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WORKING PAPER

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**Fifth North American, Central American and Caribbean Directors of Civil Aviation Meeting
(NACC/DCA/5)**

Port-of-Spain, Trinidad and Tobago, 28 to 30 April 2014

Agenda Item 5: Air Navigation
**5.4 NAM/CAR Regional Performance Based Air Navigation
Implementation Plan (RPBANIP), Version 3.1**

**NAM/CAR REGIONAL PERFORMANCE-BASED AIR NAVIGATION IMPLEMENTATION
PLAN (NAM/CAR RPBANIP)**

(Presented by the Secretariat)

EXECUTIVE SUMMARY

This working paper provides the status of the updated NAM/CAR RPBANIP, Version 3.1, which is aligned with the ICAO Aviation System Block Upgrade (ASBU) methodology. Comments received from NAM/CAR States, the NACC/WG/04 Meeting, and the Port-of-Spain Declaration targets are incorporated into version 3.1. The RPBANIP serves as the basis for air navigation implementation matters in the NAM/CAR Regions, reflecting regional priorities and milestones.

Action:	The suggested action is presented in Section 3
<i>Strategic Objectives:</i>	<ul style="list-style-type: none">• Safety• Air Navigation Capacity and Efficiency• Economic Development of Air Transport• Environmental Protection
<i>References:</i>	<ul style="list-style-type: none">• Third Meeting of North American, Central American and Caribbean Directors of Civil Aviation (NACC/DCA/3), Punta Cana, Dominican Republic, 8-12 September 2008• Draft NAM/CAR Regional Performance-Based Air Navigation Implementation Plan (NAM/CAR RPBANIP) Version 3.0, from the NACC/WG/4 Meeting• Fourth North American, Central American and Caribbean Working Group Meeting (NACC/WG/4), Ottawa, Canada, 24 to 28 March 2014• ICAO Regional NAM/CAR Workshop on the Aviation System Block Upgrade (ASBU) Methodology Framework: Planning, Implementation and Monitoring, Mexico City, Mexico, 22 to 26 July 2013• First NAM/CAR Air Navigation Implementation Working Group Meeting (ANI/WG/1), Mexico City, Mexico, 29 July to 1 August 2013

	<ul style="list-style-type: none">• ICAO State Letter, EMX0929, NAM/CAR Regional Performance-Based Air Navigation Implementation Plan (NAM/CAR RPBANIP) Version 3.0, dated 4 December 2013• ICAO State Letter, EMX0268, Revised NAM/CAR Regional Performance-Based Air Navigation Implementation Plan (NAM/CAR RPBANIP) Version 3.0, 3 April 2014• Safety and Air Navigation Directors of the CAR Region Meeting (CAR/DCA/OPSAN), Mexico City, Mexico, 18 to 19 February 2014
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Introduction

1.1 In order to harmonize air navigation system/services implementation in the NAM/CAR Regions, the NACC directors of civil aviation approved the *NAM/CAR RPBANIP* at the NACC/DCA/3 Meeting and agreed that it would be the reference for all air navigation implementation activities and reflected in each State/Territory National Plan.

1.2 Since 2008, the RPBANIP has been the reference for all NAM/CAR implementation working group action plans and implementation tasks. All working groups reported annually on the progress and operational achievements accomplished.

2. RPBANIP Update and Approval

2.1 The RPBANIP was updated as a third edition, and reviewed and analyzed by the NAM/CAR Air Navigation Implementation Working Group (ANI/WG) in July 2013. The RPBANIP was aligned with the Global Air Navigation Plan (GANP), the ICAO ASBU methodology and regional priorities were reviewed. The updated draft NAM/CAR RPBANIP that resulted from the ICAO Regional NAM/CAR Workshop on ASBU Methodology held in July 2013 consisted of the following key changes:

- Restructured sections
- A 5-year term plan
- ASBU B0 modules selected and the corresponding Air Navigation Report Forms (ANRFs) added
- Eight upgraded Regional Performance Objectives (RPOs) and a Search and Rescue (SAR) RPO added
- Detailed glossary added

2.2 For the ANI/WG/1 Meeting, ICAO commented that even though the RPBANIP was updated with comments from the ASBU Workshop, other necessary information was missing. Therefore, the ANI/WG adopted Decision 1/13 - *Review Update of Draft NAM/CAR Regional Performance-Based Air Navigation Implementation Plan (NAM/CAR RPBANIP)* in order to obtain the missing information.

