



ICAO

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

Regional Technical Cooperation Project for the
Multi-Regional Civil Aviation Assistance Programme
(MCAAP) (RLA/09/801)

**Assistance Mission/Workshop to develop/update
E/CAR and C/CAR Regions National Air Navigation Plans in accordance with the Aviation System Block
Upgrades (ASBUs), the CAR Regional Performance-Based Air Navigation Implementation Plan
(RPBANIP), and the Global Air Navigation Plan (GANP)
Bridgetown, Barbados, 6 to 9 November 2018**

Summary of Discussions

Date	6 to 9 November 2018
Location	Bridgetown, Barbados
Opening Ceremony	<p>The workshop/mission was attended by 14 participants from Antigua and Barbuda, Barbados, Grenada, Haiti, Saint Vincent and the Grenadines and Trinidad and Tobago, in addition to the participation of a facilitator from the Federal Aviation (FAA) Administration of United States. The list of participants is attached at the Appendix.</p> <p>Mrs. Mayda Ávila, Regional Officer, Communications, Navigation and Surveillance, ICAO Regional North American, Central American and Caribbean (NACC) Office welcomed the participants.</p>
Introduction	<p>The workshop/mission was aimed at providing assistance to the Eastern Caribbean States in the development and harmonization or update of their Air Navigation Plans, in accordance with the Global Air Navigation Plan, GANP (Doc 9730), the ASBU framework and the ICAO NACC Regional Objectives. The workshop was conducted in English.</p> <p>As a result of the workshop, the States presented a draft of their national air navigation plans and indicated the process that they will follow to validate these documents and prepare their final version.</p> <p>Mr. Kingsley Nelson, Barbados Civil Aviation Director, welcomed all the participants and shared the importance of the development of the air navigation plans based on the global objectives. He also welcomed the ICAO NACC Regional Office initiative for the realization of this workshop/mission.</p> <p>Mr. Nelson also indicated that the workshop/mission was an opportunity to promote the States' collaboration and the benefits of the development of the Air Navigation Plan.</p> <p>Ms. Mayda Ávila, on behalf of Mr. Melvin Cintron, ICAO NACC Office Regional Director, thanked Barbados for sponsoring the event.</p>

**Discussion
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Ms. Ávila indicated the importance of civil aviation for the States, the challenges that the Eastern Caribbean States face to offer new and more competitive services to boost tourism activity. Ms. Ávila indicated the responsibility of the States in the improvement of safety and in the conception of aviation as a business to promote the socio-economic development of the States.

Ms. Ávila also indicated that the development of a safe and competitive aviation supports fifteen of the seventeen Sustainable Development Goals of the United Nations focused on the development of people.

She finally indicated that States should ensure the execution of the necessary regulations for new services, the management of human talent, the reduction of costs, the efficiency in their operations and the implementation of environmentally friendly practices.

Further information of the workshop/mission is available in the following website: <https://www.icao.int/NACC/Pages/meetings-2018-amrpbanip.aspx>

Air navigation global and regional strategy

1.1. *Global Air Navigation Plan, GANP (Doc 9750)*

1.1.1 Under P/02, information about the Global Air Navigation Plan (GANP), its multilayer structure, global performance ambitions and the new aviation challenges was discussed. ICAO explained that the GANP is a strategy to achieve a global interoperable air navigation system to ensure safe, secure and efficient air transport services; taking into account the five ICAO strategic objectives: safety, capacity and efficiency, security and facilitation, economic development of air transport and environmental protection.

1.1.2 The GANP is an ICAO strategic document that is supported by the *Global Air Traffic Management Operational Concept (GATMOC, Doc9854)*, and the *Manual on Air Traffic Management System Requirements (Doc 9882)*.

1.1.3 The GANP has a multilayer structure: global aviation objectives, global technical objectives, regional objectives and national objectives. The States must take into account this structure to create their national air navigation plans.

