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INFORMATION PAPER

NAM/CAR/CATC/WG/2 — IP/10
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**Second NAM/CAR Civil Aviation Training Centres Working Group Meeting
(NAM/CAR/CATC/WG/2)**

ICAO NACC Regional Office, Mexico City, Mexico, 2 to 5 December 2014

**Agenda Item 5 Analysis of Courses Offered in Each NAM/CAR Region CATC
5.2 Identification and Analysis of NAM/CAR Region Training Needs**

NAM/CAR REGIONS CIVIL AVIATION TRAINING PLAN

(Presented by the Secretariat)

EXECUTIVE SUMMARY

This information paper presents the NAM/CAR Regions Regional Aviation Training Plan as an element to consider in the development of national aviation training plans and regional activities to guide CAR States with development of their aviation training programmes.

Strategic Objectives:

- Safety
- Air Navigation Capacity and Efficiency
- Security & Facilitation
- Economic Development of Air Transport
- Environmental Protection

1. Introduction

1.1 Based on results from ICAO USOAP audits, many findings are related to insufficient experienced, qualified personnel and adequate training, and inadequate authority certification/licensing systems to regulate and monitor the performance of service providers, making evident the need and priority for States to focus efforts on these deficiencies.

2. Civil Aviation Training Centres (CATCs)

2.1 ICAO's role in training is to support human resources development strategies established by member States and the aviation community.

2.2 The Civil Aviation Training Centres are an essential part of the ICAO training structure. Considering the training needs in the NAM/CAR Regions and update of the Regional Training Plan, the Secretariat has compiled a list of training courses offered by the CAR Region CATCs, which is presented in **Appendix A**.

2.3 The following Training Centres have become Full Members, which brings the total number of Full Members to five in the NAM/CAR Regions, as follows:

#	Training Institution			Full Member since
1	Central America	Instituto Centroamericano de Capacitación Aeronáutica	ICCAE-COCESNA	February 2013
2	Cuba	Centro de Adiestramiento de la Aviación	CAA	September 2012
3	Dominican Republic	Academia Superior de Ciencias Aeronáuticas	ASCA	July 2012
4	Jamaica	Jamaica Civil Aviation Authority Training Institute	CAATI	February 2013
5	Mexico	Centro de Instrucción Internacional de Aeropuertos y Servicios Auxiliares	CIIASA	September 2012
6	Trinidad and Tobago	Civil Aviation Authority (CAA) Civil Aviation Training Centre (CATC)	TT CATC	May 2013

2.4 In addition to Full Members, the following Civil Aviation Training Centres have become Associate Members:

#	State	Training Centre	Associate Member Since
1	United States	Federal Aviation Administration (FAA) Academy	June 2013
2	Barbados	Barbados Civil Aviation Training Centre	2014

2.5 With the ICAO Aviation System Block Upgrade (ASBU) approach and emerging technologies for new automated and efficient services, the availability of qualified personnel and an adequate training infrastructure to maintain up-to-date personnel is critical. ICAO developed an initial NAM/CAR Regions Training Plan in response to a mandate from the region’s Directors of Civil Aviation, which is presented in **Appendix B**.

3. Suggested actions

3.1 The Meeting is invited to:

- a) evaluate the training courses currently offered by the CATCs in the Region (Appendix B refers) and acknowledge the courses according to their existing and future needs; and
- b) based on the level of training for civil aviation personnel in the NAM/CAR States/Territories, identify improvements and actions to coordinate and streamline training provision in the CAR Region.

