand/capacity balancing Manual regional de procedimientos ATFM para la gestión del equilibrio entre demanda y capacidad
B 1.6	Develop a regional strategy and framework for the implementation of Centralized ATFM units Desarrollar una estrategia y marco de referencia para la implantación de unidades centralizadas ATFM	2008- 2014	B1 Project / Proyecto B1	Valid/ Válida	Regional strategy and framework for the implementation of Centralized ATFM units/ Estrategia y marco de referencia para la implantación de unidades centralizadas ATFM
B 1.7	Develop template/contents for operational agreements between Centralized ATFM units for interregional demand/capacity balancing Desarrollar formulario/contenido para acuerdos operacionales entre unidades ATFM centralizadas para el equilibrio entre demanda y capacidad interregional	2008- 2014	B1 Project / Proyecto B1	Valid/ Válida	Operational agreements between Centralized ATFM units for interregional demand/capacity balancing / Acuerdos operacionales entre unidades ATFM centralizadas para el equilibrio entre demanda y capacidad interregional

No.	Tarea / Task	Inicio Fin / Start End	Responsable/ Responsible	Estado / Status	Deliverable / Entregable
1	2	3	4	5	6
B 1.8	<p>Define common elements of situational awareness between FMUs;</p> <ul style="list-style-type: none"> ▪ common traffic displays, ▪ common weather displays (Internet), ▪ communications (teleconferences, web), and ▪ daily teleconference/messages methodology advisories <p>Definir los elementos comunes de conciencia situacional;</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 diarias por medio de conferencias telefónica 	2008- 2012	B1 Project / Proyecto B1	Valid/ Válida	<p>Define common elements of situational awareness between FMUs/</p> <p>Definir los elementos comunes de conciencia situacional entre FMUs</p>
B 1.9	<p>Define common electronic information and minimum databases required to support decision making process and alerting systems for interoperable situational awareness between Centralized ATFM units</p> <p>Definir la información electrónica y bases de datos mínimas comunes requeridas para apoyar los procesos de toma de decisiones y sistemas de alerta para una conciencia situacional interoperable entre las unidades ATFM centralizadas</p>	2008- 2014	B1 Project / Proyecto B1	Valid/ Válida	<p>Definition of common electronic information and minimum databases required to support decision making process and alerting systems /</p> <p>Definir la información electrónica y bases de datos mínimas comunes requeridas para apoyar los procesos de toma de decisiones y sistemas de alerta</p>

No.	Tarea / Task	Inicio Fin / Start End	Responsable/ Responsible	Estado / Status	Deliverable / Entregable
1	2	3	4	5	6
B 1.10	<p>Implement additional/advanced automation support tools to increase aeronautical information sharing</p> <ul style="list-style-type: none"> ▪ ETMS or similar ▪ MET information ▪ AIS/NOTAM dissemination ▪ Surveillance tools to identify airspace sector boundaries ▪ Use of A-SMGC in specific aerodromes <p>Implantar herramientas de apoyo adicionales/avanzados de automatización, para aumentar la compartición de información aeronáutica:</p> <ul style="list-style-type: none"> ▪ ETMS o similar ▪ información MET ▪ Difusión AIS/NOTAM ▪ Herramientas de vigilancia para identificar los límites de sector del espacio aéreo ▪ Uso del A-SMGC en aeródromos específicos 	2008- 2014	B1 Project / Proyecto B1	Completed/ Finalizada	<p>Implement additional/advanced automation support tools to increase aeronautical information sharing</p> <p>Implantar herramientas de apoyo adicionales/avanzados de automatización, para aumentar la compartición de información aeronáutica</p>
B 1.11	<p>Identify training needs and develop corresponding guidelines</p> <p>Identificar necesidades de entrenamiento y desarrollar lineamientos correspondientes</p>	2011-2012	B1 Project / Proyecto B1	Valid/ Válida	<p>Identification of training needs and develop corresponding guidelines /</p> <p>Identificación necesidades de entrenamiento y desarrollar lineamientos correspondientes</p>
B 1.12	<p>Formulate an ATFM system performance monitoring plan</p> <p>Formular un plan para la supervisión de la performance del sistema ATFM</p>	2010-2011	B1 Project / Proyecto B1	Valid/ Válida	<p>ATFM system performance monitoring plan /</p> <p>Plan para la supervisión de la performance del sistema ATFM</p>