1.1.4 The Global performance ambitions and GANP Conceptual Roadmap were also discussed.

1.1.5 The Global Air Navigation Plan link website is <https://bit.ly/2yZQuVT>

1.2. *Digital Regional Air Navigation Plan (eANP CAR/SAM)*

1.2.1 ICAO explained that the eANP CAR/SAM describes in detail the type of facilities and services required for international flights in the different air navigation regions established by ICAO, based on the recommendations made by the regional air navigation conferences, and on the decisions made by the Council.

1.2.2 The eANP Volume I describes the regional facilities and regional requirements for CAR/SAM Regions. Volume II provides dynamic elements for aerodromes operations, communications, navigation and surveillance, air traffic management, aeronautical meteorology, search and rescue and aeronautical information management. This volume also describes assignment of responsibilities, mandatory requirements subject to a regional agreement and additional requirements for the region included as part of the ICAO documentation and guidance material.

1.2.3 ICAO indicated that Volume I and II of the eANP list regional facilities and regional requirements, both general and specific, established by regional air navigation agreements for international civil aviation operations. It was also indicated that Volume III of the eANP will evolve with the sixth edition of the GANP (2019).

1.2.4 The States were invited to review the eANP and to request the necessary modifications through the Proposal for Amendment process described in Vol I.

1.2.5 The eANP is available for consultation, review and update at <https://bit.ly/2z1qzBA>

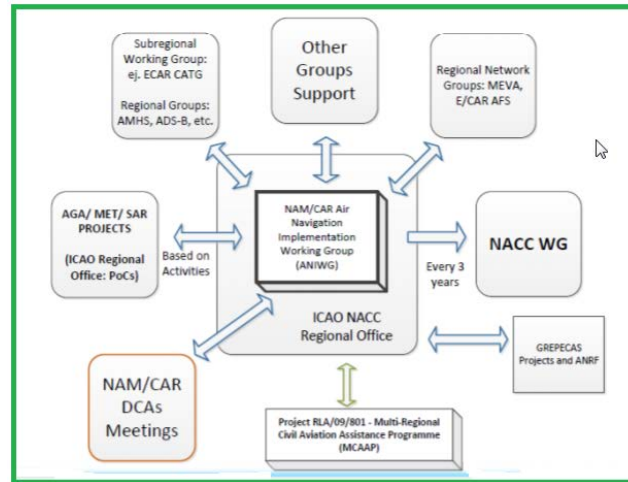
1.3 *New Version 4.0 of the CAR Regional Performance-Based Air Navigation Implementation Plan (RPBANIP)*

1.3.1 The CAR Regional Performance-Based Air Navigation Implementation Plan (RPBANIP) is a regional document that establishes the regional air navigation implementation agreements and reflects regional priorities in air navigation. The current plan is applicable through 2016-2018; the version under development will be applicable through 2019-2021.

1.3.2 The new version 4.0 will be applicable for the CAR Region and is aligned with the 5th Edition of the GANP (2016) and transitional until the approval of the CAR/SAM eANP Vol III, expected after the approval of the 6th Edition of the GANP.

1.3.3 The RPBANIP contained the Regional Performance Objectives (RPOs) that provide information about the implementation of Performance Based Navigation (PBN), Flexible Use Airspace (FUA), and Aeronautical Information Management (AIM), to improve Demand and Capacity Balancing (DCB), situational awareness, availability of Aeronautical Meteorological Information (AMET) and Search and Rescue (SAR) among others.

1.3.4 The RPBANIP receives information for improvement through the following structure:



1.3.5 Performance-Based Air Navigation Implementation Plan (RPBANIP) website is <https://www.icao.int/NACC/Documents/RPBANIP/DRAFT-RPBANIP-Ver4.pdf>

1.3.6 The CAR Region Air Navigation Targets website is <https://www.icao.int/NACC/Pages/Implementation-Targets.aspx>

1.4 *Thirteenth Air Navigation Conference (AN-Conf/13) "From development to implementation"*

1.4.1 ICAO mentioned the draft recommendations of the Thirteenth Air Navigation Conference (AN-Conf/13) that took place in Montreal, Canada, last October.

1.4.2 Some of the recommendations to States were: to incorporate emerging air navigation concepts, such as Unmanned Aircraft Systems (UAS), UAS Traffic Management (UTM), and Global Aeronautical Distress and Safety System (GADSS), to include of data and global aviation internet network, regional integration, and to integrate civil-military dimension, also to be included in the GANP, and the importance of human factors role in aviation.

