



**FINAL
VERSION**

**INTERNATIONAL CIVIL AVIATION ORGANIZATION
NORTH AMERICAN, CENTRAL AMERICAN AND CARIBBEAN OFFICE**

**THIRTY-FIRST EASTERN CARIBBEAN
WORKING GROUP MEETING**

E/CAR/WG/31

FINAL REPORT

ST. JOHN'S, ANTIGUA AND BARBUDA, 5 TO 8 OCTOBER 2009

Prepared by the Secretariat
October 2009

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HISTORICAL

ii.1 **Place and Date of the Meeting**

The Thirty-First Eastern Caribbean Working Group Meeting (E/CAR/WG/31) was held at the Grand Royal Antiguan Hotel in St. John's, Antigua and Barbuda, from 5 to 8 October 2009.

ii.2 **Opening Ceremony**

Mr. Víctor Hernández, Regional Officer, Air Traffic Management/Search and Rescue, provided introductory remarks and thanked the Ministry of Tourism and Civil Aviation of Antigua and Barbuda and the Eastern Caribbean Civil Aviation Authority for hosting the Meeting, on behalf of Mrs. Loretta Martin, Regional Director of the North American, Central American and Caribbean Regional Office of the International Civil Aviation Organization.

Mr. Rosemond W. James, Director General of the Eastern Caribbean Civil Aviation Authority, welcomed the participants to Antigua and Barbuda, and officially opened the Meeting. A transcript of Mr. James' speech is contained in paragraph ii.10 of the Historical.

ii.3 **Organisation of the Meeting**

The United States, supported by the United Kingdom, nominated Mr. Anthony Meade, Operations Officer, Air Traffic Services, of the Eastern Caribbean Civil Aviation Authority, to chair the Meeting and the E/CAR/WG. He was duly elected as Chairman of the E/CAR/WG for a three-session period. Mr. Víctor Hernández, Regional Officer, Air Traffic Management/Search and Rescue, acted as Secretary with the assistance of Mr. Julio C. Siu, Regional Officer, Communications, Navigation and Surveillance both from the ICAO NACC Regional Office.

ii.4 **Working Languages**

The working language of the Meeting was English. The working papers, information papers, presentations and the report of the Meeting were available to participants in English.

ii.5 **Agenda**

The Meeting adopted the following agenda:

Agenda Item 1: Safety Management Issues

- 1.1 Follow-up on the outstanding deficiencies in the GREPECAS Air Navigation Deficiencies Database (GANDD) in the E/CAR Area
- 1.2 Actions to reduce coordination loop errors in the ATC between adjacent ATS units related to large height deviation (LHD)
- 1.3 SSP and SMS Implementation activities and Progress Status

Agenda Item 2: Review of Air Navigation Matters

- 2.1 Global Air Navigation and CAR/SAM developments
 - 2.1.1 Global and CAR/SAM Air Navigation Activities
 - 2.1.2 ICAO Air Navigation Performance Framework
 - 2.1.3 NAM/CAR Regional Air Navigation Implementation Plan
 - *Optimize the ATS route structure en-route airspace*
 - *Optimize the ATS route structure in terminal airspace*
 - *Implement RNP approaches*
 - *Enhance civil/military coordination and co-operation*
 - *Align upper airspace classification*
 - *Improve demand and capacity balancing*
 - *Improve ATM situational awareness*
- 2.2 Air Navigation specific activities:
 - 2.2.1 Air Traffic Management (ATM)
 - *Review of ATM Committee Report*
 - *Review of SAR Committee Report*
 - *PBN implementation*
 - *Activities for the new Flight Plan format implementation*
 - *ICARD 5LNC Database implementation in ICAO NAM/CAR Regions*
 - 2.2.2 Communications, Navigation and Surveillance (CNS)
 - *Review of CNS Committee Report*
 - *Review of Radar Data Sharing Task Force Report*
 - *Digital Networks in the CAR Region*
 - *ATN implementation*
 - *Navigation and surveillance systems for Air Navigation improvements in the E/CAR Region*
 - *Frequency Management and ICAO Position for WRC-2012*
 - 2.2.3 Aerodromes and Ground Aids (AGA)
 - *Aeronautical Studies*
 - *Aerodromes certification*
 - 2.2.4 Aeronautical Meteorology (MET)
 - *MET to support ATM and need to enhance coordination between Meteorological and Air Traffic Control services*
 - 2.2.5 Aeronautical Information Management (AIM)
 - *Review of AIS Committee Report*
 - *AIS improvements in the E/CAR Region*
 - *AIS to AIM Transition*

- 2.3 NAM/CAR Regional Performance-Based Air Navigation Implementation Plan
 - *Proposed Projects/Action Plans for Performance Framework Forms (PFFs)*
- 2.4 Human Resources and Training

Agenda Item 3: Follow-up on actions taken concerning valid Conclusions/Decisions of previous meetings and review of Terms of Reference (ToRs) and Work Programme

- 3.1 Review of the valid Conclusions/Decisions from the NACC/DCA, NACC/WG, E/CAR/DCA, E/CAR/WG and GREPECAS meetings
- 3.2 Review of the E/CAR/WG Terms of Reference (ToRs) and Work Programme

Agenda Item 4: Other business

- 4.1 Next meeting site and dates

ii.6 Schedule and Work Mode

The Meeting agreed to hold its daily sessions from 09:00 to 15:30 hours, with two breaks. The Meeting also agreed to work in plenary. Ad-hoc Groups were created during the Meeting to do further work on specific items of the Agenda.

ii.7 Attendance

The Meeting was attended by 11 E/CAR Region States/Territories and 2 International Organisations, totalling 32 delegates as indicated in the list of participants on pages iii-1, iv-1 to iv-4.

ii.8 Conclusions and Decisions

The Eastern Caribbean Working Group recorded its activities as Decisions and Draft Conclusions as follows:

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.
Note: Draft Conclusions can be approved by correspondence in between Meetings

LIST OF DRAFT CONCLUSIONS ADOPTED BY THE E/CAR/WG/31 MEETING

Number	Title	Page
31/1	Resolution of Air Navigation Deficiencies	1 — 2
31/2	E/CAR High Level SAR Meeting	2 — 3
31/3	PBN Implementation in the National Air Navigation Systems	2 — 4
31/4	Urgent Actions to Mitigate Number of Missing Flight Plans in ATS Units of the Eastern Caribbean	2 — 7
31/5	Urgent Actions to Improve E/CAR AFS Network Operational Performance	2 — 11
31/6	E/CAR AFS Network Immediate Recovery Actions	2 — 11
31/7	Replacement of the E/CAR AFS Network	2 — 12
31/8	Seminar on Aviation Radio Electric Spectrum Management and Preparation for the WRC-2012	2 — 15
31/9	Air Navigation Performance Monitoring and Measurement	2 — 19

ii.9 List of Working and Information Papers

Working and Information Papers are available on the ICAO website at the following link:
www.icao.int/nacc/meetings/2009/ECARWG31/

WORKING PAPERS				
Number	Agenda Item	Title	Date	Prepared and Presented by
WP/01	1	Draft Agenda, Working Method and Schedule of the E/CAR/WG/31 Meeting	25/08/09	Secretariat
WP/02	1.1	Status Update on Air Navigation Deficiencies Reported for the E/CAR	01/09/09	Secretariat
WP/03	1.2	Actions to Reduce ATC Coordination Loop Errors Between ATS Units	23/09/09	Secretariat
WP/04	1.3	ICAO SMS/SSP Evolution and Current Status	23/09/09	Secretariat
WP/05	2.1.1	Global and CAR/SAM Air Navigation Activities	14/09/09	Secretariat
WP/06	2.1.2	Air Navigation Performance Framework	07/08/09	Secretariat
WP/07	2.1.3	NAM/CAR Regional Performance-Based Air Navigation Implementation Plan	11/09/09	Secretariat

WORKING PAPERS				
Number	Agenda Item	Title	Date	Prepared and Presented by
WP/08	2.2.1	PBN Implementation	11/09/09	Secretariat
WP/09	2.2.1	ICAO Guidelines for the New FPL Form	01/09/09	Secretariat
WP/10	2.2.2	Current Status of Digital Networks in the CAR Region and MEVA II / REDDIG Interconnection	22/09/09	Secretariat
WP/11	2.2.2	Communication Infrastructure Implementation and Aeronautical Radio Spectrum Activities in the E/CAR Region	15/09/09	Secretariat
WP/12	2.2.2	AMC Directory Services	28/08/09	Secretariat
WP/13	2.2.2	Navigation and Surveillance Related Activities for Air Navigation Improvements and Implementation in the E/CAR Region	15/09/09	Secretariat
WP/14	2.2.2	Radio Frequency Assignment Lists for the CAR Region	07/08/09	Secretariat
WP/15	2.2.2	Results of the ITU World Radiocommunication Conference (2007) (WRC-2007) and Initial Position of ICAO for WRC-2011	07/08/09	Secretariat
WP/16	2.2.3	States Survey on Aeronautical Studies to Present Acceptable Means of Ensuring Safety of Aircraft Operations at Aerodromes	10/09/09	Secretariat
WP/17	2.2.3	Implementation of Aerodrome Certification	10/09/09	Secretariat
WP/18	2.2.4	MET to Support ATM and Need to Improve Coordination Between Meteorological and Air Traffic Services	03/09/09	Secretariat
WP/19	2.2.5	AIS Improvements in the E/CAR Region	10/09/09	Secretariat
WP/20	2.2.5	Roadmap for the Transition from AIS to AIM	10/09/09	Secretariat
WP/21	2.3	Air Navigation Performance Monitoring and Measurement	18/09/09	Secretariat
WP/22	2.4	Guidelines for Human Resources and Training Planning	01/09/09	Secretariat
WP/23	3.1	Valid Conclusions and Decisions of Previous E/CAR/WG, E/CAR/DCA, NACC/WG, NACC/DCA/3 and GREPECAS/15 Meetings	11/09/09	Secretariat
WP/24	3.2 4.1	E/CAR/WG Terms of Reference and Work Programme	18/09/09	Secretariat
WP/25	2.1.3	Eastern Caribbean CNS/ATM Plan	14/09/09	Barbados
WP/26	2.2.2	Eastern Caribbean Digital Network	14/09/09	Barbados

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WORKING PAPERS				
Number	Agenda Item	Title	Date	Prepared and Presented by
WP/27	2.2.1	Nominations of 5LNC/Route Planner Users for ICARD System	02/09/09	Secretariat
WP/28	2.2.5	Training for AIS Personnel in the E/CAR	18/09/09	Rapporteur
WP/29	2.2.1	ATS Interfacility Data Communication	16/09/09	United States
WP/30	2.2.2	CNS Committee Report	16/09/09	Rapporteur
WP/31	2.2.1	Search and Rescue (SAR) Activities	25/09/09	Trinidad and Tobago
WP/32	2.2.5	PIARCO AIS Letters of Agreement	25/09/09	Trinidad and Tobago
WP/33	2.2.1	Report of activities for the Air Traffic Flow Management (ATFM) Implementation	16/09/09	United States
WP/34	2.2.2	Radar Data Sharing Task Force Report	29/09/09	Rapporteur
WP/35	2.2.1	Missing Flight Plans	05/10/09	France
WP/36	2.2.2	Need for IAL improvement	05/10/09	France

INFORMATION PAPERS				
Number	Agenda Item	Title	Date	Prepared and Presented by
IP/01	--	General information	07/09/09	Secretariat
IP/02	--	List of Working and Information Papers	01/10/09	Secretariat
IP/03	2.1.3	Summary of the North American, Central American and Caribbean Working Group (NACC/WG) Development and Results	07/08/09	Secretariat
IP/04	2.2.1	Update on Activities of the Atlantic Interoperability Initiative to Reduce Emissions (AIRE)	16/09/09	United States
IP/05	2.2.1	Status of Performance Based Navigation (PBN) Implementation in the United States	16/09/09	United States
IP/06	2.2.1 2.2.2	San Juan (ZSU) Sector 10 Surveillance and Communication Enhancement Project	16/09/09	United States
IP/07	2.2.2	Final Report of the 5 th CAR/SAM GREPECAS ATN Task Force	16/09/09	United States

INFORMATION PAPERS

Number	Agenda Item	Title	Date	Prepared and Presented by
IP/08	2.2.2	Current Status of the Federal Aviation Administration Telecommunication Programs	16/09/09	United States
IP/09	2.2.3	Airport Cooperative Research Program (ACRP) Products for the Caribbean Region	16/09/09	United States
IP/10	2.2.3	Federal Aviation Administration (FAA) Sponsored Pavement Maintenance and Rehabilitation Training Workshops for the Caribbean Region	16/09/09	United States
IP/11	2.2.2	The Federal Aviation Administration's Surveillance and Broadcast Services Program	29/09/09	United States
IP/12	2.2.1 2.2.2	CNS/ATM Developments within the ANS of the TTCAA	05/10/09	Trinidad and Tobago

ii.10 **Opening Remarks delivered by Mr. Rosemond W. James, Director General, Eastern Caribbean Civil Aviation Authority, at the Opening Ceremony of the Thirty-First Eastern Caribbean Working Group Meeting on 5 October 2009.**

Permanent Secretary within the Ministry of Tourism and Civil Aviation (Antigua/Barbuda) Mrs. Sharon Peters; Mr Victor Hernandez – Regional Officer, ATM, ICAO Regional Office, Mexico; Mr Julio Siu – Regional Officer, CNS, ICAO Regional Office, Mexico.

I also recognize Capt Margaret Wilson of the Air Safety Support International and Director of Civil Aviation of the British Virgin Islands and the head of the delegation from Dominica Mr Bennoit Bardouille, who is also Dominica's representative on the ECCAA Board of Directors.

States' Delegates, good morning.

This morning, I once again have the honour and pleasure to offer a few remarks as part of the opening ceremony of this most important and necessary 31st Eastern Caribbean Working Group Meeting. We welcome the return of the ECWG meeting after an absence of two years. During those two years, the importance of the ECWG has become more evident. Without taking anything away from the two meetings which were held instead of the ECWG meetings, there is no doubt that in those ensuing years, the progress of the region has suffered further setbacks particularly as it relates to the advancement of the Air Navigation Plan.

The lack of progress at the regional level should not be attributed solely to the absence of the ECWG meetings. We, as a region, have not done as much as we should have done towards the planned implementation of systems and structures that would bring us in line with the Regional Air Navigation Plan and the ICAO Global Plan.

The apparent lack of dialogue particularly between the custodian of our FIR and the States that form an integral part of the FIR has further exasperated the situation. This has led to a serious absence of the exchange of information not only on the implementation plans, but also on operational issues, including airspace management and the status of equipment.

During the opening of workshop on the Development of Business Case for the Implementation of CNS/ATM Systems, which took place last week here in Antigua and Barbuda, I lamented the fact that the E/CAR region had worked assiduously in the development of a CNS/ATM transition plan from late 1990's. However, for various reasons it would appear that our States have not advanced as quickly as we ought to in the implementation of these systems.

The E/CAR AFS Network is yet another area that has not been implemented as was previously planned. As a result, a number of States have expressed their concerns over the reliability of the system. Ladies and gentlemen, delegates, the E/CAR DGCA's expect that meaningful and frank dialogue will take place during the next few days and that you will arrive at conclusions and or recommendations that will seek to propel this region to the forefront of the Global ANP.

There is also a need to revisit the organization of the airspace within the E/CAR region. In this regard, we support the initiative by the government of Dominica to establish its own control airspace. Over the years, we have seen instances when traffic into that State has been severely affected by events in Guadeloupe and/or Martinique. I trust that this matter will be given the attention that it deserves and that appropriate recommendations will be arrived at, that would ensure safety, regularity and efficiency of aviation in

Dominica. Likewise I urge that the recommendations from this meeting will ensure the enhancement and maintenance of safety, regularity and efficiency throughout the region.

Finally, the issue of human resource development must be addressed from a regional standpoint. For our part, the Eastern Caribbean Civil Aviation Organization has been relentless in its efforts to source training for this region. Our efforts in this regard have not been limited to just sourcing the training but also extended towards bringing the training we source to our region with the objective of facilitating maximum participation by our Member States and airport operators.

So far this year, our success in this respect includes:

- the Seminar on Aerodrome Certification and Aeronautical Studies which was held in St. Lucia in June this year;
- the workshop on the Development of Business Case for the Implementation of CNS/ATM Systems;
- Seminar on Airport Pavement Maintenance and Rehabilitation scheduled for the 12th and 14th October 2009, here in Antigua and Barbuda;
- the Seventh International Conference on Bird Strike and Wild Life Prevention which is scheduled for Grenada 24th to 27th November 2009.

Ladies, Gentlemen and delegates, please allow me to thank the government and people of Antigua and Barbuda for its decision to host this 31st ECWG Meeting, for their warm hospitality, for these fine facilities which form part of their arrangements to host, which I am sure will contribute to your comfort and success over the next four days.

It would be remiss of me if I did not thank the ICAO Regional Director and her staff for the support they continue to give our region. Judging from the numerous e-mails and State letters emanating from that office we know that you face an extremely daunting and challenging task.

I would like to extend our thanks the staff of the Ministry of Tourism and Civil Aviation, who were the organizers of the meeting, for their hard work in making all the necessary arrangements.

In conclusion, we, as a region, cannot afford to pause in our quest to upgrade, enhance and update our civil aviation system. Therefore, we must always be cognizant of the fact that we are part of a worldwide network and must therefore spare no effort to play our part in realizing the ICAO's vision of "a global air transport system consistently and uniformly operating at peak efficiency, providing optimum safety, security and sustainability."

It is therefore my pleasure to declare the 31st Eastern Caribbean Working Group Meeting opened.

I thank you.

LIST OF PARTICIPANTS

ANTIGUA AND BARBUDA

Frankie Pereira
John Jonas
Lorraine Davis

BARBADOS

Mitchinson Beckles
Cedric H. Murrell
Karen Walkes
Shirley Ford

DOMINICA

Benoit Bardouille
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Patrick Amouroux
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GRENADA

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List of Participants

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LIST OF PARTICIPANTS

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Name / Position	Administration / Organization	Telephone / E-mail	
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Name / Position	Administration / Organization	Telephone / E-mail	
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Agenda Item 1: Safety Management Issues

1.1 Follow-up on the outstanding deficiencies in the GREPECAS Air Navigation Deficiencies Database (GANDD) in the E/CAR Area

1.1.1 The Secretariat presented WP/02, which provided an update on the status of air navigation deficiencies reported for the States and Territories in the Eastern Caribbean Region. The Meeting was reminded that the current version of the database of deficiencies is always available on the ICAO NACC Regional Office website at the following link: www.mexico.icao.int/gandd2.html.

1.1.2 The Meeting noted that E/CAR States/Territories had made efforts to correct deficiencies classified with priority “U” and that ICAO, in coordination with States in preparation for the GREPECAS/15 Meeting held in 2008, had undertaken a review of the priority classification methodology for deficiencies using the ICAO SMS Risk Assessment Matrix presented in **Appendix A** to this part of the Report.

1.1.3 As a result, the Meeting noted that a large number of deficiencies had been reclassified from “U” to “A” and that “U” deficiencies were no longer reported for any E/CAR States/Territories. However, it was noted that 148 of the 181 unresolved deficiencies reported for E/CAR States/Territories are classified Priority “A,” which are safety-related. The Meeting also reviewed the distribution of outstanding priority “A” deficiencies reported for the E/CAR Region, which showed the highest percentage of safety-related deficiencies in the AGA (62 percent), AIS (24 percent), and MET (8 percent) areas, highlighting the need to focus improvements in these particular areas.

1.1.4 States/Territories were invited to submit updates on the priority and status of deficiencies to the Secretariat during the Meeting. In this regard, France and the United States provided updates on coordinators information for the GANDD as listed below.

GANDD National Coordinator		
State/Territory	Coordinator Name	E-mail address
French Antilles	Patrick Amouroux	patrick.amouroux@aviation-civile.gouv.fr
United States	Bonnie Ahumada	bonnie.ahumada@faa.gov

1.1.5 As a result of the discussion under this Agenda Item, the Meeting decided to adopt the following draft conclusion:

DRAFT

CONCLUSION 31/1

RESOLUTION OF AIR NAVIGATION DEFICIENCIES

That E/CAR States/Territories:

- a) immediately inform the ICAO NACC Regional Office of any changes in the GANDD National Coordinator;
- b) reassess the priority of deficiencies using the ICAO safety management risk assessment methodology presented in Appendix A to this part of the report and inform the ICAO NACC Regional Office of any changes in the priority of deficiencies by **30 January 2010**;
- c) prepare and update action plans for the resolution of each reported deficiency using the template in **Appendix B** to this part of the report, and submit these to the ICAO NACC Regional Office by **30 January 2010**; and,
- d) periodically update the GANDD with any new information on changes in priority and/or resolution for reported deficiencies.

1.2 Actions to reduce coordination loop errors in the ATC between adjacent ATS units related to large height deviation (LHD)

1.2.1 Based on GREPECAS Conclusion 15/36, which urges States to take measures to reduce operational errors in the ATC coordination loop between adjacent Area Control Centres (ACCs), including early implementation of ATS Interfacility Data Communication (AIDC), the meeting received information on ICAO Circular 314, Threat and Errors Management (TEM) and Normal Operations Safety Survey (NOSS).

1.2.2 The main objective of TEM framework, in particular to the Air Traffic Control (ATC) community, is to enhance aviation safety and efficiency. This is achieved by providing an operationally relevant and highly intuitive framework for understanding and managing system and human performance in operational contexts.

1.2.3 It was noted that both TEM and NOSS are operational tools designed to be used by safety managers in their endeavours to identify and manage safety issues as they may affect safety and efficiency of aviation operations.

1.2.4 The TEM framework captures the dynamic activity of an operational ATC crew working in real time and under real conditions. The utility of the framework is that it can be applied proactively or retrospectively, at the individual, organizational, and/or systemic levels.

Normal Operations Safety Survey (NOSS)

1.2.5 It was recognized that Safety managers and supervisors should develop a tool to collect safety information on threats that personnel have to face in everyday normal operations, how these threats are managed, what errors may result from the threats and how the ATCOs manage these errors. After the information is processed, managers should have a clear overview of the strengths and weaknesses with respect to threats, errors and undesired states encountered in normal operations. This is a category of safety information that is not available through any other methods.

1.2.6 In its anticipated form, NOSS will entail over-the-shoulder observations during normal shifts and will not be applied in any training situations. All participation from ATC community will be voluntary, and data collected will be identified and treated as confidential and not for disciplinary or punitive purposes.

1.2.7 The purpose of NOSS is to furnish the ATC community with a means for providing robust data on threats, errors and undesired states to safety managers. Analysis of NOSS data, together with safety data from conventional sources, should make it possible to focus the safety change process in the areas that need the most attention.