APPENDIX A

NAM/CAR/CATC/WG/2 — IP/10

CATC 2013 Schedule	Course	Course Number or Catalog Num.	Target Audience	Objectives	Prerequisites or Requirements	Duration	Location	Number of Participants	Language	TRAINAIR PLUS (yes / No)	TRAINAIR (yes/no)	Start Date	End Date	No. of sessions
	Telecommunications for Radio Operators		All ground personnel operating on Airfields who are frequently required to have direct Radio Communication with the Control Tower, Company Personnel and other units.	To bring airfield personnel up to date on Internationally established norms in the world of Radio communication with a view to improving general safety while at the same time enhancing the professional image of these Radio Operators.	No specific academic prerequisites necessary. Ability to speak without impediment.	3 days	Trinidad and Tobago					Mon 7th Jan	Wed 9th Jan	3
	Apron Control Course		Any airport personnel who require training on the management of traffic on the Apron of an Aerodrome and any member of the public who is interested in becoming an Apron Control Officer.	To equip personnel with the knowledge and skills of the International Civil Aviation Organisation's Standards and Recommended Practices for the control of traffic on the Apron of an Aerodrome.	5 CXC or O'level Passes which must include Mathematics and English at Proficiency level 2 or higher; the individual must not suffer speech impediments or other physical impairments which would impact adversely on the performance of the Apron management Function.	17 days	Trinidad and Tobago					Mon 14th Jan	Thur 31st Jan	17
	(USC) Aviation Security Programme Management (AVSEC)		Individuals responsible for implementation of aviation security requirements in medium to small size aircraft operators, all airports and Indirect Air Carriers. This course would also be of interest to those individuals and managers who are seeking to apply a systems management approach to aviation security within their particular areas of jurisdiction. Individuals involved in the design and integration of security measures into airport environments would find benefit in this course.	To provide individuals with the knowledge and skills to institute an aviation security management system within an organization that is compliant with Federal requirements, International Standards and reflective of organizational needs	Experience in the Management of the Security functions at Airports or at establishments responsible for Security sensitive materials and services	M-F	Trinidad and Tobago					Mon 21st Jan	Fri 25th Jan	5
	AIS Course		Local and International -(New)Trainees in the field of Civil Aviation Division and Civil Aviation Authority, Airlines, Handlers, Dispatchers.	To ensure that AIS/MAP Technical Officers achieve the required competency and skills in the day-to-day management and manipulation of aeronautical information/data, and to gain a thorough understanding of the nature and use of the information being handled.		M-F	Trinidad and Tobago					Mon 4th Feb	Fri 26th Apr	60
	Aerodrome and Approach		Any individual between the ages of 18-27 working in the aviation environment or member of the public interested in Air Traffic Control.	To prepare participants with the knowledge and skills of the International Civil Aviation Organisation's Standards and Recommended Practices for the control of traffic on and in the Vicinity of the Aerodrome and in the Approach Control Zone. It prepares candidates to accept On the Job training in Aerodrome Control towers and Approach Control Units towards Ratings in the functions of those units	5 CXC or O'level Passes which must include Mathematics, Physics and English at Proficiency level 2 or higher; the individual must not suffer speech impediments or other physical impairments which would impact adversely on the performance of Air Traffic Control functions.	M-F	Trinidad and Tobago					Mon 6th May	Fri 15th Nov	140
	Threat and Error Management		All operational Aviation personnel and persons employed in safety sensitive areas	To be able to identify Threats in the operational environment. To describe the importance of Threat awareness in the operational environment and to develop organizational, team based and individual systems and procedures to effectively manage the impact of Threats, and mitigate the outcome of Errors in the operational	No specific prerequisite other than working in an environment of a safety-sensitive nature		Trinidad and Tobago					Thu. 27th Jun	Fri. 29th Jun	
	Human Factors		ATC Recruits, operational ATC Personnel and ATS Management Personnel responsible for the management of the ATC Service.	To understand the elements of Human Factors and how they affect the performance of persons who function in Safety-related areas with the sole purpose of reducing accidents and incidents.	Newly employed persons in ATC and other safety-sensitive functions and new managers who are required to supervise others functioning in a safety-sensitive area.	T-F	Trinidad and Tobago					Tue 25th Jun	Wed. 26th Jun	4
	Safety Management Systems		Local and International - New and Trainees in the field of Civil Aviation, Airlines, Handlers, Dispatchers.	To develop participants knowledge of safety management concepts and ICAO SARPs on safety management. To develop participants knowledge to certify and oversee the implementation of key components of SMS in compliance with ICAO SARPs and national		M-F	Trinidad and Tobago					Mon 15th Jul	Fri 19th Jul	5

