



Agenda Item 2: Air Navigation Matters
**2.1 Implementation of the NAM/CAR Regional Performance-Based Air
 Navigation Implementation Plan (NAM/CAR RPBANIP)**

**PROPOSED GOALS AND WORKING METHODS OF THE EASTERN CARIBBEAN
WORKING GROUP (E/CAR/WG) AERODROMES AND GROUND AIDS (AGA) COMMITTEE**

(Presented by the United States)

SUMMARY	
This Working Paper addresses the formation and proposed future goals and working methods of the E/CAR/WG AGA Committee. Additionally, the results of a review and analysis of current and future AGA-related needs in the E/CAR Region are provided.	
References:	
• E/CAR/WG/31 – <i>Final Report</i>	
<i>Strategic Objectives</i>	<i>This working paper is related to Strategic Objectives A and D.</i>

1. Introduction

1.1. The thirty-first meeting of the Eastern Caribbean Working Group (E/CAR/WG/31) was held in St. John's, Antigua and Barbuda, from 5 to 8 October 2009. It was at this meeting that the members voted establish the committee on Aerodromes and Ground Aids (AGA) to address the safety and operational issues faced by States and Territories taking action to implement the International Civil Aviation Organization (ICAO) Standards and Recommended Practices (SARPs) and the North American/Caribbean (NAM/CAR) Regional Performance Based Air Navigation Implementation Plan (PBANIP). A short history of the development of the PBANIP from the ICAO Global Air Traffic Management (ATM) Operational Concept is presented in **Appendix A** of this paper.

1.2. The ICAO North American, Central American, and Caribbean (NACC) Regional Office, in coordination with the CAR States/Territories, International Organizations, and the NAM/CAR Regional Planning and Implementation Group (GREPECAS), is responsible for the periodic monitoring of States' actions in relation to the ICAO SARPs and NAM/CAR PBANIP. The primary methods of organizing the deficiencies and actions of these activities in the E/CAR region are:

- ICAO SARPs: GREPECAS Air Navigation Deficiency Database (GANDD)
- NAM/CAR PBANIP: E/CAR/WG Work Program, containing Performance Objectives / Performance Framework Forms (PFFs) Activities and Tasks

1.3. Noting the two items above, this paper will outline the goals and proposed working methods of the E/CAR/WG AGA Committee in order to facilitate the timely and efficient resolution of current and future AGA deficiencies and implementation of related performance objectives.

2. Goals

2.1. The goals of the E/CAR/WG AGA Committee are to assist committee members in:

- Addressing the AGA-related deficiencies found in the GREPECAS Air Navigation Deficiencies Database (GANDD);
- Implementing the AGA-related performance objectives in the NAM/CAR Regional Performance-Based Air Navigation Implementation Plan (PBANIP);
- Performing any AGA-related actions and tasks assigned by the E/CAR/WG Work Program, regional work programs, or global work programs in support of ICAO Annex 14: Aerodromes.

3. Current Needs: Analysis of AGA Deficiencies in the GANDD

3.1. Air navigation deficiencies are identified, assessed, and reported in accordance with the uniform methodology approved by the ICAO Council. Safety deficiencies that are identified during this process are maintained by the NACC Regional Office through the GREPECAS Air Navigation Deficiency Database (GANDD). The Regional Office also coordinates the Action Plans for the resolution of air navigation deficiencies with the associated States/Territories.

3.2. The deficiencies currently affecting the provision of air navigation services in the ICAO Regions, and the need for States to establish Action Plans to eliminate them, are a matter of ongoing concern and high priority for the ICAO Council. It is noted that an important element of the ICAO Global Aviation Safety Plan (GASP) (as approved through Assembly Resolution A33-16) is the need to better identify air navigation deficiencies in order to take concrete action for their elimination.

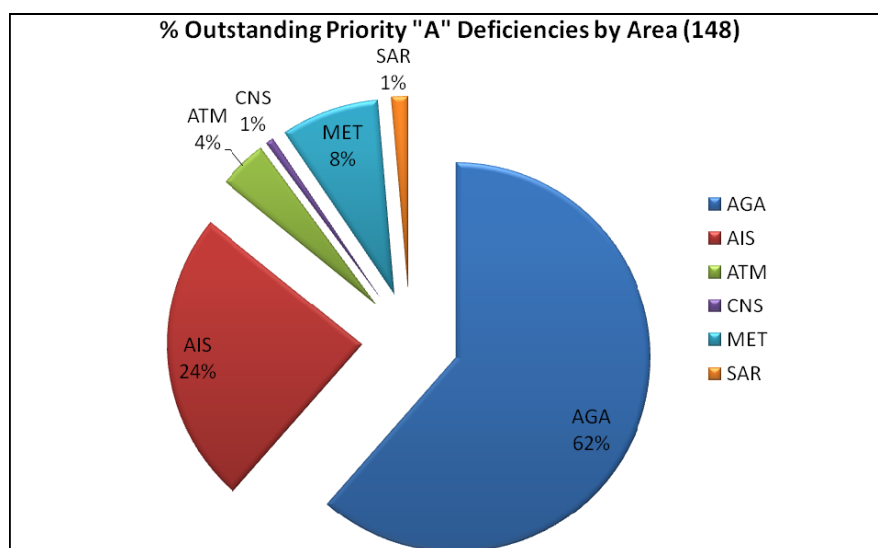
3.3. To that end, the E/CAR/WG/31 recently reviewed all outstanding deficiencies in the GANDD for the E/CAR Region, as presented in Working Paper 02, *Status Update on Air Navigation Deficiencies Reported for the E/CAR*. A listing of all the GANDD deficiencies for the E/CAR Region is shown in Table 1. Several results from the analysis presented in the working paper are shown below:

- 148 of the 181 unresolved deficiencies reported for E/CAR States/Territories are classified Priority “A,” which are safety-related.
- Of the 148 unresolved priority “A” deficiencies, 91 (or 62 percent) belonged to the AGA category, the most of any area. The next largest numbers were AIS with 36 (24 percent) and MET with 12 (8 percent) deficiencies.
- Of the 33 Priority “B” deficiencies, the AGA category held 6 (or 18 percent), which was second most, behind AIS with 19 (or 58 percent).

