International Civil Aviation Organization
North American, Central American and Caribbean Office

WORKING PAPER

GREPECAS/MET — WP/04
20/02/18

CAR/SAM Planning and Implementation Regional Group (GREPECAS)
MET Programme Projects Meeting (GREPECAS/MET)
Mexico City, Mexico, 28 February to 2 March 2018

Agenda Item 6: **Review and update of the electronic Air Navigation Plan (eANP) and the Regional Performance Objectives (RPO) included in the Performance Based Air Navigation Implementation Plan for the NAM/CAR Region (RPBANIP).**

NEED TO ADOPT INDEPENDENT FORMATS TO REPORT THE PROGRESS OF THE IMPLEMENTATION OF REGIONAL AIR NAVIGATION TARGETS AND IMPROVEMENTS BY AVIATION SYSTEM BLOCKS UPGRADE (ASBU).

(Presented by Cuba)

EXECUTIVE SUMMARY

Each year the States report on the progress of implementation of the Aviation System Block Upgrade (ASBU) to the North American, Central American and Caribbean Working Group (NACC/WG) and the NAM/CAR Air Navigation Implementation Working Group (ANI/WG), as appropriate.

These reports are indistinctly made taking into account the Air Navigation targets of the NAM/CAR Regional Performance-Based Air Navigation Implementation Plan (RPBANIP) and the NAM ASBU Handbook Block 0 Elements of the modules, as requested.

Adoption of independent formats is required to report progress on implementation of regional air navigation targets and Aviation System Block Upgrade (ASBU) to these working groups.

Action:	See the suggested actions in Section 4.
Strategic Objectives:	• Safety • Air Navigation Capacity and Efficiency • Environmental Protection
References:	• Fifth Meeting of the North America, Central America and Caribbean Directors of Civil Aviation (NACC/DCA/5), Port of Spain, Trinidad and Tobago, 28-30 April 2014 • Second Meeting of the Working Group on Air Navigation Implementation for the NAM/CAR Regions (ANI/WG/2), Puntarenas, Costa Rica, 1-4 June 2015

	• Third Meeting of the Working Group on Air Navigation Implementation for the NAM/CAR Regions (ANI/WG/3), Mexico City, Mexico, 4-6 April 2016 • Sixth Meeting of the North America, Central America and Caribbean Directors of Civil Aviation (NACC/DCA/6), Nassau, Bahamas, 10-12 May 2016 • Workshop for the implementation of the regional and national air navigation performance benchmarking and aviation block upgrade (ASBU) for the NAM/CAR Regions, Mexico City, Mexico, 22-26 August 2016 • E.OSG - NACC 65523 Status of implementation of the targets of the NAM / CAR Regional Air Navigation Implementation Plan (RPBANIP) and the Declaration of Port of Spain in December 2016, 23 March 2017 • Fifth North American, Central American and Caribbean Working Group Meeting (NACC/WG/5), Port of Spain, Trinidad and Tobago, 22-26 May 2017

1. Introduction

1.1 In the NACC/WG/04, ANI/WG/01, ANI/WG/02 and ANI/WG/03 Meetings, agreements were reached to monitor the implementation through Air Navigation Report Forms (ANRF) of the elements of Block 0 ASBU modules, its information is part of the regional contribution to the global monitoring of the Global Annual Air Navigation Report and the feedback for the Global Air Navigation Plan (GANP) and the regional dashboards.

1.2 Based on the Terms of Reference to streamline the work progress and to focus on regional priorities, the ANI/WG/3 Meeting considered necessary, and therefore agreed to create an Ad hoc Group to support the evaluation, monitoring and to inform on the achievement of the Air Navigation (AN) targets established in the RPBANIP and the *Port-of-Spain* Declaration. The ANI/WG ASBU Ad hoc Group reported to the NACC/DCA/6 Meeting the progress assessment, showing the lack of reports from States and the need to change current metrics, based on minimum standardization of the modules implemented in the Region.

1.3 Under the Conclusion NACC/DCA/6/3 - *ASBU Implementation in the NAM/CAR Regions*, the NACC/DCA/6 Meeting requested to create more effective and direct mechanisms for monitoring and to allow a harmonized progress in the regional implementation, which is aligned with the ICAO ASBU methodology, including: the need for all States to notify ASBU elements to be implemented, the designation of the Points of Contact responsible for monitoring these implementations, in order to optimize project monitoring, as well as the participation of the States in the ASBU Workshop of August 2016 in the ICAO NACC Regional Office.

1.4 Through Decision NACC/WG/5/24 – RPBANIP UPDATE, it was requested to the ASBU Task Force in coordination with the NACC, to update the RPBANIP with the 5th edition of the GANP, introduction of ASBU B1 Modules and several improvements to define by States.

2. Discussion

2.1 The current RPBANIP Chapter 3 "Air Navigation Report Formats (ANRF) of Block Aviation System Upgrade (ASBU)" is structured in such a way that the regional air navigation targets are inserted among the elements of the modules of Block 0 ASBU, based on the threads of the ASBU Methodology.