Course	Course Number or Catalog Num.	Target Audience	Objectives	Prerequisites or Requirements	Duration	Location	Number of Participants	Language	TRAINAIR PLUS (yes/No)	TRAINAIR (yes/no)	Start Date	End Date	No. of sessions
Effective Supervision		Any person who is responsible for staff and wishes to become a supervisor or a manager.	To prepare supervisors and potential supervisors to manage workers on the facilities to achieve maximum output and to achieve the best results.		T-F	Trinidad and Tobago					Tue 10th Sep	Fri 13th Sep	4
OJT Instructor Techniques		Any person who is responsible for training subordinate staff in any function in any field of work.	To provide On-The-Job Coaches with the techniques and skills of OJT to achieve the best results.	Ability and desire to pass on skills necessary to accomplish a work activity and to encourage others to perform	M-F	Trinidad and Tobago					Mon 16th Sep	Fri 20th Sep	5
Approach Radar		Rated Air Traffic Controllers in Aerodrome and/or Approach Control or Rated Area Procedural Controllers who are required to perform the functions of Radar Control	To upgrade the skills of Procedural Controllers to include functioning in an environment where Radar Control is also performed	Ratings in either Aerodrome or Approach or Area Procedural Control	M-F	Trinidad and Tobago					Mon 21st Oct	Wed 4th Dec	35
(USC) Human Factors in Aviation Safety		This course has been carefully designed to appeal to a wide-spectrum of professionals actively involved in aircraft operations. There is special emphasis for safety managers, training, flight department and maintenance managers and supervisors, pilots, air traffic controllers, dispatchers and schedulers	To provide class participants with human factors knowledge and practical tools that can be readily applied to improve safety within their respective organizations.	No specific prerequisite other than working in an Aviation environment of a safety-sensitive nature	5 Days	Trinidad and Tobago							
(USC) Accident/Incident Response Preparedness & Legal Aspects of Aviation Safety		Individuals in aviation safety who may be involved in aircraft accident investigation- Air Worthiness Inspectors	To provide the participant with a working knowledge of the legal processes and trends affecting aviation safety.	No specific prerequisite other than working in an environment of a safety-sensitive nature	5 Days	Trinidad and Tobago							
PROGRAM AND COURSE TITLE	Course Number or Catalog Number	Target Audience	Objective	Prerequisite	Duration	Location	No. Participants	Language	TRAINAIR PLUS (yes/no)	TRAINAIR (yes/no)	Additional comments		
PROGRAM: AIR NAVIGATION SERVICES													
Air Traffic Control Assistant/Flight Data	ICAO 051	Graduates of high school with no experience in aviation but who are desirous of employment as Air Traffic Assistants/ Flight data Processors	Given lectures, demonstrations and practical training, the participants will have sufficient knowledge and experience in Flight Data Processing and of the ATS system to meet the standards prescribed for Assistant Air Traffic controllers/Flight Data Processors	High school education with passes in at least 6 subjects at grades (1or2,CXC) or grades (A,B or C, GCE) or equivalent, and must include Mathematics, English Language, Geography or Physics or other science subjects. 2 passes at "A" level or equivalent. Proficiency in both written and spoken English. Satisfactory performance at interview and meet the medical requirements of ICAO Annex 1, Personnel Licensing.	5 weeks	Jamaica Civil Aviation Authority Training Institute	12	English	Yes				
Aerodrome Control Procedural	ICAO 052	Graduates of high school with no experience in aviation but who are desirous of pursuing a career in Air Traffic Control; and Air Traffic Assistants/Flight Data Processors	Given lectures, demonstrations and practical training on an Aerodrome Control simulator, then On-the-Job Training in an Aerodrome Control Tower, the participants will be able to attain the OJT training hours, sufficient knowledge and skill to meet the standard prescribed by ICAO Annex 1, Licensing for Aerodrome Controllers.	High school education with passes in at least 6 subjects at grades (1or2,CXC) or grades (A,B or C, GCE) or equivalent, and must include Mathematics, English Language, Geography or Physics or other science subjects. 2 passes at "A" level or equivalent. Proficiency in both written and spoken English. Satisfactory performance at interview and meet the medical requirements of ICAO Annex 1, Personnel Licensing.	8 weeks	Jamaica Civil Aviation Authority Training Institute	12	English	Yes				
Approach Control Non-Radar (Procedural)	ICAO 053	Licensed Aerodrome Controller students who have successfully completed the ICAO Course 052	Given lectures, demonstrations and practical training on an Approach Control simulator, then On-the-Job training in an Approach Control Unit, the participants will be able to attain OJT training hours, sufficient knowledge and skill to meet the standard prescribed by ICAO Annex 1, Licensing for Aerodrome Controllers.	Successful completion of Aerodrome Control Course. Proficiency in both written and spoken English. Meet the requirements of ICAO Annex 1, Personnel Licensing.	6 weeks	Jamaica Civil Aviation Authority Training Institute	12	English	Yes				
Approach Control Radar	ICAO 054	Licensed Approach Procedural Controllers or students who have successfully completed the Approach Control Procedural Course ICAO 053	Given lectures, demonstrations and practical training on an Approach Control simulator, then On-the-Job training in an Approach Control Unit, the participants will be able to attain OJT training hours, sufficient knowledge and skill to meet the standard prescribed by ICAO Annex 1, Licensing for Aerodrome Controllers.	See "Target Population". Proficiency in both written and spoken English. Meet the medical requirements of ICAO Annex 1, Personnel Licensing.	6 weeks	Jamaica Civil Aviation Authority Training Institute	12	English	Yes				

