



Agenda

Item 2: Report of activities of the GESEA and Subgroups

b) ATM implementation. Progress of the Subgroups

REPORT OF ACTIVITIES OF GESEA SUBGROUP 1

(Prepared by Secretariat)

SUMMARY

This working paper presents the report of the activities of Subgroup 1 of the GESEA and proposes actions to be considered by the SAM States for the progress in the initiatives related to The Planning of the Airspace.

References:

- Report of SAM/IG/26.
- Summary of the Third Meeting of GESEA Subgroup 1

1. Background

1.1 During the Third meeting of Subgroup 1 (GESEA/SG1/3, virtual – March 30 to April 1, 2022) the scope of the conclusions of the SAM/IG was addressed and the required adjustments to the Plan of Activities approved in the GESEA Plenary were discussed.

1.2 In order to organize the GS1 Work Plan, the progress of the States on the initiatives and deliverables developed by SG1 in 2021 was analyzed. At the same time, tasks to be carried out in 2022 for the implementation of the elements of optimization of the airspace and the ATM were agreed, as described below.

2. Discussion

Strategic Direct Routing (EDE)

2.1 The status of the implementation of the EDE is presented as **Appendix A** to this working paper. There was progress in several States, but in others the initiative has been suspended, due to the fast growth of air traffic since the end of 2021, especially on domestic flights. It is important to highlight that the world scenario presents high costs for the price of fuels, and the importance of promoting the initiatives linked to the FRTO module of the GANP was emphasized.

2.2 In NAM and CAR Regions, the CIIFRA initiative is being developed, promoted by IATA, ICAO and CANSO, linked with trials for user-preferred routes (UPR in IATA terms) involving city pairs and transregional flows CAR-SAM for example Atlanta – Lima – Atlanta or Atlanta – Guarulhos – Atlanta

2.3 GESEA/SG1/3 analyzed the feasibility of promoting the UPR initiative without affecting the EDE process of implementation, in a complementary way, in the case of some States that cannot extend the application of EDE throughout the scope of their FIRs. It was emphasized that THE UPRs can generate early benefits while the EDE is not implemented in all South American FIR.

2.4 As a result, the aforementioned Meeting decided to promote a second stage of studies by the EDE WG to formulate a Regional Guide Manual on the aspects of the FRT0 (EDE, UPR, etc.), as well as to facilitate tests and feasibility analysis.

2.5 In **Appendix B** to this working paper the Revised Action Plan of DCT FRA WP is presented.

Airspace Planning: Regional Documentation and Training

2.6 GESEA/SG1/3 was informed of the revised dates for activities supported by RLA/06/901. The participation of specialists from Brazil and a member of the ICAO PANS OSP Panel, for the elaboration of regional guidance material on airspace planning regulations, was confirmed in a Mission in Lima, the second week of August 2022. The JOB CARD related to this activity is attached as **Appendix C** to this working paper (*in Spanish only*).

2.7 With the material prepared and approved by SAM/IG/28, the Workshop for Airspace Planners will be held in Lima from November 7 to 11, 2022.

Update of the PBN SAM Roadmap and operational concept document (CONOPS) for SAM airspace

2.8 GESEA/SG1/3 was informed that the documents "PBN SAM Roadmap" and "CONOPS for Airspace Efficiency and Capacity" were circulated for consideration of States as requested by SAM/IG/26, receiving some input and comments.

2.9 The Secretariat indicated that the Roadmap received input for drafting improvement from Chile and a formal observation from Brazil, stating that the presentation of data on the implementation of SID STAR routes in PBN design, taken from the iSTARS application, does not reflect the real progress of 100% of that State. Whereas all needs for standard routes on all tracks have been met since all the needs of standardized routes on all runways have been covered, under an operational approach that involves the use of omnidirectional departures and diverse PBN options for arrivals. The source of the difference was explained, given that iSTARS maintains a statistic of the SID STAR PBN implementation under the premise that it is required for all international IFR track thresholds, that is, aligned with Resolution A37 - 11.

2.10 It was decided to include in the Roadmap a mention of the updated and improved PBN SAM Implementation Monitoring Table (in XLSX format) which was previously used by SAM/IG until 2016 to monitor the progress of each State. It will be available on the GESEA Channel for periodic review by interested members. This has completed Rev. 2.1 of the Roadmap and the draft has been considered ready for submission to SAM/IG/27 **through working paper WP/2.3**.

