



Agenda Item 4: SAM/IG conclusions and next actions – Plenary

- a) Summary of sessions
- b) Review and approval of conclusions

**ANALYSIS AND SUMMARY OF THE GESEA GROUP AND FORMULATION OF
CONCLUSIONS FOR CONSIDERATION BY THE SAM/IG/28 PLENARY**

(Presented by the Secretariat)

SUMMARY	
<p>This working paper presents a summary of the discussions held by GESEA on the first, second and third day of session, and an extract of the report on the work of the technical subgroups reflected in the working papers submitted to the Meeting.</p>	
References:	
<ul style="list-style-type: none">• SAM/IG/24 final report (Lima, Peru, 4-8 November 2019).• SAM/IG/25 final report (Virtual, 2-4 November 2020).• SAM/IG/26 final report (Virtual, 20-23 September 2021).• SAM/IG/27 final report (Lima, Peru, 31 May to 3 June 2022);	
ICAO strategic objectives:	<i>A – Safety</i> <i>B – Air navigation capacity and efficiency</i>

1. Introduction

1.1 In accordance with the agenda agreed by the SAMIG/28 meeting, two days and a half of meetings of the GESEA technical team were held, together with States, the industry and organizations.

1.2 The coordinators and members of the SG1-Airspace Planning, SG2-PANS OPS and SG3-ATFM, sub-groups presented the progress made in their Ad Hoc and/or Workshop/Meetings. At the same time new deliverables and formulated draft conclusions to support their next actions for airspace optimisation and the implementation of improvement elements linked to the GANP operational threads were exposed. States also presented proposals for improvements to GESEA processes and reported on their progress.

1.3 Working and information papers were submitted by the GESEA and the subgroups, as well as by the States. This material can be found on the Meeting website at:

<https://www.icao.int/SAM/Pages/MeetingsDocumentation.aspx?m=2022-RLA06901-SAMIG28&t=1>

1.4 The following tables present a summary of the aforementioned papers:

- a) WP/2.1 - Report of activities of GESEA Subgroup 1 (presented by Secretariat)
- b) WP/2.2 - Regional guide on airspace planning techniques (presented by Brazil)
- c) WP/2.3 - Progress of Subgroup 3 – GESEA ATFM (presented by Secretariat)
- d) WP/2.4 - Capacity optimization in TMA Porto Seguro – *In Spanish only* (presented by Brazil)
- e) WP/2.5 - The implementation of dynamic sectorization (lateral flexibility) the flight information region of Brasilia – *In Spanish only* (presented by Brazil)
- f) WP/2.6 - Strategic Direct Routing (EDE) implementation results in Brazilian airspace (presented by Brazil)
- g) WP/2.7 - Optimization of longitudinal separation for aircraft in continental airspace (presented by Argentina)
- h) WP/2.8 - Proposal for improving the process for updating ATS operational letters of agreement (presented by Argentina)
- i) WP/2.9 - First Workshop/Meeting on optimizing ATS coordination and contingency plans (SAM/ATS/ATFM – SAM SUR) (presented by Secretariat)
- j) WP/2.10 - True north reference system (presented by Secretariat)
- k) WP/2.11 - Airport efficiency program (presented by IATA)
- l) WP/2.12 - Optimization of the of ATS contingency plan activation and the application of the pre-tactical/tactical BRISA (presented by IATA)
- m) WP/2.13 - Optimization of airspace in Brazil – in Spanish only (presented by Brazil)
- n) IP/5.1 - Runway system capacity and ATC sector course (presented by Brazil)
- o) IP/5.2 - ATM performance indicators course (presented by Brazil)
- p) IP/5.3 - Implementation of CPDLC in the Brazilian continental airspace, presented by Brazil)

2. Discussion

Activities of SG1 - Airspace planning

2.1 SG1 - Airspace planning subgroup activities, which is under coordination of Mr. Julio Pereira (IATA), were presented.

Implementation of strategic direct routing (EDE)

2.2 The status of implementation of EDE in the SAM Region is shown in **Appendix A**¹ to this working paper. It is important to emphasize that EDE continues to be the main strategy for the implementation of the initiatives linked to the FRTO module of the GANP.

2.3 The Meeting was informed that after the implementation of the **EDE** concept in the Brasilia and Curitiba FIR, DECEA Brazil requested the principal Brazilian airlines, to analyze eventual benefits observed in their operations in the areas covered by the concept.

¹ Appendix A of SAM/IG/28-WP/2.1

2.4 During July 2022 and taking into account only the flights benefited from the implementation of the EDE in the Brasilia and Curitiba FIR, GOL company computed a reduction of 1,285 NM in the flights flown, generating a reduction of 5.5 tons of fuel (equivalent to a reduction of 17.38 Tons of CO₂).