Table 1. GANDD Deficiencies for the E/CAR Region, October 2009

State / Territory	AGA			AIS			ATM			CNS			MET			SAR			Total
	U	A	B	U	A	B	U	A	B	U	A	B	U	A	B	U	A	B	
Anguilla					3	2								2					7
Antigua and Barbuda		13	1		1	1					1			2					19
Barbados		10																	10
British Virgin Islands					5	1													6
French Antilles					4	2													6
Grenada		6			4	2		1			1			3	1				18
Montserrat					4	3													7
Netherlands Antilles (St. Maarten)		7									1								8
Saint Kitts and Nevis		10			5	2													17
Saint Lucia		6	2		5	3					1			3	1				21
Saint Vincent and the Grenadines		19	2											1					22
Trinidad and Tobago		16	1		5	3		5			2			1	1		2		36
United States (Puerto Rico)		4																	4
Total	0	91	6	0	36	19	0	6	0	0	1	5	0	12	3	0	2	0	181
Total "A"		91			36			6			1			12			2		148
Total "B"			6			19			0			5			3			0	33

3.4. The percentage of deficiencies by category for the E/CAR Region are shown in figures 1 and 2 below:

**Figure 1. E/CAR Region Percent Priority "A" Deficiencies by Area**

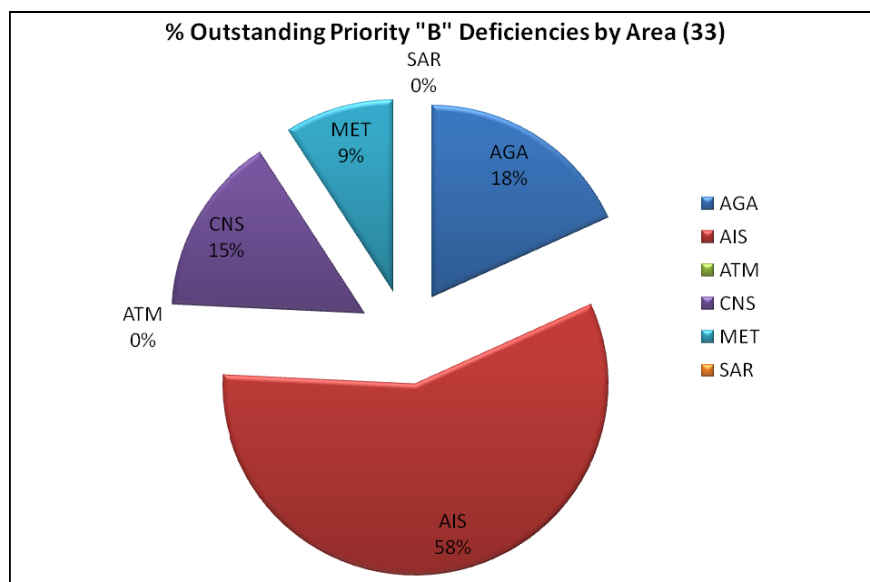


Figure 2. E/CAR Region Percent Priority “B” Deficiencies by Area

3.5. The GANDD was accessed on June 4, 2010 to collect an updated deficiency count in the AGA area (Table 2). It was noted that the general numbers for most States remained constant, while items were added that may not have been included in the October 2009 review.

Table 2. AGA-Related GANDD Deficiencies for the E/CAR Region, June 2010

State / Territory	AGA		
	U	A	B
Anguilla			
Antigua and Barbuda		13	1
Barbados		8	
British Virgin Islands			
French Antilles			
Grenada		5	
Montserrat			
Netherlands Antilles (St. Maarten)		19	
Saint Kitts and Nevis		10	
Saint Lucia		6	2
Saint Vincent and the Grenadines		19	2
Trinidad and Tobago		15	1
United States (Puerto Rico)		4	
Total	0	99	6

3.6. A review of the types of AGA deficiencies found, categorized by issue type, is shown in Table 3. A plot of the deficiency types, by percent, is shown in Figure 3. The most common type of deficiency was in visual aids, which include marking and lighting issues. The items associated with the runway strip, which include the dimensions and runway end safety area (RESA), are the second most common category of deficiency. Note: the “types” defined in these tables and figures are arbitrary – it is envisioned that further discussion of these designations by the AGA Committee members will generate more permanent and/or meaningful descriptors.