CATC 2013 Schedule													
Course	Course Number or Catalog Num.	Target Audience	Objectives	Prerequisites or Requirements	Duration	Location	Number of Participants	Language	TRAINAIR PLUS (yes / No)	TRAINAIR (yes/no)	Start Date	End Date	No. of sessions
Area Control Non-Radar (Procedural)	ICAO 055	Approach Procedural Controllers, Approach Radar Controllers, Graduates of Approach Procedural Course	Given lecturers, demonstrations and practical training on an Area Control procedural simulator, then On-the-Job training in an Area Control Unit, the participants will be able to attain the OJT training hours, sufficient knowledge and skill to meet the standard prescribed by ICAO Annex 1, Licensing for Area Procedural Controllers.	Successful completion of Approach Procedural Course. Proficiency in both written and spoken English. Meet the medical requirements of ICAO Annex 1, Personnel Licensing.	8 weeks	Jamaica Civil Aviation Authority Training Institute	12	English	Yes				
Area Control Radar	ICAO 055	Area Procedural Controllers, Approach Radar Controllers, Graduates of Approach Procedural Course	Given lecturers, demonstrations and practical training on an Area Control procedural simulator, then On-the-Job training in an Area Control Unit, the participants will be able to attain the OJT training hours, sufficient knowledge and skill to meet the standard prescribed by ICAO Annex 1, Licensing for Area Procedural Controllers.	Successful completion of Approach Procedural Course. Proficiency in both written and spoken English. Meet the medical requirements of ICAO Annex 1, Personnel Licensing.	8 weeks	Jamaica Civil Aviation Authority Training Institute	12	English	Yes				
Air Navigation Aids Technicians ATC Produres Basic Indoctrination	ICAO 059	Air Navigation Technicians and non-Air Traffic Controllers	Given lecturers and demonstrations the participants will have sufficient knowledge of Air Traffic Control and the International Civil Aviation Organization (ICAO) to meet the standards required to relate to ATC and function in the Air Navigation Department	Proficiency in both written and spoken English.	1 week	Jamaica Civil Aviation Authority Training Institute	12	English	Yes				
Flight Planning Seminar		Air Traffic Controllers, Aeronautical Information Personnel and non-air traffic controllers	The Flight Planning Seminar is geared towards educating current users such as Air Traffic Controllers and Aeronautical Information Officers on the changes in the Flight Plan Format	Proficiency in both written and spoken English.	1 day	Jamaica Civil Aviation Authority Training Institute	12	English	Yes				
Automated Messaging Handling System (AMHS)		Air Traffic Controllers, Aeronautical Information Personnel and non-air traffic controllers and users of the system	To sensitize the Aviation Industry of the changes from the AFTN to AMHS	Proficiency in both written and spoken English.	2 days	Jamaica Civil Aviation Authority Training Institute	12	English	Yes				
PROGRAM: AVIATION SECURITY, DANGEROUS GOODS AND FACILITATION													
Crisis Management		Staff at the mid to senior management levels of organizations within a State that have been assigned responsibility under the State's National Civil Aviation Security Programme to form part of the crisis management element to respond to acts of unlawful interference occurring within that State.	Trainees will be able to explain the need for crisis management plan to respond to major security emergencies occurring at airports; describe the essential components of a crisis management plan; identify the composition and function of a crisis management team; describe the essential facilities necessary in support of a planned response to crises; and list the system testing features necessary to ensure currency in crisis management	Three (3) years experience in a management/supervisory position with organizations mentioned in the target population	5 days	JCAA AVSEC	15	English					
Aviation Security Management		Staff at the mid to senior management levels of organizations within a State involved in aviation activities	Trainees will be able to use appropriate reference documentation to assist in the implementation of security programmes and procedures; recognize the basic measures applied to ensure protection of civil aviation; participate in the development and implementation of appropriate contingency plans; manage response to security incidents or major security emergencies; implement a quality control programme; understand the implications of security on design on new facilities; and implement the relevant contents of an Aviation Security Programme.	Management or Senior Supervisor who have previously received aviation security awareness or any other aviation course.	3-4 days	JCAA AVSEC	15	English					
Ground Services Security		Any airport personnel who requires training in ground security services	Trainees will understand the need for security awareness; be aware of the security procedures at check-in, screening points, and boarding gates; appreciate the need for procedures concerning the handling, carriage and disposal of restricted and dangerous articles; assist in the process of protecting and searching aircraft; implement the security requirements for hold baggage and passenger/baggage reconciliation; and understand the procedures for handling bomb threats to	Successfully complete secondary school or equivalent education and have a written and oral comand of the English Language.	4 days	JCAA AVSEC	15	English					
Cargo Security		Aviation Personnel who requires training in cargo security and any member of the public who is interested in becoming a regulated agent.	Trainees will understand the nature of the threat posed to civil aviation by restricted items; apply appropriate security controls to cargo consignments from acceptance until the departure of the aircraft; understand the need to inspect, screen, or search air cargo consignments accordance with prescribed security principles; and apply appropriate response action to a security emergency related to suspect cargo.	Trainees currently involved in a cargo operation or in the process of entering into a cargo operation	4 days	JCAA AVSEC	15	English					
Aviation Security Instructor Certification Course		Aviation Personnel who are required to train industry on all aspects of aviation security	Trainees will be qualified AVSEC experts having instructional skills and tools necessary to conduct ICAA AVSEC training	Aviation personnel required to train others in aviation security matters	7 days	JCAA AVSEC	15	English					