2.3 The Draft RPBANIP, Version 3.0, includes the adoption of the ASBU ANRFs for air navigation implementation monitoring and progress reporting on agreed NAM/CAR Regions implementation targets and milestones.

2.4 ICAO submitted the revised RPBANIP, Version 3, under cover of State Letter EMX0929 for additional comments. The relevant additions included were:

- Expansion of operational scenarios that justify the RPBANIP (traffic forecasts, homogeneous areas, etc.)
- Regional Performance Objectives and ANRF updates
- Explanation of categorization/prioritization of ASBU B0 modules (see following chart)

PIA	Module Description	Module	Priority
PIA 1	Improve Traffic Flow through Runway Sequencing (AMAN/DMAN)	B0-15 RSEQ	2
	Optimization of Approach Procedures including Vertical Guidance	B0-65 APTA	1
	Increased Runway Throughput through Optimized Wake Turbulence Separation	B0-70 WAKE	2
	Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)	B0-75 SURF	2
	Improved Airport Operations through Airport-CDM	B0-80 ACDM	1
PIA 2	Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration	B0-25 FICE	1
	Service Improvement through Digital Aeronautical Information Management	B0-30 DATM	1
	Meteorological Information Supporting Enhanced Operational Efficiency and Safety	B0-105 AMET	1
PIA 3	Improved Operations through Enhanced En-Route Trajectories	B0-10 FRTO	1
	Improved Flow Performance through Planning Based on a Network-Wide View	B0-35 NOPS	1
	Initial Capability for Ground Surveillance	B0-84 ASUR	1
	Air Traffic Situational Awareness(ATSA)	B0-85 ASEP	2
	Improved Access to Optimum Flight Levels through Climb/Descent Procedures using ADS-B	B0-86 OPFL	2
	ACAS Improvements	B0-101 ACAS	2
	Increased Effectiveness of Ground-Based Safety Nets	B0-102 SNET	2
PIA 4	Improved Flexibility and Efficiency in Continuous Descent Profiles (CDOs)	B0-05 CDO	2
	Improved Safety and Efficiency through the Initial Application of En-Route Data Link	B0-40 TBO	2
	Improved Flexibility and Efficiency Departure Profiles - Continuous Climb Operations (CCOs)	B0-20 CCO	2

- Cross-reference information between RPOs and ASBU B0 modules. For the initial 5-year term of the RPBANIP, 15 ASBU B0 modules were adopted as described in the following Table. ASBU B0 modules ASEP, OFPL and WAKE will be included in future reviews of the RPBANIP based on the maturity of the tasks and regional priorities.

	PIA1 Airport Operations					PIA2 SWIM			PIA3 Global Collaborative ATM					PIA4 Trajectory-based Operations			
	B015 RSE Q	B065 APT A	B070 WAK E	B075 SUR F	B080 ACD M	B025 FICE	B030 DAI M	B0105 AMET	B010 FRT O	B035 NOP S	B084 ASU R	B085 ASE P	B086 OPF L	B0101 ACAS	B102 SNE T	B005 CDO	B020 CCO
PBN Implementation		X						X							X	X	
FUA								X									
DCB	X								X								
ATM Situational Awareness	X			X						X				X			X
Improve SAR																	
Improve Cap/Efficiency Aerodrome Operations				X	X												
COM					X	X							X				X
AIM						X											
MET							X										

2.5 The RPBANIP was also reviewed against the 38th Session of the ICAO Assembly Resolutions, in particular Resolution A38-2 - *ICAO global planning for safety and air navigation*, which resolves that:

- States and other invited stakeholders cooperate in the development and implementation of regional, sub-regional and national plans based on the frameworks of the ICAO Global Aviation Safety Plan (GASP) and GANP
- States, Planning and Implementation Regional Groups (PIRGs), and the aviation industry utilize the guidance provided in the GANP for planning and implementation activities, which establishes priorities, targets, and indicators consistent with globally-harmonized objectives, taking into account operational needs
- States take into consideration the GANP guidelines as an efficient operational measure for environmental protection
- States, PIRGs, and the aviation industry provide timely information to ICAO and each other regarding the GANP implementation status, including lessons learned from implementation of its provisions

CAR/DCA/OPSAN Meeting Results

2.6 The Safety and Air Navigation Directors of the CAR Region Meeting (CAR/DCA/OPSAN) was briefed on the air navigation targets agreed by the ANI/WG. Five key targets were included in the Port-of-Spain Declaration for approval by the NACC/DCA/5.