2.5 On the other hand, AZUL LINHAS AÉREAS reported that the EDE concept was positive for 20% of its itineraries. In two months of analysis (April 21 to June 20, 2022), considering all FIR contemplated by the concept, the company reported a reduction in flying distances of more than 1,935 NM, saving around 8.7 tons of fuel (equivalent to a reduction of 27.49 Tons of CO₂).

2.6 LATAM reported that, in the airspace of the SBRE and SBAZ FIR, 702 flights of its itineraries gained from DCT segments from the implementation of the EDE.

Implementation of Users Preferred Routes (UPR)

2.7 The UPR route catalogue was developed within the scope of CIIFRA, with a view to harmonizing the proposals for the implementation of UPRs in the NACC and SAM Regions. Routes involving only NACC region or NACC and SAM regions are being coordinated by the CIIFRA group and routes involving only the SAM region are being implemented by GESEA.

2.8 Regarding routes involving only the SAM region, GOL airline has presented UPRs for 09 pairs of cities, which need coordination with Argentina, Brazil and Uruguay. The routes have already been evaluated and approved by Brazil, with additional distance reductions, compared to GOL's proposals.

2.9 A specific meeting was held between the aforementioned States, but it was not possible to advance in this implementation in the Montevideo FIR, due to technical problems in one of the radars that support the ATS surveillance service.

2.10 With regard to the UPRs involving only Argentina and Brazil, analysis by EANA is awaited. As an example, a single route, between SBFZ and SABE, only the Brazilian airspace, will provide a saving of 44NM and 159Kg of fuel if compared to the current route (UN741), from its approval by Uruguay.

Traffic Flow between Colombia and Panama

2.11 The project to restructure air traffic flows between the Bogotá and Panama FIR was presented. It was agreed to deconcentrate the flow of the DAKMO common point, and to implement new RNAV routes, some unidirectional, as well as to separate the overfly flows. In this way, it will be possible to reduce the risk windows caused by the high volume and conflicts of air traffic that evolves in this joint sector, as well as increase the possibilities of CCO/CDO operations and reduce the workload of the ATCOs involved. **It was agreed to publish in both States the SUP/AMDT on October 6, 2022 with effect from December 1, 2022.**

2.12 Colombia has reported that a project is being carried out to re-sectioning the Bogotá FIR, with a view to dividing the workload related to the air traffic sequence for SKBO, SKRG and SKCL Airports, as well as for MPTO. In addition, the most appropriate division of the workload may allow in the future the use of UPRs and corresponding evolution for EDE and FRA.

EDE-FRA Implementation Guide Material

2.13 The preliminary version of the EDE-FRA Implementation Guide Material can be found on the GESEA TEAMS Channel. In this version, the material related to the work developed by CIIFRA was included, taking into account the intention that this guide material be applied by the NACC and SAM regions.

2.14 Considering the complexity of developing this guide material and the resulting need for full-time dedication of approximately 2 weeks, it would be advisable for the meeting to consider requesting the support of project RLA/06/901 for its preparation, through the hiring of experts from SAM States. The Secretariat was tasked with exploring the feasibility of such support. **Action 1**

Airspace Planning: Regional Documentation and Training

2.15 The development of the Regional Airspace Planning documentation was carried out from 8 to 19 August 2022 at the premises of ICAO SAM Regional Office in Lima. The content of the Guide is as follows:

- (a) Trajectories: Arrivals, Departures and Routes;
- (b) Separation between trajectories;
- (c) Waiting;
- (d) Conditioned Airspace;
- (e) Airspace Organization (FIR, TMA and CTR);
- (f) Sectorization – limits of the ATC service;
- (g) Operational Scenarios.

2.16 The Workshop for Airspace Planners based on the guidance material will be held in **Lima from November 7 to 11, 2022**.

ATS Contingency Plan SAM SUR Workshop/Meeting

2.17 The First Workshop/Meeting on Optimizing ATS Coordination and SAM/ATS/ATFM Contingency Plans – SAM SUR was held in Lima, Peru, from September 5 to 9, 2022. The Workshop/Meeting was distributed in nine (09) bilateral working groups, bringing together the six (06) States with their respective counterparts. The meeting report with results and details of deliverables prepared (only in Spanish), is available at the following link:

<https://www.icao.int/SAM/Pages/MeetingsDocumentation.aspx?m=2022-RLA06901-SAMSUR>

2.18 As a result of this Workshop/Meeting, initiatives were reported and presented for consideration by SAM/IG/28 on the following two themes:

Topic I SAM SUR - Proposal for improvement with respect to the process for updating ATS Operational Letters of Agreement

2.19 A proposal for improvement with respect to the process for updating ATS operational letters of agreement, presented by Argentina, was analyzed. It was noted that, although there are no regulatory provisions on the methodology of review, update and subscription of LOA ATS, in several States these documents are signed with the intervention of the senior management of the Civil Aviation Authorities (AAC) and / or Air Navigation Service Providers (ANSP), which makes it difficult to update these Letters of Agreement and their availability in the ATC units.