CATC 2013 Schedule													
Course	Course Number or Catalog Num.	Target Audience	Objectives	Prerequisites or Requirements	Duration	Location	Number of Participants	Language	TRAINAIR PLUS (yes / No)	TRAINAIR (yes/no)	Start Date	End Date	No. of sessions
Detection of Suspect Passenger (Available 2014)		Airport personnel that have day to day interactions with passengers at an airport	Trainees will be able to identify characteristics of suspicious passengers	Currently working at an airport or about to start employment in an airport environment	5 days	JCAA AVSEC	15	English					

APPENDIX B

**NAM/CAR REGIONS
REGIONAL AVIATION TRAINING PLAN**

NAM/CAR REGIONS REGIONAL AVIATION TRAINING PLAN

1. *Objective*

Given the importance of training of personnel involved in the various areas of civil aviation, the dynamic and constantly changing processes and systems to meet growing demands and subsequent technological innovations, this office conducted a survey of needs and training capabilities at the regional level. With this information, it will be possible to know directly from the States what specific issues are priorities for aviation personnel training, as well as exploring the possibilities that can be provided by States through their respective training centres controlled by the aeronautical authorities.

The inventory of States' training needs was identified for 2012 through 2016, and will be shared with the CAR Region's Civil Aviation Training Centres (CATCs). CATCs will determine the different courses that would need to be implemented to meet the demands expressed by States.