1.4.3 Information management is a key enabler for the future of the air navigation system and, therefore, for important concepts within the ASBU framework, such as Trajectory-Based Operations (TBO), Flight and Flow Information for a Collaborative Environment (FF-ICE) and Airport Collaborative Decision-Making (A-CDM).

1.4.4 Lack of information exchange could limit the efficient use of capacity and capability within the system.

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1.4.5 The importance of strengthening the relationship between the GANP and the Global Aviation Safety Plan (Doc 10004, GASP) was also discussed. It was recognized that the GASP supports the implementation of the GANP by promoting the effective implementation of safety oversight and a safety management approach to oversight, including safety risk management, to permit the evolution of the air navigation system in a safety-managed way.

1.4.6 The Global Air Navigation Plan website is <https://www4.icao.int/ganportal>

State Air Navigation Plan

2.1. United States under P/06, State Air Navigation Plan, presented important points that were discussed for the development of the States ANP. The GANP/ASBU and the Air Navigation Report Form (ANFR), the State ANP preparation related to ASBU implementation, Regional Aviation System Improvements (RASI) and State Aviation System Improvements (SASI) status, was also explained.

2.2 The implementation approach process was explained through the evaluation of the implementation status, which every State needs to implement according to its needs. Other factors were also covered: ASBU benefits implementation, schedule, needs and how to report. ASBU element analysis and implementation process were also mentioned.

2.3 The ASBU Task Force rapporteur discussed implementation challenges, and described circumstances that have been encountered or are foreseen that might prevent or delay implementation. Challenges should be categorized and described under the applicable subject area.

2.4 The ANRFs submitted and presented in the ICAO NACC website, including information about the ICAO ASBU task force:
<https://www.icao.int/NACC/Pages/regional-group-asbu.aspx>

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Item 3**

Development of States Air Navigation Plan

3.1 Supported by United States and ICAO, the following States developed their Air Navigation Plans draft:

1. Antigua and Barbuda
2. Barbados (update)
3. Haiti
4. Saint Vincent and the Grenadines
5. Trinidad and Tobago

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Item 4**

Presentation of the drafts of the States Air Navigation Plans

4.1.1 The States identified the following present and future problems during their Air Navigation Plan presentation:

4.1.2 Civil aviation is a dynamic industry with many emerging technologies that require the States to constantly review and update their facilities and procedures.

4.1.3 The lack or shortage of financial and/or human resources is the main hindrance that delays the implementation of many of the requirements of Global and Regional plans. Solutions require huge investment in Communication, Navigation and Surveillance infrastructure, which have become outdated and, in some cases, obsolete.

4.1.4 Another essential component in overcoming these challenges is the development of its human resources. Training in technical areas and attendance at workshop/missions providing awareness and understanding of the requirements is essential. This will allow an increase of informed decisions to determine what is required to meet our needs. The provision of relevant training for human resource is paramount.

4.1.5 Human resource issues, if not addressed in tandem with infrastructure and procedure development, could result in deficient service provision and delivery. Human resources acquisition and development must coincide with the infrastructure and procedure development. Another fundamental component, which is also a critical concern, is the availability of human resources to meet the wide-ranging needs of airport operations. The provision of relevant training for those human resources is paramount

4.1.6 The States identified problems in the development of procedures, the implementation of PBN, SID/STAR, operational problems at airports, and the need to develop other procedures in accordance with their operations.

4.1.7 To provide and promote safe and efficient aviation services to the customers, it is important to resolve ongoing challenges that are hindering the mission. It is also important to anticipate and address the potential problems in the future.

4.1.8 The States indicated that they identified the GANP as a guiding tool for the realization of their implementation, and this workshop/mission helped them to understand the concepts and a better way to perform the ASBU implementation.