2.20 Consequently, delegates identified some topics to study and implement within the scope of SAM/IG and its contributing groups, with a view to optimizing the process of updating the LOA, aiming to standardize and condense the content of these documents recognizing their importance in operational safety, in the training processes of the ATC staff and the decision-making in the ACC during the tasks of coordination and transfer of aircraft.

2.21 For the above, the following proposal for a Conclusion is formulated:

CONCLUSION SAM/IG/28-01		Improvements to the ATS operational agreement letters, regarding their content, application, validity and subscription process	
That:		Expected impact:	
a) SAM/IG and its contributing bodies promote studies and activities for the preparation of Regional Guide Material on criteria for the efficient and safe use of the LOA ATS, regarding their content, application, validity and subscription process		<input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental	
b) ATS service providers and / or competent ATS authorities, while implementing what is recommended in Item a) above, coordinate and manage with their counterparts the review and updating of the LOA ATS between States, as far as possible one (01) time a year.		<input checked="" type="checkbox"/> Technical/Operational	
Why: To ensure efficiency and operational safety in the provision of ATS services and the transfer of aircraft between adjacent dependencies, supporting the recovery of the industry and the restoration of air connectivity of the SAM Region.			
When: No later than June 2024		Status: Adopted by SAM/IG/28	
Who: <input type="checkbox"/> Coordinators <input checked="" type="checkbox"/> States <input checked="" type="checkbox"/> ICAO Secretariat <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other: Users/industry			

2.22 Regarding the previous Conclusion, SG1 was responsible for preparing a Job Card with the terms of the activities and studies to be developed by an Ad-hoc group. Progress report will be given at the next GESEA plenary. **Action 2**

Topic II SAM SUR – Optimization of the longitudinal separations for aircrafts in continental space.

2.23 To date, a few segments of neighboring (continental) space remain between FIRs in South America that apply 80NM due to gaps in air-to-ground VHF. In general, the longitudinal separation of 40 NM is the standard. It was the need to promote actions that standardize the implementation of the longitudinal separation of aircraft between adjacent FIRs, in continental airspace, and to promote its reduction to 20 NM GNSS, constituting this a short-term objective.

2.24 The implementation of multiple enablers must be ensured:

- a) VHF coverage;

- b) ATS Surveillance Systems;
- c) Airspace implementations and PBN flight procedures;
- d) Implementations of Direct Routing (EDE) and / or Preferential Routes (UPR);
- e) Implementations in ATFM, among others.

2.25 In this regard, it was noted that the aforementioned installations suppose budgets, therefore, it is pertinent to present working papers at the Meeting of Civil Aviation Authorities – RAAC/17 (Santiago de Chile, March 2023) to socialize the initiative and facilitate decision-making. The Secretariat was charged with coordinating these Notes. **[Action 3]**

2.26 To carry out the initiative, SG1 was responsible for preparing a Job Card with the terms of the activities and studies to be developed by an Ad-hoc (tripartite) group that should involve the GESEA, GT INTEROP, and a focal point of the GTE (to address aspects of operational safety and reduction of LHDs). Progress report will be given at the next GESEA plenary. **[Action 4]**

2022-2023 Regional route optimisation. Implementation of RNAV-5

2.27 See previous paragraphs 2.7, 2.8 and 2.9 on the initiatives being developed by Panama and Colombia.

Airport Efficiency Program

2.28 IATA stated that there is a close relationship between runway operations efficiency, aircraft separation applied by TWR/Approach Control and Airspace Design. An optimization of runway occupancy time, the application of the High Intensity Runway Operations (HIRO) and departures from RWY/TWY intersections are examples of preconditions to the optimization of separation standards between arrivals, departures, and arrivals/departures.