2. *General Considerations*

At the NACC/DCA/2 Meeting, the Directors of Civil Aviation expressed that the objective of human resource planning is to ensure that Civil Aviation Authorities have sufficient staff trained in the various air navigation services, formulating Conclusion 2 / 27 - *Human Resources Planning and Education*, which recommended that the Civil Aviation Authority begin, as soon as possible, the process of human resource planning and instruction required to implement the new emerging systems. The governments should, therefore, develop training programs and human resource planning in different aeronautical areas.

Similarly, the Directors at the NACC/DCA/3 Meeting formulated conclusions:

NACC/DCA/3/11 - *Human Resource Planning and Training in the NAM / CAR Regions* and NACC/DCA/3/12 - *Aviation Training Strategy for the CAR Region* in order that ICAO, in coordination with States, prepare a training strategy taking into account human resource planning and training in the NAM / CAR Regions.

The Central American States adopted the NAM/CAR Regional Plan for Implementation of Air Navigation Based on Performance (NAM/CAR RPBANIP) as a reference for the development of their national plans, in which activities such as training, human factors, planning and skills are key elements for successful implementation. These elements require considerable coordination at all levels. Consequently, the States, through their training centres (CATCs), such as ICCAE, should also adopt a similar approach for the development and implementation of their courses and activities for the achievement of an ATM system based on performance.

3. *Principles*

Based on the needs expressed by the States, and taking into account the availability of offered courses, the CAR Region Training Plan suggested the approach of course availability for 2012 and 2013 for planning purposes for both the States and the training centres. Since the Plan is dynamic and depends on factors such as the number of students in the courses and availability of instructors for the courses, the Plan will be updated for 2014 to 2016, taking into account the history and experience of supply and demand of the courses between 2012 and 2013.

According to the training needs expressed by Member States and the training offered by training centres, we can infer that the needs are basically covered. However, the following considerations are required:

- 1) The training survey forms sent by the ICAO NACC Office only took into account the existing courses and a plan for 2011, and not a long-term period, e.g., 2011-2016. Therefore, it was not possible to establish a course plan for the full five years.
- 2) The expectations or the contents of the courses requested by States may differ or vary from the program and content of the courses offered. So it is important to clarify the scope of the required courses and know in detail the programs offered.

To implement a training plan that responds to the needs expressed by the States, it should combine the different options available and optimize them, creating new mechanisms to consider the dynamism of the information and how to process and deliver it in a harmonized regional environment, which is, among others, the objective of TRAINAIR *PLUS* program.

It will therefore be necessary:

1. From the survey of needs, remove items from the same area (e.g., air traffic management) with similar titles or same or similar content and group them by specialty.
2. The NACC Office specialist in the area in question will formulate a tentative program with the States according to their needs, based on their knowledge and experience of the subject. All States in the region will be consulted on the resulting program for final approval.
3. Once agreed, the training plan and its contents will be evaluated by the potential training centres capable of carrying out the agreed training plan. In cases where no CATC meets the course expectations as defined by the training plan, the ICAO NACC Regional Office Training Coordinator may request the review of the existing regular course to satisfy State requirements.
4. The training plan, as agreed and defined, will be included in the regular programmes of the TRAINAIR *PLUS* Centres and will generate the appropriate review mechanism based on dynamic information and new requirements that may arise through amendments and a harmonized regional process.
5. Also, taking into account the ICAO Safety Strategic Objective and State interest in this area as reflected in the survey, States would consult with the ICAO NACC Office Regional Officer for Flight Safety regarding training deficiencies and associated training provided by RASG-PA.
6. The Regional Officer for Technical Cooperation will receive training requests from States and coordinate and communicate with other NACC Regional Officers and outside groups or institutions or training centres outside of ICAO in planning courses for States.

4. *Application*

This document applies to all CAR Region States and Territories and all international organizations that provide services as CATCs.

5. *Recommendations*

This plan is seen as a dynamic one that will be updated continuously.

It is important that those CAR Region States and Territories who have not yet implemented a training plan for air navigation services and the safety of civil aviation employees, consider this training plan to meet their training needs.

In addition, it is recommended that CAR Region States and Territories develop a Human Resources Plan that includes a programme designed for civil aviation personnel training and promote the attendance of their specialists at activities supported by ICAO (courses, seminars, workshops, etc.) taking into consideration that such activities are conducted in order to supplement and update civil aviation personnel training.