2.11 Regarding the CONOPS proposal, there was participation of specialists from ANAC Argentina, who deepened comments expressed on the aforementioned document. The concern that CONOPS generates divergent or overlapping lines of analysis with the activities of elaboration of VOL III of the ANP CAR SAM was highlighted and analyzed in detail, and the lack of clarity of the scope of CONOPS and its use by States or users was noted, in addition to other required improvements.

2.12 The Rapporteur of the CONOPS WG took note of the comments and the analysis of the Meeting, in order to formulate the corresponding amendment of the draft that is presented to SAM/IG/27 through working paper WP/2.2.

Optimization of Regional routes 2022 - 2023. Implementation of RNAV-5

2.13 After activities carried out in 2021 by Argentina, Brazil, Chile, Paraguay and Uruguay, in coordination via teleconference, as well as the participation of Brazil in the respective AIP publication, the airspace routes of the FIR Resistencia, FIR Asunción, TMA FOZ, and other sectors on the southern side of Chile and Argentina have been optimized. To date, there are only 23 conventional Upper Space Regional routes (from the SAM catalog).

2.14 It was deemed appropriate to commission this year some tasks of implementation RNAV 5 or optimization of routes to GESEA/SG2 - PANS OPS; given that SG1 will have a lot of activity load. In the FIR Maiquetía a joint optimization with FIR Piarco is already in progress.

ATS Contingency plan

2.15 GESEA/SG1/3 addressed the progress of the GADHOC Contingency ATS, which analyzed opportunities for improvement for MCATS. It was agreed that the new version of the document was ready for submission for adoption by SAM/IG/27 (see working paper WP/2.4).

2.16 The progress of each State on tasks of implementation of ATS Contingency Plans aligned with the MCATS was analyzed. Several States already have ENR 1.15 enabled in their IAPs or are in the final stages of bilingual publication.

2.17 The need to resume the alignment activities of the MCATS with respect to the national Contingency Plans was highlighted and the dates of the events organized for harmonization between adjacent States/RIS, that is, SAM SUR (September 5 to 9) and SAM NORTE (October 24 to 28, 2022), were highlighted. GESEA/SG1/3 was of the opinion that National Contingency Plans should be aligned with MCATS by the end of July 2022, so as to ensure that the aforementioned events are arrived at with documentation ready for discussions and agreements.

2.18 Delegates Débora Kuc and Laura Díaz graciously accepted the meeting's request to provide support to this part of the implementation, through a sequence of 3 meetings with the State teams to observe progress, identify difficulties or delays in deliveries and provide support if necessary. The meetings referred to will be via TEAMS at 13 30 UTC on the following dates;

- 5 May 2022
- 9 June 2022
- 25 July 2022

3. **Suggested actions**

3.1 The Meeting is invited to:

- a) Take note of the information presented in this working paper;
- b) assess the status of EDE implementation in the SAM Region (Appendix A);
- c) propose changes that deem necessary to the EDE implementation Plan of EDE in the SAM Region (Appendix B);
- d) take note of the activities related to the airspace planning initiatives and select the suitable experts for the Workshop/Meetings:
 - Contingency Plans SAM SOUTH(Lima - 5 al 9 September)
 - Contingency Plans SAM NORTH (Lima - 24 al 28 October 2022)
 - Workshop for Airspace planners (Lima - 7 al 11 November 2022).

— END —

APPENDIX A**Status of EDE Implementation in the South American Region**

(Reviewed by GESEA/SG1/3)