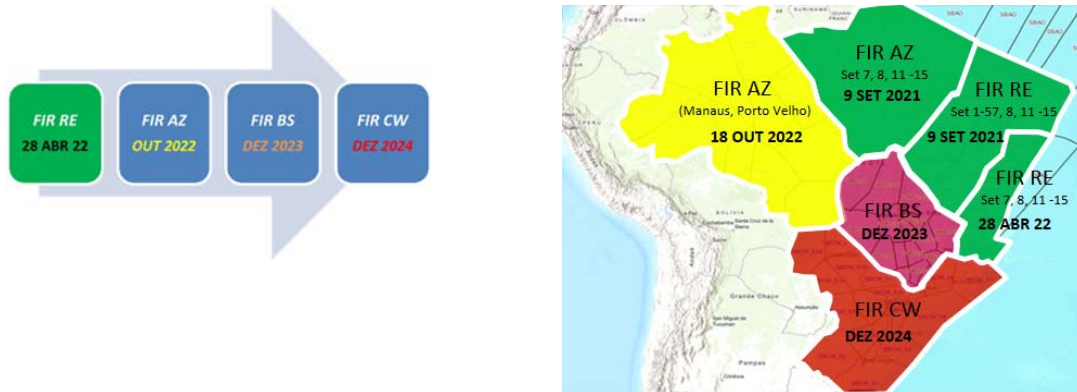
2.29 This enhanced separation standards will allow an optimum airport acceptance rate and, in consequence, a reduction of airborne/ground holdings, decrease of radar vectors and better flight profile. In this sense the application of Airport Efficiency Program could be considered as a previous requirement for a successful implementation of a new airspace concept.

2.30 To carry out the initiative at the level of pilot programs for certain airport of the Region SG1 was responsible for preparing a Job Card with the terms of the activities and studies to be developed by an Ad-hoc group that must involve SG3 and the focal point of the airport concerned. Progress report will be given at the next GESEA plenary. **[Action 5]**

Other Topics on Planning / Airspace and ATS Optimization

2.31 Brazil presented a summary of the implementation of the concept of dynamic sectorization (lateral flexibility) of the Flight Information Region (FIR) of Brasilia. This initiative provided a significant increase in the sector capacity (S02) of the ACC-BS, reduced ATFM measures and consequently improved the system's lag indicators.

2.32 The activities of implementation of the CPDLC in the continental area of Brazil were presented. Operational experience has shown that there are few domestic commercial aircraft equipped with CPDLC data link avionics, but most international and general aviation aircraft are ready, and adherence to the use of CPDLC has been very significant. The following figure represents the implementation schedule for the FIRs in Brazil:



2.33 INGENAV Company made a presentation regarding the concept of Operational Readiness and Transition (ORAT) for change management, presenting a case developed at the airport and ACC in Oman. Likewise, queries were resolved regarding roostering tools that allow the preparation of ATC personnel shift roles based on the criteria and conditions (hours of work/rest, medical validation, etc.) that requires establishing the ATS manager. The presentation is included in the material on the website.

Training

2.34 The feasibility of carrying out the Workshop/Meeting on Flexible Use of Airspace (FUA) and Civil-Military Cooperation at the ATM, at ICAO Regional Office in Lima, Peru, from December 5 to 10, 2022, was analyzed. It was concluded that there would be difficulty for the participation of several States since by the end of the year, budgets are running out. It also aims to ensure that the military personnel (in charge of civil-military cooperation) of each State are included into this event.

2.35 Consensus was reached to modify the approach to the activity so that a **Seminar on Flexible Use of Airspace (FUA) and Civil-Military Cooperation will be held at the two-day ATM** on November 28 and 29, 2022, for all SAM States. Likewise, the face-to-face Workshop / Meeting will be rescheduled in the first half of 2023. The Secretariat was in charge of the calls and coordination. **[Action 6].**

SG2 Activities - PANS OPS

2.36 SG2 – PANS OPS is coordinated by Mr. Diego Gamboa (Argentina). Progress of activities continues, as reported at the SAM/IG/27 Meeting. Next, the analyzed is summarized:

Follow-up to the implementation of PBN in the SAM Region (Resolution A-37/11) and Optimization of TMA spaces. RNAV Routes

2.37 The Secretariat informed that Table XLS approved by SAM/IG/27 to register the progress of the implementation of PBN in the States (traffic light indicator), can be downloaded from the GESEA TEAMS channel, at the link below. It is also free for States to include data from their domestic airports.

<https://oaci.sharepoint.com/:x:/r/sites/SAM-CAR-ANS-GESEA/Shared%20Documents/GESEA/SG2%20PANS%20OPS/SEGUIMIENTO%20implant.%20PBN/GESEA%20SG2%20PBN%20progress.xlsx?d=w910ce628a6874dc49e52ae9f47cd4673&csf=1&web=1&c=N89mEn>

2.38 Information on the optimization of airspace in Brazil was presented, in general, there is 100% implementation with respect to standardized STAR/SID routes (efficiency criteria are applied for STAR requirements, as well as criteria for Omnidirectional outputs and merge point), APV/LNAV and application of the CCO and CDO. A detailed presentation can be found on the SAM/IG/28 website.

2.39 Peru presented a case of Implementation of new PBN flight procedures at the "Mayor General FAP Armando Revoredo Iglesias" Airport in Cajamarca (SPJR), where a set of PBN procedures and Visual procedures have been implemented, to expedite departures and gain capacity and efficiency, in addition to facilitating the CTOT measures of the ATFM. The presentation is included in the material on the website.

