



Agenda Item 5:

Other Business

EU-LAC Aviation Partnership Project activities with European partners on regional cooperation in the ATM/ANS domain and opportunities for the SAM region

(Prepared by the European Union Aviation Safety Agency - EASA)

SUMMARY

This information paper presents the activities of EASA in the region in the context of ATM/ANS modernization, in cooperation with regional and European partners, and provides insights into opportunities for future work.

References:

- N/A

1. Background

1.1 The European Union Aviation Safety Agency (EASA) is the entity in charge of ensuring that the levels of safety in civil aviation in Europe are harmonized and of the highest level. The main tasks of EASA are:

- Drafting Implementing Rules and other regulatory instruments
- Certifying and approving products and organizations at European level
- Providing oversight and support to member states
- Promoting the use of European and global standards
- Cooperating with international actors for the advancement of global aviation safety

1.2 In this context, EASA manages technical cooperation projects globally, providing support to states and regional organizations with the development of civil aviation through the promotion of European experiences and standards, as well as the participation of European industry.

1.3 Within these technical cooperation projects, the EU-LAC Aviation Partnership Project (EU-LAC APP) is an initiative financed by the EU and implemented by EASA with Argentina, Brazil, Chile, Colombia and Mexico as bilateral partners, as well as the SRVSOP (Regional Safety Oversight Cooperation System for Latin America), ACSA (Central American Agency for Aeronautical Safety) and CASSOS (Caribbean Aviation Safety and Security Oversight System) as regional partners. The project also works in cooperation with the regional EU delegations, the ICAO regional offices, and aeronautical industry.

1.4 The EU-LAC Project aims to identify the challenges and improvement areas at national and regional level in order to provide support through activities such as institutional and technical support, workshops and trainings, and collaboration with industry.

1.5 The EU-LAC has a duration of 53 months, with its conclusion on the 31st of May 2022. A continuation project will be initiated in June 2022, with a duration of 3 years.

1.6 One of the most significant domains where the EU-LAC APP provides support is in ATM/ANS. The activities in this domain include support to partners with the development of Air Navigation Plans, the implementation of certification and oversight frameworks for Air Navigation Service Providers, as well as workshops, trainings, and continued support on technical and operational aspects.

1.7 Some of the activities at regional level conducted in the past months by the EU-LAC APP in cooperation with European partners are the following:

European Network Manager functions workshop

The activity provided perspectives on the benefits of centralised concepts for services with a strong regional focus, such as flight plan management and ATFM, as well as best practices and lessons learned from the European experience.

The lack of a harmonised approach towards flight plan (FPL) management and air traffic flow management (ATFM) in the LATAM region has resulted in notable performance issues in the regional ATM system. Flight plans make up the first link in the information chain of Air Traffic Management, and thus contain the data which is required by many systems for fulfilling their tasks through the automated processing of this information. Issues with flight plan format of content results in systems being unable to process the FPLs accurately and thus not being able to enable further automation. Additionally, ATFM allows a great increase in predictability of traffic and better planning of capacity and resources. However, it also requires tight coordination and data processing. For these reasons, in Europe the provision of these services was centralised in the Network Manager function, and EUROCONTROL was designated for their provision. This centralised approach, as well as the standards and rules behind it, can be a very useful reference for the LAC region as they deal with the challenges of harmonising FPL management and ATFM services provision at regional level.

Air Navigation and Airports Capacity Management workshop

The activity provided a view of the state of the art in capacity management in Europe, and what is possible when stakeholders and different states work together, as well as an understanding of how these frameworks function in detail.

Capacity constraints and lack of coordination among stakeholders in the Air Navigation and Airports domains are identified causes of traffic congestion and delays.

While COVID-19 resulted in a reduction in traffic, it was also an opportunity to implement improvements before the capacity constraints started being felt. For this reason, the EU-LAC APP collaborated with EUROCONTROL to provide this webinar to highlight the European approaches towards ANS and Airports capacity management.

This could be a first step in identifying common frameworks and tools at the regional level for capacity management.

ATM/ANS Innovation and Master Planning workshop

The activity consisted of a workshop organised in cooperation with EUROCONTROL, SESAR, ENAIRE and EU Industry (Indra & Frequentis), aimed at demonstrating the benefits of a regional approach for ATM/ANS master planning, and how the technical, operational and strategic coordination is performed in Europe to successfully implement new solutions in ATM/ANS.

The objective was to provide participants with the context and expertise for defining the national strategy and planning for the implementation and deployment of ATM/ANS improvements, by ensuring an adequate identification, prioritization and traceability of tasks and projects, as well as

alignment with global and regional guidance and trends, all while following a performance-based approach in accordance with ICAO guidelines.

It also aimed at promoting the development of regional common plans and operational concepts, to ensure interoperability and harmonisation.

Many of the advantages from new services and technologies in air navigation are based on the premise of interoperability, sharing of digital information, and synchronised deployment. In this sense, a coordinated approach at global, regional and national levels for the implementation of ATM/ANS operational and technological improvements is essential to ensure benefits are maximised.

Regional CNS Services in Europe workshop

The activity consisted of a workshop organised in cooperation with EUROCONTROL, DFS, ESSP, and EU industry (INDRA & Startical), aimed at providing a perspective of regional CNS services in Europe and the latest developments in this area, from service provision to oversight.

Regional CNS services are gaining increasing importance at the global level, due to the performance benefits as well as the increasing requirements for digitalisation and interoperability.

This workshop touched on several of the existing regional CNS services from Europe, such as the regional IP network (newPENS), Data-link, or surveillance distribution, and how interoperability and rationalisation is achieved from the local to the regional level. It also covered some of the upcoming initiatives, such as those based on satellite systems with global reach.

Many of these systems and services were deployed to address challenges which are also faced in the Latin America region, and the approaches followed could be a reference for states to consider following a regional perspective.

2. Analysis

2.1 The modernization and digitalization of ATM/ANS is a key requirement to ensure that the current system can keep up with the increased demands in performance, from capacity, safety to environmental impact. This involves, among others, systems and services which are more interconnected and automated. However, this comes with the need for those systems to be as integrated, interoperable and standardized as possible.

2.2 In Europe, several approaches have been taken to ensure the effective modernisation of ATM/ANS, while at the same time maintaining industry's competitiveness. This includes the following:

- Harmonized oversight and certification of ATM/ANS service providers, through common EASA rules and guidance.
- A regional approach to ATM/ANS modernization and the development, planning and deployment of improvements through the Single European Sky ATM Research (SESAR) Programme.
- Performance targets, monitoring and accountability through regional regulations and performance frameworks.
- Centralization and coordination of certain regional ATM/ANS Services and infrastructure via EUROCONTROL as network manager.
- Tight coordination of all players, from industry to service providers and competent authorities at the national and regional levels.

2.3 In this context, the EU-LAC APP has been cooperating with international organizations, EUROCONTROL, SESAR, European Air Navigation Service Providers (ANSPs), and European industry to provide workshops for the Latin America and Caribbean region that promote regional cooperation, covering aspects such as:

- The European regional Flight Plan Management System (The IFPS)

- European Air Traffic Flow Management (ATFM)
- The European Route network
- Airport/ANSP Capacity Management
- Regional Air Navigation Planning frameworks and the Single European Sky
- Regional Communications, Navigation & Surveillance (CNS) services in Europe
- Harmonised frameworks for oversight and certification of service providers
- Interoperability, standardisation and automation in ATM/ANS

2.4 The SAM Region has several opportunities to make the most from the digitalization and modernization of ATM/ANS systems and services, and to overcome the challenges associated with it. Among others, EASA has identified the following opportunities for working together:

- The advancement of regional guidance for the planning, procurement, and implementation of ATM/ANS systems and services, to ensure interoperability.
- The strengthening of regional ATM/ANS strategic planning and performance management, at the national level and in strong coordination with ICAO at the global and regional level.
- The identification and exploitation of centralization opportunities, particularly for services of regional nature such as Flight Planning or ATFM. This has already been achieved with the regional network (REDDIG) with great success.
- The establishment of partnerships with industry and between service providers to work together in harmonizing service provision and systems implementation.
- Raising awareness and building capacity in technical, operational and management staff to embrace the evolution of ATM/ANS and the opportunities that it brings.

2.5 The EU-LAC APP is willing to continue and even increase its support in these areas, and it available to contribute to what the ICAO SAM is already doing in such an intense and effective way, through the many initiatives in this field. In this context, the EU-LAC APP is planning activities in the region in cooperation with LAC and European partners for the next years, such as the following:

- Regional workshops highlighting innovative technologies developed and implemented in Europe, such as Remote Towers, Artificial Intelligence for safety data management, or cybersecurity frameworks.
- Technical support and guidance in areas of regional importance, such as AIDC implementation, regional IP network advancements, or airspace/procedures harmonization.
- Technical support and guidance to partners in implementing harmonized frameworks for ATM/ANS Master Planning, and for the oversight & certification of ANSPs.

2.6 At the same time, EASA encourages the regional partners to increase their efforts in cooperation, harmonisation and information sharing, and to support the establishment of regional frameworks to do so.

3. **Suggested actions**

3.1 It is suggested to the meeting to:

- a) Take note of the information paper;
- b) Evaluate the opportunities and needs for support for your State/Organisation within the context of ATM/ANS modernization and regional cooperation; and
- c) Acknowledge EASA availability for cooperation in the areas relevant to this topic and which could be performed within the frame of the EU-LAC APP.