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WORKING PAPER

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TECHNICAL COMMISSION

Agenda Item 24: Aviation Safety and Air Navigation Priority Initiatives

CHALLENGES POSED BY HIGHER AIRSPACE OPERATIONS

(Presented by Cuba and supported by LACAC Member States²)

EXECUTIVE SUMMARY

This working paper analyses and summarizes the issues related to higher airspace operations (HAO) and the measures that need to be taken to ensure a standard, globally harmonized approach to procedures and systems in order to integrate such operations into the aviation system while maintaining high standards of safety.

Action: The Assembly is invited to call on Member States to update or amend their regulations and procedures so as to facilitate the integration of such operations without compromising safety and while ensuring environmental protection and coordination of civil and military aviation operations.

<i>Strategic Goals:</i>	This working paper relates to <i>Every Flight is Safe and Secure</i> .
<i>Financial implications:</i>	Immaterial
<i>References:</i>	Doc 10140, <i>Assembly Resolutions in Force (as of 4 October 2019)</i> Doc 10118, <i>Global Aviation Security Plan</i> Doc 10008, <i>Global Aviation Safety Plan</i> Doc 9750, <i>Global Air Navigation Plan</i> , 7th edition

¹ Spanish version provided by Cuba.

² Belize, Bolivia (Plurinational State of), Chile, Colombia, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Paraguay, Peru, Uruguay, and Venezuela (Bolivarian Republic of).

1. INTRODUCTION

1.1 Technological developments are making possible increasing numbers of operations in and through the airspace above the level of today's conventional aircraft operations. Higher airspace operations (HAO) include space launches and re-entries, suborbital, hyper- and supersonic operations and operations using high altitude platform systems (HAPS). These developments will result in increased demand in terms of volume, frequency and mix of operational characteristics.

1.2 The emerging activities will have an impact on the current aviation system and will therefore need to be accommodated and integrated, while maintaining a high standard of safety and ensuring the sustainability of associated operations.

1.3 These new types of operations (e.g., high-altitude operations above FL 600, urban air mobility, very low-level operations below 400 ft) have already shown the limitations of the traditional approach to service delivery.

2. ANALYSIS

2.1 Most higher airspace (current and anticipated) operations span several flight information regions (FIR). A regionally harmonized approach is therefore needed to develop solutions that can be integrated into the scope of action of present-day air traffic management (ATM) while also covering phases in the airspace below higher airspace.

2.2 Initiatives are under way in the North American, Central American and Caribbean (NACC) Region to establish arrangements for space traffic management, including space surveillance and tracking, space situational awareness, and launch and re-entry management. The frequency of space operations is increasing, and this will require the development of consistent global interfaces in procedures and systems to ensure safety and efficiency in both space and airspace operations.

2.3 The current international regulatory framework does not provide flexibility to accommodate the deployment and operation of these novel technologies. Existing standards and recommended practices (SARPs) have been developed over time through iterative learning processes to provide the best minimum requirements for safe and efficient operations of passenger aircraft, and while they are well suited to the technologies now in use they cannot accommodate newer types of operations.

2.4 The Global Air Navigation Plan (GANP) and Global Aviation Safety Plan (GASP) should be updated to facilitate a harmonized and innovative global approach to HAO.

3. CONCLUSION

3.1 Emerging developments in preparation for higher airspace operations both allow and necessitate a more precise and proactive plan of action.

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