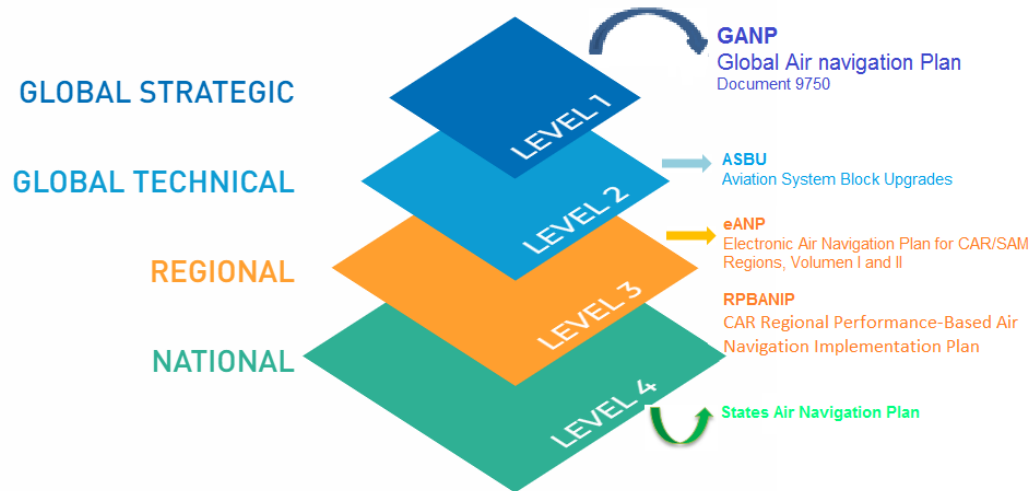
4.1.9 The States requested more training and activities carried out by ICAO in the Caribbean, to facilitate all the insular States to participate.

4.1.10 The ANP will be available at:

<https://www.icao.int/NACC/Pages/meetings-2018-amrpbanip.aspx>

4.2 Conclusions/Recommendations

4.2.1 ICAO emphasized the importance of taking into consideration the information and discussions as a base is for the formulation and development of the National air navigation plans under the multilayer structure approach.



4.2.2 The States will review the eANP tables and analyse the minimum requirements established for their States and send the request of amendments to the ICAO NACC Regional Office using the procedure established in the eANP amendment process.

4.2.3 It is necessary that the States develop an assessment process to allow them to include all stakeholders in the process of analysis of the draft Air Navigation Plan. Including all stakeholders will allow the States to incorporate all their needs and requirement for their implementation success.

4.2.4 Air navigation plans should be the reference documents for national investment in air navigation infrastructure, and the guide for its users to equip the aircrafts according to the time route defined by the State.

4.2.5 The implementation of aeronautical systems requires many phases (it is a project), requires CNS infrastructure, system validation, in some case validation of the avionics of aircraft, training, development of technical/operational procedures, and finally the implementation. When it is operational, it is implemented.

4.2.6 For ASBU systems that have been declared "Not Applicable", it is advisable to analyze their future achievable implementation in the future.

4.2.7 No State should implement any module of the ASBU without making a technical/operational feasibility analysis and performing investment projects feasibility analysis.

4.2.8 Take advantage of the experience, knowledge and lessons learned of the States.

4.2.9 States must be in constant review of their air navigation national plans to ensure that any facility that was previously not applicable is maintained that way, because the needs can change.

4.2.10 ICAO will follow up the work done, and will request updating the validation of the Air Navigation Plans developed by the States by June 2019, in addition to conduct a monitoring process on the ANP implementation.



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Oficina para Norteamérica, Centroamérica y Caribe (NACC)

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LIST OF PARTICIPANTS

ANTIGUA AND BARBUDA

1. Audrey Lorraine Davis

FEDERAL AVIATION ADMINISTRATION

15. Midori Tanino

BARBADOS

2. Angela Gaskin-Haynes
3. Denielle 'O Callender
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ICAO

16. Mayda Ávila

GRENADA

8. Willard De Allie

HAITI

9. Jacques Boursiquot

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10. Orville Shaw

SAINT VINCENT AND THE GRENADINES

11. Dale C. Lyda Ollivierre
12. Dillet Davis

TRINIDAD AND TOBAGO

13. Robert Rooplal
14. Veronica Ramdath