Table 3. AGA-Related GANDD Deficiencies for the E/CAR Region, by Type, June 2010

Type	Number
Visual Aids	34
Marking	13
Lighting	21
Runway Strip	25
Dimensions	12
RESA	13
Obstacles	16
Airport Design	13
Pavement	10
ARFF	8
Aerodrome Emergency Plans	2
Wildlife Hazard Management	1
Human Resources	1

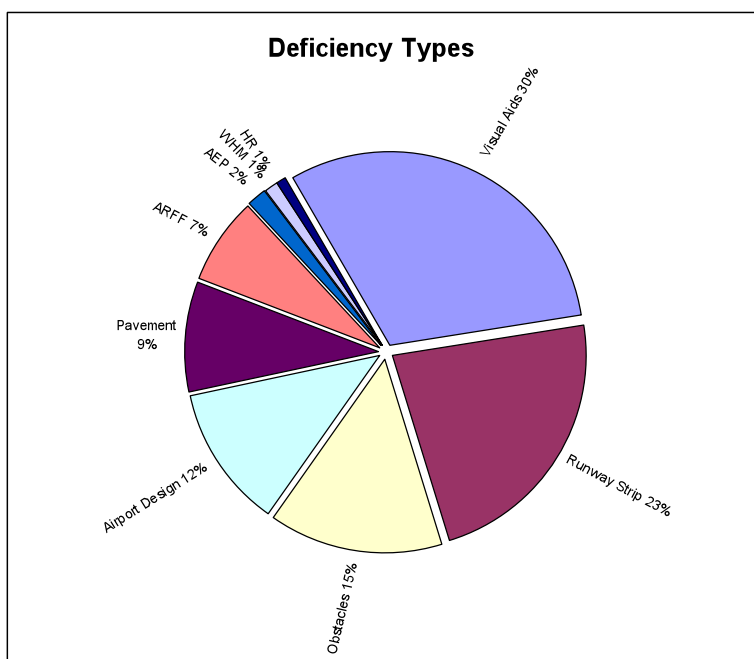


Figure 3. AGA Deficiencies for the E/CAR Region, by Type / Percent

4. **Future Needs: Analysis of PBANIP AGA Performance Objectives**

4.1. The PBANIP is structured to ensure coordination among all air navigation services toward a seamless ATM system in accordance with the Global Plan Initiatives (GPIs) of the ICAO *Global Air Navigation Plan* (Doc 9750) and with GREPECAS *Conclusion 15/1: Development of Performance Based Regional and National Plans* and *Decision NACC/DCA/3/3: Approval of the NAM/CAR Implementation Plan*.

4.2. The performance-based planning and implementation approach is used to develop the regional and national level work programs, which each contain a set of performance objectives. Performance objectives are structured using the standardized format of Performance Framework Forms (PFFs). Each performance objective is composed of various tasks or actions that are linked to the GPIs.

4.3. The most recent E/CAR/WG terms of reference and work program (from E/CAR/WG/31) are presented in **Appendix B** of this paper. Additionally, a copy of the AGA-related performance objectives within the NAM/CAR PBANIP that were approved by E/CAR/WG/31 are presented in **Appendix C** of this paper. However, it was noted by the E/CAR/WG/31 Meeting that the two AGA-related performance objectives of aerodrome certification and solutions to the major AGA deficiencies were to be reviewed and possibly revised at the GREPECAS AGA/AOP Subgroup (AGA/AOP/SG) meeting held later in the year (AGA/AOP/SG/7, Buenos Aires, Argentina, 9 to 13 November, 2009). The terms of reference and work program from the AGA/AOP/SG/7 meeting are presented in **Appendix D** of this paper. In their review of the E/CAR/WG/31 AGA performance objectives, the AGA/AOP/SG/7 members noted that the topics of aerodrome certification and elimination of identified AGA deficiencies could not be PBANIP goals because they were Annex 14 requirements. The meeting therefore revised the AGA performance objectives and developed NAM/CAR PBANIP *Performance Objective 10 – Enhance Capacity and Efficiency of Aerodrome Operations*, which is shown in Tables 5 and 6 below:

Table 5. NAM/CAR PBANIP Performance Objective 10

10. ENHANCE CAPACITY AND EFFICIENCY OF AERODROME OPERATIONS				
Benefits				
Safety	• Improve situational awareness. • Efficient use of aerodrome resources. • Safely maneuver in all weather conditions. • Precise surface guidance to and from a runway. • Reduced incident/accident factors. • Reduced number of deficiencies. • Reduction in fuel consumption. • Reduced wildlife / bird strikes.			
Efficiency				
Environment				
Strategy				
ATM Component	TASK DESCRIPTION	Start-End	RESPON-SIBLE	Status
AO	a) Implementation of Aerodrome Certification	12/2009 12/2014	States, Territories	Valid
	b) Analyze new requirements for rapid exit taxiways for increasing runway capacity.	12/2009 12/2014	States, Territories	Valid
	c) Implementation of action plans for runway incursion prevention.	12/2009 12/2014	States, Territories	Valid
	d) Implement the Airport Capacity analysis, Enhancement and Planning procedure (ACE)	12/2009 12/2013	States, Territories	Valid
	e) Minimizing the effects of adverse meteorological conditions on aerodrome operational capacity.	12/2009 12/2013	States, Territories	Valid
	f) Implement Airport Collaborative Decision Making (CDM), prioritizing the following aspects: • Collaborative management of the capacity of a CDM Airport during periods of a predicted or unpredicted reduction of capacity. • Determination of Turnaround and Variable Taxi Times • Apron Congestion	12/2010 12/2014	States, Territories	Valid
	g) Implement Advanced Surface Movement Guidance and Control System (A-SMGCS)	12/2013 12/2014	States, Territories	Valid
	h) Monitor implementation progress.	12/2009 12/2014	ICAO	Valid
GPIs	GPI/6 Air traffic flow management; GPI/9 Situational awareness; GPI/13 Aerodrome design and management; GPI/14 Runway operations; GPI/15 Match IMC and VMC operating capacity; GPI/18 Aeronautical information.			

**Table 6. NAM/CAR PBANIP Performance Objective 10, 2009-2011 Follow-up and Implementation
Action Plan: Aerodromes and Ground Aids (AGA)**

No.	Performance Objective Task	Action Description	Responsible	Begin date	End date	Deliverables
1	10 c)	Implement an action plan for the prevention of runway incursions, establishing a specific set of recommendations to implement for aerodrome community involved in runway operations.	States / Territories	Dec-09	Dec-10	Runway safety programme.
2	10 c), g)	Implement Advanced Surface Movement Guidance and Control System (A-SMGCS) at airports experiencing low visibility conditions during long periods of time and with heavy traffic density.	States / Territories	Dec-09	Dec-14	Improve ATC situational awareness under all meteorological weather conditions.
	10 e)					Reduce workload and improve planning of the current and pending traffic situation.
	10 c), e)					Ensure safety operations under all meteorological weather conditions.
3	10 d)	Implement the Airport airside Capacity analysis, Enhancement and planning (ACE) procedure. Implement best practices on actual ICAO criteria.	States / Territories	Dec-09	Dec-14	• Accurate assessment of capacity in reduced weather conditions. • Implementation of best in class practices based upon existing ICAO criteria.
4	10 e)	Implement Airport Collaborative Decision Making (CDM) recovery of adverse meteorological conditions procedure.	States / Territories	Dec-09	Dec-14	Obtain collaborative management of the airport capacity during periods of predicted or unpredicted decreased capacity.
5	10 f)	Implement the Airport Collaborative Decision Making Turn-Round process.	States / Territories	Dec-09	Dec-14	Monitoring operational process with available departure times to be provided to air traffic control.
6	10 f)	Implement the Airport Collaborative Decision Making Variable Taxi Time procedure.	States / Territories	Dec-09	Dec-14	Improve traffic predictability. Variable taxi time calculation and the real time allocation for an aircraft to taxi from each parking position to the runway, which can vary significantly depending on the taxiway used.

5. Proposed Committee Focus Areas, Activities, and Tasks

5.1. Based on the analysis of current and future AGA-related needs (GANDD and PBANIP, respectively), and in coordination with the performance objectives of respective national, local, and regional work programs, the following proposed areas are a high priority for the future work of the AGA Committee:

- Visual Aids
 - Lighting
 - Marking
- Runway Strips
 - RESAs
 - Dimensions
- Obstacle and Obstructions
- Aerodrome Design
 - Rapid Exit Taxiways
- Aerodrome Certification
- Runway Safety / Runway Incursion Prevention
- Pavements
 - Maintenance
 - Rehabilitation

- Aerodrome Airside Capacity Analysis, Enhancement and Planning (ACE) Procedure
- Operations During Adverse Meteorological Conditions
 - Efficiency
 - Safety: Situational Awareness / Surface Movement Guidance and Control System (A-SMGCS)
- Aerodrome Collaborative Decision Making (A-CDM)
- Aircraft Rescue and Fire Fighting (ARFF)
 - Equipment
 - Training
- Airport Emergency Planning
 - Water Rescue
- Wildlife Hazard Mitigation
 - Strike Database
- Aerodrome Environmental
 - Noise
- Human Resources / Personnel
- Performance Metrics

5.2. In addition, any new topics suggested by the E/CAR/WG and GREPECAS AGA/AOP/SG will be addressed by the Committee members.

6. Proposed Working Methods

6.1 The proposed working methods of the AGA Committee should consist of at least the following elements:

- Develop and continually update a Committee member list, including contact information;
- Review the Committee topic areas and working methods, and update as necessary;
- Review the status of GANDD deficiencies and progress on implementing the PBANIP for their State / Territory;
- Review AGA-related working and information papers submitted to the E/CAR/WG meetings, and coordinate a Committee response to the E/CAR/WG meeting Chairman at the conclusion of each meeting;
- Promote data and information sharing by coordinating work between E/CAR/WG meetings as follows:
 - conduct work via written correspondence (e.g., e-mail, fax, etc.);
 - conduct work via phone and teleconference calls;
 - conduct work via a dedicated internet Website (e.g., the ICAO NACC Regional Office or FAA E/CAR Aerodromes, which are under development);
 - hold ad-hoc meetings when necessary.
- The Rapporteur of the Committee will be replaced or reaffirmed, and will present a report of the Committee's progress at the conclusion of each E/CAR/WG meeting.

7. Proposed Committee Membership / Points of Contact

7.1 All States, Territories, and regional/international organizations that are members of the E/CAR/WG are invited to have a representative serve on the AGA Committee. These representatives include: Anguilla, Antigua and Barbuda, Aruba*, Barbados, British Virgin Islands, France, Grenada, Guyana*, Montserrat, Netherlands Antilles, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname*, Trinidad and Tobago, United Kingdom, United States, Venezuela*, ACI, CANSO, ECCAA, IATA, IFALPA and IFATCA (**Note: To be invited*)

7.2 A draft list of the aerodromes and airfields in the E/CAR Region are shown in Table 7 below:

Table 7. Aerodromes and Airfields in the E/CAR Region, June 2010

State / Territory	Number of Aerodromes	Responsible Body
Anguilla	1	ASSI/UK
Antigua and Barbuda	1	ECCAA
Barbados	1	CAD
British Virgin Islands	2	ASSI/UK
French Antilles	4	DRAC
Grenada	2	ECCAA
Montserrat	1	ASSI/UK
Netherlands Antilles (St. Maarten)	4	NA
Saint Kitts and Nevis	2	ECCAA
Saint Lucia	2	ECCAA
Saint Vincent and the Grenadines	5	ECCAA
Trinidad and Tobago	2	TTCAA
United States (Puerto Rico)	5	US/FAA
Total	32	