2.2 Motivated by the above, we can find throughout the different meetings of the Implementation Group that the denominations report of the implementation of the targets of Air Navigation of the Region and reports of the implementation of the elements of the modules of the Block 0 ASBU are indistinctly used. As a consequence, in order to inform the regional targets of Air Navigation we use the RPBANIP ASBU ANRF; and, according to the agreement made in the ASBU Workshop, August 2016, we also inform the ANRF of ASBU by the NAM ASBU Handbook Methodology, developed by the FAA and NAVCANADA. The content of these documents is different, although they are named in the same way and this structure, in our opinion, creates confusion when preparing the reports. We consider this situation should be corrected. See the **Appendix**.

2.3 In the comparison table presented in the Appendix, we can see that in the case of the guiding thread of the Aeronautical Meteorology, both reports have almost no differences, even though it’s not the same in others guiding threads.

2.4 In order to solve this situation, Cuba proposed in the Teleconference Changes/Updates expected in the RPBANIP held in 20 April 2017 that the current Chapter 3 of the RPBANIP is converted into two chapters: a Chapter 3 where the implementation targets of air navigation are contained with its metrics; and a Chapter 4 where the reports of implementation of the elements of the modules of Block 0 ASBU are contained.

2.5 The proposed Chapter 3 would include everything related to the Air Navigation targets of the Port of Spain Declaration and the air navigation implementation targets of the RPBANIP, which was last updated by means of the State letter Ref: NACC65523 dated 23 March 2017.

2.6 The basis for this Chapter would be the Air Navigation targets of the Port of Spain Declaration and the air navigation implementation targets of the RPBANIP, which was last updated by the abovementioned letter (Ref: NACC65523), we also suggest using ANI/WG/2/DP/9 from where Appendices Q to R of the Corrected Final Report of ANI/WG/2 for the treatment of metrics and everything related to the subject.

2.7 For the progress report of the Air Navigation targets we suggest the design of a new ANRF, showing its implementation progress with its metrics, based on the regional performance objectives and not on the basis of the threats of the ASBU Methodology.

2.8 The proposed Chapter 4 would include everything related to the Air Navigation reporting forms, according to the elements of the ASBU Block 0 and 1 modules.

2.9 The basis of this Chapter would be the elements of the ASBU Block 0 modules, also suggested in ANI/WG/2/DP/9 from which Appendix R of the ANI/WG/2 Corrected Final Report came out and the staff was trained at the ASBU Seminar in August 2016, using the NAM ASBU Handbook developed by the FAA and NAVCANADA.

2.10 For the progress report on the elements of the ASBU Block 0 and 1 modules we suggest adopting the new ANRF approved in the ANI/WG/2 with its updates, as the only progress report format in the implementation of the same.

3. Conclusions

Attending to the above mentioned, the Meeting could agree the following Draft Conclusion:

DRAFT CONCLUSION
GREPECAS/MET XX **ADOPTION OF INDEPENDENT FORMATS FOR THE AIR NAVIGATION REGIONAL TARGETS NOTIFICATION AND THE ASBU PROGRESS**

That,

Aiming to guarantee the independent reports to inform the Regional Air Navigation Targets of the RPBANNIL and the progress in the implementation of ASBU Blocks 0 and 1 suggest to the ICAO NACC Regional Office through the ASBU Task Force:

a) Design a new ANRF, where the implementation progress of the Regional Air Navigation Targets and their metrics is shown, based on the Regional performance objectives and not on the basis of the guiding threads of the ASBU Methodoly; and

b) adopt the new ANRF approved in the ANI/WG/2 with its updates, as unique format of progress notification in the implementation of blocks 0 and 1 of the elements of the modules of the ASBU methodology.

3. Suggested actions

3.1 The Meeting is invited to:

a) review the information provided in this working paper;

b) consider the adoption of the draft conclusion included in paragraph 3; and

c) adopt any other action as deemed necessary.

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APPENDIX

COMPARACIÓN ENTRE LOS ELEMENTOS A REPORTAR POR LOS ESTADOS A LA OFICINA REGIONAL NACC SEGÚN FORMATO SOLICITADO.

