



Agenda Item 3: Report on activities and deliverables of the GESEA and Subgroups.

**WORKSHOP ON DIGITAL AIRSPACE SYSTEM
ANALYSIS (DASA) – SAM REGION**

(Presented by Brazil)

SUMMARY

The Digital Airspace System Analysis (DASA) is an innovative tool developed by the Brazilian Department of Airspace Control (DECEA) to enhance the analysis and management of digital airspace. This tool represents a milestone in the modernization of air traffic control systems, offering a comprehensive and accurate view of air operations in real time. With advanced data analysis and modeling capabilities, DASA provides valuable insights to optimize operational efficiency, ensure flight safety, and facilitate coordination among different stakeholders in the aviation community in a dynamic and complex scenario such as modern air traffic. In summary, DASA represents a significant step towards excellence in airspace management, contributing to safer, more efficient, and sustainable aviation.

References:

- ICAO Global Air Navigation Plan (Doc 9750);
- Guide for implementing the ATFM Service in the SAM Region 2021 – 2025

1. INTRODUCTION

1.1 The Brazilian Airspace Control System (SISCEAB), led by the Department of Airspace Control (DECEA), aims to provide the necessary means to manage airspace and air navigation services safely and efficiently, as established in national regulations and the international agreements and treaties to which Brazil is a party.

1.2 To meet the growing demand for digitization and automation in airspace usage analysis, DECEA launched the Digital Airspace System Analysis (DASA). This system was developed to meet the needs of both the State and users, integrating the facilities offered by DECEA. Its goal is to enable analysts to make more efficient decisions when studying and approving airspace-related user requests.

1.3 DASA's main objectives are to increase airspace usage planning capacity, improve airspace usage request analysis, enhance air safety by identifying potential conflicts between analyzed areas and routes, automate requested analyses, and disseminate information among stakeholders in different processes.

1.4 The tool has been officially designated as the exclusive channel for User Preferred Routes (UPR) requests in Brazil, which are more direct and cost-effective. The request process now occurs through this system, which has become the sole accepted method as of April 1, 2024. Its utilization is integrated to avoid

conflicts with Mandatory Routes (PREF), and it also aims to facilitate flight planning by reconciling UPR routes with Direct Routes (or DCT Routes) already widely used in Brazilian upper airspace.

2. DISCUSSION

2.1 The concept of Free Route Airspace (FRA) is an integral part of the ICAO Global Air Navigation Plan (Doc 9750) and is included in the implementation of ASBU Blocks, specifically in the Improved Operations by Optimized Route Trajectories (FRTO B0/B1) segment. This concept highlights the need to change the airspace optimization strategy in South America, allowing for more efficient trajectories, fuel savings, and contributing to environmental sustainability.

2.2 In March 2024, the Brazilian Association of Airline Companies (ABEAR) organized a Workshop on the DASA tool, with the main objective of introducing the system to SISCEAB users and establishing it as the official channel for User Preferred Route (UPR) requests. This Workshop served as a scenario update, reinforcing previous requests and their improvements.

2.3 The event was attended by representatives from national airlines LATAM, Azul, and Gol, as well as representatives from international companies such as Delta Airlines, Air Canada, KLM, FedEx, JetBlue, and United Airlines. During the meeting, airlines had the opportunity to discuss their real needs, challenges, and improvement suggestions with the Air Navigation Management Center (CGNA). Companies also had individual access to the system to create scenarios and new User Preferred Routes (UPR) in real-time, in addition to contributing to new improvements.

2.4 Through GESEA's actions, initiatives focused on reducing flight time, fuel consumption, and sustainable development with lower CO2 emissions into the atmosphere are being developed. The airspace in the SAM region is being addressed in an integrated manner, considering joint development based on the experiences and specific characteristics of each country in the execution of their aeronautical activities.

2.5 Following this cooperation line, Brazil, through DECEA, proposes to host the DASA Workshop for the entire SAM Region, offering to make arrangements to extend the tool for use throughout South American airspace. The goal is to establish and connect common User Preferred Routes (UPR) for use by all operators in the aviation community.

3. ACTION SUGGESTED

3.1 The Meeting is invited to:

- a) Take note of the information in this paper;
- b) Analyze the creation and regional integration of UPR Routes from stakeholders; and
- c) Study the feasibility of holding the DASA Workshop - SAM Region with the presence of States and international operators by the year 2025.