True north reference system (geographic north)

2.40 ICAO proposes to eliminate the practice of using a magnetic north reference system for markings, defeats and radials and instead publish and use only the true north reference system. The procedures are designed with reference to true north and convert to magnetic north.

2.41 ICAO has prepared a survey (Letter to States SL22.87.SP) to gather comments from States and their respective aviation sectors on the level of support needed for ICAO to begin work on the shift from a magnetic north reference system to a true north reference system for course and defeat in air operations.

2.42 Find more information related to true north on the web pages:

<https://www.icao.int/safety/OPS/OPS-Section/Pages/Truenorth.aspx>.

<https://www.icao.tv/videos/moving-from-magnetic-to-true-north-in-aviation>

ACTIVITIES OF SG3- ATFM

2.43 The Fifth meeting of Subgroup 3 (SG3/5) was held on 13 and 14 September 2022 via videoconference, under the coordination of Mr. Ricardo David (Brazil). The defined Work Plan is shown in **Appendix A** to this working paper. The analysis of the ATFM topics follows:

GT DOCS: Manual for calculating Track Capacity and ATC Sector

2.44 The analysis of the documents "Guide for the implementation of the ATFM service in the SAM Region 2022-2026" and "Capacity Calculation Manual" (current versions were approved in SAM/IG/26 and SAM/IG/27 respectively) should be continued in order to identify opportunities for

improvement of these documents, for presentation at the next meeting of SG3 in April 2023 and, then submission for approval in SAM/IG/29.

2.45 The next steps include monitoring the process of measuring and declaring capacities in the countries of the Region, promoting and supporting it when necessary, as well as conducting a second round of the regional ATFM Survey and verifying opportunities to update the Guide and the CAP Manual (including models of Capacity Statement, FLW and Post-Operations Report).

GT PLAN DCB: OPSAM, DASHBOARD and BRISA

2.46 Two activities were considered completed: the implementation in the OPSAM dashboard of the functionalities related to the runway capacity of airports, and the purpose of identifying saturation schedules, as well as specific capacity reductions due to works, for example; and the structuring of a single database format to allow the exchange of post-operations data, in order to allow post-operations analysis for BRISA

2.47 The Ad hoc BRISA Group was organized for the States to define which airports should be part of the BRISA, attending to the main pairs of cities in the Region and seasonal flow, among others; and establish an interrelationship between the BRISA, so that the Pre-Tactical also constitutes an update of the content of the strategic BRISA. It is proposed to close this task by giving it as fulfilled, being pending to manage, at the level of SG3, the participation of the industry in this way of working.

2.48 It was considered that the GADHOC should remain on standby until an opportunity for improvement appears in the BRISA, especially in terms of user participation and the use of the English language.

2.49 The results of the survey addressed to the States were presented with the aim of obtaining data on the development and implementation of the ATFM service in the SAM Region and identifying which States in the Region have defined runway capacity values for their airports and/or for the ATC sectors. A second survey is planned to complement the data collected. The summary is shown in the following two Tables (figures in Spanish only):



Asunto 3 – Status ATFM SAM. Implantación servicio ATFM

2.Su Estado ha implantado el Servicio ATFM?	8 - SI, 1 - NO, 2 NO RESPONDIERON,11 ENCUESTADOS	75%	
3.Está utilizando la Guía para Implantación del Servicio ATFM en la Región SAM 2020-2025?	7-SI, 2-NO (1 APLICÓ OTRO PROCESO), 2 NO RESPONDIERON,11 ENCUESTADOS	75%	
4.En qué fase o fases de implantación de la Guía se encuentra?	3 - Fase ATFM I: (capacidad/demanda y línea base) 2 - Fase ATFM II: Fase ATFM II-A (nacional básico) 2 - Fase ATFM II: Fase ATFM II-B (nacional operacional) 2 - NO (1 APLICÓ OTRO PROCESO) 2 NO RESPONDIERON,11 ENCUESTADOS	70%	SE HAN DESARROLLADO TRES FASES EN DISTINTA CONDICIÓN
5.Cuales son los siguientes pasos en su implantación?	6 - INDICAN QUE SEGUIRAN DESARROLLANDO LAS FASES Y ADQUIRIENDO CONOCIMIENTOS 1 - INDICA QUE HA ALCANZADO EL NIVEL REQUERIDO Y NO PREVEE DESARROLLOS 2 - NO (1 AL NO APLICAR ESTE PROCESO ESTABLECE DESARROLLOS PROPIOS) 2 NO RESPONDIERON,11 ENCUESTADOS	55%	
6.Si considera que existen mejoras para la Guía dejar un comentario a continuación.	3 - INDICAN QUE SE PUEDE HACER MEJORAS 6 - NO (1 AL NO APLICAR ESTE PROCESO ESTABLECE DESARROLLOS PROPIOS) 2 NO RESPONDIERON,11 ENCUESTADOS	25%	
7.Indique a continuación la causa por la que no ha podido implantar el Servicio ATFM y/o la Guía?	8 - NO CORRESPONDE DAR RESPUESTA 1 - APLICÓ OTRO PROCESO PORQUE COMENZO ATFM ANTES DE LA GUÍA 2 NO RESPONDIERON,11 ENCUESTADOS		



Asunto 3 – Status ATFM SAM. Cálculo de Capacidad de Pista y Sector ATC

1.Su Estado ha implementado un proceso de cálculo de capacidad de pista y/o sector ATC?	9 - INDICAN HAN REALIZADO EL CÁLCULO 2 NO RESPONDIERON,11 ENCUESTADOS	85%	
2.El proceso de cálculo de capacidad empleado por su Estado, se basa en los lineamientos descritos por la RO OACI SAM en el Manual de Cálculo de Capacidad de Pista y Sector ATC - Draft 1.0?	5 - INDICAN QUE SI 4 - NO (3 HAN APLICADO OTROS DESARROLLOS) 2 NO RESPONDIERON,11 ENCUESTADOS	80%	
3.En caso que la respuesta a la pregunta 2. haya sido NO, ¿Cuáles fueron las razones que motivaron a su Estado a emplear una metodología diferente? ¿Cuáles son las ventajas obtenidas de aplicar esa metodología?	4 - NO (1 NO HA PODIDO IMPLEMENTAR Y 3 HAN APLICADO OTROS DESARROLLOS)	90%	
4. ¿Cuenta el Estado con un Plan de Medición de capacidad Pista? De ser su respuesta SI, señale cuantas y cuales pistas están incluidas en el mismo e indique el porcentaje de cumplimiento de su Plan.	8 - INDICAN QUE SI 1 - NO 2 NO RESPONDIERON,11 ENCUESTADOS	80%	PISTAS
5. ¿Cuenta el Estado con un Plan de Medición de capacidad de Sector ATC? De ser su respuesta SI, señale cuantos y cuales sectores están incluidos en el mismo e indique el porcentaje de cumplimiento de su Plan.	7 - INDICAN QUE SI EN DISTINTOS PORCENTAJES 1 - NO 2 NO RESPONDIERON,11 ENCUESTADOS	70%	SECTOR ATC
6.Su Estado ha publicado la declaración de capacidad (Capacidad Declarada) de pista y sector ATC, para cada aeródromo/Aeropuerto y Sector ATC, en la AIP? ¿Su Estado ha publicado en la AIP la Capacidad Declarada de pista y sector ATC para cada aeródromo/aeropuerto y Sectores ATC?	5 - INDICAN QUE SI 4 - NO (POR DISTINTAS RAZONES Y 1 ESTA EN PROCESO) 2 NO RESPONDIERON,11 ENCUESTADOS	50%	
7.En caso que la respuesta a la pregunta 2. haya sido NO, y no haya desarrollado ninguna metodología de cálculo de capacidad de pista y sector ATC, indique las razones.			

GT ATFM Crossborder

2.50 The creation of the ATFM Crossborder Task Group (GT XB) was approved, and the rapporteurship of Mr. Leonardo Costa (Argentina) was also approved. It was proposed that this GT XB begin studies related to the interrelations already existing between Argentina, Brazil, Chile and Uruguay, as well as between Colombia and its adjacent States, leading to the establishment of crossborder coordination processes of ATFM or ATS interest.

2.51 GT XB Deliverables approved are as follows:

- a) To study a cross-border ATFM process model and ATM-impact cross-border coordination;
- b) Establish a model of LOA/CAO/MOU ATS/ATFM; and
- c) Develop an ATFM crossborder SAM Manual.

Other topics ATFM, Capacity and Efficiency

2.52 IATA explained that it is essential to make a difference from the activation of the ATS Contingency Plan, which must be done through the mechanisms established in the MCATS and in the plans of the States, using the Call Tree, and the discussion of alternative measures, which could be discussed within the scope of the tactical coordination mechanism atfm, which could be called 'Extraordinary Tactical BRISA'.

2.53 In addition, unexpected events that do not require the activation of contingency plans, but cause significant impact to airspace users and/or ANSPs could also be considered in the Tactical ATFM Coordination Mechanism.

2.54 The following requirements are necessary for the formation of the Tactical ATFM Coordination Mechanism (BRISA Extraordinary):

- a) Verify the feasibility of the ATFM SAM units operating H24 being voluntary to coordinate the Tactical ATFM Coordination Mechanism in rotation system.
- b) Develop and keep updated a list of ATFM or ATC contact points (for States that do not have ATFM H24 dependencies), which can be activated H24 for participation in calls of the Tactical ATFM Coordination Mechanism (BRISA Extraordinary).

2.55 It was recognized that maintaining the level of response for Contingencies, as described, may entail use of administration resources and significant organizational tasks, as well as require improvements in areas of ATS and ATFM providers. Consensus was reached to study and implement IATA's proposal progressively.

2.56 To carry out the initiative, SG3 was responsible for drawing up a Job Card with the terms of the activities and studies to be developed by an ad-hoc group. Progress report will be given at the next GESEA plenary. **[Action 7]**

2.57 Brazil presented the initiatives taken throughout 2021 for the TMA Porto Seguro, which were decisive for the ordering of the demand. It is noteworthy that, unlike what happened in the previous season, the demand for SBPS, mostly from commercial flights, was not affected by ATFM measures. In addition, it was observed that punctuality in SBPS presented quite good results, although there has been significant growth in the movement of that period (1,032 movements in December 2020 and 1,614 in December 2021).

Training

2.58 In order to support SAM States in complying with the provisions for ATFM PHASE I (Capacity/Demand) of the Guide for the Implementation of the ATFM Service in the SAM Region, Brazil will provide a course on runway system capacity and ATC sector (20 places) in two phases: the first, theoretical, to be carried out remotely in the period from April 3 to 14, 2023; the second phase, practical, will be conducted face-to-face, from 17 to 28 April 2022 at the Rio de Janeiro, Brazil International Airport (Galeão).

2.59 In order to support SAM States in complying with the provisions of the GANP, as well as for the post-operations phase of the national ATFM, in accordance with the Guide for the Implementation of the ATFM Service in the SAM Region, Brazil will provide the course of ATM performance indicators (20 places) in two phases: the first, theoretical, to be carried out remotely in the months of May and June 2023; and the second phase will be conducted face-to-face, from 3 to 14 July 2022, at the CGNA, Rio de Janeiro, Brazil.

2.60 The Meeting welcomed Brazil's proposal for horizontal cooperation. It was noted that training on KPI management of the GANP is very scarce. It is expected to generate competencies in personnel who are managing data to feed KPIs in the States. The Secretariat was in charge of coordinating with CGNA and DECEA Brazil the calls and documentation for these two initiatives. The profile of the participant and the strategies that frame this training will be detailed in the Mnemonic Sheet that accompanies the calls from the SAM Office. **[Action 8]**

Work Plan 2022 under the support of the RLA/06/901

2.61 The Work Plan approved in SAM/IG/26 was reviewed and the dates of these events were confirmed, according to the review of the GESEA Plenary in coordination with RLA/06/901. The

reactivation of face-to-face activities in the Regional Office from July 2022 is taken into account. **See Appendix B.**

3. Suggested actions

3.1 The Meeting is invited to:

- a) Take note of the activities and deliverables provided by the GESEA subgroups;
and
- b) in case a consensus is reached, approve the conclusions formulated in this paper.

APPENDIX A

SG3 – ATFM 2022-2023 Work plan

ACTIVITIES BY VIDEOCONFERENCE
(Initially, consider from 14:00 to 17:30 UTC).

2022	SG3	GT PLAN DCB	GT DOCS ATFM*	GT XB
October	--	17 al 18	TBD	11 al 12
November	--	--	TBD	15 al 16
December	--	5	TBD	--
2023	SG3	GT PLAN DCB	GT DOCS ATFM*	GT XB
January	--	30	TBD	TBD**
February	--	27	TBD	14 to 15
March	20 to 21	--	TBD	--
April	--	10	TBD	17 to 18
May	--	29	TBD	17 to 18
June	--	--	TBD	22 to 23
July	--	3	TBD	19 to 20
August	--	--	TBD	16 to 17
September	4 to 5	--	TBD	--
October	--	2	TBD	--
November	--	27	TBD	--
December	--	--	TBD	--

* The Rapporteur of the WG DOCS ATFM will coordinate with the delegates the dates in due course

** The XB WG will assess the need for a meeting in January, considering the attempt to deliver a first product at SG3/6.

FACE TO FACE ACTIVITIES

2023	GESEA	BRAZIL***
April	-----	ATC Capacity Course; in two phases: the first, theoretical, to be carried out remotely in the period from April 3 to 14, 2023; the second phase, practical, will be conducted face-to-face, from 17 to 28 April 2022 at the Rio de Janeiro, Brazil International Airport (Galeão).
June	5 to 9 – Second Capacity Workshop (Lima, Peru)	-----
July	-----	Course of ATM performance indicators; in two phases: the first, theoretical, to be carried out remotely in the months of May and June 2023; and the second phase will be conducted face-to-face, from 3 to 14 July 2023, at the CGNA, Rio de Janeiro, Brazil.