- **Argentina.** - The EDE has not yet been implemented. The TMA Baires is in the process of being implemented, which is expected to affect the airspace of several FIRs neighboring Ezeiza, therefore, the issue of EDE implementation has not yet been defined.
- **Bolivia.** - The EDE has not yet been implemented. Progress in the implementation of the ATS surveillance service in the FIR La Paz was reviewed, and it is hoped that the coverage of pilot-controller VHF communications will also be extended, and it is foreseen that with the fulfillment of these technical conditions the EDE can be implemented.
- **Brazil.** - The EDE is implemented in all the FIRs of Recife and Amazonia and in most of the RIS Brasilia and Curitiba, as published in the AIP Brazil (ENR 1.9 AIR TRAFFIC FLOW MANAGEMENT AND AIRSPACE MANAGEMENT).
- **Chile.** – EDE implemented in a portion of the ocean space, according to AIC NR 19 - 28 OCT 2020.
- **Colombia.** – The EDE is not implemented. Sup AIP A64/C86, 04 NOV 2020, has been cancelled, taking into account the increase in the volume of air traffic in the Barranquilla and Bogotá FIR.
- **Ecuador.** – EDE implemented in the entirety of the Guayaquil FIR, as published in AIP as part of ENR 1.10.
- **Panama.** – The EDE has not yet been implemented. However, it was indicated that there is a tactical application for direct flight for a long time. The applicable conditions have been published in AIP ENR 1.8-1.
- **Peru.** – EDE implemented in the upper oceanic airspace of the FIR Lima, through Supplement AIP 01/21, as of June 1, 2021 In a first stage, the entry and / or exit to / from the EDE space of the FIR Lima must be done through travel points published in the AIP Peru.
- **Uruguay.** - The EDE is not implemented. It was stated that all SID/STAR procedures and ATS routes within FIR Montevideo have a direct and very efficient configuration. The option of publishing specific information in AIP was analyzed, in a way that facilitates the knowledge of the airlines for the presentation of flight plans with origin in Montevideo, which could access the application of EDE in the neighboring FIR spaces. In addition, there will possibly be more information that will be subject to the implementation process of the Baires TMA, which is expected to affect the airspace of the MONTEVIDEO FIR.
- **Venezuela.** –The EDE was implemented in most of the Maiquetia FIR through sup AIP C03-A03/21 on the AIRAC date of May 2021.

APPENDIX B

DCT/FRA action plan

Activity	Responsible	Starting date	Finish date	Status	Obs.
Review the Implementation Status of Strategic Direct Routing in the CAR/SAM Region	Julio Pereira	May 20	Julio 20	Finished	
Review the Contents of FRTO B0/1 of the Global Air Navigation Plan	Julio Pereira	May 20	Jul 20	Finished	
Implement Strategic Direct Routing in airspaces with low air traffic volume	States	May 20	Nov 20	On going	
Develop aeronautical publication model for the implementation of FRTO B0/1	Julio Pereira Fernando Hermoza	May 20	Jul 20	Finished	
Develop a model/guide for Operational Safety Assessment for IMPLEMENTATION of FRTO B0/1.	Fernando Hermoza	May 20	Jul 20	Finished	
Develop an educational brochure to disseminate the EDE concept for CTAs and Pilots, ARO Officers.	Rosanna Baru	May 20	Jul 20	Finished	
Update the operational agreement letters for the implementation of the EDE	States	May 20	TBD	On going	
Develop a guide for instruction of ATCOs involved in FRTO B0/1 implementation.	Rosanna Baru	May 20	Nov 20	On going	
Establish the requirements for the implementation of FRTO B0/1 (ATS Surveillance Coverage, VHF Coverage, MTCD, Trajectory Monitoring)	States	May 20	TBD	On going	

Activity	Responsible	Starting date	Finish date	Status	Obs.
Verify the impact on the implementation in AIDC.	Fernando Hermoza Luis Perales	May 20	Nov 20	On going	
Establish key performance indicators.	Julio Pereira	May 20	TBD	On going	
Develop Material Implementation Guide Direct Routes (EDE and UPRs)	EDE/GT	Apr 21	TBD	On going	
AIC UPR evaluation	States	01 Apr 21	20 Apr 21	On going	
Propose Intraregional UPRs (SAM Region)	IATA/Airlines	01 Apr 21	20 abril 21	On going	
Intraregional UPRs evaluation	States	01 Apr 21	07 Jun 21	On going	
Elaborate process for Intraregional UPRs evaluation	EDE/GT	01 Apr 21	07 Jun 21	On going	

APÉNDICE C / APPENDIX C
(Español solamente / Spanish only)