4. *Annexes*

- a. Table of courses based on needs expressed by the States/Territories and the capabilities of the CATCs.
- b. Survey results are shown at the end of this Plan for reference purposes.

CAR REGION REGIONAL PLAN FOR AERONAUTICAL TRAINING					
Implementation of AGA Systems	2012	2013	2014	2015	2016
Aerodrome Certification	X	X	TBD	TBD	TBD
Aeronautical Studies	X	X	TBD	TBD	TBD
Runway Safety	X	X	TBD	TBD	TBD
Implementation of AIM Systems					
Quality Management System (QMS)	X	X	TBD	TBD	TBD
Eaeronautical Informaiton Publication (eAIP)	X	X	TBD	TBD	TBD
Aeronautical Information Exchange Model (AIXM)	X	X	TBD	TBD	TBD
Data Quality And Integrity Monitoring	X	X	TBD	TBD	TBD
Electronic Aeronautical Charts	X	X	TBD	TBD	TBD
Digital NOTAM	X	X	TBD	TBD	TBD
Electronic Terrain Obstacle Data (eTOD) for Areas 1 And 3	X	X	TBD	TBD	TBD
Metada Development Workshop fnd AIXM	X	X	TBD	TBD	TBD
Electronic Terrain Obstacle Data (eTOD) for Areas 2 And 4	X	X	TBD	TBD	TBD
Implementation of ATM Systems					
Implementation of New ICAO FPL Format and ATS Operational Procedures	X	X	TBD	TBD	TBD
CDM Implementation	X	X	TBD	TBD	TBD
PBN Procedures Design	X	X	TBD	TBD	TBD
Continuos Descent Operations (CDOs)	X	X	TBD	TBD	TBD
PBN Airspace Concept Workshop	X	X	TBD	TBD	TBD
PBN Operational Approvals	X	X	TBD	TBD	TBD
Performance Framework and Aviation System Block Upgrades	X	X	TBD	TBD	TBD
SMS Implementation for ANS And ATS Safety Oversight Workshop	X	X	TBD	TBD	TBD
ATS Capacity Methodology	X	X	TBD	TBD	TBD
Flexible Use Airspace (FUA)	X	X	TBD	TBD	TBD
Implementation of CNS Systems					
Situational Awareness Options/ Improvements Workshop	X	X	TBD	TBD	TBD
ADS-B Trials and Analysis Meetings	X	X	TBD	TBD	TBD
Data Link Application Implementation Workshop	X	X	TBD	TBD	TBD
Air-Ground and G-G ATN Application Implementation Workshops	X	X	TBD	TBD	TBD
CAR Regional Networks Integration Meeting	X	X	TBD	TBD	TBD
AIDC Implementation Workshop	X	X	TBD	TBD	TBD
Mode S Radar Implementation Meeting	X	X	TBD	TBD	TBD
GBAS CAT I Implementation Workshop	X	X	TBD	TBD	TBD
GNSS/SBAS Implementation Workshop	X	X	TBD	TBD	TBD
Implementation of MET Systems					
MET QMS	X	X	TBD	TBD	TBD
Preparation And Dissemination of Safety Critical OPMET Data	X	X	TBD	TBD	TBD
Meteorological Downlinks	X	X	TBD	TBD	TBD
XML OPMET Data Exchange	X	X	TBD	TBD	TBD
Implementation of FS Systems					
SSP Implementation	X	X	TBD	TBD	TBD
SMS Implementation	X	X	TBD	TBD	TBD

X = Available, TBD = To be determined

AVIATION TRAINING NEEDS SURVEY FINDINGS AND CAPABILITIES OF STATES IN THE REGIONS

1) General

Given the importance of personnel training involved in the various areas of civil aviation, the dynamic and constantly changing processes and systems to meet growing demands and subsequent technological innovations, the ICAO NACC Regional Office conducted a survey of needs and training capabilities at the regional level. With this direct information from States it will be possible to identify specific training areas needed for aviation personnel, as well as explore what States are able to provide through their respective CATCs.