2.7 From the CAR/DCA/OPSAN Meeting, the aerodrome certification target was adjusted to 48% by 2016, and the CO₂ reduction environmental target was included in the RPBANIP.

NACC/WG/4 Meeting Results

2.8 The NACC/WG/4 Meeting reviewed the Draft RPBANIP, Version 3.0, proposing several changes to the objectives and metrics in Chapter 3.

2.9 As a result of the NACC/WG/4 Meeting, ICAO NACC Office submitted the revised RPBANIP, Version 3.0 to States, under cover of State Letter EMX0268, to take into account the proposed RPBANIP changes. This NACC/WG/4 revised Version 3.0 is available at: <http://www.icao.int/NACC/Documents/Meetings/2014/NACCWG4/NAMCARRPBANIPFINAL2014NACCWG.pdf>

2.9 Following this review, the NACC/WG/4 Meeting formulated Draft Conclusions NACC/WG/4/1 - *Approval of the NAM/CAR Regional Performance-Based Air Navigation Implementation Plan (RPBANIP), Version 3.0* and 4/2 - *Update of National Air Navigation Implementation Plans in Accordance with the RPBANIP, Version 3.0*.

Final RPBANIP Review and Development of Version 3.1 for Approval by the NACC Directors of Civil Aviation

2.10 In addition to the review conducted by the NACC/WG/4 Meeting, comments and observations to the revised RPBANIP were received from several States for the following updates:

- PBN-related metrics were updated to refer to the percentage of instrument approach runways in accordance with Assembly Resolution A37-11
- Updated DATM ASBU acronym to DAIM
- Adjusted Regional Performance Objective (RPO) 5 - *Enhance Capacity and Efficiency of Aerodrome Operations in the CAR Region* in accordance with the benefits established on RPBANIP page 2.12 and item g) of this strategy task description
- Clarified that the aerodrome certification target will only apply to the CAR Region as stated in the Port-of-Spain Declaration

2.11 Due to the recent RPBANIP updates, a final RPBANIP, Version 3.1, was developed. Version 3.1 is available at the following link: <http://www.icao.int/NACC/Pages/regional-groups.aspx>. This final version of the RPBANIP will be approved by the NACC/DCA/5 Meeting. In this regard, and to update the NACC/WG/4/1 and NACC/WG/4/02 draft conclusions, the following are proposed:

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CONCLUSION NACC/DCA/5/x

APPROVAL OF THE NAM/CAR REGIONAL PERFORMANCE-BASED AIR NAVIGATION IMPLEMENTATION PLAN (NAM/CAR RPBANIP), VERSION 3.1

That, considering that the NAM/CAR RPBANIP is the basis for the NAM/CAR Regions air navigation implementation, where regional targets and milestones have been agreed and regional air navigation priorities are reflected, the NACC Directors of Civil Aviation approve RPBANIP, Version 3.1.

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CONCLUSION NACC/DCA/5/x UPDATE NATIONAL AIR NAVIGATION
IMPLEMENTATION PLANS IN ACCORDANCE WITH
THE RPBANIP, VERSION 3.1

That, for effective and timely air navigation development and implementation in the NAM/CAR Regions, which ensure harmonization and coordination of efforts aimed at improving international civil aviation safety and capacity and efficiency, States/Territories of the NAM/CAR Regions:

- a) review and update their national Air Navigation Implementation Plans in accordance with their national needs and the RPBANIP regional framework; and
- b) inform and submit these national plans to ICAO by **December 2014**.

3. Suggested Actions

3.1 The Meeting is invited to:

- a) take note of the RPBANIP Version 3.1, review process conducted by ICAO and the regional implementation groups;
- b) approve the draft conclusions proposed in paragraph 2.11; and
- c) conduct any further actions as deemed necessary.