JOB CARD

PARTE I	
Objetivo(s) Estratégico(s)	Desarrollar propuesta de material guía Regional armonizado y capacitación sobre planificación de espacio aéreo.
Referencia:	SG1/PANSOPS/01/2020
Macroactividad	Regulación, Guías Técnicas y Capacitación
Actividad	Desarrollo de Normas y Capacitación de especialistas en Planificación de Espacio Aéreo en Sudamérica.
Propuesto por	SAMIG/25 noviembre 2020, reporte del GESEA y plan de trabajo
Definición del problema	<p>La Planificación del Espacio Aéreo requiere varias competencias y habilidades para que el nuevo escenario operacional y la nueva circulación en una TMA cumplan con los objetivos estratégicos establecidos para un determinado proyecto de implementación de Conceptos de Espacio Aéreo: recolección y análisis de datos de tránsito aéreo; comprensión de la distribución geográfica de los flujos, mix de tránsito aéreo y performance de las aeronaves; definición de nuevos flujos de llegadas y salidas para un aeródromo, definición de la estructura de rutas y procedimientos de navegación aérea, entre otros aspectos.</p> <p>Los Proyectos de Implantación del Conceptos de Espacio Aéreo se ven directamente afectados por las técnicas de organización del espacio aéreo y por la actuación del especialista responsable de la planificación del espacio aéreo, ya que el desarrollo de los escenarios operacionales, que describen la organización del espacio aéreo y la circulación aérea, están directamente relacionados con la actividad de Planificación del Espacio Aéreo. Esta es la principal tarea a desarrollar para la implantación de nuevos Conceptos de Espacio Aéreo y requiere una gran especialización y competencia de los profesionales que la realizan.</p> <p>Sin embargo, aún no existe una norma (o guía) Regional sobre Planificación de Espacio Aéreo, ni tampoco curso o formación adecuada para los especialistas que desarrollan esa actividad, lo que ha generado obstáculos a la implementación eficiente de Conceptos de Espacio Aéreo en Sudamérica:</p> <ul style="list-style-type: none"> ✓ Falta de alineación con las mejores prácticas internacionales; ✓ Dependencia del talento individual del especialista;

	<ul style="list-style-type: none"> ✓ Falta de estandarización en la aplicación de técnicas de organización y gestión del espacio aéreo; ✓ Retrasos y dificultades en la implementación de proyectos de Concepto de Espacio Aéreos; ✓ Insatisfacción e incredulidad de los usuarios en general (ATCO, pilotos, aerolíneas, etc.). <p>La formulación de Normas y Guías Regionales sobre Planificación de Espacio Aéreo, así como cursos y entrenamientos para los especialistas para el desarrollo de esta actividad, resolverán un importante vacío que existe actualmente respecto a la Planificación del Espacio Aéreo en Sudamérica.</p>
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	Detalle	Elaborar normas que contengan guías técnicas armonizadas sobre planificación de espacio aéreo y gestión de proyectos de concepción de espacio aéreo.		
PARTE II		Desarrollar entrenamiento y curso de capacitación de especialistas para la actividad de Planificación de Espacio Aéreo y gestión de proyectos de Conceptos de Espacio Aéreo.		
Prioridad	Alta	Media X	Baja	
Justificación para aceptación/rechazo	NA			
Encaminamiento del tema	SG1		Creación de GADHOC: <input checked="" type="checkbox"/> Sí <input type="checkbox"/> No	
Acciones en curso	NIL			
Referencias	Doc 9613 OACI, Doc 9992 OACI; Manual de Planificación de EA EUROCONTROL (ERNIP).			
Interrelaciones	Reuniones SAMIG, Talleres regionales de Planificación de Espacio Aéreo.			

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PARTE III
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Acción requerida	Responsables	Productos	Término
Elaborar un Manual de Planificación de Espacio Aéreo de la Región SAM que contenga las técnicas armonizadas de organización de la estructura del espacio aéreo (trayectorias, espacios aéreos, FUA, concepto PBN, etc).	Coordinador: Fernandes Jr (Brasil). Asistencia: IATA; LATAM. El grupo está abierto a Estados GESEA que deseen aportar.	Propuesta de Manual de Planificación de Espacio Aéreo de la Región SAM para ser presentada a SG1 / GESEA y posteriormente a consideración de SAMIG y/o Estados miembros.	Octubre 2022
Fecha de emisión: 31 de Agosto 2021	Fecha de aprobación de TF 31 de Agosto 2021	Fecha de aprobación de SG1: N/A	Próxima revisión:

Acción requerida	Responsables	Productos	Término
Desarrollar un Taller sobre Planificación de Espacio Aéreo para especialistas de los Estados de la Región SAM que presente las técnicas armonizadas de organización de la estructura del espacio aéreo (trayectorias, espacios aéreos, FUA, concepto PBN, etc).	Coordinador: Fernandes Jr (Brasil). Asistencia: IATA; LATAM. El grupo está abierto a Estados GESEA que deseen aportar.	Propuesta de Taller sobre Planificación de Espacio Aéreo para especialistas de los Estados de la Región SAM para ser presentada a SG1 / GESEA y posteriormente a consideración de SAMIG y/o Estados miembros.	Octubre 2022
Fecha de emisión: 31 de Agosto 2021	Fecha de aprobación de TF 31 de Agosto 2021	Fecha de aprobación de SG1: N/A	Próxima revisión:

Acción requerida	Responsables	Productos	Término
Aplicar un Taller sobre Planificación de Espacio Aéreo para especialistas de los Estados de la Región SAM que presente las técnicas armonizadas de organización de la estructura del espacio aéreo (trayectorias, espacios aéreos, FUA, concepto PBN, etc).	Coordinador: Fernandes Jr (Brasil). Asistencia: IATA; LATAM. El grupo está abierto a Estados GESEA que deseen aportar.	Taller sobre Planificación de Espacio Aéreo para especialistas de los Estados de la Región SAM para ser presentada a SG1 / GESEA y posteriormente a consideración de SAMIG y/o Estados miembros.	Noviembre 2022
Fecha de emisión: 31 de Agosto 2021	Fecha de aprobación de TF 31 de Agosto 2021	Fecha de aprobación de SG1: N/A	Próxima revisión:

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Acción requerida	Responsables	Productos	Término
Elaborar un Guía sobre Gestión de Proyectos de Conceptos de Espacio Aéreo de la Región SAM que contenga las guías armonizadas y buenas prácticas para la implementación de Conceptos de Espacio Aéreo.	Coordinador: Fernandes Jr (Brasil). Asistencia: IATA; LATAM. El grupo está abierto a Estados GESEA que deseen aportar.	Propuesta de Guía sobre Gestión de Proyectos de Conceptos de Espacio Aéreo de la Región SAM para ser presentada a SG1 / GESEA y posteriormente a consideración de SAMIG y/o Estados miembros.	Mayo 2023
Fecha de emisión: 31 de Agosto 2021	Fecha de aprobación de TF 31 de Agosto 2021	Fecha de aprobación de SG1: N/A	Próxima revisión:

Acción requerida	Responsables	Productos	Término
Desarrollar un curso para capacitación de especialistas de la Región SAM sobre Planificación de Espacio Aéreo y de Gestión de Proyectos de Conceptos de Espacio Aéreo.	<p>Coordinador: Fernandes Jr (Brasil).</p> <p>Asistencia: IATA; LATAM.</p> <p>El grupo está abierto a Estados GESEA que deseen aportar.</p>	Propuesta de curso para capacitación de especialistas de la Región SAM sobre Planificación de Espacio Aéreo y de Gestión de Proyectos de Conceptos de Espacio Aéreo para ser presentada a SG1 / GESEA y posteriormente a consideración de SAMIG y/o Estados miembros.	Mayo 2023
Fecha de emisión: 31 de Agosto 2021	Fecha de aprobación de TF 31 de Agosto 2021	Fecha de aprobación de SG1: N/A	Próxima revisión:

Acción requerida	Responsables	Productos	Término
Aplicar un curso para capacitación de especialistas de la Región SAM sobre Planificación de Espacio Aéreo y de Gestión de Proyectos de Conceptos de Espacio Aéreo.	<p>Coordinador: Fernandes Jr (Brasil).</p> <p>Asistencia: IATA; LATAM.</p> <p>El grupo está abierto a Estados GESEA que deseen aportar.</p>	Curso para capacitación de especialistas de la Región SAM sobre Planificación de Espacio Aéreo y de Gestión de Proyectos de Conceptos de Espacio Aéreo para ser presentada a SG1 / GESEA y posteriormente a consideración de SAMIG y/o Estados miembros.	Junio 2023
Fecha de emisión: 31 de Agosto 2021	Fecha de aprobación de TF 31 de Agosto 2020	Fecha de aprobación de SG1: N/A	Próxima revisión: