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**Eighth Meeting of the North American, Central American and Caribbean Directors of Civil Aviation
(NACC/DCA/08)**

Ottawa, Canada, 31 July to 2 August 2018

**Agenda Item 6: NAM/CAR Regional Safety/Air Navigation/Aviation Security/Facilitation
Implementation Matters**

6.3 Air Navigation Implementation Matters

REGIONAL AND STATE AIR NAVIGATION PLANS IN THE ICAO NACC STATES

(Presented by United States)

EXECUTIVE SUMMARY

This paper presents the experience of the ICAO North American, Central American, and Caribbean (NACC) Regional Offices (RO) in the development of processes to support its member states and territories to implement and report the status of Aviation System Block Upgrades (ASBU) Elements in Block 0 Modules. The experience also includes the development of regional and state Air Navigation Plans (ANPs) that are aligned with the Global Air Navigation Plan (GANP).

Action:	<ul style="list-style-type: none">• Suggested actions are in Section 4.
<i>Strategic Objectives:</i>	<ul style="list-style-type: none">• Safety• Air Navigation Capacity and Efficiency

1. INTRODUCTION

1.1 The twelfth Air Navigation Conference (AN-Conf/12) was held in November 2012 and approved *Recommendation 6/1 – Regional Performance Framework – Planning Methodologies and Tools* to assist States, Planning and Implementation Regional Groups (PIRGs), and aviation stakeholders to implement harmonized and interoperable air navigation systems by aligning their future plans with the 4th edition of ICAO Doc 9750, *Global Air Navigation Plan (GANP)*.

1.2 The Aviation System Block Upgrades (ASBU) is the framework introduced in the 4th edition of GANP. The ASBU is a phased-approach framework and the *Recommendation 6/1* notes that States and PIRGs should focus on implementation of ASBU Blok 0 Modules according to their operational needs, once recognizing that these modules are ready for deployment. The *Recommendation 6/1* also notes that PIRGs to finalize the alignment of regional air navigation plans (ANPs) to GANP. The GANP envisions that state ANPs be aligned with regional ANPs.

1.3 ICAO PIRGs, member States, and aviation stakeholders made significant efforts to understand GANP/ASBU, their roles, responsibilities, and expectations to implement Block 0 capabilities, how and what to report as an evidence of ASBU implementation, and how to take advantage of ASBU since 2013, when all reference documents that support the implementation of ASBU Elements in Block 0 Modules officially became available.

1.4 The ICAO Council decided that the regional ANPs should be published in three volumes in June 2014. Regional ANP Volume I contains stable plan elements, Volume II contains dynamic plan elements, and Volume III contains dynamic/flexible plan elements. Specifically, the regional ANP Volume III considers ASBU and associated technology roadmaps.

1.5 The regional ANP, also known as Electronic ANP (eANP) represents the bridge between, from one side, the global provisions in the ICAO standards and recommended practices (SARPs) and the GANP, and from the other side, the States' ANPs and current implementation. This alignment of ANPs from the GANP to regional ANPs to state ANPs would assist regions and States to implement harmonized and interoperable air navigation systems.

1.6 As for the regional ANPs, European (EUR) ANP Volume III (endorsed by EANPG/59, dated November 2017), North Atlantic (NAT) ANP Volume III (endorsed by NATSPG/53, dated June 2017), Middle East (MID) ANP Volume III (dated February 2017), North America/Caribbean and Central America (NAM/CAR) Performance-Based Air Navigation Implementation Plan (RPBANIP) (dated April 2014), and Asia/Pacific Seamless Air Traffic Management Plan (approved by APANPIRG/27, dated September 2016) have been published. The NAM ANP Volume III and CAR RPBANIP are forthcoming.

1.7 As for the state ANPs, a number of States such as Brazil, Canada, China, India, Japan, Russian Federation, and the United States have air navigation improvement programmes and associated ANPs. European States have the European ATM Master Plan. Some States may not have comprehensive ANPs that may or may not be aligned with the GANP.

2. **DISCUSSION**

2.1 Development of the GANP/ASBU concept and framework is a major accomplishment at the global level. The ICAO Regional Offices and individual States were left to translate the concept and framework to implement Block 0 Modules.

2.2 The North American, Central American and Caribbean Directors of Civil Aviation region (NAM and CAR) consists of States and territories with wide ranging financial and socio-political situations. For many States and territories in the CAR, resources were scarce to support GANP/ASBU. Representatives from these States may be able to attend seminars and workshops to learn about GANP/ASBU. However, returning back to their regular work, many seminar and workshop attendees find it difficult to spend time to apply the concepts and framework of GANP/ASBU, or create something tangible and concrete for their States to take advantage of all that GANP/ASBU has to offer.

2.3 The ICAO NACC RO understands the reality of resource issues in the region while continuing to encourage its member States and territories to follow the GANP/ASBU concepts, as well as frameworks to implement the future aviation technologies guided by ICAO standards. The RO assists them by creating the necessary steps and components that bridge the gap between concepts and practical usage of ASBU framework needed for implementation. The RO has prepared the following steps and components in addition to providing seminars and workshops on GANP/ASBU:

- NACC ASBU Handbook;
- Analysis and Implementation Workflow;
- Structure of regional and state ANPs that feedback to each other;
- Metrics with Targets;
- ASBU Air Navigation Reporting Form (ANRF), Regional Aviation System Improvement (RASI) ANRF, and State Aviation System Improvement (SASI) ANRF templates;
- Organization of Block 0 Element Implementation Status;
- State ANP template;
- Formation of Air Navigation Implementation Working Group (ANI/WG) ASBU Task Force (TF); and
- Webpage to share the ASBU related information and to deposit documents.

2.4 The first state ANP workshop was hosted by the ICAO NACC Regional Office in May 2018. Three States (Barbados, Belize, and Mexico), one territory (Curacao), and one organization (COCESNA) participated. After the 3-day workshop, all participants had developed a draft state ANP with clear understanding of what follow-up actions they needed to take to complete the draft document. With this successful state ANP workshop, the ICAO NACC Regional Office scheduled two additional workshops in 2018; one will be hosted by COCESNA to cover Central American States, and one will be hosted by Barbados to cover the East Caribbean States.

3. CONCLUSION

3.1 Applying these steps and components, the ICAO NACC Regional Office is moving forward in implementing Elements in the ASBU Block 0 Modules and developing regional and state ANPs aligned with GANP following ASBU framework.

4. SUGGESTED ACTIONS

4.1 The Meeting is invited to:

- a). note the information provided in this paper;
- b). support the stable Element definitions in Block 0 Module;
- c). support regions and States to implement ASBU; and
- d). support regions and States to develop and maintain ANPs.