FOURTEENTH AIR NAVIGATION CONFERENCE

Montréal, Canada, 26 August to 6 September 2024

Agenda Item 3:   **Air Navigation System Performance Improvement**
          3.1:   **Proposals to improve the efficiency of air navigation services contributing to LTAG**

ENHANCING SEAMLESS AIR TRAFFIC MANAGEMENT BY ESTABLISHING A FRAMEWORK FOR CROSS-BORDER SERVICES

(Presented by Civil Air Navigation Services Organisation (CANSO))

EXECUTIVE SUMMARY

There are important lessons to be learned regarding the operational benefits that can be realized for air traffic and the operational efficiencies in service provision. Many successful examples exist where services are being provided across State borders, by civil aviation authorities or international organizations.

A recent white paper by CANSO entitled *Lines in the Sky* examined 13 examples of successful cross border arrangements. Cross-border arrangements can be complex to establish as there are legal, economic, governance, oversight and sovereignty aspects. The white paper provides States with information on successful ways these issues have been addressed.

Action: The Conference is invited to agree to Recommendation 3.1/x – Enhancing Seamless Air Traffic Management in paragraph 3.

1.   INTRODUCTION

1.1   Eighty years ago, the Convention on International Civil Aviation (Chicago Convention), was signed. The Convention outlined the State responsibility to ensure the provision of air navigation services and facilities in order to facilitate international air navigation within their sovereign boundaries. However, Article 28 of the Convention does not identify the service provider themselves.

1.2   Improving the efficiency of air traffic management (ATM) by reducing the fragmentation of airspace has been identified as the objective of many important initiatives. The Single European Sky initiative was designed to provide cross-border air traffic services (ATS) with the goal to deliver operational flight efficiency benefits, for both local areas and broad regional enroute airspace.

1.3   In determining the organization of airspace, ICAO Annex 11 — *Air Traffic Services*, 2.11.1 recommends that "The delineation of airspace, wherein air traffic services are to be provided, should be

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[1] Arabic, Chinese, English, French, Russian and Spanish versions provided by CANSO.

related to the nature of the route structure and the need for efficient service rather than to national boundaries." ICAO Assembly Resolution A41-10 "Consolidated statement of continuing ICAO policies and associated practices related specifically to air navigation" Appendix G is specifically relevant, in making a strong commitment to, and guidance for, cross-border arrangements and delegations in the interest of "technical, operational, safety and efficiency considerations."

1.4   Furthermore, the *Global Air Traffic Management Operational Concept* (GATMOC, Doc 9854) in its vision for future airspace states "while acknowledging sovereignty, airspace will be organized globally. Homogeneous ATM areas and/or routing areas will be kept to a minimum, and consideration will be given to consolidating adjacent areas."

1.5   In A41-WP/356 ICAO was requested to advance the development of a framework for the decentralized management of sovereign airspace with the understanding that such a framework would facilitate the process for States motivated to consider such arrangements.

2.   DISCUSSION

2.1   Despite the Chicago Convention recognizing the benefits of an organized airspace structure, and the subsequent ICAO Standards and Recommended Practices (SARPs) that followed, the organization of today's airspace remains largely organized along national borders, with only isolated examples of shared or cross-border areas readily identifiable. Cross-border service arrangements are sometimes viewed as too complex or incompatible with national interests, even between allies with relatively open land borders.

2.2   Fortunately, there are successful examples of cross-border service arrangements in existence today providing both local and regional benefits. An examination of these examples, provides important lessons on the establishment of cross-border ATS service arrangements, including how best to deal with liability, safety and economic regulations, assurance of performance, civil military collaboration, and other sovereignty aspects. These case studies also provide important insight into the benefits that may be realized by expanding cross-border arrangements in other areas.

2.3   A recently released CANSO white paper "Lines in the Sky: Seamless Cross Border ATS" (https://canso.org/publication/seamless-cross-border-ats/) examines 13 cross-border service arrangements and the benefits and lessons learned from their establishment, including how they managed the legal, economic, safety oversight, civil military coordination and other issues.

2.4   The thirteen case studies examined fall into three categories:

    a) small border adjustments between neighbouring States providing local benefits;

    b) an air navigation services provider (ANSP) in one State providing ATS service entirely over its neighbour, often focussed on upper airspace; and

    c) the establishment of an entirely new entity to provide air traffic services over multiple countries.

2.5   Each of the above forms of cross-border service arrangements can deliver operational benefits for aircraft operations, by enabling efficiencies that contribute to the achievement of the long-term global aspirational goal (LTAG) for international aviation. In some cases, there are additional benefits for controller and pilot workload, and reduced service provision costs through improved resourcing and infrastructure management.

2.6   As advanced ATM concepts, such as trajectory-based operations (TBO) are readied for deployment, coordination, communication and interoperability are likely to become the dominant challenges. The establishment of seamless cross-border services will be essential for TBO to deliver its anticipated performance benefits as capabilities and processes integral to TBO will need to be developed and deployed in a globally harmonized manner. Cross-border flight information regions (FIRs), particularly in upper airspace, have the potential to provide an environment to reduce the many challenges involved in realizing such concepts.

2.7   The air services agreements establishing public health corridors (PHCs) during the COVID-19 pandemic, was an example where ICAO supported the development and implementation of guidance, frameworks, decision aids and template agreements, to help States through the process. Similar tools might facilitate a process for States considering changes to airspace to provide important operational benefits. ICAO is well placed to provide the States with guidance and frameworks in shaping these complex agreements.

3.   **CONCLUSION**

3.1   While the benefits of cross-border service arrangements are clear, they remain in many instances complex to set up, with many considerations for participating States to address. Existing arrangements contain important lessons learned to teach States willing to examine potential benefits. ICAO support for implementation in the form of guidance, frameworks and template agreements will help States looking to consider changes to airspace to provide important operational benefits.

3.2   Considering the above, the Conference is invited to agree to the following recommendation:

Recommendation 3.1/x – Enhancing seamless air traffic management

That States:

a)   note the information provide in this paper and in the CANSO white paper "Lines in the Sky: Seamless Cross Border ATS[2]" and the lessons highlighted from existing successful case studies of cross-border ATS provision; and

that ICAO:

b)   develop a framework for cross-border service arrangements that would aid States considering the benefits of such arrangements, to identify appropriate options for how to best establish them.

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[2] CANSO white paper "Lines in the Sky: Seamless Cross Border ATS" can be found in the references page of the AN-Conf/14 site at https://www.icao.int/Meetings/anconf14/Pages/Reference-Documents.aspx.