2023	GESEA	BRAZIL***
August	7 to 11 – Second Data and Indicators Workshop (Lima, Peru)	----
October	9 to 13 – ATFM Crossborder Working Group SAM (Lima, Peru)	----

APPENDIX B
Work Plan 2022 – under support of RLA/06/901

Activities	Objectives / Deliverables	Tentative Dates
Plenary Meeting GESEA	Organization of the implementation of concepts according to deliverables of 2021 Subgroups. Review and adjustments of the PTA. Monitoring of activities.	Virtual, 1 to 3 March <ul style="list-style-type: none"> • Translation of documents
GESEA SG3 ATFM Meeting	Continuation of scheduled studies. Monitoring of implementation and optimization activities of the ATFM service.	Virtual, 20 – 21 March <ul style="list-style-type: none"> • Translation of documents
GESEA SG1 Airspace Planning Meeting	Continuation of scheduled studies. Monitoring of implementation and optimization activities	Virtual, 12 to 14 April
ATC Capacity Course Support from Brazil	See IP/5.1 SAM/IG/28	Phase 1; virtual from 3 to 14 April ; Phase 2, practical face-to-face From 17 to 28 April abril , Rio de Janeiro International Airport (Galeão), Brazil. <ul style="list-style-type: none"> • xxx fellowships for RLA/06/901 member States
GESEA SG2 PANS OPS Meeting	Continuation of scheduled studies. Monitoring of activities for the implementation of operational elements of the APTA module and optimization of TMA. Optimization of IFPD service	Virtual, 8 to 9 May Translation of documents
SAM/IG/29 Air navigation implementation priorities considered in GREPECAS programs, VOL III Regional ANP and Regional initiatives.	Continue with the activities of implementation, execution and optimization under the GESEA studies. Support to Vol III Regional ANP management	Lima, 15 to 19 May <ul style="list-style-type: none"> • 30 fellowships for States RLA/06/901 • Simultaneous interpretation
Second Workshop/Meeting on methodology for ATFM calculation capacity	Application of the Calculation Manual. Planning of capacity measurement (or updating) activities in the Region.	Lima, 5 to 9 June Mission 2 facilitators <ul style="list-style-type: none"> • 10 fellowships for States RLA/06/901

Performance Indicators Course; GANP KPI; support Brazil	See IP/5.2 SAM/IG/28	Phase 1, theoretical, to be carried out remotely in the months of May and June; Phase 2, face-to-face From 3 to 14 July , at the CGNA, Rio de Janeiro, Brazil. <ul style="list-style-type: none"> • xxx fellowships for RLA/06/901 member States • Mission 1 expert
2nd ATFM Workshop/Meeting on Data Management and Regional Indicators	Standardization of ATFM data. Analysis of demand forecasts and indicators. Power BI app for regional and national analytics	Lima, 7 to 11 August <ul style="list-style-type: none"> • 2 missions expert (facilitator) • 10 fellowships for States RLA/06/901
Preparation of regional guide material on the implementation of the FRTO module, and EDE and UPR concepts	Deliverable	<ul style="list-style-type: none"> • Lima, TBD • 1 Mission (expert)
Development of regional guidance material on airspace planning regulations.	Deliverable	<ul style="list-style-type: none"> • Lima, TBD • 1 Mission (expert)
SAM ATGM Crossborder Working Group meeting (GT XB)	Consolidate studies for the implementation of the ATFM Crossborder, according to the SAM Implementation Guide, based on intra-regional scenarios. Analysis of deliverables.	Lima (or another site in SAM) 9 to 13 October <ul style="list-style-type: none"> • 10 fellowships for States RLA/06/901 • 1 Mission (expert)

APPENDIX B
Work Plan 2022 – under support of RLA/06/901

<p>SAM/IG/30 Air navigation implementation priorities considered in GREPECAS programs, VOL III Regional ANP and Regional initiatives.</p>	<p>Continue with the activities of implementation, execution and optimization under the GESEA studies. Support to Vol III Regional ANP management</p>	<p>Lima, 23 al 27 de October</p> <ul style="list-style-type: none"> • 10 fellowships for States RLA/06/901 • Simultaneous interpretation
<p>Second Workshop for Airspace Planners.</p>	<p>At least one planning specialist per Member State trained in airspace design and organization techniques - ASM</p>	<ul style="list-style-type: none"> • Mission expert (facilitator) in Lima, TBD • Workshop: Lima, TBD • 10 fellowships States RLA/06/901

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