Safety Oversight Training

1.2.8 To conduct safety oversight, E/CAR States and Territories authorities have performed oversight inspections based on prescriptive elements and strict compliance with aviation regulations. Civil Aviation Authorities (CAA) and air navigation service providers interact in the resolution of safety concerns through a risk mitigation plan.

1.2.9 To this end, the SMS/SSP concept requires a particular training programme for ATS inspectors/supervisors on comprehensive ATC performance-based frameworks to support safety performance goals. Interaction of these two elements will also play a critical role in the success or failure of the SMS/SSP.

1.2.10 Since safety was recognized as the highest concern and needs to remain as the focus of all discussions, the Meeting agreed valuable meetings between two or more facilities with common Letters of Agreement (LOAs) should be convened to discuss procedures and actions to be realized from facility to facility to reduce ATC coordination loop errors.

1.2.11 These meetings review the working relationship between facilities. The Meeting concurred that ATC units should make efforts to move forward and continue to look for opportunities to improve the working relationship between facilities. Possible topic meetings to be analyzed between ATC units are attached in the **Appendix C** to this part of this report.

Interface ATS Automated Systems

1.2.12 The Meeting identified further actions from E/CAR States/Territories to ensure ATC coordination in the lower airspace. Based on the regional strategy for the integration of ATM automated systems approved by GREPECAS, the meeting agreed certain tasks to Improve ATM situational awareness, as part of an action plan for interfacing ATM automated systems.

1.2.13 To this end, E/CAR States and Territories should develop an action plan and conduct tests in their ATS surveillance system, in accordance with the airspace classification, as well as determine other automation requirements to satisfy future operational applications of the ATM community. An action plan should be submitted to the ICAO NACC Regional Office no later than **26 February 2010**. To this end, each State/Territory of the Eastern Caribbean:

- a) appoint an expert as point-of-contact to carry out work for the evolutionary interfacing of ATM automated systems;
- b) follow guidance material specified in the regional Interface Control Document (ICD) for data interfacing and common procedures to exchange messages between ATM automated systems to exchange ATS messages (EST, FPL, CPL, etc.);
- c) review the ATM automation capacities/functionalities of their corresponding Area Control Centres to meet future implementation requirements;
- d) conduct CPL tests between adjacent Area Control Centres, where benefits related to this implementation could result;
- e) establish bilateral or multilateral agreements as appropriate, among States/Territories of adjacent airspaces for trials and operational implementation/integration of ATM automated systems;
- f) establish necessary measures for human resources planning and training;
- g) identify other potential benefits for the ATM community that may be obtained in the long-term;
- h) conduct a cost-benefit analysis; and
- i) document the action plan providing best experiences to other States/Territories.

1.2.14 Concerns were expressed by Dominica during the meeting with respect to their location below, and within the lateral limits of, the Guadeloupe TMA, and their resultant total dependence on Guadeloupe for the provision of Approach Control Service, as it pertains to:

- 1) the severe negative impact on Dominica when flow control procedures are in effect in the Guadeloupe TMA; and
- 2) the necessary planning for upgrading to the provision of public-use instrument approach procedures at Melville Hall Airport in Dominica.

1.2.15 In this regard, informal discussions were held between Dominica, the ECCAA and the French delegation, as a prelude to a formal meeting in the near future.

1.3 SSP and SMS Implementation activities and Progress Status

1.3.1 The Secretariat presented information on the evolution of safety concepts and subsequent implementation of Safety Management Systems (SMS) and State Safety Programmes (SSP) and the challenges for industry and regulators. ICAO provided a perspective on the evolution, challenges and a few implementation issues associated with the migration process to the SMS/SSP environment.

1.3.2 The Meeting was informed that ICAO is enabling the strategic approach to safety management implementation projects around the world and that ICAO support to States with their SMS/SSP implementation plans can facilitate their efforts. States were invited to consider requesting the ICAO NACC Regional Office to deliver a basic SSP implementation course for Civil Aviation Authority staff.

1.3.3 In this regard, the Meeting was informed that the ICAO NACC Regional Office had conducted a SSP training course in Spanish for CAR Region States/Territories in March 2009. An English SSP course will be held in Curaçao, Netherlands Antilles, during the first week of December 2009.

1.3.4 States that have not already done so, are urged to develop an SSP implementation plan and commence related activities at the earliest opportunity to comply with ICAO SARPs.

**METHODOLOGY FOR DETERMINING THE THREE PRIORITY LEVELS
FOR AIR NAVIGATION DEFICIENCIES (U/A/B) ON THE BASIS OF RISK INDEX**

Risk probability	Risk severity				
	Catastrophic A	Hazardous B	Major C	Minor D	Negligible E
Frequent 5	5A	5B	5C	5D	5E
Occasional 4	4A	4B	4C	4D	4E
Remote 3	3A	3B	3C	3D	3E
Improbable 2	2A	2B	2C	2D	2E
Extremely improbable 1	1A	1B	1C	1D	1E

"U" type deficiencies correspond to the shadowed area of this matrix (Risk Indexes: 5A, 5B, 5C, 4A, 4B and 3A)

"A" type deficiencies correspond to all the remaining risk indexes

"B" type deficiencies are not safety related and do not correspond to any of the above risk indexes

**ACTION PLAN FOR THE RESOLUTION OF EACH ONE OF THE REGIONAL AIR NAVIGATION DEFICIENCIES
PLAN DE ACCIÓN PARA RESOLVER CADA UNA DE LAS DEFICIENCIAS REGIONALES DE NAVEGACIÓN AÉREA**

State/Intl. Organization:

Estado/Org. Internacional:

Date/Fecha:

ID	Deficiency/ Deficiencia	Corrective Action/ Acción correctiva	Date of Correction/ Fecha de corrección	Executing Body/ Organo Ejecutor	Difficulties encountered/ Dificultades encontradas
Identify the deficiency using the format AREA-NUM- REG	Exact description of the deficiency as appears in the Databank	State must inform the proposed corrective action or to be carried out, taking into account the action described by the Secretariat	Estimated date for the conclusion of the corrective action of the deficiency, indicating at least the year in which it will be completed	Responsible of carrying out the corrective action	Indicate any difficulty encountered or that could appear for the adequate implementation of the corrective action
Identificación de la deficiencia usando el formato AREA-NUM- REG	Descripción exacta de la deficiencia tal y como aparece en la Base de Datos	El Estado deberá informar la acción correctiva propuesta o que llevará a cabo, tomando en cuenta la acción ya descrita por la Secretaría	Fecha estimada para concluir la acción correctiva de la deficiencia, indicando al menos el año en que se finalizará	Responsable de llevar a cabo la acción correctiva	Mencionar cualquier dificultad encontrada o que se pueda presentar para la adecuada implementación de la acción correctiva.

APPENDIX C

ACTIONS TO REDUCE ATC COORDINATION LOOP ERRORS

- Review Airspace and Facility operations for each facility involved
 - Describe the Airspace
 - Describe the control room/workstation
 - Equipment – Radar/Phone lines/AFTN/ etc.
 - Flight Strips
- Review Incidents and findings by each facility
 - Data Collection
 - Common Factors
 - Casual Factors
 - Mitigations
- Review Letters of Agreements and update procedures
 - Look at letters from other facilities for ideas
- Short Term Mitigations
 - Staffing
 - Sector Configuration
 - Phone lines (more or different types)
 - Incentive programs
- Long Term Mitigations
 - Routes
 - Airspace reconfiguration
 - AIDC
- Note - Encourage participation of active working controllers at these meetings. These are the people with the working knowledge and understanding to make the procedures work.
- Incentive programs – these can be at limited cost. Everyone has been trained and knows what their job is but how can they be encouraged to do it to the best of their ability. This can change between facilities with respect to cultural differences. It is important to make the workforce feel that they have value and that their work is appreciated.
 - Employee of the month
 - Letter of Recognition
 - Time off award
 - Recognition in the local newspaper
- Safety Point of Contact – a Safety POC could have periodic teleconferences with adjacent facilities to share ideas and information. The POC could also prepare periodic briefing/training items to keep awareness and focus on safety.
- Prepare a simplified report form for controller use (attached format). If the form takes too long to fill out, the likelihood is that its completion will be limited. A simplified form will gather a limited amount of information and then a supervisor or other designated person can conduct an investigation.

COORDINATION ERROR REPORTING FORM

DATE: _____ WORK SHIFT: _____

[illegible]

Please Attach Flight Progress Strips

Agenda Item 2: Review of Air Navigation Matters

2.1 Global Air Navigation and CAR/SAM developments

2.1.1 Global and CAR/SAM Air Navigation Activities

2.1.1.1 The Meeting was informed on the global and CAR/SAM air navigation activities, such as the performance-based approach and its metrics, ICAO electronic ANP framework, ICAO tools for analyzing and facilitating decision-making, CAR/SAM ANP/frequency Assignment lists updates and ICAO activities on the harmonization of the United States NextGen and European SESAR Programmes.

2.1.1.2 The Meeting took note of the requested actions for the ICAO SARPs proposals for amendment and requested information on Amendments 84 and 85 to Annex 10, Amendments to Annex 14, questionnaire on proficiency in the English language used for radiotelephony and proposal for amendment to Annex 10 Vol. III and Vol. IV.

2.1.1.3 A video on “*ICAO Seamless Programme from Global concept to regional realities*” was presented to the Meeting, showing ICAO’s future vision on planning and developing gap analysis, task definition, performance objective formulation, online amendment process, and other online tools being developed by ICAO.

2.1.2 ICAO Air Navigation Performance Framework

2.1.2.1 The Secretariat presented WP/06 and provided a presentation to the Meeting on the concept and scope of the Performance Framework concept and ICAO proposal for its application and implementation. The Meeting was informed that under the Performance Based Approach (PBA):

- the Global ATM operational concept represents the vision for 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.
- The Global Air Navigation Plan (GANP) describes strategies aimed at achieving near and medium term air traffic management (ATM) benefits on the basis of available and foreseen aircraft capabilities and ATM infrastructure.
- The Regional Plan and State Plans are considered to be the action plans.
- 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.
- Performance objectives may change depending on the ATM system’s evolution; therefore, throughout the implementation process, these should be coordinated with and be available for all interested parties.

- PBA is based on three principles:
 - a) Strong focus on desired/required results;
 - b) Informed decision making, driven by desired/required results; and
 - c) Reliance on facts and data for decision making.

2.2 Air Navigation specific activities

Because of the numerous WPs, the meeting agreed to form several Ad Hoc groups to deal with the ATM, CNS, AIM and AGA WPs. These Ad Hoc groups met after the end of the plenary meeting and presented their reports to the Secretariat.

2.2.1 Air Traffic Management (ATM)

Review of the ATM Committee Report

2.2.1.1 A transcript of the ATM Ad Hoc group report is included in **Appendix A** to this part of the report.

Review of the SAR Committee Report

2.2.1.2 The Chairman of the E/CAR SAR Committee presented the report on Search and Rescue (SAR) activities within the Eastern Caribbean (E/CAR) and suggested actions to collect outstanding SAR information and to convene a SAR Committee Meeting to review and make progress on outstanding work.

2.2.1.3 The Meeting noted that the last formal SAR Meeting in the E/CAR was held in 2001. While there has been some collaboration between E/CAR States since that time, there is a need to identify a point-of-contact in each of the E/CAR States and Territories, regarding SAR information to confirm that the activities envisaged by the conclusions and recommendations of the CAR/SAM RAN/3 and GREPECAS/11 Meetings are indeed completed in the Sub-region.

2.2.1.4 The Meeting also noted that some States in the E/CAR have difficulty in the implementation of some of these recommendations as several actions require the establishment of high level institutional agreements. In addition, States are required to gather information from collaborating Agencies and Organizations to provide SAR service in jurisdictional airspace and overseas within Piarco FIR/SRC.

2.2.1.5 Based on the SAR Matrix presented in **Appendix B** to this part of the report, the Meeting agreed that the SAR checklist may be used by States to assess their SAR Capabilities and details on resources available, as follow-up on the status of the conclusions and recommendations of the CAR/SAM RAN/3 and GREPECAS/11 Meetings in each State.

2.2.1.6 The meeting agreed that SAR information from individual States should be sent by their point of contact to the Piarco Aeronautical Information Services (AIS) or directly to Mr. Trevor Dowrich (tdowrich@caa.gov.tt), the Chairman of the E/CAR SAR Committee, by 15 November 2009 in order to have the results discussed at the Twenty Second Meeting of Directors of Civil Aviation of the Eastern Caribbean (E/CAR/DCA/22) being held in Port of Spain, Trinidad and Tobago from 8 to 11 December 2009. This information will also form the basis for the convening of an E/CAR SAR Meeting in 2010. To this end, the Meeting agreed on the following:

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CONCLUSION 31/2

E/CAR HIGH LEVEL SAR MEETING

That the Directors of Civil Aviation of the Eastern Caribbean convene a high level SAR Meeting in the E/CAR during the first quarter of 2010 with an aim to:

- a) review and update existing SAR Agreements as well as to seek permission for SAR Units from other States to provide SAR assistance within the jurisdiction of another State;
- b) establish proper Coordination between civil and military authorities for efficient use of all available resources;
- c) review SAR staffing requirements and response capacity within Piarco Flight Information Region (FIR); and
- d) review other related activities to improve SAR service in the E/CAR and the Piarco FIR.

PBN implementation

2.2.1.7 The Meeting recalled Assembly Resolution 36-23 on the implementation of RNAV/RNP procedures, which resolved that States and GREPECAS complete a PBN implementation plan by end 2009, which will include achieving implementation of approach procedures with vertical guidance (APV) (Baro-VNAV and/or augmented GNSS) for all instrument runway ends either as the primary approach or as a back-up for precision approaches by 2016 with intermediate milestones as follows: 30 percent by 2010 and 70 percent by 2014.

2.2.1.8 It was noted that many of the navigational advances enabled by PBN are compatible with the avionics technology currently installed in most of the world's major commercial aircraft fleets—meaning minimal or no new equipment requirements for major aircraft operators or Air Navigation Service Providers (ANSPs). However, a new airspace concept and determining requirements calls for a multi-disciplinary team and includes factors such as airspace organisation and management, listing airworthiness and operational approvals, etc.

2.2.1.9 PBN represents a framework for defining a navigation performance specification along a route, during a procedure, or in an airspace within which an aircraft must comply with specific operational performance requirements. Since several airports have implemented GNSS procedures in the E/CAR there are still additional tasks that should be developed in the near future such as:

- a) methodologies for traffic forecast and cost benefit analysis;
- b) air operations simulation in different scenarios;
- c) ATC personnel training;
- d) uniform classification of adjacent and regional airspaces;
- e) RNAV/RNP application in SIDs and STARs;
- f) RNAV routes implementation;
- g) FPL processing;
- h) automation updates;
- i) WGS 84 implementation; and
- j) AIS support for PBN publications.

2.2.1.10 The Meeting agreed that E/CAR States/Territories should issue PBN regulations and procedures so as to allow operational enhancements to the airspace capacity and benefits for aircraft operators in the near term. It is necessary also to review the ATS routes network, assign particular RNAV or RNP navigation specification to the ones already implemented and publish related information in the AIP as soon as practicable.

2.2.1.11 To this end, the Meeting was advised on the possibility of Trinidad and Tobago CAA to hold a PBN Workshop/Seminar for the States/Territories of the E/CAR. Further, it was agreed that States/Territories shall take action to complete the Action Plan presenting the same to the ICAO NACC Regional Office copying the Rapporteur when making their submission. The Meeting agreed to formulate the following draft conclusion:

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CONCLUSION 31/3 PBN IMPLEMENTATION IN THE NATIONAL AIR NAVIGATION SYSTEMS

That Eastern Caribbean States/Territories report on their national PBN Plan and implementation progress achieved with their national air navigation systems to the ICAO NACC Regional Office by **30 January 2010**.

2.2.1.12 The United States presented IP/05 informing the Meeting on PBN (RNAV and RNP) implementation and plans in the United States National Airspace System (NAS). It also addressed the role of Space Based Augmentation Systems (SBAS) as a sensor input to PBN and noted recently updated and newly published U.S. guidance material for PBN.

ATS Interfacility Data Communication (AIDC)

2.2.1.13 United States presented WP/29, and the Meeting recalled that GREPECAS encouraged States and international organisations to implement the ATS Interfacility Data Communications (AIDC). Considering the need for a harmonised approach to the implementation of AIDC, the Meeting expressed appreciation for the presentation of the WP and its support for implementation of AIDC as a means to improve safety and bilateral coordination.

2.2.1.14 The Secretariat commented that a key element of analysis is to review each incident in detail, identify casual factors of the incidents and establish short and long-term mitigations. The analysis also provides the opportunity to establish a safety culture and relationship in which ATS safety-related data is shared to help identify potential issues so that preventative measures can be taken before ATS incidents occur.

2.2.1.15 The Secretariat indicated that it would be convenient to support an Internal ATS Safety Auditors training event next year. The Meeting recalled that another aspect is ATM Automation Interface; NACC/DCA Conclusion 3/7 covers the necessary actions to accomplish automated system interface in the short-term.

ATFM

2.2.1.16 The Meeting briefly commented on WP/33 presented by the United States on ATFM issues, which included a questionnaire and ATFM Manual with updates made during the ATFM/TF/4 Meeting held in Colombia in June 2009.

2.2.1.17 The Meeting took into account that GREPECAS considered that ATFM implementation in the CAR/SAM Regions would require development of detailed guidelines for States and international organisations, including the following aspects:

- review experience in other regions;
- obtain and complete the information, taking note of the status in the participating States and organisations; and
- obtain and complete the information, taking note of the status in the participating States and organisations regarding the electronic databases required for the evolutionary phases of the ATFM system.

Activities for the new Flight Plan format implementation

2.2.1.18 The Secretariat presented WP/09, which dealt with *ICAO Guidelines for the New Flight Plan format*, provided information to States/Territories assisting them in developing their national procedures and actions to meet the proposed implementation date by **15 November 2012**. A new performance framework form on the transition to the new flight plan format was included within the NAM/CAR Regional Performance-Based Air Navigation Implementation Plan.

2.2.1.19 In view of the many implications affecting a wide range of automated flight plan processing systems and the associated operating practices, the planned activities should assess compatibility of existing automated systems, human factors, training, etc. Any incompatibility with the processing capability in few States could have significant impact on operations in other States of the E/CAR region that has the potential to create a significant degradation of ATM services.

2.2.1.20 The Meeting was informed that ICAO will publish a website that will contain the implementation status of new provisions in all Flight Information Regions (FIRs) and will publish issues related to implementation and be available for discussions among subject matter experts and State designated points-of-contact. One of the main concerns of airspace users is the possible post-implementation challenge that will be faced by States and service providers who are not able to implement by the deadline.

Missing Flight Plans

2.2.1.21 An analysis of missing flight plans, included in **Appendix C** to this part of the report, was presented by the French DGAC, SNA-Antilles Guyana in WP/35.

2.2.1.22 The Meeting raised concerns regarding the number of missing flight plans within the Piarco FIR. The situation reflects that many flight plans are not received in ATS units, and the repartition of missing FPL per companies and per departure terrains, with results as follows:

- ATC workload increases: coordination is more complicated, reduced FPL are to be created locally or AFTN investigations are needed,
- Loss of aircraft information: in case FPL is missing, there is no information on the aircraft (for instance rescue equipment, etc) that could be a problem in case of an accident.
- Certain ATM or CNS functions are FPL dependent such as ADS-C/CPDLC.
- Some flights are systematically without FPL; ATCOs are familiar and this becomes routine situation.

2.2.1.23 Initial analysis issued from SAT12 in 2005 indicated the following reasons for the missing flight plans:

- 1) Foreign agencies are not addressing flight plans to the respective ATC units. Most are sent to Piarco ACC only. This has been discovered to be the major contributing factor for missing flight plans.
- 2) Flight Plans are not being transmitted by the required agency; that is no flight plan is being sent out.
- 3) The use by some users and/or centres of a repetitive flight plan system without any regional agreement. The result is a wrong use of received FPLs that are not disseminated on the right day at the right hour. There is a need for an internal investigation by all local AIS units to verify that all repetitive flight plan (RPL) are correctly disseminated.
- 4) Some flight plans have been observed to be transmitted after the Departure time. This may be due to requests being made for flight plans discovered missing even though the flight is still allowed to depart.
- 5) AFTN links unserviceable
- 6) Very small number were observed with incorrect AFTN format.

2.2.1.24 Due to the lack of reliability of the E/CAR AFS network, AFTN new routing is under consideration by France, as the possibility to bypass the E/CAR AFS network via a direct leased line between Trinidad and French West Indies, or the possibility to use Rochambeau FIR (French Guyane) as a full backup.

2.2.1.25 Unanimously, the meeting concurred that this deficiency impacts safety since the number of missing FPLs are increasing, therefore it is necessary to set up urgent actions to reverse that trend with proper investigations on the loss of AFTN messages between E/CAR ATC units. Based on urgent actions, the Meeting agreed to the following:

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CONCLUSION 31/4

URGENT ACTIONS TO MITIGATE NUMBER OF MISSING FLIGHT PLANS IN ATS UNITS OF THE EASTERN CARIBBEAN.

That

- a) the E/CAR States and Territories:
 - i) conduct an evaluation of their flight plan processing system in an internal investigation by all local AIS units to verify that all repetitive flight plans (RPL) and flight plans (FPL) are correctly disseminated;
 - ii) review the RPL system used in their ATS units;
 - iii) analyze and assess the loss of AFTN messages between E/CAR ATS units;
 - iv) undertake a regional investigation on missing FPLs between **1 to 30 November 2009**, utilizing the guidelines and form provided in Appendix E of the Report; and
 - v) submit to the ICAO NACC Regional Office the results obtained from the above-mentioned actions by **15 December 2009**.
- b) the ICAO NACC Regional Office propose other remedial actions to ensure proper coordination of flight plan data between ATS units, and follow-up on the actions listed in item a), and assist States and Territories of the Eastern Caribbean, as required.

ICARD 5LNC Database implementation in ICAO NAM/CAR Regions – Nominations of 5LNC/Route Planner users for ICARD System

2.2.1.26 Based on the ICAO NACC Regional Office State Letter N1-2.1 – **EMX0597**, sent on 18 June 2009, the Secretariat presented progress on the required nominations from States/Territories/International Organizations for Route Planner Users of ICARD System, so as to continue regional activities for the Global Implementation of the Electronic Air Navigation Plan (eANP).

2.2.1.27 It was also noted that a web link has been created on the ICAO NACC Regional Office website to assist in registering authorized users. The Secretariat presented a video regarding the registration for authorized users as part of the Phase 2 planning activities for the registration of route planner and the operation of the ICARD 5LNC System.

San Juan (ZSU) Sector 10 Surveillance and Communication Enhancement Project

2.2.1.28 United States presented information on implementation work by increasing radar coverage and implementing advanced technologies to enhance radar, Advanced Technologies and Oceanic Procedures (ATOP) / Ocean21 System surveillance in ZSU Sector 10 airspace.

2.2.1.29 The FAA Task force evaluated a three-phase plan for ZSU Sector 10 airspace. Safety and Efficiency Benefits will be obtained with expanded ZNY Ocean21 CPAR Coverage and Transfer of ZSU Sector 10 Non-radar Airspace to ZNY Control.

Update on Activities of the Atlantic Interoperability Initiative to Reduce Emissions (AIRE)

2.2.1.30 United States presented IP/04 on the AIRE Partnership Phase II Oceanic Demonstration, as an international government, airline, and industry initiative to minimize global aviation's environmental impact. The AIRE program is working to accelerate the development and implementation of oceanic procedures that result in environmentally friendly operations such as reduced emissions and noise. AIRE is working on efforts to integrate new technologies and procedures under NextGen and SESAR to achieve the following objectives:

- a) Hasten development of operational procedures to reduce aviation's environmental footprint for all phases of flight, from gate to gate;
- b) Accelerate incorporation and worldwide interoperability of environmentally friendly procedures and standards;
- c) Capitalize on existing technology and best practices;
- d) Provide a systematic approach with short, medium and long-term initiatives; and,
- e) Validate improvements with flight trials and demonstrations.

2.2.1.31 The AIRE Partnership focus includes all flight segments, beginning with the departure gate and terminating when an aircraft arrives at its destination; hence, "Gate to Gate." AIRE focuses on the entire flight, with a "phased approach" to flight demonstration initiatives including:

- Increase operator efficiency
- Increased system precision and enhanced automation
- Reduce fuel burn
- Improve predictability
- Reduce greenhouse gas emissions (AIRE initiative)
- Increase oceanic traffic flow capacity

2.2.1.32 Starting in 2009, AIRE demonstrations will validate the environmental advantages of new procedures for all phases of flight, from engine start at the departure gate through taxi, take off and climb to cruise altitude, en-route to the destination, approach, landing and taxi to the arrival gate. The collected data from these flight tests will be used to determine the environmental benefits. The results of these demonstrations are envisioned to accelerate the development of oceanic operational procedures and standards on both sides of the Atlantic Ocean.

2.2.1.33 The Phase II AIRE Oceanic Demonstration will be conducted over the period from June 2009 through September 2009. During the demonstration period, the AIRE participant flights may also be able to request and receive Tailored Arrival clearances into Miami International (MIA).

2.2.1.34 The data collection on the candidate flights will end at the conclusion of the AIRE Oceanic Demonstration period (expected to be the end of September 2009); however, airlines may continue to use the procedures for flight optimization.

2.2.2 *Communications, Navigation and Surveillance (CNS)*

Review of the CNS Committee Report

2.2.2.1 The CNS Committee Rapporteur presented WP/30 which provided to the meeting an update on the CNS Committee activities since the Thirtieth Eastern Caribbean Working Group Meeting (E/CAR/WG/30), held in Saint Lucia from 5 to 9 June 2006. This WP was reviewed by the CNS Ad Hoc group and its actions were incorporated in the *NAM/CAR Regional Performance-Based Air Navigation Implementation Plan*.

Review of Radar Data Sharing Task Force Report

2.2.2.2 Through WP/34, the meeting was informed on the status of the radar data sharing task force assigned activities:

- **Completed:** project on radar data provision from Martinique to Saint Lucia;
- **Completed:** project on radar data provision from Martinique to Trinidad and Tobago Piarco ACC;
- **Planned:** the RDPS seamless common radar image utilizing the radar data from Antigua, Barbados, French Antilles (combined Martinique and Guadeloupe radars), Trinidad and Tobago and Sint Maarten; and
- **Planned:** multiradar data feed may be exported to interested States from the ATM Systems from Martinique and/or Trinidad and Tobago. The French Antilles will conduct a teleconference with the Radar Data Sharing Task Force members by the end of 2009.

2.2.2.3 Antigua and Barbuda informed that they are not in a position to advise the meeting of the actual plans for the Antigua Radar Project as such decisions have to be made at a higher level.

Digital Networks in the CAR Region

2.2.2.4 The Meeting was informed through WP/10, of the status and activities carried out by the VSAT digital networks in the CAR Region, and the follow-up of implementation of the interconnection of the MEVA II and REDDIG VSAT Networks:

- a) **MEVA II Network:** This network was successfully upgraded in 2006 to meet new CNS/ATM services and for the integration with other VSAT telecommunication networks. The MEVA II network has had a satisfactory performance in the last years and will have a future increase on the use of the network bandwidth, the implementation of the Contingency Plan; the MEVA II website (www.mevaii.net), action plans for equipment upgrade, plan for the satellite transition from IS 1R to IS-14, assessment/preparation for new services such as radar data sharing and the implementation of AMHS and progress in the interconnectivity activities of the MEVA II/REDDIG networks.

- b) CAMSAT Network: the Central American VSAT network managed by COCESNA currently working with 16 operating stations with aeronautical voice and data communications, administrative communications and an Intranet service (WAN).
- c) Other domestic VSAT networks in the CAR region, such as the Mexican VSAT network and VSAT stations of the Colombian network.

2.2.2.5 The Secretariat emphasized the application of ALLPIRG Conclusion 5/16 – *Implementation of very small aperture terminals (VSATs)* which urges PIRGs to discourage the proliferation of VSAT networks where one/some of the existing ones can be expanded to serve the new areas of interest and work towards integrated regional/interregional digital communication networks with a single (centralized) operational control and preferably based on the Internet Protocol (IP) and give due consideration to managed network services (e.g. a virtual private network [VPN]), subject to availability and cost-effectiveness, and has set the VSAT networks performance guidelines to manage the end-to-end performance of digital communication networks, irrespective of the technologies and protocols utilized.

2.2.2.6 The meeting took note of the E/CAR Network's architecture and its process for its second upgrade. The NET was sub-contracted to maintain the end user multiplexing equipment effective on 1 July 2009. The software and partial hardware upgrade is expected to be completed by mid November 2009. The E/CAR Network is considering a VSAT network to replace the terrestrial E/CAR network in the near term.

2.2.2.7 Barbados presented WP/26, which addressed the poor functioning of the E/CAR Digital Network and the need to establish a protocol for the easy and expeditious movement of spare parts within the Region.

2.2.2.8 French Antilles presented WP/36, informing the Meeting that the E/CAR network is not meeting their operational requirements, which is resulting in AFTN blackouts, and/or operational telephone unavailability.

2.2.2.9 Saint Vincent and the Grenadines informed that they experienced a 3-month system outage with the E/CAR network, continuous communication problems with Saint Lucia and an intermittent service. Flight Plans have to be faxed due to failures in AFTN communications.

2.2.2.10 Antigua and Barbuda informed that most coordination is being made through PSTN lines, and that they are experiencing a similar situation as Saint Vincent and the Grenadines regarding their flight plans and voice circuits. They concluded that the E/CAR Network is unreliable.

2.2.2.11 Grenada informed about their evaluation of the E/CAR Network performance, indicating that recently the AFTN service was out for about one month and that the voice service is intermittent resulting in having to use backup telephone lines instead.

2.2.2.12 Montserrat indicated that over the past two months, the AFTN service provided by the E/CAR Network has only worked one week.

2.2.2.13 In this regard, the Meeting expressed its concern for the faulty and degraded services that are provided by the E/CAR network in both data and voice circuits. The meeting assigned the CNS ad hoc group the task to analyze the current status of improvements for the E/CAR Network and present an action plan for solving deficiencies, including the replacement/renewal planning of the E/CAR Network. A transcript of the CNS ad hoc group report is included in **Appendix D** to this part of the report.

2.2.2.14 The current E/CAR network deficiencies are impacting safety, making coordination more complicated between air traffic centres, due to lack of flight plans or unreliable voice communication services; resulting that the current E/CAR network does not fit operational requirements in terms of availability, maintenance reactivity [response times to resolution of faults], and information about the network status to users. Based on this information, the Meeting agreed on the following draft conclusions:

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CONCLUSION 31/5

URGENT ACTIONS TO IMPROVE E/CAR AFS NETWORK OPERATIONAL PERFORMANCE

Due to the current poor performance and unreliability of the E/CAR AFS Network service, and its inadequate management, which may have an impact on ATS safety, the E/CAR States and Territories urge Trinidad and Tobago Civil Aviation Authority (TTCAA) to:

- a) provide feedback by **16 October 2009** on all failure reports submitted in the E/CAR region. This feedback shall include:
 - the identified causes
 - the corrective actions undertaken
 - the foreseen planning
- b) consider changing the current service provider managing the network.

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CONCLUSION 31/6

E/CAR AFS NETWORK IMMEDIATE RECOVERY ACTIONS

In order to ensure normal operations of the E/CAR AFS Network and due to the frequent and continuous failures in voice and data communications, the following immediate actions are required:

- a) that TTCAA immediately send the corresponding technical personnel and adequate spare parts to unserviceable sites to restore the network (including Barbados and Guadeloupe) by **16 November 2009**;
- b) each E/CAR Network member State shall facilitate the transportation of spare parts of the system, to avoid delays due to VAT payments or customs formalities;
- c) under TTCAA management, adequate spare parts shall be available on sites,
- d) that TTCAA study the possibility for first intervention actions to be performed by local maintenance teams; and

- d) progress on these actions is to be reported by TTCAA to E/CAR Network members and ICAO by **23 November 2009**.

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CONCLUSION 31/7

REPLACEMENT OF THE E/CAR AFS NETWORK

Due to the current condition and performance of the E/CAR AFS Network with its maintenance difficulties (equipment, spare parts, logistics) and the need of a telecommunication network capable of supporting the future Air Navigation services and systems (AIDC, AMHS, Surveillance data sharing, etc), that:

- a) an E/CAR Network Technical Group (E/CAR/NTG) be formed to study, analyze and follow-up on the planning, documentation and implementation of the replacement of the E/CAR AFS Network;
- b) TTCAA conduct the replacement process of the E/CAR Network, assisted by the E/CAR/NTG and the ICAO NACC Regional Office; and
- c) the new AFS Network should be a VSAT solution operational **by mid 2011**.

ATN Implementation

2.2.2.15 The Meeting was informed (IP/07) of the results of the GREPECAS Fifth ATN Task Force Meeting on the planning documents for AMHS implementation and ATN deployment. The Rapporteur of this Task Force informed the meeting of the recent acceptance of the CAR/SAM IPv4 Addressing scheme by the ASIA/PAC ATN implementation Group.

2.2.2.16 The United States informed the Meeting (IP/08) on the current status of their Federal Aviation Administration (FAA) National Airspace Data Interchange (NADIN) Message Switch Network (MSN) and their Air Traffic Services (ATS) Message Handling System (AMHS) Programs.

2.2.2.17 To accomplish and enable several of the performance objectives, the Secretariat presented WP/11 and the Meeting took note that communication infrastructure is an enabler of the ATM operational concept and that its evolution is important, as defined in the Global Air Navigation Plan (GANP) Strategy GPI-22 – *Communication Infrastructure*. Similarly, the efficient and organized use of the aeronautical radio spectrum is fundamental for all the different applications and systems implemented in air navigation as described in GPI-23 – *Aeronautical Radio Spectrum*. Due to the importance of these topics, the Meeting included in the *NAM/CAR Regional Performance-Based Air Navigation Implementation Plan* the following new performance objectives (Performance Framework Forms) and action plans that were revised by the CNS Ad Hoc Group:

1. Performance Objective on the Protection and Optimum Use of Radiofrequency Spectrum – Actions on radio frequency management activities and the coordination and communication for conducting the States' support to the ICAO position for the ITU WRC-2012 meeting.

2. Performance Objective on Optimization and Modernization of Communication Infrastructure – Review of the current status of this infrastructure, the implementation of improvements, the Aeronautical Telecommunication Network (ATN) tasks and planning of new communication technologies.
3. Action Plan on Follow-Up and Implementation of Air-Ground and Ground-Ground Communications – Communication-related activities that are necessary to enable the implementation of several services and systems in accomplishing the performance objectives.

2.2.2.18 The Secretariat presented WP/12 and informed the Meeting of the short-to-medium term agreement between EUROCONTROL and ICAO for the coordination of the allocation and management of AMHS addresses, Directory Services, and the training offered to users for the AMC Operations. In this regard, the Meeting took note of the following:

- That ICAO has invited EUROCONTROL to provide the ATS Messaging Centre (AMC) training, which will be held together with the ICAO Seminar on the Implementation of ATN Ground/Ground and Air/Ground Applications; both scheduled to be held in Dominican Republic from 23 to 27 November 2009.
- the procedures for minor and major changes, as well as considerations for the management with the AMC and informing the request to the ICAO NACC Regional Office of any new registration to the AMC;

2.2.2.19 Since Trinidad and Tobago had planned its AMHS implementation, the meeting suggested Trinidad and Tobago to register in the AMC and to take advantage of the information, operational features and testing data available on the AMC site for facilitation the implementation and operation of the AMHS.

Navigation and surveillance systems for Air Navigation improvements in the E/CAR Region

2.2.2.20 The United States informed of its San Juan (ZSU) Sector 10 Surveillance and Communication Enhancement Project (IP/06), which consisted of Sector 10 service provision by ZNY Control and radar coverage enhancements in Grand Turk and Pico del Este radars and the implementation of ADS-C and CPDLC in this area.

2.2.2.21 The Meeting was informed on the Federal Aviation Administration's (FAA's) Surveillance and Broadcast Services Programme (IP/11), including the overall approach, implementation planning, and expected benefits and costs. This program covers several ADS-B implementation, cockpit applications, wide area multilateration and cost-benefit analysis results.

2.2.2.22 The meeting approved the inclusion of two new action plans in the *NAM/CAR Regional Performance-Based Air Navigation Implementation Plan* regarding navigation and surveillance related actions in support of the following performance objectives:

- Optimize the ATS route structure in en-route airspace
- Optimize the ATS route structure in terminal airspace
- Implement RNP Approaches
- Improve demand and capacity balancing
- Improve ATM Situational awareness

2.2.2.23 These action plans are:

1. *Action Plan on Follow-Up and Implementation of Navigation Systems*
Navigation-related activities that are necessary to enable the different navigation specification as defined in the CAR/SAM PBN Roadmap, as well as other future activities for GNSS elements and systems.
2. *Action Plan on Follow-Up and Implementation of Surveillance Systems*
Surveillance-related activities to implement a common situational awareness, facilitate ATFM and seek improvements to the current status of the surveillance system, by means of sharing surveillance data and assessing new technologies.

2.2.2.24 The meeting was informed of Trinidad and Tobago's modernization project (IP12), which involved the upgrade of communications equipment; replacement of certain Navigation Aids and installation of new ones, and the implementation of a seamless Surveillance Service within the Piarco FIR west of 057°W.

Frequency Management and ICAO position for WRC-2012

2.2.2.25 The Secretariat informed the Meeting (WP/14) of the latest actions and results regarding the update made to the radio frequency assignment lists for the CAR Region, as part of the preparation of information for its inclusion within the electronic Air Navigation Plan (eANP); reiterating the importance to have accurate information for the Regional Planning of the States. Barbados informed that they will provide some updates to these lists and the meeting was encouraged to provide further updates before the publication of the updated versions of the lists, scheduled for the end of October.

2.2.2.26 The Secretariat informed the Meeting about the prototype frequency assignment tool being developed by ICAO. Barbados, French Antilles, Trinidad and Tobago and the ECAA were handed out a copy of the prototype tool. Comments and observations are to be submitted to ICAO by the end of the year in order to improve the tool.

2.2.2.27 The meeting was informed (WP/15) of the results of the World Radiocommunication Conference (2007) (WRC-2007), the ICAO position for the next ITU WRC scheduled for 2012, as well as several suggested actions, based on the lessons learned from the WRC-2007, and on the preparation for State support in ITU related meetings.

2.2.2.28 The ICAO final position for ITU WRC-2012 was approved by the Air Navigation Commission and communicated to States through State Letter Ref. E 3/5-09/61 dated 30 June 2009. The Meeting agreed to support the idea to carry out a seminar on the management of the radio frequency spectrum for aviation and preparations for WRC-2012, in order to understand and support the ICAO position for WRC-2012 and the management of radio frequency spectrum in aviation. The meeting was informed that the C/CAR/WG/7 meeting formulated Draft Conclusion 7/2 – *Seminar on Aviation Radio Electric Spectrum Management and Preparation for the WRC-2012*, which was approved by the C/CAR/DCA/10 Meeting. In this regard, the Meeting agreed to support the same conclusion for the E/CAR Region.

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CONCLUSION 31/8

**SEMINAR ON AVIATION RADIO ELECTRIC SPECTRUM
MANAGEMENT AND PREPARATION FOR THE WRC-2012**

That, in view of the preparation and support for the ICAO position for the ITU World Radiocommunication Conference 2012 (WRC-12):

- a) the ICAO NACC Regional Office request headquarters to organize in the NACC Office by the first semester of 2010, a bilingual Seminar for the CAR Region on Aviation Radio Electric Spectrum Management, in which all the necessary topics are included to prepare States to understand and support the ICAO position for the ITU WRC-2012; and
- b) States/Territories/International Organizations facilitate the participation of their experts in this seminar, as well as inform the designated point-of-contact to support the ICAO position by June 2010.

2.2.3 *Aerodromes and Ground Aids (AGA)*

2.2.3.1 According to GREPECAS Decision 15/22 – *Survey on Aeronautical Studies in the AGA Field*, the meeting was requested to complete and send to this Regional Office by 23 October, 2009 the States' survey on aeronautical studies to present acceptable means of ensuring safety of aircraft operations at aerodromes.

2.2.3.2 Barbados and French Antilles informed the meeting that they will send the information to the ICAO NACC Regional Office as requested.

2.2.3.3 Under WP/17, the meeting was requested to review, update and send to the ICAO NACC Regional Office by **23 October 2009**, the information on Appendixes A and B of this paper, regarding Aerodrome certification and SMS implementation. The Meeting agreed to include into the *NAM/CAR Regional Performance-Based Air Navigation Implementation Plan* new performance objectives (Performance Framework Forms) related to aerodrome certification and solutions to the major AGA deficiencies. Although, several changes are foreseen to the AGA activities due to the application of the Performance based approach (PBA). The GREPECAS AGA/AOP Subgroup (AGA/AOP/SG) will propose several regional actions (PFFs) for these changes in their next meeting to be held in November 2009 (AGA/AOP/SG/7 Meeting to be held on Buenos Aires, Argentina from 9 to 13 November, 2009).

2.2.3.4 ECCAA informed that Aerodrome certification for the OECS members is delayed due to the absence of an Aerodrome Manual, which is being developed. ECCAA informed that Grenada will be performing its SMS implementation in this month of October.

2.2.3.5 The United States informed the meeting (IP/09) about the Airport Cooperative Research Program (ACRP), which carries out applied research on problems that are shared by airport operating agencies throughout the world. The results of all ACRP research projects are available online and free of charge under the ACRP website (<http://www.trb.org/crp/acrp/acrp.asp>).

2.2.3.6 The United States also provided information (IP10) on their aerodrome pavement maintenance workshops being conducted in the region, and that the second workshop is planned to be held in Antigua and Barbuda from 12 to 13 October 2009.

2.2.3.7 The United States proposed the establishment of an AGA Committee in the E/CAR/WG to develop the AGA related PFFs of the NAM/CAR Regional Performance-Based Air Navigation Implementation Plan.

2.2.4 *Aeronautical Meteorology (MET)*

2.2.4.1 Under this Agenda Item, the Secretariat informed the meeting (WP/18) on activities to maintain MET information up-to-date, the preparation, dissemination and use of SIGMET messages, WAFS protection considerations, the importance of MET-ATS-AIM coordination and the implementation of quality management system for meteorological information. The meeting was informed that the Civil Aviation Authority of Jamaica will host an ICAO Seminar / Workshop on the “Development of a Quality Assurance System to enhance the Aeronautical Meteorological Service” to be held in Montego Bay, Jamaica, from 25 to 27 November 2009.

2.2.4.2 Similarly, the meeting agreed that Civil Aviation Directorates, Air Traffic Control Services and Meteorological Authorities of the Eastern Caribbean States should remind pilots, ATS and MET personnel the need to comply with ICAO standards to ensure that: “Special air-reports are prepared and relayed to the meteorological offices, without delay, to prepare and issue SIGMET messages.”

2.2.4.3 The meeting also recognized the lack of attendance of MET personnel to the E/CAR/WG, which has already been discussed by the group and E/CAR/DCAs. In this regard, ICAO will continue to promote MET participation and States are encouraged as well to do so, as indicated in conclusion NACC/DCA/3/8.

2.2.4.4 The Meeting agreed to include within the NAM/CAR Regional Performance-Based Air Navigation Implementation Plan a new performance objective (Performance Framework Form) for the improvement of Availability of Meteorological Information.

2.2.5 *Aeronautical Information Management (AIM)*

2.2.5.1 The Meeting noted that AIS must evolve to the broader concept of AIM with different working methods for the provision of AIS. This evolution also identifies mechanisms for validating competency, and the development of supporting guidance and training material. An action implementation plan will be developed for the transition from AIS to AIM. It was informed that the transition from AIS to AIM will be discussed at the GREPECAS AIM/SG/12 Meeting, to be held in the ICAO SAM Regional Office from 23 to 27 November 2009, and several changes are foreseen to the AIM activities and implementation projects due to the application of the Performance-Based Approach (PBA). In this regard, the AIM/SG will propose several regional actions (Performance Framework Forms [PFF]) for conducting this transition to AIM.

2.2.5.2 The Meeting recognized the need for E/CAR States and Territories to establish a tentative work programme for the transition from AIS to AIM in accordance with the global roadmap (<http://www2.icao.int/en/anb/met-aim/aim/Pages/RoadmapfromAIStoAIM.aspx>) and the regional actions to be proposed by the GREPECAS AIM/SG. Similarly, the Meeting considered important to present the AIS/MAP action plans for resolving deficiencies. Both the tentative programme and the AIS/MAP action plans are to be submitted to the ICAO NACC Regional Office by **30 January 2010**.

2.2.5.3 Regarding duplication and missing flight plans, the Meeting recalled that the responsibility for providing adequate flight plans rests with the operators. Therefore, the Meeting considered that all E/CAR States and Territories should participate in regional activities to solve related deficiencies in the PIARCO FIR.

2.2.5.4 The Meeting acknowledged the importance of current and valid AIS Letters of Agreement (LOA) in order for efficient and timely processing of aeronautical information which has a direct impact on air traffic management. The Meeting then agreed that all States should review and update their individual AIS LOAs as a matter of urgency.

2.2.5.5 In reviewing the attachment to WP/28, the Meeting acknowledged that AIS in the E/CAR has not kept pace with ICAO recommended development for this specialty area. The meeting discussed the training requirements for AIS personnel to carry out activities, especially about the transition from AIS to AIM and all related issues according to the roadmap mentioned before.

2.2.5.6 The meeting also noted that the E/CAR States and Territories need to take all necessary actions to ensure attendance of AIS specialists at the AIM Training Seminar that could be scheduled to take place in August 2010. The importance for the E/CAR States and Territories to establish AIS units with dedicated staff was stressed since progress to AIM cannot take place with staff temporarily assigned to AIS.

2.2.5.7 A transcript of the AIM ad hoc group report is included in **Appendix E** to this part of the report.

2.3 NAM/CAR Regional Performance-Based Air Navigation Implementation Plan

2.3.1 The Secretariat presented WP/07 on the NAM/CAR Regional Performance-Based Air Navigation Implementation Plan, which ensures coordination among all air navigation services toward a seamless ATM system in line with Doc 9750 operational initiatives and in accordance 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.”*

2.3.2 The Meeting also recognized that the work of all air navigation fields was being merged and that work has to be addressed in a holistic and strategic way. The Meeting noted that accomplishing the work associated with performance objectives will require efforts for working in close coordination amongst all air navigation fields.

2.3.3 The Meeting considered the alignment of the E/CAR/WG work programme with this regional implementation plan, considering the performance objectives with detailed tasks, deadlines and ICAO NACC Regional Office periodic monitoring activities. It was also indicated that these performance-based work strategies will impact the dynamic update of the implementation programmes and terms of reference of the E/CAR/WG.

2.3.4 The establishment of new performance objectives in line with ICAO guidelines will allow the dynamic identification of needs and periodic follow-up of attained implementation results and the optimum assignment of resources by States/Territories/International Organizations. **Appendix F** to this part of the Report shows the consolidated E/CAR version of the NAM/CAR Regional Performance-Based Air Navigation Implementation Plan.

2.3.5 The Meeting agreed that restructured and coordinated work between all ANS fields would ensure efficient implementation in the short and medium terms in order to achieve harmonized enhancements within the ATM Operational Concept approach. The Meeting unanimously agreed to the performance based approach, including the review of terms of reference of the E/CAR/WG.

2.3.6 Based on WP/21, the meeting recalled that one of the key aspects of the performance based approach to air navigation planning is the development of performance objectives with related measurable indicators and metrics. The performance monitoring and measurement of ATM systems calls for metrics in area that envelopes access, capacity, cost effectiveness, efficiency, environment, flexibility, predictability and safety. On the basis of the Global ATM Operational Concept and the Manual on Performance of the Global Air Navigation System, a sample set of metrics is listed in Appendix C to this working paper.

2.3.7 The Meeting was also informed that the data needed for some of the metrics (e.g. fuel consumption or aircraft movements) listed as metrics are in the final phase of being officially collected from the Contracting States, in the context of the ICAO Statistics Programme, managed by the Economic Analyses and Databases (EAD) section at ICAO Headquarters, Montreal.

2.3.8 The E/CAR region, on the basis of its experience, could determine the appropriate metrics applicable to its situation. Agreement on the metrics would necessitate common definitions and understanding.

2.3.9 Considering the need to have a clearly defined common approach to performance monitoring and measurement and the need to agree on a uniform set of metrics, the meeting formulated the following draft conclusion:

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CONCLUSION 31/9 AIR NAVIGATION PERFORMANCE MONITORING AND MEASUREMENT

That the E/CAR States/Territories:

- a) assign the E/CAR/WG to establish a set of metrics related to key performance areas including access, capacity, cost effectiveness, efficiency, environment, flexibility, predictability and safety by the 32th E/CAR/WG meeting to be held in 2010;
- b) incorporate agreed metrics into the performance monitoring process by the end of 2010, collect and submit relevant data to the ICAO NACC Regional Office on a regular basis; and
- c) coordinate with the ATM community members to promote information and data collection.

2.4 Human Resources and Training

Guidelines for Human Resources and Training Planning

2.4.1 The Secretariat presented WP/22 with guidelines for considering human resource and training planning. The objective of human resource planning is to ensure that States guarantee the availability of qualified personnel through a human resource planning process according to the requirements to provide an efficient air navigation service.

2.4.2 It was noted that ATS deficiencies in the E/CAR States and Territories are related to insufficient appropriately qualified and experienced personnel, inadequate training, certification and licensing systems, and authorities capability to oversee performance proficiency and regulate service providers.

2.4.3 The Meeting noted that each organization should develop and maintain a current organizational structure analysis in order to determine shortcomings and maintain a training programme that ensures personnel are trained and competent to perform their duties. To design effective training, programmes will be dependent upon the level of specialization of new technology, new procedures and practices, the effectiveness of human and machine interaction and a segment on inter-cultural communication. The Appendix to this part of the report contains strategic guidelines to develop regional training programmes.

2.4.4 Training development should include a documented process to identify new training requirements and a validation process that measures the effectiveness of training. However, E/CAR States and Territories are facing strong difficulties and budgetary constraints to develop training programmes for the next generation professional in air navigation services.

2.4.5 ECCAA provided information on the progress of medical assessments and the implementation of licensing air traffic controllers in the OECS States. One particular aspect was the establishment of one ATS provider in the OECS; discussions are ongoing with Local Government Ministers responsible for air navigation services in the OECS.

2.4.6 The Eastern Caribbean Civil Aviation Authority informed the meeting that in view of the numerous problems and challenges faced by Member States of the OECS as well as for other reasons, the ECCAA had concluded that there is a need for one entity to provide Air Traffic Services in the OECS. A proposal for the establishment of this entity was tabled during the meeting of Ministers Responsible for Civil Aviation throughout the OECS which was held in Castries in July 2009 but a decision has not yet been made. Should such a decision be positive, the ECCAA will then proceed to further conceptualize the idea and seek to develop plans in this regard.

2.4.7 Barbados provided information on the following training assistance available to other E/CAR States and Territories:

- i. Full Aeronautical Information Services Course;
- ii. Aerodrome Control Course;
- iii. Non-Radar Control Course;
- iv. Aerodrome and Non-Radar Control Course;
- v. Radar Control Course;
- vi. Non-Radar and Radar Control Course;
- vii. Refresher Training Course;
- viii. Supervising Training Course;
- ix. On-the-job Instructor Training Course;
- x. Human Factors Course;
- xi. AVSEC Training Course (STP123); and
- xii. Instructor Training (Train the Trainers).

APPENDIX A

REPORT OF THE AD-HOC GROUP OF THE E/CAR/WG ATM COMMITTEE

(Presented by the Rapporteur)

An Ad-hoc Group of the E/CAR/WG ATM Committee met on the evening of 2009 October 05 and 06 at the Grand Royal Antiguan Hotel, Antigua and Barbuda to discuss ATM Matters relating to the implementation of ATM Systems

In attendance were the following States/Territories/International Organizations:

Antigua and Barbuda
Barbados
Dominica
France
Grenada
St. Kitts/Nevis
St. Vincent and the Grenadines
Trinidad and Tobago
United States of America

ECCAA and IFATCA were also in attendance.

Participants were welcomed by the Rapporteur who gave a short update on the activities of the ATM Committee as well as sought ways and means for the inactivity of the Committee to be turned around. Considering that the Terms of Reference and Work Programme of the E/CAR ATM Committee was of important to all States/Territories/International Organizations, within the sub-region it was agreed that each will provide a Point of Contact (POC) to the Rapporteur to effect coordination and to be also responsible for progressing the activities of the E/CAR ATM Committee. It was also agreed that the Committee will progress its work via electronic mail (copied to all the POCs unless it being specifically directed to a particular States/Territory/International Organization and not relating to the Committee's work) and meet in formal session from time to time when considered necessary.

The ad-hoc group reviewed the following Working Papers:

- WP 3 - Safety Management Issues - *Actions to reduce coordination loop errors in the ATC between adjacent ATS units related to large height deviation (LHD)*
- WP 4 - Safety Management Issues - *SSP and SMS Implementation activities and Progress Status, ICAO SMS/SSP evolution and current status*
- WP 7 - Global Air Navigation and CAR/SAM developments - NAM/CAR Regional Air Navigation Implementation Plan; NAM/CAR Regional Performance Based Air Navigation Implementation Plan
- WP 8 - Air Navigation specific activities- *Air Traffic Management (ATM), PBN implementation*
- WP 9 - Air Navigation specific activities - *Air Traffic Management (ATM), Activities for the new Flight Plan format implementation*
- WP 29 - Review of Air Navigation specific activities - *Air Traffic Management (ATM), ATS inter-facility data communication AIDC*

- WP 33 - Review of Air Navigation specific activities - *Air Traffic Management (ATM), Report of activities for the air traffic flow management (ATFM) implementation*
- WP 35 - Review of Air Navigation specific activities - *Air Traffic Management (ATM), Missing Flight Plans*

In examining the Working Papers relating to ATM matters taking into account PBN and the Performance Based Approach to ATM/CNS implementation, it was the view of the Group that many of the States/Territories had apparently neither embraced the Performance Based Approach for CNS/ATM implementation developed and approved by GREPECAS and adopted by NACC/ DGCA/3 Meeting held in the Dominican Republic, 2008 September 08 to 12. Further, the Group also noted that perhaps information relating to certain ATM Matters was not filtered down as necessary among certain States/Territories. In this regard, information was provided to members of the Group as to how access of same, may be achieved, namely through:

- the Offices of their respective DGCAs
- the ICAO websites - mexico.icao.int, icaonet,
- the Rapporteur ATM Committee.

In reviewing **WP3; Actions to reduce coordination loop errors in the ATC between adjacent ATS units related to large height deviation (LHD)** the group took note of the elements of the suggested Action plan as contained in Para 2.2.5 and Para 3 and agreed that States should carry out the activities contained therein as well as complete their Action Plans by 26 February 2010 and submit them via electronic mail to the NACC Regional Office with a copy to the Rapporteur of the ATM Committee.

With respect to **WP 4; SSP and SMS Implementation activities and Progress Status, ICAO SMS/SSP evolution and current status**, the group took note of the contents therein, and was urged to move assiduously to meet the mandate as set forth in the relevant documents.

Regarding **WP 7; NAM/CAR Regional Performance Based Air Navigation Implementation Plan** the group agreed after lengthy discussions to support the suggested actions contained in the Working Paper endeavoring to comply with ICAO requirements for providing the data / Performance Based Navigation Performance Framework Forms to the NACC Regional Office.

WP 8; PBN implementation induced an interesting discussion which gave rise to consideration being given to the coordination of a Workshop/Seminar on the subject. This, the Rapporteur advised that he would pursue after communication with his Manager in Trinidad and Tobago CAA the possibility of holding a Workshop/Seminar for the States/Territories of the E/CAR. Further, it was agreed that States/Territories shall take action on Recommendation 3.1 of the paper to complete the Action Plan presenting same to the Regional Office copying the Rapporteur when making their submission.

WP 9 which dealt with **ICAO Guidelines for the New Flight Plan Form** provided information to States/Territories assisting them in developing their national procedures and actions to meet the proposed cut-over date November 15, 2012. Trinidad and Tobago as the ACC responsible for the Piarco FIR informed the group that the States/Territories concerned will be circularized on developments in Trinidad and Tobago on issues relating to implementation and any changes required. A draft performance framework form was reviewed and suggested and suggested to be included in the NAM/CAR Regional Performance-Based Air Navigation Implementation Plan.

Regarding **WP/25 – Global and CAR/SAM Air Navigation activities and Eastern Caribbean CNS/ATM Plan** respectively, the group discussed the difficulties encountered with the withdrawal of NDBs and the periodic failures of VORs in the Region. After in depth discussions it was agreed that GNSS approaches should be established and implemented with some degree of urgency and at the same time, the Region's aircraft commence the implementation of CNS system. These considerations are included in the PFFs of the NAM/CAR Regional Performance-Based Air Navigation Implementation Plan.

With respect to **WP 29; ATS inter-facility data communication AIDC** the meeting agreed that the States and Territories should support the recommendations contained in the paper and action them as outlined therein.

WP 33; Report of activities for the air traffic flow management (ATFM) implementation was not discussed during the meeting but States/Territories are expected to follow-up on the current progress/actions being made by the TTCAA in the area of ATFM.

In discussions on **WP 35; Missing Flight Plans**, the group agreed to conduct a survey in conjunction with the AIS Departments of all States. In that regard, it was further agreed that the questionnaire used in the previous survey should be revalidated and used as the document to determine the actual status of the Flight Plan system in the NAM/CAR Region. Trinidad and Tobago has undertook to carry-out the coordination of this survey which is planned to be commence on 01 November 2009, Further Trinidad and Tobago will be in communication with the States/Territories of the FIR by mid October 2009.

APPENDIX B
SAR LIST OF QUESTIONS IN EACH FIELD

Code	Reference	Aspect to be evaluated	Implementation	Comment
ORGANISATION				
<i>Legislative Acts governing national SAR activities</i>				
Org.act.1	Annex 12 Chap 2 Doc 8733 Doc 9731 Vol I Chap 1 and 5	Are there legislative acts governing SAR activities?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Org.act.2	Annex 12 Chap 2 Doc 8733 Doc 9731 Vol I Chap 1 and 5	If there are legislative acts governing SAR activities, are they up-to-date?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Org.act.3	Annex 12 Chap 2 Doc 8733 Doc 9731 Vol I Chap 1 and 5	Do the above acts organise SAR services in such a way that tasks and responsibilities are precisely and efficiently distributed?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
<i>SAR Plan – Administrative SAR Units</i>				
Org.1	Annex 12 Chap 2 para 2.2 Doc 9731 Vol I Chap 2 para 2.3.15	Are SRR and FIR boundaries coincident?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Org.2	Annex 12 Chap 2 para 2.3 Doc 9731 vol I Chap 2 Para 2.3	Is the State equipped with a RCC?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Org.3	Annex 12 Chap 2 para 2.3 Doc 9731 vol I Chap 2 Para 2.4	Is the State equipped with one or several RSC?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	

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Code	Reference	Aspect to be evaluated	Implementation	Comment
Org.4	Annex 12 Chap 3 para 3.2 Doc 8733	Has a SAR point of contact (SPOC) been designated?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Org.5	Annex 12 Chap 2 para 2.4	Are there radio/coastal stations?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Org.6	Annex 12 Chap 2 para 2.4	If the answer is positive, are radio/coastal stations known and listed?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
National SAR Plan				
Org.pla.1	Doc 9731 Vol I Chap 5 para 5.2	Is there a national SAR plan?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Org.pla.2	Doc 9731 Vol I Chap 5 para 5.2	If the answer is positive, is it up-to-date?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Organizational Authorities in charge of SAR Services				
Org.aut.1	Doc 9731 Vol I Chap 1 ^{er} para 1.5 Doc 9731 Vol II Chap 1 ^{er} para 1.2	Has the State designated an Authority to be in charge of SAR services coordination?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	

Code	Reference	Aspect to be evaluated	Implementation	Comment
Org.aut.2	Annex 12 Chap 2 Doc 8733 Doc 9731 Vol I Chap 1 ^{er} para 1.5 Doc 9731 Vol II Chap 1 ^{er} para 1.2	Does the above Authority have the legal means to discharge its responsibilities?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
SAR Committee / Civilian – military coordination				
Org.coo.1	Doc 9731 Vol I Chap 5 para 5.2 and 5.3 Doc 9731 Vol I Chap 6 para 6.3	Has a national SAR Committee been established?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Org.coo.2	Doc 9731 Vol I Chap 5 para 5.2 and 5.3 Doc 9731 Vol I Chap 6 para 6.3	Does the SAR national Committee hold regular meetings?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Org.coo.3	Doc 9731 Vol I Chap 5 para 5.2 and 5.3 Doc 9731 Vol I Chap 6 para 6.3	Does it include representatives of civilian and military Authorities?	☐ Yes ☐ No ☐ Not applicable ☐ Not evaluated	
Notification of difference(s) to ICAO Annex 12				
Org.not.1	Doc 7300 (Convention de Chicago) Article 38	Has the State notified any difference to ICAO Annex 12?	☐ Yes ☐ No ☐ Not applicable ☐ Not evaluated	
SAR data published in AIP				
Org.aip.1	Annex 12 Chap 3 para 3.3 8733 Doc 9731 Vol I Chap 4 para 4.5	Does the State AIP include SAR data?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Aviation / maritime SAR coordination				
Org.mar.1	Doc 9731	Are there maritime SAR services in the State?	☐ Yes ☐ No ☐ Not applicable ☐ Not evaluated	

Code	Reference	Aspect to be evaluated	Implementation	Comment
Org.mar.2	Annex 12 Chap 3 para 3.2 8733	Has a coordination mechanism been established between the aviation and maritime SAR services?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
INTERNATIONAL SAR AGREEMENTS AND CONVENTIONS				
<i>International SAR related Conventions</i>				
Acc.conv.1	Not applicable	Has the State ratified the Convention on International Civil Aviation?	☐ Yes ☐ No ☐ Not applicable ☐ Not evaluated	
Acc.conv.2	Not applicable	Has the State ratified the Safety of Life at Sea (SOLAS) Convention?	☐ Yes ☐ No ☐ Not applicable ☐ Not evaluated	
Acc.conv.3	Not applicable	Has the State ratified the International Convention on Maritime Search and Rescue?	☐ Yes ☐ No ☐ Not applicable ☐ Not evaluated	
<i>International SAR agreements</i>				
Acc.acc.1	Annex 12 Chap 3 para 3.1 Resolution A33-14 Appendix O Doc 8733 Doc 9731 Vol I Chap 1 ^{er} para 1.6 and 1.7 Doc 9731 Vol I Chap 5 para 5.1 Doc 9731 Vol I Chap 6 para 6.3.6	Has the State signed SAR agreements with neighbouring States?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
OPERATIONAL PROCEDURES				
<i>Aerodrome Emergency plan</i>				
Ops.airp.1	Annex 14 para 9.1 Doc 9731 Vol II Chap 7 para 7.7	Are international aerodromes equipped with appropriate emergency plans?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	

Code	Reference	Aspect to be evaluated	Implementation	Comment
Ops.airp.2	Annex 14 para 9.1 Doc 9731 Vol II Chap 7 para 7.7	Are domestic aerodromes equipped with appropriate emergency plans?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Ops.airp.3	Doc 9731 Vol II Chap 7 para 7.7	Is there appropriate coordination between SAR and aerodrome services?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
National Emergency plan				
Ops.org.1	Not applicable	Has the State enforced regional or national emergency plans?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
National SAR Manual				
Ops.man.1	Doc 9731 Chap 5 para 5.2.11 to 5.2.18	Has the Authority responsible for SAR services developed a national SAR manual?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
RCC operations plans				
Ops.cond.1	Annex 12 Chap 4 para 4.2 Doc 9731 Vol I Chap 5 para 5.2 Doc 9731 Vol II Chap 1 ^{er} para 1.5	Has a RCC operations plans been developed and updated?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Procedures / Alerting phase				
Ops.aller.1	Annex 12 Chap 5 para 5.2 Doc 9731 Vol II Chap 3 para 3.3 Doc 9731 Vol II Appendix E	Have special procedures dedicated to alerting phases been implemented?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	

Code	Reference	Aspect to be evaluated	Implementation	Comment
FUNDING				
Fin.mec.1	Doc 9731 Vol I Chap 5 para 5.4	Has the State implemented a SAR activities funding mechanism?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Fin.mec.2	Doc 9731 Vol I Chap 5 para 5.4	Does this mechanism ensure adequate funding of SAR services complying with international standards?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
EQUIPMENTS				
<i>Compliance with the Air Navigation Plan</i>				
Equ.afi.1		Are available equipments in line with the available equipment list of Air navigation plan?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
<i>Navigation means of the SAR units</i>				
Equ.nav.1		Are SAR Units equipped with on-board radio direction-finding stations?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
<i>Survival equipments</i>				
Equ.surv.1	Annex 12 Chap 2 para 2.6 Doc 9731 Vol I chap 2 para 2.5 Doc 9731 Vol II chap 6 para 6.4 and 6.5 Doc 9731 Vol II appendix G	Are SAR Units equipped with functional survival equipments?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	

Code	Reference	Aspect to be evaluated	Implementation	Comment
RCC / RSC equipments				
Equ.rcc.1	Doc 9731 Vol I Chap 2 para 2.3 Doc 9731 Vol I Chap 5 para 5.2 Doc 9731 Vol II Chap 1 ^{er} para 1.7	Are RCC / RSC equipped with SAR technical documentation (IAMSAR Manual and other technical documentation)?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Equ.rcc.2	Doc 9731 Vol I Chap 2 para 2.7 Doc 9731 Vol II Chap 1 para 1.11	Are RCC / RSC equipped with computers and SAR dedicated software?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Communications				
Equ.com.1	Annex 12 Chap 2 para 2.4 Doc 9731 Vol I Chap 4 Doc 9731 Vol II Chap 2	Is the RCC equipped with adequate communication means with air traffic services?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Equ.com.2	Annex 12 Chap 2 para 2.4 Doc 9731 Vol I Chap 4 Doc 9731 Vol II Chap 2	Is the RCC equipped with adequate communication means with RSC?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Equ.com.3	Annex 12 Chap 2 para 2.4 Doc 9731 Vol I Chap 4 Doc 9731 Vol II Chap 2	Is the RCC equipped with adequate communication means with position fixing and radio direction-finding stations?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Equ.com.4	Annex 12 Chap 2 para 2.4 Doc 9731 Vol I Chap 4 Doc 9731 Vol II Chap 2	Is the RCC equipped with adequate communication means with radio/coastal stations?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	

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Code	Reference	Aspect to be evaluated	Implementation	Comment
Equ.com.5	Annex 12 Chap 2 para 2.4 Doc 9731 Vol I Chap 4 Doc 9731 Vol II Chap 2	Is the RCC equipped with adequate communication means with Cospas-Sarsat mission control centres?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Equ.com.6	Annex 12 Chap 2 para 2.4 Doc 9731 Vol I Chap 4 Doc 9731 Vol II Chap 2	Is the RCC equipped with adequate communication means with Rescue teams operations centres?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Equ.com.7	Annex 12 Chap 2 para 2.4 Doc 9731 Vol I Chap 4 Doc 9731 Vol II Chap 2	Is the RCC equipped with adequate communication means with adjacent RCCs?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Equ.com.8	Annex 12 Chap 2 para 2.4 Doc 9731 Vol I Chap 4 Doc 9731 Vol II Chap 2	Is the RCC equipped with adequate communication means with MET or MET Watch office?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Equ.com.9	Annex 12 Chap 2 para 2.4 Doc 9731 Vol I Chap 4 Doc 9731 Vol II Chap 2	Is the RCC equipped with MF communication means with SAR Units when employed on SAR operations?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Equ.com.10	Annex 12 Chap 2 para 2.4 Doc 9731 Vol I Chap 4 Doc 9731 Vol II Chap 2	Is the RCC equipped with HF communication means with SAR Units when employed on SAR operations?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Equ.com.11	Annex 12 Chap 2 para 2.4 Doc 9731 Vol I Chap 4 Doc 9731 Vol II Chap 2	Is the RCC equipped with VHF communication means with SAR Units when employed on SAR operations?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	

Code	Reference	Aspect to be evaluated	Implementation	Comment
COSPAS / SARSAT				
Equ.cosp.1	Doc 8733 Doc 9731 Vol II Chap 2 para 2.15	Is the State managing and updating a database of Cospas-sarsat users registered on its territory?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Equ.cosp.2	Annex 6, Parts I, II and III; Annex 10, Vol III, Part II, Chapter 5; Annex 10, Vol V, Chapter 2, para 2.1	Has the State adopted a regulation making the carriage of 406 MHz beacons compulsory?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Removal of wreckage				
Equ.epav.1	Annex 12 Chap 4 para 4.5	Is the State equipped with removal of wreckage facilities?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
HUMAN RESOURCES				
SAR personnel				
Rh.per.1	Doc 9731 Vol I Chap 5 para 2.3.11 and 5.4.9 to 5.4.16	Is SAR personnel sufficient and properly trained in the State?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Training				
Current training plan(s)				
Rh.for.1	Doc 9731 Vol II Chap 1 ^{er} para 1.8	Is a training plan currently applied to coordinating SAR mission staff?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Rh.for.2	Doc 9731 Vol II Chap 5	Is a training plan currently applied to pilots involved in SAR missions?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	

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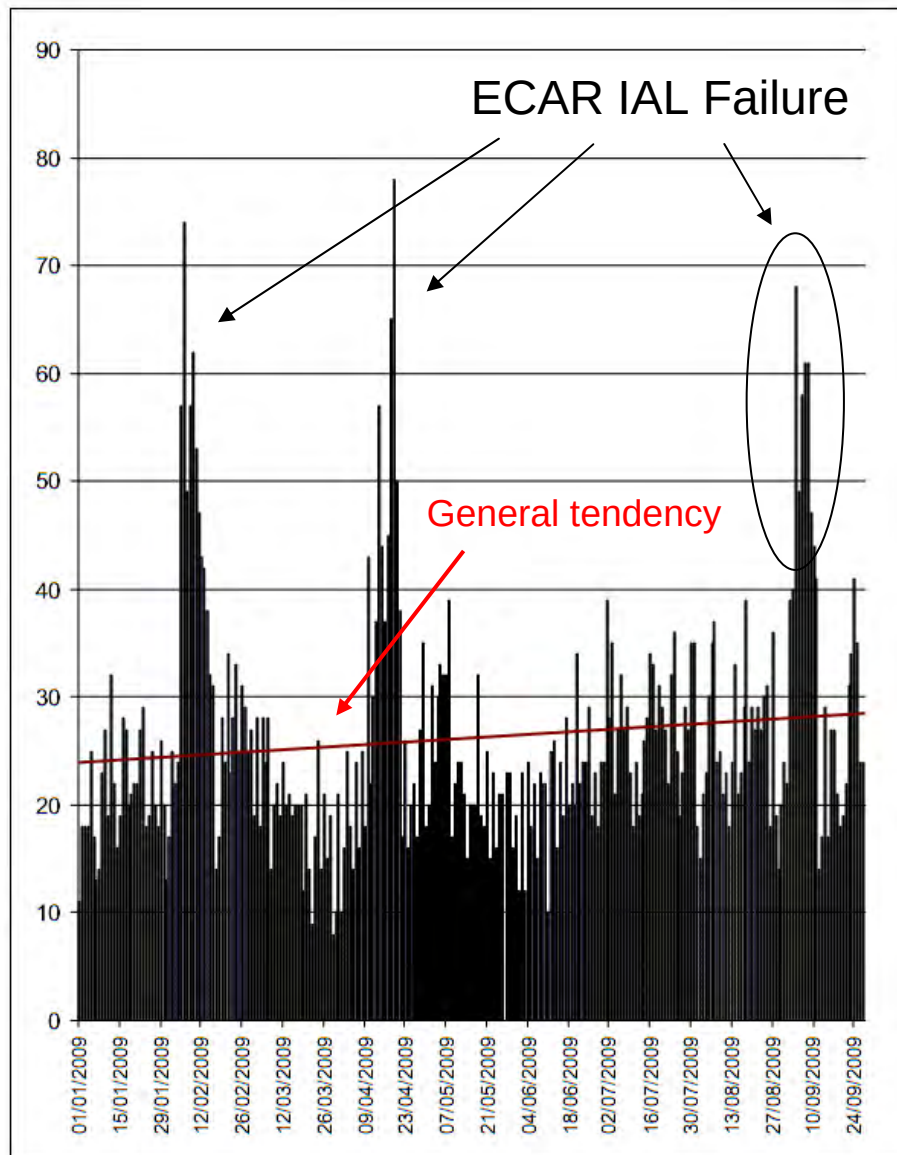
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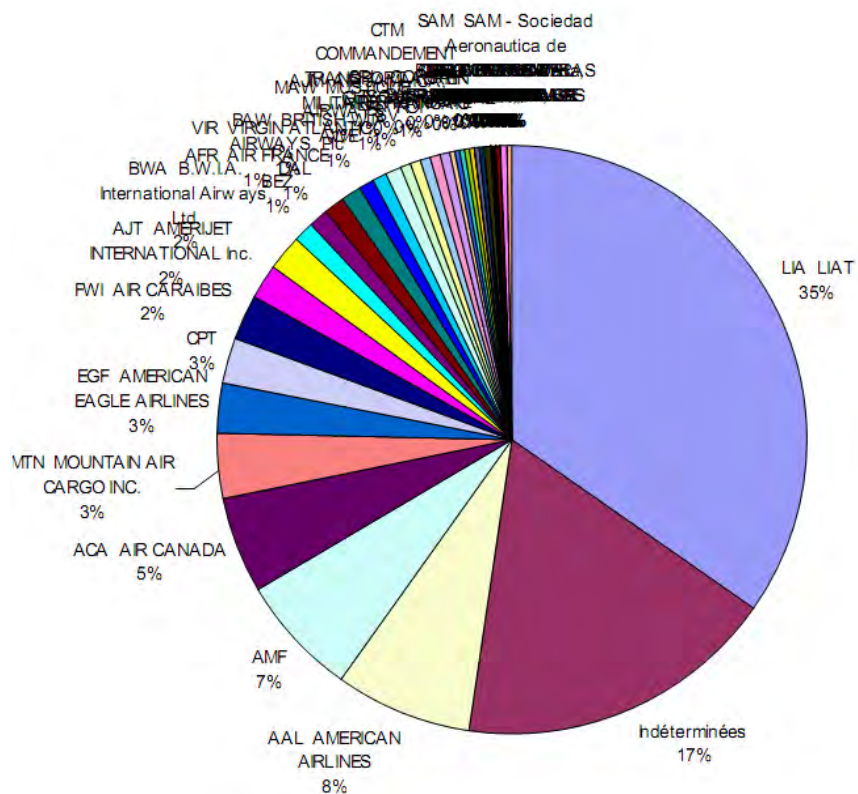
Code	Reference	Aspect to be evaluated	Implementation	Comment
Rh.for.3	Doc 9731 Vol II Chap 1 ^{er} para 1.8	Is a training plan currently applied to staff involved in rescue missions?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
<i>Scheduled training plans</i>				
Rh.for.4	Doc 9731 Vol I Chap 6 Doc 9731 Vol II Chap 1 ^{er} para 1.8	Has a training plan been scheduled for coordinating SAR mission staff?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Rh.for.5	Doc 9731 Vol I Chap 6 Doc 9731 Vol II Chap 1 ^{er} para 1.8	Has a training plan been scheduled for pilots involved in SAR missions?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Rh.for.6	Doc 9731 Vol I Chap 6 Doc 9731 Vol II Chap 1 ^{er} para 1.8	Has a training plan been scheduled for staff involved in rescue missions?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
<i>Qualification / certification procedure</i>				
Rh.for.7	Doc 9731 Vol I Chap 6 Doc 9731 Vol II Chap 1 ^{er} para 1.8	Has a standard Qualification / certification procedure for SAR staff been implemented?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
<i>Training venue(s)</i>				
Rh.for.8	Doc 9731 Vol I Chap 6 Doc 9731 Vol II Chap 1 ^{er} para 1.8	Have training venues been certified?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	

Code	Reference	Aspect to be evaluated	Implementation	Comment
English language proficiency				
Rh.ang.1	Doc 9731 Vol II Chap 1 ^{er} para 1.8	Are RCC and RSC staff proficient in the use of the English language?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
QUALITY CONTROL / EXERCISES				
Quality control procedure				
Qua.proc.1	Annex 12 Chap 5 para 5.11 Doc 9731 Vol I Chap 5 Doc 9731 Vol I Chap 6 Doc 9731 Vol II Chap 8 para 8.6	Has the State established a quality control mechanism for its SAR services?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Exercises				
Qua.ex.1	Annex 12 Chap 4 para 4.4 Doc 8733 Doc 9731 Vol I Chap 3 para 3.3 Doc 9731 Vol II Chap 1 ^{er} para 1.8	Does the State organize SAR exercises on a regular basis?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
Qua.ex.2	Doc 8733 Doc 9731 Vol I Chap 3 para 3.3 Doc 9731 Vol II Chap 1 ^{er} para 1.8	If the answer is yes, are the SAR exercises conducted in conformity with ICAO recommendations?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	
SAR actions				
Qua.pha.1	Annex 12 Chap 5 para 5.11 Doc 9731 Vol II Chap 1 ^{er} para 1.7 Doc 9731 Vol I Chap 5 and 6	Are reports established and critical analysis conducted about passed SAR actions?	☐ A ☐ B ☐ C ☐ D ☐ E ☐ Not applicable ☐ Not evaluated	

APPENDIX C

Missing FPL between 1st of January 2009 and 27th September 2009. Average number of FPL per day is around 150.





APPENDIX D

Report of the E/CAR/WG/31 Ad hoc CNS Group

Participants: *Barbados, Dominica, French West Indies, Grenada, Trinidad and Tobago, United States, ECCAA and ICAO.*

WPs under consideration:

WP35, 36, 26, 10, related to ECAR AFS Network,
WP36 related to Flight plans [network and processing]
WP34 related to Radar data sharing task force
WP13, 11 and 30 related to CNS activities

1 / ECAR AFS network:

1.1 / Feedback from users :

All participants agreed on the following facts:

- 1 / Present AFS ECAR network does not fit operational requirements in terms of availability, maintenance reactivity [response times to resolution of faults], information about the network status to users.
- 2 / The network deficiencies impact safety, by making coordinations more complicated between air traffic centres, due to lack of flight plans or unreliable voice communication services.

These facts are illustrated through WP 26, 35, 36, and through annexed written contribution done during WG31 meeting by Grenada, by St Vincent and the Grenadines, and by Antigua & Barbuda.. Also by quarterly ECAR AFS reports, by Barbados numerous claims, and by the exchanges during the WG31 meeting between users.

Other problems reported are bandwidth limitation (AFTN, Barbados), and the unreliable Promina switch (ECCAA)...

1.2 / Analysis :

The following facts were agreed by the ad hoc meeting:

- 1 / the reporting of failures is not perfect, but there is no urgent need to change the form.
- 2 / next to fault reporting, users need feed back when the network is restored, and need information about the analysis of the fault and the corresponding action plan for repair, including time-scaled actions.

Despite TTCAA numerous efforts to get a better responses from TSTT, the situation has not improved and it is therefore not acceptable For instance, Guadeloupe ECAR AFS voice circuit has been unserviceable since June 2008. Today, neither AFS voice nor AFTN data are available. Since 2008, only one TSTT intervention was programmed, with no result. TTCAA explained that despite contractual agreement they have been unable thus far to achieve better response times to fault resolution.

Proposals for DCA:

A1 : the DCA committee is invited to urge TSTT to give quick feed back to any fault report declared in ECAR region. This feedback shall include: the identified cause if any, the corrective actions undertaken and the foreseen planning.

A2 : the DCA committee is invited to notice that TSTT is not managing properly the network, and is invited to consider the proposal to study a change of the company in charge of managing the network. DCA committee is invited to consider that this deficiency has a real impact on safety

1.3 / Short term actions :

As all users agree the network is not meeting operational requirements having an impact on safety in the Region and agreed that short and mean term actions are necessary. The following short term actions are listed:

A3: the users agreed that the network shall be restored before touristic season star mid November 2009) This means TSTT sending teams and spares to unserviceable sites to restore the network (for instance Barbados and Guadeloupe), before mid November 2009. Highest pressure shall be put to TSTT to ensure this objective by ICAO/TTCAA.

A4: each state shall facilitate the transportation of spares parts of the system, to avoid latency due to VAT payments or customs formalities.

A5: under TTCAA management, adequate spares shall be available on sites, and the opportunity to ask to local maintenance team for first intervention actions shall be studied.

Other actions are already ongoing, as described by TTCAA: NET is upgrading Promina multiplexer (software and some new associated hardware, from August 2009 to mid November 2009), and Promina replacement by Cisco routers is under discussion.

1.4 / Medium term actions :

The present network will be more and more difficult to maintain. All participants agree that replacing the AFS ECAR network is a very urgent matter for the following reasons:

To cope with present requirements

To be able to set up new technology or new system, such as AIDC, AMHS, and Surveillance data sharing...

All the participants agree that VSAT network appears to be the best and quickest solution to replace ECAR AFS network. Barbados wants to have this network within 18 months, which is supported by other present users.

All users agree additional work is needed to define the VSAT ECAR solution. For instance :
the possibility to integrate the Central Caribbean and South America Satellite Networks,
new technology with available options to lease or purchase the VSAT stations,
the role of local maintenance team, the data to be transmitted, the number of stations (full VSAT or partial VSAT), etc..

Several options can be explored by including them in a Request For Proposal. These options can be reviewed with the vendors once the responses are received.

TTCAA indicates (see WP30) that today's policy is to seek leased service that means that the successful bidder will own and maintain the hardware and software and provide network and bandwidth . TTCAA indicates that the requirements are currently being revised to have a partial VSAT network with some terrestrial and microwave links depending on the traffic movements derived from statistics and collaboration with States. This was one of the options initially proposed at the 30/ECWG by the CNS Committee. This revised document which should be completed by the end of the first quarter of 2010 will be distributed to States for further comments.

A6 : the DCA is invited to support urgently the AFS ECAR network replacement by a VSAT ECAR network, possibly to have an operational system by mid 2011, under the responsibility of TTCAA.

2 / Missing FPL in ECAR region:

2.1 / Analysis:

Probably the main cause of missing FPL is due to the network deficiency. But other factors contribute to this situation: bad addressing, non coordinated use of Repetitive FPL, internal problem (organization or FDPS), etc... SAT12 study pointed out the different causes identified as responsible for FPL missing, in 2005.

2.2 / Proposed actions:

A7 : TTCAA is invited to give a description of Piarco FDPS, specially regarding RPL processing.

A8 : States are invited to give a description of existing FPL systems in ECAR region.

A9 : TTCAA is invited to identify backup procedures to be used when AFTN network is down.

A10 : Barbados, TTCAA and France are invited to work together to define a new way to process RPL and to study the basis of a regional agreement for RPL.

3 / Radar data sharing task force:

3.1 / Analysis:

The radar data sharing task force lead by France has been dormant for 3 years, and little progress was done, except Martinique fused radar output to St Lucia airports (that is waiting for ATCO radar training) and Martinique fused radar output to Trinidad, used for tuning RDPS and testing the surveillance system.

In the region, two RDPS are available: one in Trinidad, one in Martinique (Dacota system). Barbados requires clarification about the location of the radar Caribbean server : the late agreements clearly identify Martinique as the radar server, that should output the data on a reliable network, so that the data is available for every user on the network, if useful. Barbados explained that in case a change is needed, it should be asked by the radar data sharing task force. Moreover, investments were done in Barbados to be compliant with French Asterix format implementation.

3.1 / Proposed actions:

It is proposed to reactivate the radar data sharing taskforce via teleconference before the end of the year, conducted by France. This task force shall propose:

- Clarification about the location of the Caribbean server of relevant responsibilities.
- Additional work to be done to reactive radar (or surveillance) data sharing in the region.

3 / UPS power:

As explained in WP30 (CNS committee report), one of the problems encountered on most Eastern Caribbean States is the unreliability of the commercial power being supplied to airports. Operational reliability of air navigation services is adversely affected by fluctuations and disruptions in commercial power.

UPS (uninterruptible power system) are not always properly installed and operated.

States are urged to provide standby electrical generating systems with conditioned uninterruptible power systems to ensure that air navigation services and its associated ATM/CNS support are provided with reliable power.

It is reminded that states are responsible for environmental conditions under which air navigation services equipment is housed and operated. This includes power supply and air conditioning. In case for instance ECAR AFS Network components delivered by TTCAA would be damaged by inadequate power supply, states could be charged.

4 / Updated proposed CNS action plan:

TASK	DEADLINE	RESPONSIBILITY	ADDED SUPPORT	REMARKS
Revise the VSAT User and Technical Specifications document for a partial VSAT network with some terrestrial and microwave links depending on the traffic movements derived from statistics and collaboration with States.	March 2010	Trinidad and Tobago	ECAR States, French Antilles, United States	
Perform VSAT implementation	Mid 2011	Trinidad and Tobago	ECAR States, French Antilles, United States	
Increase the number of international telephone trunk lines between Trinidad and Tobago and the French Antilles				
Installation of routers on the 64 Kbps leased circuits between the French Antilles, Barbados and Trinidad and Tobago for radar, voice and AFTN data.	15th November 2009	TSTT	Trinidad and Tobago, French Antilles and Barbados	
Testing of 64 leased circuits end-to-end after routers are installed	30th November 2009	TSTT, France Telecoms, LIME	Trinidad and Tobago, French Antilles and Barbados	
Promina multiplexer upgrade	15 November 2009	TSTT	Trinidad and Tobago	
Fault reporting procedure		All States		States need to ensure that the Fault Report Form is filled in with sufficient information to assist in a timely resolution.

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TASK	DEADLINE	RESPONSIBILITY	ADDED SUPPORT	REMARKS
Implementation of CISCO routers to replace Promina multiplexers		TSTT, TTCAA, FAA, SNA/AG	Trinidad and Tobago, United States, French Antilles	
X.25 connectivity to Atlanta by eliminating the X.25 PAD at Piarco, Trinidad		TTCAA, FAA		TSTT, THALES, Trinidad and Tobago
Radar remoting between Barbados and Trinidad and Tobago		TTCAA, GAIC, Barbados Civil Aviation	Raytheon, Selex SI, Trinidad and Tobago, Barbados	
ADS-B trials	<2015	All States		
Implementation of ADS-C	June 30th 2011	Trinidad and Tobago		
The provision of proper support infrastructure for CNS/ATM equipment		All States		
Organization of communication and feed back about E/CAR AFS Network status and fault reports processing	End 2009	TTCAA	TSTT	
Propose to DCA the replacement of TSTT network management	Next DCA meeting	ICAO		
Restore the ECAR AFS network wherever needed	Mid 2009	TTCAA	TSTT	
Facilitation of ECAR AFS spares transportation	Mid November 2009	All states		
Organization and localisation of ECAR AES spares	end 2009	TTCAA	TSTT	
Summary of existing FDPS and RPL processing organization within ECAR	March 2010	TTCAA, ICAO	All states	
Clarify basckup AFTN procedures	End 2009	TTCAA		
Investigation about RPL problems	End 2009	Barbados, France, TTCAA		
Reactivate radar data sharing task force, and address radar server location issue	End 2009	All RDSTF members		

APPENDIX E

REPORT OF THE AIS AD-HOC GROUP

(Presented by the Rapporteur)

1. Introduction

1.1 Barbados and Trinidad and Tobago, with Barbados as Rapporteur, met to discuss the issues and Working Papers relevant to AIS raised during the meeting.

1.2 The following working papers were discussed:
WP/09 – ICAO Guidelines for the New Flight Plan Form
WP/19 – AIS Improvements in the E/CAR Region
WP/20 – Roadmap for the Transition from AIS to AIM
WP/28 – Training for AIS Personnel in the E/CAR
WP/32 – Piarco AIS Letters of Agreement
WP/35 – Missing Flight Plans

2. Discussion

2.1 Flight Planning (WP/35)

2.1.1 The group considered the matter of missing Flight Plans which was brought to the attention of the meeting by France in WP35, and agreed that, as in the past this problem likely has multiple causes. Where resolution of AFTN chronic outages would result in a significant reduction in the number of missing flight plans it will not completely alleviate the problem.

2.1.2 The group discussed the need to further investigate the extent of this problem using the methodology employed by Trinidad and Tobago in 2005, where states were asked to keep track of missing flight plans using forms distributed by Trinidad and Tobago. Once again the data collected will be analyzed and the results used to devise appropriate solutions. It is proposed that this investigation take place over a one month period from 1st to 30th November, 2009. The form and guidelines for its use are in the appendix to this report.

2.1.3 The AIS AD-HOC group also considered that duplication of flight plans was another issue facing the region. This matter was raised by the USA as a safety issue at the NAM/CAR/SAM Meeting held in 2008 in Ocho Rios, Jamaica. ICAO has stated that the dissemination of flight plans is the responsibility of the aerodrome of departure. However, with the advent of Flight planning agencies that operate on behalf of many airlines and coupled with address stripping by the AFTN switch so that the ATS Reporting Office (ARO) is not aware of all of the addressees on a received flight plan, AROs at departure aerodromes are sometimes disseminating flight plans already in the possession of ATS Units. This causes confusion and uncertainty especially when these flight plans are not identical and it is difficult to determine which is correct.

2.1.4 The group recommended that an investigation of duplicate flight plans take place simultaneously with the investigation of missing flight plans to determine the extent of this problem in the region and to propose a solution as a result of the analysis done. A Duplicate flight plan report form along with guidelines for its use is found in the appendix to this report.

2.1.5 The group also recommended that ICAO be requested to assist in resolving this problem since its occurrence spreads wider than this region.

2.1.6 One possible solution suggested by the group was for states to notify flight planning agencies to address flight plans to aerodromes of departure only. In this way, departure aerodromes retain the sole responsibility for disseminating of FPLs thus reducing the incidence of duplication.

2.1.7 The group considered that disharmony in the procedures for processing of repetitive flight plans (RPLs) among states may also add to the incidences of missing or duplicated flight plans. As a result the group determined that the AIS Committee should review the procedures for the processing of RPLs in the region, arrive at regional RPL procedures by 31st January 2010 and notify E/CAR states of the requirement to implement these procedures.

2.2 ICAO New Flight Plan Format (WP/09)

2.2.1 The group agreed that implementation of this new flight plan format in the E/CAR must be managed to ensure as seamless a transition as possible. It was decided that the AIS Committee, with Trinidad and Tobago taking the lead, will establish guidelines and an action plan with timelines for the region incorporating the guidelines that ICAO has published in the Appendix to WP/09 as is appropriate.

2.2.2 Additionally, it was decided that E/CAR states should notify Ground Handling Companies in their respective territories of the use of the new format, utilizing an agreed appropriate medium and an agreed format.

2.2.3 The group also acknowledged that ATS authorities in all states must ensure that their AIS units are kept fully informed as to developments relating to the new flight plan format.

2.3 Roadmap for the Transition from AIS to AIM (WP/20)

2.3.1 The AIS group agreed that this a very good document but will have to be studied in greater detail as soon as possible, but however noted that it may be unrealistic at this time for the E/CAR Region to realize the Conclusion to this paper which states ‘Implement the guidelines, steps and timelines for the Transition from AIS to AIM, presented in the **“Roadmap Map for the Transition from AIS to AIM”**’. This implementation is hindered by the status of AIS in the E/CAR as outlined in the report of the Chief Technical Officer AIS of Piarco attached to WP/28.

2.3.2 The members of the group recommended that ICAO urge states to properly establish AIS Units with dedicated staff as a first step in the transition. The requirements for the various phases of the transition cannot be accomplished with AIS staff who are temporarily assigned to the AIS as is the case with many of the E/CAR states.

2.4 Training for AIS Personnel in the E/CAR

2.4.1 The aim of this training will be to inform AIS specialists of the new requirements for AIS. States are requested to ensure that their AIS specialists are available to attend this important training schedule for August of 2010.

2.5 AIS Improvements in the E/CAR Region (WP/19)

2.5.1 The group considered the tasks listed and acknowledged the following:

Task#1 – WGS84 coordinates are harmonized with all neighbouring FIRs except Venezuela. There is still a need for a meeting with Venezuela to resolve this problem.

Task#2 – Barbados AIS is covered under the ATS Quality Assurance Program and the ATS is ISO certified, however Part IV of the ICAO Guidance Manual was not adhered to respecting AIS. Trinidad and Tobago has produced a Quality Manual, but their Quality implementation program is now on hold due to staffing problems.

Task#3 – There is a need for better understanding of this concept and a need for the CNS committee to liaise with the AIS Committee with respect to the implementation of the AIXM exchange model.

Task#4 – The AIS Committee must start work on the action plan to resolve E/CAR AIS deficiencies, however the individual states remain responsible for updating the GANDD.

Task#5 – There is a need to get the ICAO guidelines on Human Factors in AIM so that it can be studied and a plan can be worked out for its application in the E/CAR AIS Units.

States should take the necessary actions as suggested by this WP.

2.6 Piarco AIS Letters of Agreement

2.6.1 The group agreed that updated Letters of Agreement were necessary for efficient and safe operations in the E/CAR AIS. It was acknowledged that since the last signing of AIS LOAs many elements in the processing storage and distribution of AIS information had changed. This necessitates the urgent revision of the operational LOAs. The group recommended that relevant E/CAR State authorities review the LOAs and make necessary changes and return the adjusted LOA to Piarco in a timely manner so that after agreement, validation by signing can be accomplished.

3 Conclusion

3.1 As a result of the considerations in the above paragraphs 2.1 to 2.6 the following conclusions were drafted:

3.1.1 Conclusion 31/xx (a)- That E/CAR states participate in the investigation of missing and duplicated flight plans as outlined in paragraphs 2.1.1 and 2.1.2 using the guidelines and forms provided in the appendix to this report.

3.1.2 Conclusion 31/xx (b)- That ICAO assist in the resolution of the problem of missing and duplicated flight plans.

3.1.3 Conclusion 31/xx (c)- That E/CAR States develop harmonized procedures for the processing of Repetitive flight plans as at paragraph 2.1.7

3.1.4 Conclusion 31/xx (d)- That the E/CAR AIS Committee establish guidelines and an action plan for implementation of the new flight plan format as at par 2.2.1

3.1.5 Conclusion 31/xx (e)- That E/CAR states notify ground handling agencies well in advance of the implementation of the new flight plan format and that they also ensure that their AIS Units are fully informed as at paragraphs 2.2.2 and 2.2.3.

3.1.6 Conclusion 31/xx (f)- That ICAO urge E/CAR states to establish AIS Units with dedicated staff as described in paragraph 2.3.2.

3.1.7 Conclusion 31/xx (g)- That the E/CAR AIS Committee work on an action plan for resolving E/CAR AIS Deficiencies to be issued to states by 31st December 2009 and that E/CAR states inform the ICAO NACC Regional Office as specified in WP/19.

3.1.8 Conclusion 31/xx (h) That states taken all necessary actions to ensure the attendance of their AIS specialists at the Training Seminar schedule to take place in the E/CAR in August 2010.

3.1.9 Conclusion 31/xx (i)- That E/CAR states AIS authorities review the AIS Letters of Agreement and make recommendations for any amendment to Piarco AIS by December 31st 2009.

GUIDELINES FOR USE OF MISSING FPL/DUPLICATE FPL FORMS

- a) A one month period of information gathering on missing or duplicated flight plans will be conducted from the 1st to 31st November 2009 in all Eastern Caribbean States.
- b) Eastern Caribbean States Civil Aviation will inform all concerned personnel/agencies eg AIS, ATC, Technicians etc well ahead of the November 1st date.
- c) The information on missing/duplicate Flight plans will be recorded in the form provided on pages 2 and 3 of this appendix.
- d) The responsibility for recording this information will be that of the ATC supervisor on duty.
- e) Initial investigation into the reason for the absence of the flight plan will be done by the ATC Unit that is first affected.
- f) Investigation into the reason for duplication of the flight plan will be done by Piarco AIS and this reason will be entered in the remarks column.
- g) The reason why the flight plan is missing will be entered in the remarks column by the ATC Unit affected..
- h) On completion, the forms are to be stamped, signed and sent to Piarco AIS on a daily basis.
- i) If the reason why the flight plan is missing is unknown by the end of the day, then this will be noted in the remarks column prior to sending the form to Piarco AIS. The affected ATC Unit will however continue to investigate the reason for the flight plan absence, and when found, will send a duplicate form to Piarco AIS with the reason entered in the remarks column.
- j) The deadline for receipt of all completed forms by Piarco AIS will be 1st December 2009.
- k) Piarco AIS will acknowledge receipt of the forms via AFTN, fax or email.
- l) Piarco AIS will analyse the information received in order to identify the source of the problem **if not already identified by the affected ATC Unit** and either contact the identified problem source with a view to resolving the problem or recommend to the affected ATC Unit that they contact the problem source to the same end.
- m) Piarco AIS will send a report of findings to each States' Civil Aviation Authority for onward transmission to their respective AIS/ATC Units.
- n) As a follow up, the affected ATC Unit will make periodic checks on the identified missing or duplicated flight plans to determine whether the problem remains rectified or if further action is needed.

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RECORD OF MISSING FLIGHT PLANS

ATC UNIT NAME _____ **NO** _____

	DATE	CALL SIGN	DEP AD	DEST AD	ORIGINATOR	REMARKS
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

On completion please fax to Piarco AIS (868-669-1716) or e-mail to rgomez@caa.gov.tt

Signature/Stamp

RECORD OF DUPLICATE FLIGHT PLANS

ATC UNIT NAME _____ NO _____

	DATE	CALL SIGN	DEP AD	DEST AD	ORIGINATOR	REMARKS
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

On completion please fax to Piarco AIS (868-669-1716) or e-mail to rgomez@caa.gov.tt

Signature/Stamp



INTERNATIONAL CIVIL AVIATION ORGANIZATION

**NORTH AMERICAN, CENTRAL AMERICAN AND CARIBBEAN
REGIONAL OFFICE**

NAM/CAR REGIONAL PERFORMANCE-BASED AIR NAVIGATION IMPLEMENTATION PLAN

E/CAR/WG/31

1. INTRODUCTION

1.1 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 ATM system envisioned in the global ATM operational concept (Doc 9854). The operational concept presents the ICAO vision of an integrated, harmonized and globally interoperable ATM system.

1.2 The Strategic Vision is *“To foster implementation of a seamless, global air traffic management system that will enable aircraft operators to meet their planned times of departure and arrival and adhere to their preferred flight profiles with minimum constraints and without compromising agreed levels of safety.”*

1.3 This vision is refined in the Mission of Implementation as follows:

To develop a seamless, globally coordinated system of air navigation services that will cope with worldwide growth in air traffic demand while:

- *improving upon the present levels of safety;*
- *improving upon the present levels of regularity;*
- *improving upon the overall efficiency and capacity of airspace and airports;*
- *improving operations allowing for capacity increase while minimizing fuel consumption and aircraft engine emissions;*
- *increasing the availability of user-preferred flight schedules and profiles; and*
- *minimizing differing equipment carriage requirements between regions.*

1.4 Having a strategic geographical location at the confluence of ATS routes connecting the major destinations, the airspace has become a vital link to the smooth flow of traffic between major airspace in NAM and CAR Regions.

1.5 The complexities of Caribbean airspace are unique in nature. Based on the topography, various types of aircraft from Helicopter to bigger type of jet aircraft are being operated in various sectors. Restricted airspace for Military flying and the mixed type of aircraft with unmatching capabilities occupy the airspace and their conflicting demands need to be accommodated.

1.6 Civil commercial, Military, general Aviation, Space research, hobby and adventure flying, flying training, helicopter flying have been constantly increasing and thereby the airspace has been getting congested day by day. Technological innovations provide more simple and flexible solutions not only for transportation needs but also for national security and economic development.

1.7 Entry of Low Cost carriers with attractive flying schemes has boosted traffic in the recent past and the air transport industry is in the upswing with more and more air operations. These carriers have not only become a potential competitors to the currently established airlines but also potential challengers to the ATM system as the airspace/ airports are getting more and more congested and leading to delay and holding resulting in burning of extra fuel.

1.8 Military flying activities with frequent airspace and airport closures implies additional civil flight operations and workload on the capacity and air traffic management point of view.

1.9 Recently the rate of traffic growth is at an average of 3.3% with the advent of new routes and airlines commencing operations as Caribbean destinations have become more popular for international tourist and commercial interest. The total operations at the main airports of the CAR Region in the period 2002 to 2005 reflected a positive trend of 1.92%, the global trend is 6%. The main rates of traffic growing were:

Cuba	6.41%
Dominican Republic	5.74%
Belize	4.77%
El Salvador	3.06%
México	2.57%
U. S. (P. R) (V. I)	2.51%
Guatemala	2.51%
Costa Rica	2.42%

1.10 What is reflected in the following tables is continuing growth for the next several years:

**Total (international and domestic) services of airlines of ICAO contracting States
(NACC States - Percentage of world traffic 2008)**

Aircraft Kilometers (millions)	Aircraft Departures (thousands)	Passengers Carried (thousands)	Passenger- Kilometers Performed (millions)	Passenger load factor (%)	Tonne-kilometres Performed		Tonne Kilometers available (millions)	Weight Load Factor (%)
					Freight (millions)	Total (millions)		
13,523	10,652	782,200	1,434,423	80	41,279	17,3977	28,3610	61

International services of airlines of ICAO contracting States - NACC States - Percentage of world traffic 2008

Aircraft Kilometers (millions)	Aircraft Departures (thousands)	Passengers Carried (thousands)	Passenger- Kilometers Performed (millions)	Passenger load factor (%)	Tonne-kilometres performed		Tonne Kilometers available (millions)	Weight Load Factor (%)
					Freight (millions)	Total (millions)		
3,489	1,244	118,805	488,219	79	24,028	69,577	115,130	60

1.11 The regional distribution of scheduled traffic 2008 by aircraft departures and by passengers carried is depicted in the following Tables 1 and 2.

Regional Distribution of Scheduled Traffic – 2008

NAM/CAR Aircraft Departures 10.7 Million

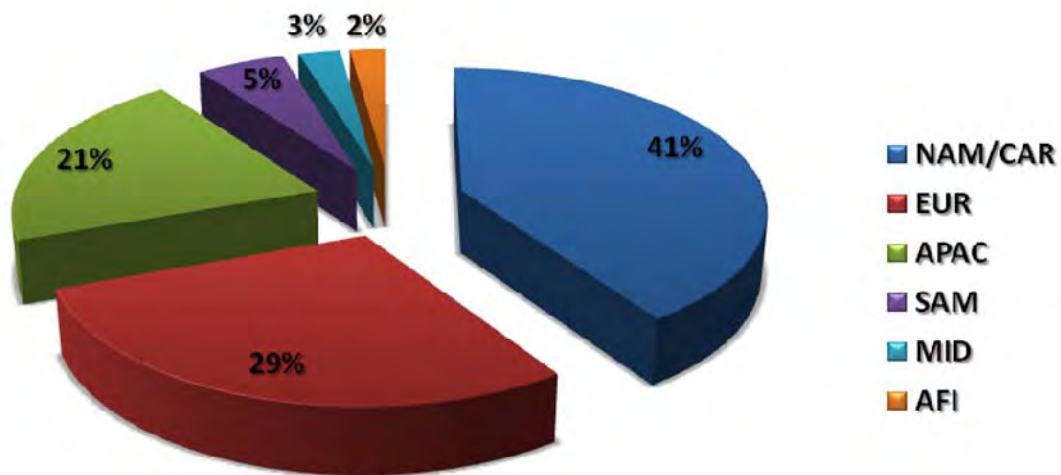


Table 1

Regional Distribution of Scheduled Traffic – 2008

NAM/CAR Passengers carried 782.2 Million

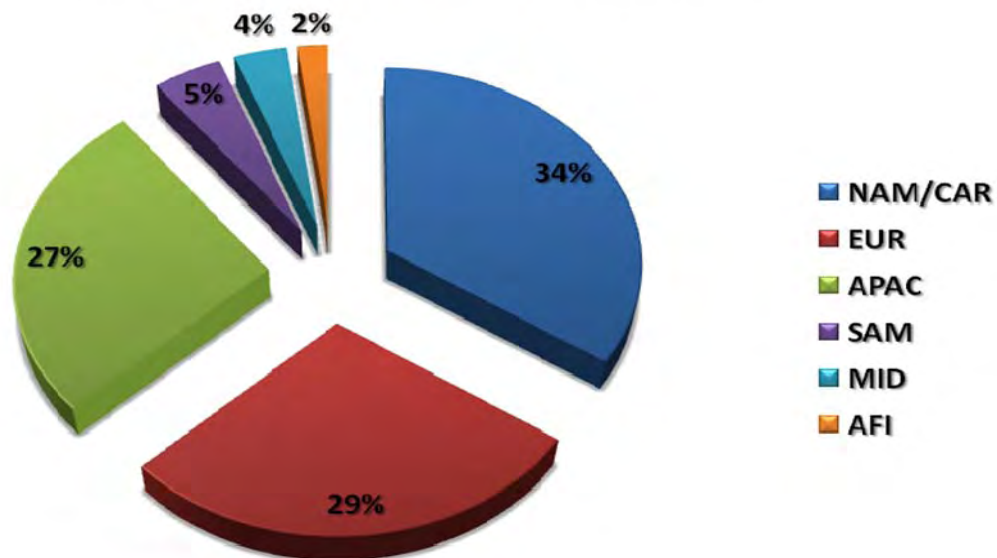


Table 2

1.12 More challenges are in the horizon for ATM seamless system in CAR and NAM Regions. The expectation is more and more air operations among CAR and NAM Regions which will require gradual operational developments of ATM system to ensure an optimum air traffic flow towards among certain areas or through them, during periods in which the demand exceeds or is foreseen to exceed the available capacity.

1.13 New aircraft are capable of extremely accurate navigation during all phases of flight and many are equipped with satellite-based communication. Aircraft operations growth also has resulted in a relatively young airline fleet, most equipped with some or all of enhanced capabilities.

1.14 Implementation programmes are required to be addressed with a performance-based approach, in order to achieve improvements to the air navigation system and environmental benefits, thus preventing costly implementation processes.

2. REGIONAL PLANNING PROCESS

2.1 The regional planning process should be conducted in accordance with the global plan initiatives (GPIs) of the *Global Air Navigation Plan* (Doc 9750) and the ICAO vision for an integrated, harmonized and globally interoperable ATM system, as established in the Global ATM Operational Concept (Doc 9854).

2.2 The objective is to achieve the maximum level of inter-operability and harmonization among sub-systems for a seamless and interoperable regional ATM system for all users during all phases of flight, complying with agreed levels of safety, providing optimum economic operations, to be environmentally sustainable and to fulfil national aviation security requirements.

2.3 Planning should be developed through performance objectives with clearly defined implementation requirements. The planning horizon should be focused on the strategies of development, activities or main tasks for two periods – that of less than 5 years (short-term) and 6 to 10 years (medium-term). Some already identified tasks to be analyzed beyond this period may be included if they conform to ICAO ATM requirements.

3. PERFORMANCE OBJECTIVES

3.1 The performance objectives should be developed using a performance approach to reflect the necessary activities needed to support regional ATM system implementation.

3.2 During its life cycle, the performance objectives may change in a dynamic manner depending on the ATM system's evolution; therefore, these should be coordinated with and available to all interested parties within the ATM Community in order to achieve timely communication throughout the implementation process. The establishment of collaborative decision-making processes (CDM) ensures that all stakeholders are involved in and concur with the requirements, tasks and timelines.

3.3 The following sections describe aspects pertaining to the performance objectives and required changes, and how these changes foster harmonized improvements throughout the regional ATM system.

Benefits

3.4 Each performance objective should establish a group of common benefits for all stakeholders and be achieved through the strategies, the operational and technical activities planned. These benefits should be in accordance with the ICAO strategic objectives, and the ATM community expectations.

Strategy

3.5 The air navigation system evolution requires a progressive strategy with tasks and actions that best represent the national and regional implementation in accordance with the global planning framework. The final goal is to achieve harmonized regional implementation on a continuous evolution towards a global seamless ATM system.

3.6 This means the need to develop short and medium term implementation programmes, focusing on the necessary changes to the system in which a clear work commitment will be carried out by the parties involved.

3.7 The implementation should define additional tasks and activities, maintaining a direct relation with ATM system components such as airspace organization, civil-military coordination, human factors, aeronautical regulations, operational safety management systems and environmental protection, among others.

3.8 The framework for regional activities should also include the coordination of activities with military authorities who play an important role in helping to ensure that the best use is made of the available airspace resources by all airspace users while still safeguarding national security.

3.9 The following principles should be considered when developing implementation programmes:

- The work should be organized using project management techniques and performance-based objectives in alignment with the Global Plan and the strategic objectives of ICAO. The implementation programmes should be in accordance with the progress, characteristics and regional implementation needs.
- All activities involved in accomplishing the performance objectives should be designed following strategies, concepts, action plans and roadmaps to align the regional work with the fundamental objective of achieving interoperability and seamlessness to the highest level.
- The implementation tasks should encourage human resources optimization, as well as promote the use of electronic communications means such as internet, videoconference, teleconference, phone and fax. It should be ensured that all the resources will be used efficiently, avoiding any duplication or unnecessary work.
- It should be ensured that performance objectives can be measured against timelines and the regional progress achieved can be easily reported to the Air Navigation Commission and to the ICAO Council.

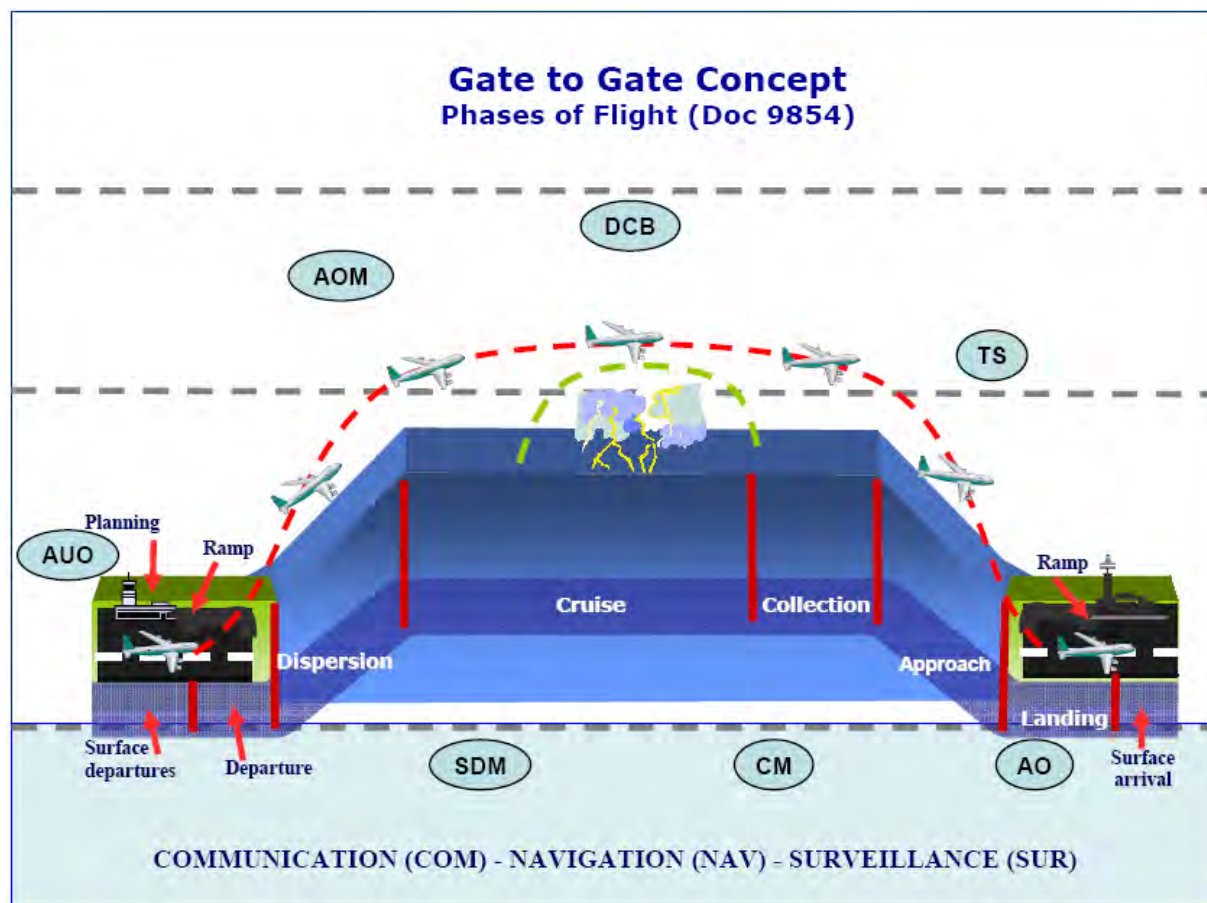
Identification of tasks

3.10 Each task should be identified firstly by the activity associated with components of the ATM system when describing the tasks. According to the Doc 9854, the designators for ATM components are as follows:

- **AOM** — Airspace organization and management
- **DCB** — Demand and capacity balancing
- **AO** — Aerodrome operations
- **TS** — Traffic synchronization
- **CM** — Conflict management
- **AUO** — Airspace user operations
- **ATM SDM** — ATM service delivery management

3.11 Each designator looks to link ATM system component pertains to tasks and activities related to phases of air operations, ATC en-route, terminal and airport, capacity management, airspace management including its flexible use and aeronautical information management.

3.12 The infrastructure includes the ground technical systems and capacity required to support operations such as communications, navigation and surveillance, data processing, inter-operability of systems, information management system and spectrum management, including both civil and military systems. The following diagram shows the ATM components in relation to the phases of flight:



3.13 The status is mainly focused on monitoring the progress of the implementation activity as it progresses toward a specific completion date. The status of the activity is defined as follows:

- | | |
|-------------------|---|
| ■Valid | the feasibility and benefits of an activity has been confirmed, work has been initiated but the activity itself has not been finalized. |
| ■Completed | implementation of the activity has been finalized by the involved parties. |
| ■Tentative | the feasibility and benefits of an activity investigated or to be developed. |

3.14 A tentative status indicates a potential activity; normally this activity will not be included in the regional planning documents unless it is an ICAO defined requirement.

Relationship between Performance Objectives and Global Plan Initiatives

3.15 The 23 GPIs provide a global strategic framework and are designed to contribute to achieving the regional performance objectives and to support the logical progression of regional implementation programmes.

3.16 Each performance objective should be referenced to the pertinent GPIs. The goal is to ensure that the work process will be integrated into the global planning framework

4 NATIONAL ACTION PLAN

4.1 States should develop their own national action plans reflecting the specific activities or tasks along with the expected benefits to be obtained and the date by which each should be completed according to the national needs and based on the regionally agreed performance objectives.

4.2 The strategic activities should include the necessary detailed actions to successfully achieve the national performance objectives, relating these activities with the short and medium term regionally agreed performance objectives.

4.3 National plans should identify the individuals or teamwork responsible for achieving the objectives as well as a means for monitoring and eventually reporting progress on the actions to ICAO. The responsibilities and time-tables should be clearly defined so that the involved parties are aware of their commitments throughout the implementation process.

4.4 Additionally, national action plans should include adequate means to provide information on implementation progress achieved such as through a periodic reporting process. This facilitates senior management levels' efforts to prioritize the actions and resources required. The same information provided to ICAO will allow feedback and assistance to be provided specific for each Region as they work to achieve a Global ATM system.

4.5 For the development of a national action plan, the following subjects, as a minimum, should be analysed and properly documented:

a) Characteristics of the industry

Enumerate the current and projected growth of Air Traffic in your state and also identify, if any, the efficiency challenges in your State.

b) The air navigation service provider

Describe briefly the organization providing the air navigation services in your State including its institutional format, capital structure, principal shareholders and the management.

c) Major stakeholders/partners

Identify the major stakeholders/partners such as the air navigation service providers, the airspace users (the commercial airlines using the airspace, business aviation, general aviation, military, etc.) and the potential funding sources.

d) Risks and Limitations

Enumerate the limitations of the current conventional air navigation systems that may arise and which solution would depend on the State/Territory/International Organization.

e) Risk Management

What are the identified risks and briefly describe the risk mitigation plans/techniques.

f. National Performance-based Air Navigation Plan

- i) Define the geographical scope of the National Air Navigation Plan and determine the major traffic flows.
- ii) Explain briefly the vision of your State/Territory/International Organization for achieving a seamless Global ATM system in accordance with ICAO Doc 9854.
- iii) Determine the current air navigation infrastructure and services.
- iv) Through gap analysis define near and medium term operational improvements.
- v) Using a standard Performance framework form (PFF), develop different national performance objectives by determining relevant tasks and ensure the linkage to ATM components and Global Plan Initiatives (GPIs).

CAR/NAM REGIONS PERFORMANCE OBJECTIVES

1. OPTIMIZE THE ATS ROUTE STRUCTURE EN-ROUTE AIRSPACE				
Benefits				
Environment Efficiency	• reductions in fuel consumption; • ability of aircraft to conduct flight more closely to preferred trajectories; • increase in airspace capacity; • facilitate the utilization of advanced technologies (e.g., FMS based arrivals) and ATC decision support tools (e.g., metering and sequencing), thereby increasing efficiency.			
Strategy				
ATM Component	TASK DESCRIPTION	START-END	RESPON-SIBLE	STATUS
AOM	a) Develop regional action plan	2007	GREPECAS	Completed
	b) Develop Airspace Concept based in CAR /SAM PBN Roadmap, in order to design and implement a trunk route network, connecting major city pairs in the upper airspace and for transit to/from aerodromes, on the basis of PBN and, in particular, RNAV/5, taking into account interregional harmonization	2010	States	Valid
	c) Develop performance measurement plan	2010	States	Valid
	d) Formulate safety plan	2010	States	Valid
	e) Establish collaborative decision making (CDM) process	2010	States	Valid
	f) Publish national regulations for aircraft and operators approval using PBN manual as guidance material	2010	States	Valid
	g) Identify training needs and develop corresponding guidelines	2010	States	Valid
	h) Implementation of ATS routes enroute	2010	States	Valid
	i) Monitor implementation progress in accordance with CAR/SAM PBN implementation roadmap and State implementation plan	On going	GREPECAS	Valid
GPIs	GPI/5: performance-based navigation, GPI/7: dynamic and flexible ATS route management, GPI/8: collaborative airspace design and management, GPI/10: terminal area design and management, GPI/11: RNP and RNAV SIDs and STARs and GPI/12: FMS-based arrival procedures			

2. OPTIMIZE THE ATS ROUTE STRUCTURE IN TERMINAL AREA AIRSPACE				
Benefits				
Environment Efficiency	• reductions in fuel consumption; • ability of aircraft to conduct flight more closely to preferred trajectories; • increase in airspace capacity; • facilitate utilization of advanced technologies (e.g., FMS based arrivals) and ATC decision support tools (e.g., metering and sequencing), thereby increasing efficiency.			
Strategy				
ATM Component	TASK DESCRIPTION	START-END	RESPON-SIBLE	STATUS
AOM	a) Develop regional PBN implementation plan	2007	GREPECAS	Completed
	b) Develop State PBN implementation plan	2010	States	Valid
	c) Develop Airspace Concept based in CAR /SAM PBN Roadmap, in order to design and implement optimized standard instrument departures (SIDs), standard instrument arrivals (STARs), instrument flight procedures, holding, approach and associated procedures, on the basis of PBN and, in particular RNAV-1 and Basic-RNP1	2011	States	Valid
	d) Develop performance measurement plan	2010	States	Valid
	e) Formulate safety plan	2010	States	Valid
	f) Establish collaborative decision making (CDM) process	2010	States	Valid
	g) Publish national regulations for aircraft and operators approval using PBN manual as guidance material	2010	States	Valid
	h) Identify training needs and develop corresponding guidelines	2010	States	Valid
	i) Develop system performance monitoring plan	2010	States	Valid
	j) Develop a regional strategy and work programme for implementation of SIDs and STARs	2011	States	Valid
	k) Monitor implementation progress in accordance with CAR/SAM PBN implementation roadmap and State implementation plan	On going	GREPECAS	Valid
GPIs	GPI/5: performance-based navigation, GPI/7: dynamic and flexible ATS route management, GPI/8: collaborative airspace design and management, GPI/10: terminal area design and management, GPI/11: RNP and RNAV SIDs and STARs and GPI/12: FMS-based arrival procedures.			

3. IMPLEMENT RNP APPROACHES				
Benefits				
Efficiency	• Improvements in capacity and efficiency at aerodromes.			
Safety	• Improvements in safety at aerodromes.			
Strategy				
ATM Component	TASK DESCRIPTION	START-END	RESPON-SIBLE	STATUS
AOM	a) Develop State PBN implementation plan.	2009	States	Valid
	b) Develop Airspace Concept based in CAR /SAM PBN Roadmap, in order to design and implement RNP APCH with Baro-VNAV in accordance with assembly resolution A36-23, and RNP AR APCH where beneficial	2010	States	Valid
	c) Develop performance measurement plan	2010	States	Valid
	d) Formulate safety plan	2010	States	Valid
	e) Establish collaborative decision making (CDM) process	2010	States	Valid
	f) Publish national regulations for aircraft and operators approval using PBN manual as guidance material.	2010	States	Valid
	g) Identify training needs and develop corresponding guidelines	2010	States	Valid
	h) Implementation of APV procedures	2016	States	Valid
	i) Formulate system performance monitoring plan	2011	States	Valid
	j) Monitor implementation progress in accordance with CAR/SAM PBN implementation roadmap and State implementation plan	On going	GREPECAS	Valid
GPIs	GPI/5: performance-based navigation, GPI/7: dynamic and flexible ATS route management, GPI/8: collaborative airspace design and management, GPI/10: terminal area design and management, GPI/11: RNP and RNAV SIDs and STARs and GPI/12: FMS-based arrival procedures.			

4. ENHANCE CIVIL/MILITARY COORDINATION AND CO-OPERATION**Benefits**

- | | |
|-------------------|---|
| Efficiency | <ul style="list-style-type: none"> • increase airspace capacity; • allow a more efficient ATS route structure |
| Continuity | <ul style="list-style-type: none"> • ensure safe and efficient action in the event of unlawful interference; • make available military restricted airspace more hours of the day so that aircraft can fly on their preferred trajectories; and • improve search and rescue services. |

Strategy

ATM Component	TASK DESCRIPTION	START-END	RESPONSIBLE	STATUS
AOM	a) Develop guidance material on civil/military coordination and co-operation to be used by States/Territories to develop national policies, procedures and rules.	2007	ICAO	Completed
	b) Establish civil/military coordination bodies.	2008 – 2012	States	Valid
	c) Arrange for permanent liaison and close cooperation between civil ATS units and appropriate air defence units.	2008 – 2012	States	Valid
	d) Conduct a regional review of special use airspace.	2008 – 2012	GREPECAS	Valid
	e) Develop a regional strategy and work programme for implementation of flexible use of airspace in a phased approach for dynamic sharing of restricted airspace	2008 – 2010	States	Valid
	f) full integration of civil and military aviation activities by 2012.	2008 – 2012	States	Valid
	g) Monitor implementation progress.	On going	GREPECAS	Valid
GPIs	GPI/1: flexible use of airspace.			

5. ALIGN UPPER AIRSPACE CLASSIFICATION				
Benefits				
Efficiency	• better utilization of data link communication; • optimize use of flight plan data processing systems; • enhance airspace management coordination, message exchange capabilities and utilization of flexible and dynamic airspace management techniques;			
Continuity	• harmonization of interregional coordination processes; • improvement of airspace interoperability and seamlessness; and • ensure the provision of positive air traffic control services to all aircraft operations.			
Strategy				
ATM Component	TASK DESCRIPTION	START-END	RESPON-SIBLE	STATUS
	a) Develop a regional implementation strategy and work programme for the implementation of ICAO Annex 11 airspace Class A above FL 195.	2007	GREPECAS	Completed
	b) Identify key stakeholders, ATCOs, pilots, and relevant international organisations for coordination and cooperation on changes for new airspace organization, using a CDM process.	2008 – 2010	States	Valid
	c) Develop new national airspace organization in accordance with ICAO provisions, as needed.	2008 – 2010	States	Valid
AOM	d) Coordinate changes for regional and national documents; • Doc 8733, CAR/SAM ANP; • AIP; and, • ATS letters of agreement.	2008 – 2012	ICAO - States	Valid
	e) Carry out improvements in ground systems to support new airspace organization configurations, as necessary.	2008 – 2012	States	Valid
	f) Publish national regulatory material for implementation of new rules and procedures to reflect airspace organizational changes.	2008 – 2010	States	Valid
	g) Train ATCOs and pilots in new procedures, including all civil and military airspace users, as required;	2008 – 2012	States	Valid
	h) Monitor implementation progress.	On going	GREPECAS	Valid
GPIs	GPI/4: align upper airspace classification.			

6. IMPROVE DEMAND AND CAPACITY BALANCING				
Benefits				
Environment	- reduction in weather- and traffic-induced holding, leading to reduced fuel consumption and emissions; - improved and smoother traffic flows; - improved predictability; - improved management of excess demand for service in ATC sectors and aerodromes; - improved operational efficiency; - enhanced airport capacity; - enhanced airspace capacity; and - improved safety management.			
Efficiency				
Safety				
Strategy				
ATM Component	TASK DESCRIPTION	START-END	RESPON-SIBLE	STATUS
DCB	a) Identify key stakeholders (ATC service providers and users, military authorities, airport authorities, aircraft operators and relevant international organisations) for purposes of coordination and cooperation, using a CDM process.	2008	GREPECAS	Valid
	b) Identify and analyse traffic flow problems and develop methods for improving efficiencies on a gradual basis, as needed, through enhancements in current: i. airspace organization and management (AOM) and ATS routes structure (unidirectional routes) and SID and STARS; ii. communication, navigation and surveillance systems; iii. aerodrome capacity; iv. ATS capacity; v. training for pilots and Controllers; and vi. ATS letters of agreement.	2008 – 2012	GREPECAS	Valid
	c) Define common elements of situational awareness between FMUs; i. common traffic displays, ii. common weather displays (Internet), iii. communications (teleconferences, web), and, iv. daily teleconference/ messages methodology advisories.	2010 – 2012	GREPECAS	Valid
	d) Develop methods to establish demand/capacity forecasting;	2007 – 2012	GREPECAS	Valid
	e) Develop a regional strategy and work programme for harmonized implementation of ATFM service.	2007	GREPECAS	Completed

<i>Medium term</i>				
DCB	f) Develop a regional strategy for the implementation of flexible use of airspace (FUA); i. assess use of airspace management processes; ii. improve current national airspace management to adjust dynamic changes in tactical stage to traffic flows; iii. introduce improvements in ground support systems and associated procedures for the extension of FUA with dynamic airspace management processes; and iv. implement dynamic ATC sectorization in order to provide the best balance between demand and capacity to respond in real-time to changing situations in traffic flows, and to accommodate in short-term the preferred routes of users.	2008 – 2012	GREPECAS States	Valid
	g) Define common electronic information and minimum databases required for decision support and alerting systems for interoperable situational awareness between Centralized ATFM units.	2008 – 2014	GREPECAS States	Valid
	h) Develop regional procedures for efficient and optimum use of aerodrome and runway capacity.	2008 – 2012	GREPECAS	Valid
	i) Develop a regional ATFM procedural manual to manage demand/capacity balancing.	2008 – 2010	GREPECAS	Valid
	j) Develop a regional strategy and framework for the implementation of a Centralized ATFM unit.	2008 – 2012	GREPECAS	Valid
	k) Develop operational agreements between Centralized ATFM units for interregional demand/capacity balancing.	2008 – 2015	GREPECAS	Valid
	l) Monitor implementation progress.	On going	GREPECAS	Valid
GPIs	GPI/1: flexible use of airspace; GPI/6: air traffic flow management; GPI/7: dynamic and flexible ATS route management; GPI/9: Situational awareness; GPI/13: aerodrome design and management; GPI/14: runway operations; and GPI/16: decision support and alerting systems.			

7. IMPROVE ATM SITUATIONAL AWARENESS				
Benefits				
Efficiency	- enhanced traffic surveillance; - enhanced collaboration between flight crew and the ATM system; - improved collaborative decision-making through sharing electronic aeronautical data information; - reduced of workload for both pilots and controllers; - improved operational efficiency; - enhanced airspace capacity; - improved implementation on a cost-effective basis;			
Safety	- improved available electronic terrain and obstacle data in the cockpit; - reduced of the number of controlled flight into terrain related accidents; and - improved safety management.			
Strategy Near term				
ATM Component	TASK DESCRIPTION	START- END	RESPON- SIBLE	STATUS
SDM	a) Identify parties concerned.	2009	GREPECAS	Completed
	b) Identify the automation level required according to the ATM service provided in airspace and international aerodromes, assessing i. operational architecture design, ii. characteristics and attributes for interoperability, iii. data bases and software, and iv. technical requirements.	2008 – 2010	States	Valid
	c) Improve ATS interfacility communication.	2008 – 2015	States	Valid
	d) Implement flight plan data processing system and electronic transmission tools.	2008 – 2012	States	Valid
	e) Implement radar data sharing programs where benefits can be obtained.	2008 – 2012	States	Valid
	f) Develop situational awareness training programmes for pilots and controllers.	2008 – 2012	States	Valid
	g) Implement ATM surveillance systems for situational traffic information and associated procedures.	2010 – 2015	States	Valid
	h) Implement ATS automated message exchanges, as required; a. FPL, CPL, CNL, DLA, etc.	2008 – 2012	GREPECAS States	Valid

	i) Implement automated radar handovers, where able.	2008 – 2014	States	Valid
	j) Implement ground and air electronic warnings, as needed i. Conflict prediction ii. Terrain proximity iii. MSAW iv. DAIW v. Surveillance system for surface movement.	2008 – 2012	States	Valid
	k) Implement data link surveillance technologies and applications: ADS, CPDLC, AIDC, as required.	2008 – 2012	States	Valid
Medium term				
ATM Component	TASK DESCRIPTION	START-END	RESPONSIBLE	STATUS
	l) Implement additional/advanced automation support tools to increase sharing of aeronautical information i. ETMS or similar ii. MET information iii. AIS/NOTAM dissemination iv. Surveillance tools to identify airspace sector constraints v. A-SMGC in specific aerodromes, as required.	2010 – 2012	States	Valid
	m) Implement teleconferences with ATM stakeholders.	2008 - 2014	States	Valid
	n) Monitor implementation progress	On going	GREPECAS	Valid
GPIs	GPI/1: flexible use of airspace; GPI/6: air traffic flow management; and GPI/7: dynamic and flexible ATS route management; GPI/9: Situational awareness; GPI/13: aerodrome design and management; GPI/14: runway operations; and GPI/16: decision support and alerting systems; GPI/17: implementation of data link applications; GPI/18: aeronautical Information; GPI/19: meteorological systems.			

8. IMPLEMENTATION OF NEW FLIGHT PLAN FORMAT				
Benefits				
Efficiency	- improved operational efficiency; - enhanced airspace capacity;			
Safety	- improved implementation on a cost-effective basis; - improved safety management			
Strategy Near term (2012)				
ATM Component	TASK DESCRIPTION	START-END	RESPON- SIBLE	STATUS
SDM	a) Guidelines on transition to new Flight Plan Format	2009	ICAO	Completed
	b) Develop regional strategy for transition to new Flight Plan Format	April 2010	GREPECAS	Valid
	c) Identification of stakeholders involved and possible impact by implementation of New Flight Plan Format (FPL/RPL/CPL)	1/10/2009-30/6/2010	States, Territories, Int. Org	Valid
	d) Evaluation of current/future flight plan processing capabilities regarding the New Flight Plan Format.	1/10/2009-30/6/2010	States, Territories, Int. Org	Valid
	e) Conduct trials between systems with NEW flight Plan processing capacity.	1/1/2010-30/12/2010	States, Territories, Int. Org	Valid
	f) Develop of contingency procedures and determination of operational/ technical considerations for the transition	1/1/2011-30/6/2011	States, Territories, Int. Org	Valid
	g) Identification of major parties considering FP data flow and definition of transition steps based on: - systems with capability to process both formats: current and NEW. - Systems to be upgraded/implemented before 2012 and that will be capable to process New Flight Plan Format.	1/1/2011-30/6/2011	States, Territories, Int. Org	Valid
	h) Publication on Transition Actions, Trials and other publication for the users and stakeholders	30/10/2011-30/5/2012	States, Territories, Int. Org	Valid
	i) Assestment of Transition Actions and make adjustments	1/6/2012-30/9/2012	States, Territories, Int. Org	Valid
	j) Conduct Transition plan	15/11/2012	States, Territories, Int. Org	Valid
	k) Monitor the transition activities	1/10/2009-1/12/2012	ICAO	Valid
GPIs	GPI/1: flexible use of airspace; GPI/6: air traffic flow management; and GPI/7: dynamic and flexible ATS route management; GPI/9: Situational awareness; GPI/13: aerodrome design and management; GPI/14: runway operations; and GPI/16: decision support and alerting systems; GPI/17: implementation of data link applications; GPI/18: aeronautical Information; GPI/19: meteorological systems; GPI-21: Navigation Systems; GPI-22: Communications Infrastructure and GPI-23: Aeronautical radio spectrum.			

9. IMPROVE SAR SYSTEM				
Benefits				
Efficiency	- enhanced traffic surveillance; - enhanced collaboration between stakeholders; - improved operational efficiency;			
Safety	- improved implementation on a cost-effective basis; - improved safety management.			
Strategy				
ATM Component	TASK DESCRIPTION	START-END	RESPON-SIBLE	STATUS
SDM	a) Develop regional strategy to improve SAR System	End 2009	ICAO	Completed
	b) Identify parties concerned	End 2009	ICAO	Completed
	c) Conduct comprehensive analysis of SAR requirements based on risk assessment and quality assurance principles	2009 - 2010	States, ICAO	Valid
	d) Foster the harmonization of policies, regulations, practices and procedures of the aeronautical/maritime SAR services, in accordance with ICAO Standards and Recommended Methods.	2009 - 2012	States, ICAO	Valid
	e) Develop, update and ratify SAR agreements with RCCs of adjacent States.	2009 - 2012	States	Valid
	f) Develop, update and ratify SAR agreements with SAR service International agencies.	2009 - 2012	States	Valid
	g) Foster the establishment of joint aeronautical/maritime SAR Committees, including the integration of voluntary SAR organizations, as well as the development of agreements between all the stakeholders of the national SAR service	2009 - 2012	States, ICAO	Valid
	h) Develop human resources and training planning strategy in line with ICAO SAR guidelines and the regional agreements reached.	2009 - 2012	States, ICAO	Valid
	i) Monitor implementation progress	2009 - 2012	ICAO	Valid
GPIs	GPI/6: air traffic flow management; and GPI/9: Situational awareness			

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.			

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.			

12. PROTECTION AND OPTIMUM USE OF RADIOFREQUENCY SPECTRUM				
Benefits				
Efficiency	• Efficient use of aviation radio spectrum • Ensure availability of frequencies for services and aeronautical systems			
Safety	• Assurance of aviation spectrum			
Strategy Near term (2012)				
ATM Component	TASK DESCRIPTION	START-END	RESPONSIBLE	STATUS
AOM, DCB, AO, TS, CM, AUO, SDM	a) Ensure Regional coordination for the protection of the aviation spectrum at WRC-12, and beyond	2009-2011	States, Territories, Int. Org, ICAO	Valid
	b) Ensure Participation of Civil Aviation Experts in State's delegation to ITU WRC Meetings	2009-2010	States, Territories, Int. Org,	Valid
	c) Disseminate ICAO policy statements of requirements for aeronautical radio frequency spectrum	2009-2010	ICAO	Valid
	d) Implement frequency spectrum management	2009-2011	States, Territories, Int. Org,	Valid
	e) Support ICAO Position during WRC-12	2012	States, Territories, Int. Org,	Valid
	f) Monitor the understanding of radio spectrum management and support on WRC-2012	2009-2012	ICAO	Valid
GPIs	GPI/1: flexible use of airspace; GPI/6: air traffic flow management; GPI/7: dynamic and flexible ATS route management; GPI/9: Situational awareness; GPI/14: runway operations; GPI-21: Navigation Systems, GPI-22: Communications Infrastructure and GPI-23: Aeronautical radio spectrum.			

13. OPTIMIZATION AND MODERNIZATION OF COMMUNICATION INFRASTRUCTURE				
Benefits				
Efficiency	• Improvements in coordination • Increase availability of communications • Avoid misunderstandings in communications • Facilitate the utilization of advanced technologies			
Continuity	• improvement of airspace interoperability and seamlessness; and • ensure the provision of positive air traffic control services to all aircraft operations.			
Safety	• Improvement in safety in airspaces and aerodromes			
Strategy				
Near Term (2012)				
ATM Component	TASK DESCRIPTION	START-END	RESPONSIBLE	STATUS
AO, TS, CM, AUO AOM, SDM	a) Review the status of performance of current AFS Services and identify deficiencies or improvements (AFTN, oral ATS services, A/G communications)	2009-2009	WGs	Valid
	b) Analysis and formulation of plans for implementing improvement or solving deficiencies	2009-end 2009	WG	Valid
	c) Develop Regional ATN Planning documents	2009-2012	CNS/ATM/SG	Valid
	d) Coordination and testing of ATN G-G Application implementation aspects	2009-2012	WGs	Valid
	e) Planning and trial activities for A-G Application implementation	2010-2011	WGs	Valid
	f) Technical review of Regional Telecommunication networks for ATN implementation	2009-2010	MEVA TMG, WGs	Valid
	g) Implement available technologies in to facilitate ground and airborne applications (CPDLC, ADS-C, ADS-B)	2009-2015	States, user	Valid
	h) Monitor the implementation and improvement of the telecommunications and ATN applications issues.	2009-2012	States, WGs, CNS/ATM/SG, OACI	Valid
GPIs	GPI/1: flexible use of airspace; GPI/6: air traffic flow management; GPI/7: dynamic and flexible ATS route management; GPI/9: Situational awareness; GPI/14: runway operations; GP1-17: Data Link Application, GPI-21: Navigation Systems and GPI-22: Communications Infrastructure			

14. IMPROVE AVAILABILITY OF METEOROLOGICAL INFORMATION				
Benefits				
Efficiency	- Assist ATM in tactical decision making for aircraft surveillance, air traffic flow management and flexible and dynamic routing of aircraft - improve aerodrome and airspace capacity - improve situational awareness of pilots - reduce unnecessary consumption of fuel and prevent unnecessary delays due to minimal meteorological conditions at the airports - improve planning of flight routes and schedules			
Operational safety	- Increase the number of flights in areas of fair weather conditions and prevent or reduce flights in areas of unfavorable meteorological conditions and volcanic ash clouds - prevent landing operations at aerodromes under minimal meteorological conditions			
Strategy Short Term (2010)				
ATM Component	TASK DESCRIPTION	START - END	RESPONSIBLE	STATUS
AOM, DCB, AO, TS, AUO	a) Increase and protect facilities to disseminate and Exchange aeronautical meteorological information i) Increase AFTN, WAFS and internet facilities to disseminate OPMET data at meteorological offices and stations. ii) Increase AFTN communications facilities to relay aircraft special reports from the air traffic control units to the meteorological offices iii) Implement lightning and other protection systems for the AFTN and WAFS facilities used for OPMET exchange iv) Maintain and expand the number of workstations used to receive meteorological products of the World Area Forecast System	2009 - 2010	States and Territories	Valid
AOM,DCB, AO, TS, AUO	b) Increase availability, timeliness and quality of OPMET data i) Improve the use of the METAR and TAF codes/templates used to disseminate meteorological reports and aerodrome forecasts ii) Enhance preparation and availability of SIGMET information on hazardous meteorological conditions and volcanic ash clouds iii) Enhance the availability of landing forecasts, TREND, considering user (IATA) requirements	2009 - 2010	States and Territories	Valid
AOM, DCB, AO, TS, AUO	c) Establish contingency procedures to disseminate OPMET data, via Internet, in case of failure of the AFTN and WAFS facilities	2009 - 2010	States and Territories ICAO NACC	Valid

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AO	d) Improve the quality of data, provided by meteorological sensors, used in meteorological reports Establish verification and calibration programmes of data provided by meteorological instruments and automated weather systems at the aerodromes	2009 - 2010	States and Territories	Valid
AUO	e) Monitor availability and quality of OPMET data issued by CAR States and Territories and Territories and provide assistance if required	2009 - 2010	States and Territories	Valid
AUO	f) Monitor participation of States and Territories in the International Airways Volcano Watch and provide assistance if necessary	2009 - 2010	ICAO NACC Washington VAAC	Valid
AUO	g) Monitor participation of States and Territories in the International Tropical Cyclone Watch and provide assistance if necessary	2009 - 2010	ICAO NACC Miami TCAC	Valid
AOM, DCB,AO, TS, AUO	h) Establish Quality Assurance Systems provided to the aeronautical users	2010	States and Territories	Valid
AUO	i) Conduct, every year, update seminars and courses on relevant operational aeronautical meteorological matters	2009-2010	States and Territories ICAO NACC, WMO AR IV	Valid
AUO	j) Consider standards and recommendations ICAO and WMO for the training and recruitment of aeronautical meteorological personnel	2009 - 2010	States and Territories	Valid
Mid Term (2015)				
AUO	k) Establish cost recovery schemes for the aeronautical meteorological services	2010 - 2015	States and Territories	Valid
AO, TS	l) Increase the number of automated weather systems at the aerodromes	2010 - 2015	States and Territories	Valid
AO, TS	m) Implement meteorological data downlinks at the MET and ATS units	2012-2015	States and Territories	Valid
AO, TS	n) Implement meteorological data uplinks from the automated weather systems, ATS and meteorological unit	2012-2015	States and Territories	Valid
AUO	o) Prepare hourly-monthly climatological tables of the aerodromes for itinerary planning	2010 - 2015	States and Territories	Valid
GPIs	GPI/6 air traffic flow management, GPI/7 flexible/dynamic ATS route management, GPI/9 situational awareness, GPI/14 runway operations, GPI/17 implementation of datalink applications, GPI/18: aeronautical information, GPI 19. Meteorological systems.			

2009-2011
FOLLOW-UP AND IMPLEMENTATION ACTION PLAN
AIR-GROUND AND GROUND-GROUND COMMUNICATIONS

No.	Performance Objective Task	Action Description	Responsible	Begin date	End date	Deliverables	Observations
1	2	3	4	5	6	7	8
1	13 a), 13 b)	Improve VHF and HF/AMS (R) coverages and mitigate deficiencies	States/ Territories coordinated by E/CAR/WG-CNS Committee	Oct 2009	April 2010	- Deficiencies Identification and - Corresponding corrective action plan	References to CNS tables 2A and 2B
2	13 a), 13 b)	Improve AFTN communications and ATS direct communications and mitigate deficiencies	States/ Territories coordinated by E/CAR/WG-CNS Committee	Oct 2009	Mid November2009	- Deficiencies Identification and - Corresponding corrective action plan	References to CNS tables 1A and 1C
3	13 a), 13 b)	Replace E/CAR Telecommunication network by ECAR VSAT network	E/CAR NTG	Oct 2009	Mid 2011	E/CAR VSAT Telecommunication Network	
4	1 b)	Evaluation of required communication infrastructure to satisfy the navigation requirements based on PBN.	States/ Territories coordinated by E/CAR/WG-CNS Committee	July 2009	Dec 2010	Analysis of communication infrastructure	
5	7 l)	Adoption of an “equipment modernization/DATIS Service implementation plan for international airports” in compliance to the ATM requirements.	States/ Territories coordinated by E/CAR/WG-CNS Committee	July 2009	Dec 2012	DATIS Modernization and Implementation Plan	
6	13 c)	Elaborate Air-ground datalink progressive execution Plan based on CAR/SAM Activities Plan and Datalink implementation programme (Appendix AW and AX of Agenda 3 of GREPECAS/13).	CNS/ATM/SG (ATN TF)	June 2009.	Dec 2010	Initial Transition Plan for ATN Air-ground applications	References to CNS table 1Bc
7	13 c)	Elaborate ATN AIDC Implementation Plan	CNS/ATM/SG (ATN TF)	June2009.	Dec 2010	Initial Transition Plan for ATN ground-ground Applications (AIDC)	
8	13 c)	Update the ATN Routers Regional Plan	CNS/ATM/SG (ATN TF)	June2009.	June 2010	CNS Table 1Ba Updated proposal	References to CNS table 1Ba

No.	Performance Objective Task	Action Description	Responsible	Begin date	End date	Deliverables	Observations
1	2	3	4	5	6	7	8
9	13 d)	Preliminary review of ATN Routers Regional Plan	States/ Territories coordinated by E/CAR/WG-CNS Committee	Oct 2009	April 2010	Comments to current version of CNS Table 1Ba	References to CNS table 1Ba
10	13 d)	Evaluation of AMHS CAAS addresses proposal	States/ Territories coordinated by E/CAR/WG-CNS Committee	Oct 2009	March 2010	Comments to AMHS CAAS addresses proposal	CAR AMHS CAAS Addresses Proposal
11	13 d)	Technical evaluation of communications and interfaces for AIDC implementation over the AFTN.	States/ Territories coordinated by E/CAR/WG-CNS Committee	Oct 2009	June 2010	Technical recommendations for AIDC implementation over the AFTN	
		Perform activities for the implementation of the ATN and its applications according to the CAR/SAM Regional strategy for the implementation of the ATN and its applications. (Appendix BA of Agenda 3 of GREPECAS/13 Report).:					
12	13 d)	i. Perform AMHS operation trials	USA, Trinidad & Tobago	Oct 2009	Jul 2010	Trial results	
13	13 e), 7c)	ii. Evaluation of regional networks to support ATN Applications	States/ Territories coordinated by E/CAR/WG-CNS Committee	Oct 2009	May 2010	Trial results	
14	13 d)	iii. Update of Regional Plan for ATN ground-ground applications	States/ Territories coordinated by E/CAR/WG-CNS Committee	Oct 2009	June 2010	Updates to Regional Plan for ATN ground-ground applications	References to CNS table 1Bb
15	13 e)	iv. Review of CAR/SAM Regional Program for the implementation of the air – ground data links	States/ Territories coordinated by E/CAR/WG-CNS Committee	Oct 2009	March 2010	Comments to this Regional Program	Reference: CAR/SAM Regional Program for the implementation of the air – ground data links

No.	Performance Objective Task	Action Description	Responsible	Begin date	End date	Deliverables	Observations
1	2	3	4	5	6	7	8
16	13 e), 13 g)	v. A-G Applications trial Plans	States/ Territories coordinated by E/CAR/WG-CNS Committee	Oct 2009	Nov 2010	Trial Plans for A-G Applications	
17	13 d), 13 e)	vi. Participate on training seminars and events	States/ Territories	Oct 2009	Nov 2011	Participation on events	
18	13 c)	Procure the application of management and coordination of frequency assignments and the implementation of tools for this goal.	ICAO	Jul 2009	Dec 2010	Frequency Management and coordination tools	
19	13 c)	Implement management and coordination of frequencies with ICAO	States/ Territories	Oct 2009	Dec 2009	Comments to ICAO reviewed frequency assignment lists	
20	13 c)	Comments to management frequency tools provided by ICAO	Barbados, French Antilles, Trinidad and Tobago, ECCAA	Nov 2009	Feb 2010	Comments and evaluation of tools	
21	12 a)	Promote and coordinate diffusion of ICAO position for WRC-2012	ICAO	Oct 2009	Dec 2011	Promote ICAO position	
22	12 b), 12 e)	Participate and coordinate with their national spectrum regulation entities the support to ICAO position for the WRC-2012	States/ Territories	Oct 2009	Dec 2011	Support ICAO position in WRC-2012 related meetings	

2009-2014
FOLLOW-UP AND IMPLEMENTATION ACTION PLAN
NAVIGATION SYSTEMS

No.	Performance Objective Task	Action Description	Responsible	Begin date	End date	Deliverables	Observations
1	2	3	4	5	6	7	8
1	1 b)	Evaluation of required navigation infrastructure to satisfy the PBN based navigation requirements, identifying improvements and deficiencies	States/ Territories coordinated by E/CAR/WG-CNS Committee	Oct 2009	Dec 2010	1. Analysis of required navigation infrastructure for example: DME-DME coverage for selected ATS routes for RNAV 5 2. Identification of deficiencies 3. Corresponding corrective Action plan	Reference to CNS table 3
2	1 b), 2c), 3 b)	Development of a regional strategy for the implementation of navigation systems	CNS/ATM/SG	Sep 2009	Dec 2009	Regional Strategy for Navigation Systems	Navigation Infrastructure alternatives for PBN
3	1 b), 2c), 3 b)	Develop recommendations for training in GNSS elements	CNS/ATM/SG	Sep 2009	Dec 2009	recommendations for training in GNSS elements	Navigation Infrastructure alternatives for PBN
4	1 b), 2c), 3 b)	Plans on GNSS systems (SBAS y GBAS) and trial conduction.	States/ Territories coordinated by E/CAR/WG-CNS Committee	Oct 2009	Dec 2014	GNSS trial plan	Navigation Infrastructure alternatives for PBN

2009-2011
FOLLOW-UP AND IMPLEMENTATION ACTION PLAN
SURVEILLANCE SYSTEMS

No.	Performance Objective Task	Action Description	Responsible	Begin date	End date	Deliverables	Observations
1	2	3	4	5	6	7	8
1	7 e)	Evaluation of radar coverage and identification of improvements to satisfy operative requirements.	States/ Territories coordinated by E/CAR/WG-CNS Committee	Oct 2009	April 2010	• Identification of improvements and • Respective Action Plan	Reference to CNS table 4A
2	7 e)	Radar Data Sharing implementation	French Antilles, Trinidad & Tobago, Saint Lucia, Barbados	Oct 2009	Dec 2010	Agreements and implementation of radar data sharing	
3	1 b)	Evaluation of surveillance infrastructure to satisfy navigation requirements for PBN	States/ Territories coordinated by E/CAR/WG-CNS Committee	Oct 2009	Dec 2010	Analysis of surveillance infrastructure	
4	7 k)	Implementation of 24 bits Address registry	States/ Territories coordinated by E/CAR/WG-CNS Committee	Oct 2009	Dec 2010	24 bits Address registry	
5	13 g), 7 k)	ADS-B, ADS-C and MLAT trials	States/ Territories coordinated by E/CAR/WG-CNS Committee	Oct 2009	Dec 2015	Trials on ADS-B, MLAT and ADS-C	
6	13 g), 7 k)	ADS-B cost – benefit analysis	States/ Territories coordinated by E/CAR/WG-CNS Committee	Oct 2009	Dec 2015	ADS-B cost-benefit analysis	
7	7e), 7 k)	<i>Development of a regional strategy for surveillance systems</i>	CNS/ATM/SG	July 2009	Oct 2009	Regional Strategy for Surveillance Systems	
8	7 k)	Mode S radar implementation and update to Regional Plan on Surveillance Systems	States/ Territories coordinated by E/CAR/WG-CNS Committee	Oct 2009	Dec 2011	Information on Mode S Radar implementation and updates to Regional Plan	Reference to CNS table 4A

Agenda Item 3: Follow-up on actions taken concerning valid Conclusions/Decisions of previous meetings and review of Terms of Reference (ToRs) and Work Programme

3.1 Review of the valid Conclusions/Decisions from the NACC/DCA, NACC/WG, E/CAR/DCA, E/CAR/WG and GREPECAS meetings

3.1.1 The Secretariat presented WP/23, Appendix A which reviewed the status of conclusions from previous meetings of the Eastern Caribbean Working Group. The Meeting agreed that the following conclusions were completed or superseded by time, events, incorporated into the NAM/CAR Regional Performance-Based Air Navigation Implementation Plan or a subsequent NACC/WG Conclusion: 30/1, 30/2, 30/3, 30/4, 30/5, 30/6, 30/8, 30/9, 30/10, 30/11, 30/12, 30/13, 30/14, 30/15, 30/16, 30/17, 30/18, 30/19, 29/2, 29/4, 29/6, 29/7, 28/4, 28/11, 27/20, 27/21, 27/22, and 27/23. The only outstanding valid conclusion from previous meetings is 30/7, transcribed below for ease of reference:

DRAFT

CONCLUSION 30/7

**NATIONAL AND INTERNATIONAL SAR COOPERATION
AGREEMENTS IN THE E/CAR**

That States/Territories of the E/CAR Area that have not yet done so:

- a) present an up-to-date report of their bilateral and/or multilateral SAR cooperation agreements with other States/Territories/International Organizations which allow the use of mechanisms and resources to improve the SAR regional system; and*
- b) submit to the ICAO NACC Regional Office by 30 August 2007 a report on the progress attained in this regard.*

3.1.2 The Meeting reviewed WP23, Appendix B on Outstanding conclusions for the Eastern Caribbean Directors of Civil Aviation, and noted that all were completed or superseded by other conclusions (21/1, 21/2, 21/3, 21/4, 21/5, 21/7, 20/2, 20/8, 19/6, 19/20 and 19/28).

3.1.3 Regarding WP23, Appendix C on Outstanding conclusions for the NACC Working Group, the Meeting reviewed it and informed that for the E/CAR Region, the following conclusions were completed or superseded: 2/5, 1/1, 1/4 and 1/8. Remaining as outstanding for the E/CAR Region were the following: 2/1, 2/2, 2/3 and 2/4.

3.1.4 Finally the meeting took note of the NACC/DCA and GREPECAS Outstanding conclusions presented in Appendices D and E of WP/23.

3.2 Review of the E/CAR/WG Terms of Reference (ToRs) and Work Programme

3.2.1 The Meeting adopted the draft revised Terms of Reference and Work Programme of the E/CAR/WG, as detailed in the **Appendix A** to this part of the report, to be presented to the E/CAR DCAs for approval. The Secretariat informed the Meeting about the importance of confirming the focal points designated by the States/Territories/international organisations for the E/CAR/WG to conduct proper coordination and to be responsible for progressing committed activities.

3.2.2 To this end, E/CAR States/Territories will provide to the ICAO NACC Regional Office the members of the E/CAR/WG, the names, telephone number and e-mail address, as well for the Committees, the updated names and e-mail addresses of members.

3.2.3 It was also agreed that the E/CAR/WG will progress its work via electronic mail and meet in formal session from time to time as depicted in the meeting host rotation programme, presented in **Appendix B** to this part of the Report.

APPENDIX A

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 B**FUTURE E/CAR/WG MEETING HOST ROTATION PROGRAMME
INCORPORATING THE NACC/WG MEETING SCHEDULE**

- a) The following meeting host rotation programme has been adopted for the E/CAR Working Group Meetings incorporating the NACC/WG Meeting schedule;
- b) any other States and International Organizations normally invited to participate in the E/CAR Working Group meetings may at any time offer to host a meeting;
- c) should a State or Group of Territories be unable to host a particular Working Group meeting as per the programme, it may exchange positions with another State or Group of Territories through bilateral discussions and the ICAO NACC Regional Office should be informed of the change at the latest six months before the convening of the meeting;
- d) should a State or Group of Territories be unable to host a particular Working Group meeting as per the programme and not have exchanged positions in the programme with another State or Territory, the ICAO NACC Regional Office should be advised at least six months before the convening of the meeting, where upon the next State on the list should take on the responsibility of hosting the meeting; and
- e) Meeting Host Rotation Programme:

YEAR	STATES OR GROUP OF TERRITORIES
2007	Trinidad and Tobago (NACC/WG/1)
2008	Ocho Rios, Jamaica (NACC/WG/2)
2009	Antigua and Barbuda (E/CAR/WG/31)
E/CAR/WG/32	Netherlands Antilles
NACC/WG/3	ICAO NACC Regional Office
E/CAR/WG/33	Barbados
E/CAR/WG/34	French Antilles
NACC/WG/4	ICAO NACC Regional Office
E/CAR/WG/35	United States
E/CAR/WG/36	Saint Kitts and Nevis
NACC/WG/5	ICAO NACC Regional Office
E/CAR/WG/37	Grenada
E/CAR/WG/38	UK Overseas Territories (Anguilla, British Virgin Islands, Montserrat)
NACC/WG/6	ICAO NACC Regional Office
E/CAR/WG/39	Saint Vincent and the Grenadines
E/CAR/WG/40	Saint Lucia

Agenda Item 4: Other business

4.1 Next meeting site and dates

4.1.1 Based on the meeting host rotation programme contained in the Appendix B to Agenda Item 3 of this report, the venue for the Thirty-Second Eastern Caribbean Working Group Meeting (E/CAR/WG/32), which is scheduled to be held from 15 to 18 June 2010, is Sint Maarten, Netherlands Antilles. During the Meeting, Dominica offered to host the E/CAR/WG/32 meeting, if Netherlands Antilles are unable for any reason.