No.	Tarea / Task	Inicio Fin / Start End	Responsable/ Responsible	Estado / Status	Deliverable / Entregable
1	2	3	4	5	6
B 1.13	<p>Develop a regional strategy and work programme for harmonized implementation of ATFM service</p> <p>Elaborar una estrategia y programa de trabajo regionales para la implementación del servicio ATFM</p>	2007	GREPECAS	Completed/ Finalizada	<p>Regional strategy and work programme for harmonized implementation of ATFM service</p> <p>Estrategia y programa de trabajo regionales para la implementación del servicio ATFM</p>

PROGRAMME/PROGRAMA:

ATFM

PROJECT/PROYECTO:

B2.FLEXIBLE USE OF AIRSPACE / USO FLEXIBLE DEL ESPACIO AEREO

PROJECT COORDINATOR/**COORDINADOR DEL PROYECTO:**

No.	Tarea/Task	Inicio Fin / Start End	Responsable / Responsible	Estado/Status	Deliverable/Entregable
1	2	3	4	5	6
B 2.1	<p>Develop guidance material on civil/military coordination and co-operation to be used by States/Territories to develop national policies, procedures and rules</p> <p>Elaborar material de orientación sobre coordinación y cooperación civil/militar a utilizar por parte de los Estados/Territorios para elaborar políticas, procedimientos y normas nacionales</p>	2011-2012	B2 Project / Proyecto B2	Completed/ Finalizada	<p>Guidance material on civil/military coordination and co-operation to be used by States/Territories</p> <p>Material de orientación sobre coordinación y cooperación civil/militar a utilizar por parte de los Estados/Territorio</p>
B 2.2	<p>Develop a regional strategy to implement the use of a flexible upper airspace (FUA):</p> <ul style="list-style-type: none"> • evaluate the management processes in the use of the airspace; • improve the current domestic airspace management to adjust dynamic changes to the traffic flows in tactical stages; • introduce improvements to the ground ATS systems and associated procedures for the extension of the FUA with dynamic management processes in the use of the airspace • dynamically implement ATC sectorization with the aim of providing a better balance between demand and capacity that responds in real time to changing situations in the traffic flows and to accommodate in the short-term the users preferred trajectories / <p>Desarrollar una estrategia regional para la implantación del uso flexible del espacio aéreo (FUA)</p> <p>o evaluar los procesos de gestión en el uso del</p>	2008- 2015	B2 Project / Proyecto B2	Valid/ Válida	<p>Regional strategy to implement the use of a flexible upper airspace (FUA) /</p> <p>Estrategia regional para la implantación del uso flexible del espacio aéreo (FUA)</p>

No.	Tarea/Task	Inicio Fin / Start End	Responsable / Responsible	Estado/Status	Deliverable/Entregable
1	2	3	4	5	6
	espacio aéreo; o mejorar la actual gestión del espacio aéreo nacional para ajustar cambios dinámicos a los flujos de tráfico en la etapa táctica; o introducir mejoras a los sistemas ATS de tierra y procedimientos asociados para la extensión del FUA con procesos dinámicos de gestión en el uso del espacio aéreo; o implantar dinámicamente la sectorización ATC a fin de proporcionar el mejor equilibrio entre demanda y capacidad que responda en tiempo real a las situaciones cambiantes en los flujos de tráfico y para acomodar a corto plazo las trayectorias preferidas de los usuarios				
B 2.3	Identify training needs and develop corresponding guidelines Identificar las necesidades de capacitación y desarrollar las directrices correspondientes.	2011-2012	B2 Project / Proyecto B2	Valid/ Válida	Guidelines on training needs on Flexible Use of Airspace / Directrices sobre necesidades de capacitación .en Uso Flexible del Espacio Aéreo