7.3 Committee members may already participate in the AGA deficiency process by serving as a GANDD National Coordinator / Focal Point for their State/Territory/Regional/International Organization. A draft list of these National Coordinators / Focal Points, as of June 2010, is shown in Table 8 below:

Table 8. GANDD National Coordinators / Focal Points for the E/CAR Region, June 2010

GANDD National Coordinator		
State/Territory	Coordinator Name	E-mail address
Anguilla	Margaret Wilson	margaret.wilson@caribairsafety.aero
Antigua and Barbuda (ECCAA)		
Barbados	Anthony Archer	civilav@sunbeach.net
British Virgin Islands	Margaret Wilson	margaret.wilson@caribairsafety.aero
French Antilles	Patrick Amouroux	patrick.amouroux@aviation-civile.gouv.fr
Grenada (ECCAA)		
Montserrat	Margaret Wilson	margaret.wilson@caribairsafety.aero
Netherlands Antilles (St. Maarten)	Vilmo Pieter	vilmo.pieter@gov.an
Saint Kitts and Nevis (ECCAA)		
Saint Lucia (ECCAA)		
Saint Vincent and the Grenadines	Alastair Alexander	ETJoshua@caribsurf.com
Trinidad and Tobago	Randy Gomez	rgomez@caa.gov.tt
United States	Bonnie Ahumada	bonnie.ahumada@faa.gov

8. Conclusion

8.1 There are a number of specialized aerodrome needs in the E/CAR Region that have significant impacts to the safety and efficiency of air travel. Some of the current needs may be characterized as those emanating from the deficiencies listed in the GANDD, while future needs may be characterized as the actions required to implement the NAM/CAR Regional PBANIP. Many of the identified needs contain cross-cutting elements, and the resolution of deficiencies or implementation of performance objectives will have an impact on both the current and future levels of aerodrome safety and efficiency.

8.2 The resolution of deficiencies or implementation of performance objectives are actions that each State must take individually. However, the formation of an AGA Committee for the E/CAR Region may be able to assist in those individual efforts by defining a strategy to address the most pressing issues first, or enable certain issues to be accomplished through the organization and leverage of resources among the States.

9. Suggested Action

9.1 The meeting is invited to:

- a) review the content of this working paper;
- b) revise and/or correct any of the proposed AGA Committee goals, needs analysis data, focus areas, and working methods;
- c) nominate a representative to serve on the AGA-Committee (who's contact information will be collected by the Committee), and update any of the other membership information listed in this paper;
- d) formulate other actions for the elimination/reduction of AGA deficiencies in the E/CAR Region; and
- e) consider and recommend any other appropriate action.

APPENDIX A

An Abridged History of the Development of the Performance Based Air Navigation Implementation Plan (PBANIP) for the North American and Caribbean (NAM/CAR) Regions from the International Civil Aviation Organization (ICAO) Global Air Traffic Management (ATM) Operation Concept.

Global Air Traffic Management

The *Global Air Traffic Management (ATM) Operational Concept* (Doc 9854) was endorsed by the Eleventh Air Navigation Conference in 2003. This concept serves as the vision for a global ATM system intended to achieve an interoperable global air navigation system for all users during all phases of flight, that meets agreed levels of safety, provides for optimum economic operations, is environmentally sustainable, and meets national security requirements; and to guide the high-level implementation of CNS/ATM technology by providing a description of how the emerging and future air navigation system should operate.

Based on the Global ATM Operational Concept and the Strategic Objectives of ICAO, an updated and revised version of the Global Air Navigation Plan for CNS/ATM Systems, re-titled as the Global Air Navigation Plan (GANP) (ICAO Doc 9750), was developed. *The Global Plan describes a strategy aimed at achieving near and medium term ATM benefits on the basis of available and foreseen aircraft capabilities and ATM infrastructure. It contains guidance on ATM improvements necessary to support a uniform transition to the Global ATM system.* Most significantly, the GANP serves as an industry roadmap to facilitate implementation of the Eleventh Air Navigation Conference recommendations and vision, and ensure that focused efforts would lead to near- and medium-term benefits in air traffic management (ATM).

GANP planning efforts are focused on specific performance objectives (performance framework forms, or PFFs) that are supported by a set of “Global Plan Initiatives” (GPIs). States and regions should choose GPIs that meet performance objectives (identified through the gap-analysis identification process of the GANP) specific to the particular needs of a State, region, homogeneous ATM area or major traffic flow.

Performance-Based Approach (PBA)

The Performance Based Approach for CNS/ATM implementation was developed and approved by GREPECAS and adopted by NACC/ DGCA/3 Meeting held in the Dominican Republic, 2008 September 08 to 12. The ICAO planning objective is to achieve a performance-based global ATM system through the implementation of air navigation systems and procedures in a progressive, cost-effective, and cooperative manner. A performance-based approach (PBA) is based on three principles:

- A strong focus on desired/required results;
 - Instead of prescribing solutions, desired/required performance is specified. It implies finding what the current situation is, what the most appropriate result should be, and clarifying who is accountable for achieving those results.
- Informed decision making, driven by desired/required results; and
 - Working backwards from the “what (result)” – the primary focus – to decisions about the “how.”

- Reliance on facts and data for decision making.
 - Desired/required results, drivers, constraints, shortcomings, options expressed in quantitative terms (not in qualitative terms). Rationale: "If you can't measure it, you can't manage it."