Block 0 Modules	**Elementos del ANRF según documento ASBU y NAM ASBU Handbook**	**Elementos del ANRF según Capítulo 3 del RPBANIP** (Numeración según ADJUNTO a NACC 65523)
ACDM	1. Airport CDM procedures	17. Aeropuerto – CDM
	2. Airport CDM tools	
	3. Collaborative departure queue management	
		18. Certificación de aeródromo
		19. Operaciones de helipuerto
APTA	1. PBN Approach Procedures with vertical guidance (LPV, LNAV/VNAV minima, using SBAS and Baro VNAV)	8. APV con Baro VNAV
		9. APV con SBAS (WAAS)
		11. LNAV
	2. PBN Approach Procedures without vertical guidance (LP, LNAV minima; using SBAS)	
	3. GBAS Landing System (GLS) Approach procedures	10. APV con GBAS
RSEQ	1. AMAN via controlled time of arrival to a reference fix	3. AMAN y mediciones basadas en el tiempo
	2. AMAN via controlled time of arrival at the aerodrome	
	3. Departure management	4. Gestión de salidas (DMAN)
	4. Departure flow management	
	5. Point merge	
		5. Optimización de la capacidad del área de movimiento
SURF	1. A-SMGCS with at least one cooperative surface surveillance system	12. Sistema de vigilancia para movimiento de superficie terrestre (PSR, SSR, ADS B o Multilateración)
	2. Including ADS-B APT as an element of A-SMGCS	13. Sistema de vigilancia a bordo (transpondedor SSR, capacidad ADS B)
	3. A-SMGCS alerting with flight identification information	
	4. Airport vehicles equipped with transponders	14. Sistema de vigilancia para vehículos
		15. Ayudas visuales para la navegación
		16. Programa de organización y control de aves/fauna de aeródromo

Block 0 Modules	**Elementos del ANRF según documento ASBU y NAM ASBU Handbook**	**Elementos del ANRF según Capítulo 3 del RPBANIP** (Numeración según ADJUNTO a NACC 65523)
WAKE	1. New PANS-ATM wake turbulence categories and separation minima	N/A
	2. Dependent diagonal paired approach procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart	
	3. Wake independent departure and arrival procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart	
	4. Wake turbulence mitigation for departures procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart	
	5. State-defined additional wake turbulence categories and separation minima (6-category wake vortex separation)	
AMET	1. WAFS	26. WAFS
	2. IAVW	27. IAVW
	3. TCAC forecats	28. Vigilancia de ciclones tropicales
	4. Aerodrome warnings	29. Avisos de aeródromo
	5. Wind shear warnings and alerts	30. Avisos y alertas de cizalladura de viento
	6. SIGMET	31. SIGMET
	7. Other OPMET information (METAR, SPECI and/or TAF)	
DATM	1. Aeronautical Information Conceptual Model (AICM) Aeronautical Information Exchange Model (AIXM)	38. Implementación AIXM 5.1
	2. eAIP	39. Implementación e-AIP
	3. Digital NOTAM	40. NOTAM Digital
	4. eTOD	37. Implementación e-TOD
	5. WGS-84	
		36. QMS - AIM
FICE		32. Implementación de IP de red MEVA III
		33. Implementación AMHS
	1. AIDC to provide initial flight data to adjacent ATSUs	34. Implementación AIDC
	2. AIDC to update previously coordinated flight data	
	3. AIDC for control transfer	
	4. AIDC to transfer CPDLC logon information to the Next	

		35. Implementación de estructura de enrutador ATN
Block 0 Modules	**Elementos del ANRF según documento ASBU y NAM ASBU Handbook**	**Elementos del ANRF según Capítulo 3 del RPBANIP** (Numeración según ADJUNTO a NACC 65523)
ACAS	1. ACAS II (TCAS version 7.1)	22. ACAS II (TCAS Versión 7.1)
	2. Auto Pilot/Flight Director (AP.FD) TCAS	
	3. TCAS Alert Prevention (TCAP)	
ASEP	1. ATSA-AIRB	N/A
	2. ATSA-VSA	
ASUR	1. ADS-B	20. Implementación de ADS B
	2. Multilateration (MLAT)	21. Implementación de Multilateración
FRTO	1. CDM incorporated into airspace planning	1. Planificación del Espacio aéreo
	2. Flexible Use of Airspace (FUA)	2. Uso Flexible del espacio aéreo
	3. Flexible route system	
	4. CPDLC used to request and receive re-route clearances	
NOPS	1. ATFM	41. Gestión de la afluencia del tránsito aéreo
OPFL	1. ITP using ADS-B	N/A
SNET	1. Short Term Conflict Alert implementation (STCA)	23. Alerta de conflicto a corto plazo (STCA)
	2. Area Proximity Warning (APW)/	
	3. Minimum Safe Altitude Warning (MSAW)	24. Advertencia de proximidad de área (APW)/ Advertencia de altitud mínima de seguridad (MSAW)
	4. Medium Term Conflict Alert (MTCA)	25. Alerta de conflicto a mediano plazo (MTCA)
CCO	1. Procedure changes to facilitate CCO	44.Implementación CCO
	2. Route changes to facilitate CCO	
	3. PBN SIDs	45. Implementación PBN SID
		46.Resultados de 36-40
CDO	1. Procedure changes to facilitate CDO	42. Implementación CDO
	2. Route changes to facilitate CDO	
	3. PBN STARs	43. STAR PBN
TBO	1. ADS-C over oceanic and remote areas	6. ADS-C sobre áreas oceánicas y remotas
	2. Continental CPDLC	7. CPDLC Continental
		47.Resultados PBN-IFSET