The PBA is expected to provide following advantages:

- it is results oriented, allows customer focus and promotes accountability;
- policy making becomes much more transparent when the goals to be reached are publicly stated in terms of performance outcome (rather than solutions);
- shift from prescribing solutions to specifying desired/required performance gives more freedom and flexibility in selecting suitable solutions;
- "Technology Driven Approach" and "Solutions searching for a problem to solve" can be avoided;
- stress on rigorous scientific approach in place of anecdotal evidence;
- focus on desired/required results helps decision makers to set right priorities, make most appropriate trade offs, choose optimum solution and resource allocation;
- provides more predictability of benefits; and
- typically results in cost savings, which often is much more than the investment made in applying the approach.

Once an organization (or State, region etc.) has decided to adopt the PBA approach, it must acknowledge that following ingredients are essential for success:

- Commitment (at the top).
- Agreement on goals (desired results).
- Organization (who is responsible/accountable for various functions).
- Human resources and know-how (Culture & Skills).
- Data collection, processing, storage and reporting.
- Collaboration and coordination (with other subject areas and stakeholders).
- Cost implication (dedicated data management & IT infrastructure).

In the long run, implementation of PBA is expected to result in:

- Efficient system through identified cost savings.
- Reduction in waste of resources.
- More equitable charging practices.
- More efficient provision of services.
- It requires a globally coordinated effort, and a common approach towards developing and implementing a performance-based air navigation system.

NAM/CAR Regional Performance-Based Air Navigation Implementation Plan

The Fifth Meeting of the All Planning and Implementation Regional Groups/Advisory Group (ALLPIRG/5) agreed to adopt a performance based approach in its work and to undertake steps to ensure harmonization of regional and national work aligned under the ATM Global Operational Concept, in support of ICAO planning and implementation processes and the guidelines of the ICAO Council.

Subsequently, the CAR/SAM Regional Planning and Implementation Group (GREPECAS), through its Conclusion 14/51, agreed to reorganize the ATM work program in line with ICAO vision as established in the Global Air Traffic Management Operational Concept (Doc 9854). At its next meeting, GREPECAS/15 urged States, Territories and International Organizations to develop performance-based national plans in accordance with the regional performance objectives. It was therefore clear that in order to develop a seamless ATM system that was in line with the GANP, close coordination between all Air Navigation Services (ANS) fields, such as ATM, CNS, AGA, AIM and MET was necessary.

Noting the work of GREPECAS, the Directors of Civil Aviation of the North American, Central American, and Caribbean Region held a meeting (NACC/DCA/3) and agreed that restructured and coordinated work between all ANS fields would ensure efficient implementation in the short and medium terms. The Meeting unanimously agreed to the performance-based approach and approved the harmonization of all work programs into a single NAM/CAR Implementation Plan (Decision 3/3). The new Performance Based Air Navigation Implementation Plan for the NAM/CAR Regions (PBANIP) contained terms of reference that included performance objectives with detailed tasks, deadlines, and periodic monitoring activity by the ICAO NACC Regional Office.

While complying with a reorganization of work programs and future meetings, the PBANIP also seeks to improve decision-making processes and to ensure that resources be addressed in a suitable manner to support the ICAO Strategic Plan objectives. Moreover, it seeks to comply with the following principles:

- identify implementation tasks with regard to the Global Plan Initiatives (GPIs) of the GANP (Doc 9750), in order to facilitate the objectives and results targeted by each performance objective;
- associate, in a logical manner, the tasks with the seven components of Doc 9854, (AOM, DCB, AO, TS, CM, AUO ATMSDM) as appropriate;
- avoid unnecessary task duplications;
- quantify cost/benefit analysis in terms of performance metrics, deadlines, responsible body for implementation and results;
- offer specific solutions to ensure that expectations of the ATM community and system requirements are fulfilled;
- facilitate a dynamic and periodical review, based on the States/Territories implementation needs and requirements; and
- foster the use of electronic tools and teleconferences to ensure full information exchange.

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APPENDIX B

DRAFT REVISED TERMS OF REFERENCE AND WORK PROGRAMME OF THE EASTERN CARIBBEAN WORKING GROUP (E/CAR/WG)

1 Background

The Eastern Caribbean Working Group was established by Agreement No. 2/1 of the Informal ATS CAR/SAM 1/75 Meeting held in Bridgetown, Barbados from 14 to 17 October 1975, for the purpose of examining problems affecting airspace organization and utilization in the Eastern Caribbean area for States and Territories in the PIARCO and San Juan FIRs. The terms of reference were expanded at the E/CAR/WG/18 Meeting (Saint Lucia, 1994) to include the continuous examination of problems affecting all air navigation fields in the Eastern Caribbean area. The Terms of Reference were revised at the E/CAR/WG/31 Meeting (Antigua and Barbuda, 2009) with a performance based approach for the implementation and improvement in all air navigation fields in the Eastern Caribbean area.

2. Terms of Reference

- a) coordination of the implementation of the CAR/SAM Air Navigation Plan and other relevant regional documentation, in compliance with ICAO SARPs, as required;
- b) facilitation for the development of emerging aviation issues focusing on continued improvements to operational efficiency through coordinating harmonised procedures and promote interoperability of networks and implementation of new technologies;
- c) development of implementation initiatives and associated technologies to improve safety, increase operational and economic efficiency and/or capacity of regional Air Navigation Services;
- d) coordination to implement the performance objectives related to Regional Air Navigation Services with regard to Global Plan Initiatives (GPIs);
- e) share information on implementation initiatives for enhancing compatibility of air traffic operations; and
- f) technical advice to the E/CAR Directors General of Civil Aviation, as required, in relation to the *NAM/CAR Regional Performance-Based Air Navigation Implementation Plan* and any other necessary steps for implementation.

3. Work Programme

The E/CAR/WG Work Programme are the Performance Framework Forms (PFFs) activities/tasks contained in the *NAM/CAR Regional Performance-Based Air Navigation Implementation Plan*, applicable to the E/CAR Area, taking the following into consideration:

- a) consider the deadlines for implementation of facilities, services and procedures to improve ANS in the E/CAR Region;

- b) develop guidelines and recommendations for States/Territories to implement their national plans;
- c) recommend the implementation of air navigation facilities and services to ensure interregional harmonization, taking account of performance metrics, environmental benefits and operational issues;
- d) provide recommendations to improve human resources planning and development in line with ICAO guidelines;
- e) coordinate the implementation of initiatives with the seven components of Doc 9854, (AOM, DCB, AO, TS, CM, AUO, ATMSDM) as appropriate; and
- f) quantify cost/benefit analysis in terms of performance measures, deadlines, responsible body for implementation and results as well as human factors performance.

The Eastern Caribbean Working Group (E/CAR/WG) must report its work programme progress to the E/CAR Directors General of Civil Aviation (E/CAR/DCA) and the North American, Central American and Caribbean Working Group (NACC/WG).

4. Working Methods

- a) the Chairperson of the E/CAR/WG will be a representative from the E/CAR States/Territories designated by the Meeting for a three-session period;
- b) the E/CAR/WG will avoid duplication of work and maintain a close coordination between States/Territories/International Organization and users to optimise the use of available resources and experience;
- c) carry out the coordination of tasks using electronic tools and teleconferences to guarantee an efficient exchange of information, when required;
- d) the E/CAR/WG may form Ad-hoc Groups, Task Forces or Committees to work on specific topics and activities. Ad-hoc Groups will be valid for the time of the meeting. Task forces and committees will be valid until the completion of their assigned task or group of tasks. All tasks and activities should be clearly defined by time and deliverables. Nomination for the position of Rapporteur of Committees and/or Task Forces may be presented by any State or Territory which is a member of the E/CAR/WG;
- e) the Committees and Task Forces should co-ordinate and advance their works between meetings as follows;
 - conduct work via written correspondence, i.e. e-mail, fax, etc.;
 - conduct work via phone and teleconference calls;
 - conduct work via a dedicated page on the ICAO NACC Regional Office Website (under development);
 - hold meetings when necessary;

- f) all Committee and Task Force Rapporteurs must present their report on the progress of assigned tasks to the E/CAR/WG;
- h) the E/CAR/WG will use the following classification/definitions to record recommendations in the meeting reports:

Decisions

Internal actions of the E/CAR/WG

Draft Conclusions

Actions requiring communication to States and Territories and/or endorsement by the E/CAR/DCAs.

- i) the meetings will be usually convened every year, except in years when the NACC/WG meets, or whenever necessary. The ICAO NACC Regional Office will be requested to provide Secretariat services for E/CAR/WG Meetings.

5. Membership

Anguilla, Antigua and Barbuda, Aruba*, Barbados, British Virgin Islands, France, Grenada, Guyana*, Montserrat, Netherlands Antilles, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname*, Trinidad and Tobago, United Kingdom, United States, Venezuela*, ACI, CANSO, ECCAA, IATA, IFALPA and IFATCA.

** To be invited*

6. E/CAR/WG Committees and Task Forces

To be periodically reviewed based on the work programme activities.

AIS Committee

Rapporteur: Barbados – Shirley Ford

ATM Committee

Rapporteur: Trinidad and Tobago – Samuel Lampkin

SAR Committee

Rapporteur: Trinidad and Tobago – Trevor Dowrich

CNS Committee

Rapporteur: Trinidad and Tobago – Veronica Ramdath

Radar Data Sharing Task Force

(To be disbanded by the end of 2009)

AGA Committee (to be established)

Rapporteur: United States – Paul Friedman

APPENDIX C

NAM/CAR AGA-Related Performance Objectives Approved at E/CAR/WG/31

Thirty-First Eastern Caribbean Working Group Meeting
E/CAR/WG/31
Appendix F to the Report on Agenda Item 2

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10. IMPLEMENTATION OF AERODROME CERTIFICATION				
Benefits				
Efficiency	Ensure aerodrome operators comply with relevant ICAO SARPs and/or applicable national regulations.			
Safety	- Continued provision of safe and efficient aircraft operations at aerodromes - Strengthen States' safety oversight responsibility on aerodrome operations			
Strategy				
Short Term (2010)				
Medium term				
ATM COMPONENTS	TASK DESCRIPTION	START – END	RESPONSIBLE	STATUS
AO	a) States to analyze Annex 14, Volume I provisions on aerodrome certification vis-à-vis national legislations and regulations	August 2009 – December 2009.	States	Valid
	b) States to analyze guidance in the Manual on Certification of Aerodromes (Doc 9774) vis-à-vis national regulations	August 2009 – December 2009	States	Valid
	c) States to develop and/or complete national regulations on aerodrome certification as necessary; and training of aerodrome inspectors	August 2009 – March 2010	States/Regional Office	Valid
	d) States to develop an action plan for certifying all remaining aerodromes used for international operations, including implementation of SMS	On going	States	Valid
	e) States to implement the action plan; to provide yearly feedback to NACC Regional Office regarding the status of the implementation of aerodrome certification	On going	States	Valid
GPIs	GPI/13: aerodrome design and management; GPI/14: runway operations.			

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E/CAR/WG/31

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11. ELIMINATION OF IDENTIFIED AOP DEFICIENCIES (wildlife and bird hazard reduction, rescue and fire fighting services and aerodrome emergency planning)				
Benefits				
Safety	• Strengthen States' safety oversight responsibility on aerodrome operations			
Efficiency	• Enhanced safety, efficiency and regularity of aerodrome operations in the States.			
	• Uniform implementation of the relevant ICAO SARPs and/or applicable national regulations in the CAR States/Territories.			
Strategy Short Term (2010) Medium term				
ATM COMPONENT	TASKS DESCRIPTION	START – END	RESPONSIBLE	STATUS
AO	a) to carry out a survey of States to determine the current level of implementation with respect to the three major deficiencies in the NAM/CAR Regions.	August 2009 – December 2009	Regional Office	Valid
	b) to evaluate training needs in the CAR Region, if any; and coordinate these with the training needs for aerodrome certification	August 2009 – December 2009.	States/ Regional Office	Valid
	c) to identify in coordination with States specific technical assistance needs, if any	August 2009 – December 2009.	States / Regional Office	Valid
	d) to develop and implement an action plan to meet the identified training needs in coordination with those for aerodrome certification	August 2009 – March 2010	States	Valid
	e) States to develop and implement an action plan to resolve the three major deficiencies	December 2009 – June 2010	States	Valid
	f) To develop and implement an efficient monitoring system for correcting the three major deficiencies in the CAR States/Territories.	December 2009 – June 2010.	States	Valid
GPIs	GPI/13: Aerodrome operations.			

APPENDIX D

Aerodromes and Ground Aids / Aerodromes Operational Planning Subgroup (AGA/AOP/SG) Terms of Reference and Work Program

1. Terms of Reference

- a) To promote development of the CAR/SAM and NAM Air Navigation Plans and other relevant regional documentation, in compliance with ICAO SARPs, as required.
- b) To facilitate the implementation of air navigation systems and services as identified in the CAR/SAM and NAM Air Navigation Plans.
- c) To promote implementation activities and associated technologies to improve safety, increase operational and economic efficiency and/or aerodrome capacity.
- d) To harmonize implementation of performance objectives related air navigation services with regard to the GPIs of Doc 9750.
- e) To carry out permanent co-ordination with GREPECAS Contributory Bodies in order to ensure appropriate integration of all tasks contributing to the implementation of the CAR/SAM ANP.
- f) To review the requirements of the AOP Part of the CAR/SAM Regional Air Navigation Plan with a view to developing any changes required to comply with new technological developments including environmental impact aspects.

2. Work Programme

TASK NUMBER	TASK DESCRIPTION	PRIORITY	DATE	
			START	END
AGA/AOP/2	Planning and update the Table AOP 1 of the AOP Part of the ANP/FASID CAR/SAM at regular intervals based on the greater demands on airports in relation to air traffic growth and the accommodation of aircraft with more onerous physical requirements	B	1 st Meeting	8 th Meeting

TASK NUMBER	TASK DESCRIPTION	PRIORITY	DATE	
			START	END
AGA/AOP/3	Review and follow-up the implementation of corrective actions for AGA deficiencies that have direct impact on the ANP including: ▪ Objects and depressions in runway strips, principally in the graded areas ▪ Runway and taxiway separations ▪ Runway and taxiway slopes ▪ Obstacles ▪ Secondary power supply ▪ Visual aids ▪ Fencing and perimeter roads ▪ Rescue and fire-fighting services ▪ Aerodrome emergency plans ▪ Runway surface conditions ▪ Runway strips and runway end safety areas Refer urgent (U) priority deficiencies, with proposed corrective actions, to the Aviation Safety Board.	A	1 st Meeting	8 th Meeting
AGA/AOP/6	Review demand/capacity problems at airports and develop options for alleviating airport congestion.	B	1 st Meeting	Goes to ATM/CNS Decision ACG 6/1
AGA/AOP/7	• Implementation of action plans for runway incursion and excursion prevention. • Coordinate the implementation of initiatives with the seven components of Doc. 9854, (AOM, DCB, AO, TS, CM, AUO, ATMSDM) as appropriate. • Implement the Wildlife Hazard Management	A	1 st Meeting	6 th Meeting 8 th Meeting
AGA/AOP/8	• Implement the Airport airside Capacity analysis, Enhancement and planning (ACE) procedure. • Minimizing the Effects of Weather on Capacity.	A	7 th Meeting	9 th Meeting
AGA/AOP/9	• Implement Airport Collaborative Decision Making (CDM). • Implement Airport Collaborative Decision Making (CDM) recovery of adverse conditions procedure. • Implement the Airport Collaborative Decision Making Turn-Round process.	A	8 th Meeting	10 th Meeting
AGA/AOP/10	Implement Advanced Surface Movement Guidance and Control System (A-SMGCS)	A	9 th Meeting	10 th Meeting

3. Priority

- A** High priority tasks, on which work should be speeded up.
- B** Medium priority tasks, on which work should commence as soon as possible, but without detriment to priority **A** tasks.
- C** Tasks of lesser priority, on which work should commence as time and resources allow, but without detriment to Priority **A** and **B** tasks.

— D3 —

4. **Composition**

Argentina, Barbados, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, Guatemala, Haiti, Honduras, Mexico, Paraguay, Peru, Trinidad and Tobago, United States, Uruguay, Venezuela, ACI, ALACPA, CARSAMPAF, IATA, IFALPA and IFATCA.

5. **Chairpersons**

Chairman	Norberto Cabrera (Cuba)
Vice-Chairman	Alberto Palermo (Argentina)

NOTE: The Chairman and Vice-Chairman were elected for the period 2007-2009.

— END —