The inventory of States' training needs was identified for 2012 through 2016, and will be shared with the CAR Region's Civil Aviation Training Centres (CATCs). CATCs will determine the different courses that would need to be implemented to meet the demands expressed by States.

2) Analysis of material received

In response to the survey, the States and organizations listed below submitted the information requested:

- Barbados
- BVI-Montserrat-Anguilla
- CIPE (Instituto de Argentina)
- Cuba
- Ecuador
- Guatemala
- ICCAE (El Salvador)
- ASA and SENEAM (México)
- Dominican Republic
- Saint Lucia
- St. Vincent and The Grenadines
- Trinidad y Tobago

2.1) Training requirements by area:

- 2.1.1) ATM
- 2.1.2) CNS
- 2.1.3) SAFETY
- 2.1.4) AIM
- 2.1.5) AGA
- 2.1.6) MET
- 2.1.7) AVSEC
- 2.1.8) Legal and administrative
- 2.1.9) Training for teaching and/or training of inspectors

2.1.1 ATM

Aerodrome Control
Inspector SAR
ATM Applications
RNAV/RNP Course
ATFM Course
Quality Control of Aviation Services
Statistical Information and Forecasts of Accidents/Incidents of Aircraft (ATM/SAFETY)
ATC
CNS/ATM Seminar

2.1.2 CNS

Non-Radar and Radar
CNS - Update on Technologies
GNSS Implementation
ADS-B and Multi-Lateralization
Advanced GNSS Course
AMHS Seminar
CNS /ATM Seminar
CNS Supervisor
Quality Control of Aviation Services
New Technologies for Air Navigation
Radar Training
Radar Technician

2.1.3 SAFETY

SMS Developments
USOAP Auditor
Accident Investigation
SMS
SSP
Operational Safety Risk Assessment
Airport Operational Safety
National Operational Safety Inspectors
Statistical Information and Forecasts of Accidents/Incidents Aviation
Effective Supervision for Change
SMS for Airports
PEL / Licensing Training
Operational Safety on the Air Side and Operations
Safety Human Factors
Preventative Systems Management

2.1.4 AIM

Aeronautical Information Management
 Electronic Aeronautical Charts
 e-TOD & WGS84 Data Quality Control and Assurance (Annex 4 Aeronautical Charts,
 Annex 15 Aeronautical Information Services)
 Data Collection and Processing Electronic Terrain and Obstacles (e-TOD)
 Aeronautical Information Exchange Model (AIXM see. 5.0 / ver.5.1)
 Special Data Processing (GIS)
 GML Data Processing
 XML Document Processing and Associated Technologies (XSLT, XSD)
 PANS-OPS (Procedures Design IFR / VFR)
 Quality Control Aeronautical Information Services (QMS)
 Aeronautical Charts (electronic)
 Officer Training in Aeronautical Information Management

2.1.5 AGA

Aerodrome Certification (3)
 Ramp Check
 Emergency Plan
 Noise and Emissions
 Emergency Plans and Rescue and Fire Fighting
 Airport Pavement Design
 Electrical Systems at Airports
 Airport Pavement Maintenance
 Airport Planning (2)
 Design and Operation of Air Terminals
 Environment
 Airport Management (2)
 Air Cargo Management
 Aviation Infrastructure
 Airport Services
 Pavement Management Systems
 Aeronautical Studies
 Endangered Bird and Wildlife Prevention
 Rescue and Fire Fighting
 Airport Strategic Management
 Airport Master Plan

2.1.6 MET

Quality Control of Aviation Services
 Mesoscale Connective Cells
 Clear air Turbulence
 Numerical Prediction and Modelling
 Tropical Meteorology
 Air Masses and Fronts
 Meteorology

2.1.7 AVSEC

- Aviation Security Inspectors
- Crisis Management
- Cargo Aviation Security
- Management of Aviation Security
- Aviation Security Instructors
- FAL/AVSEC
- FAL/MRTD
- AVSEC Courses
- Basic Safety Course
- Security Supervisor
- Quality Control Program for Civil Aviation Security
- Screener Certification Workshop
- Airport Security Program
- Cargo and Mail Security Systems Course

2.1.8 AIR TRANSPORT AND LEGAL

- Civil Aviation Administration
- Aeronautical Law
- Transport and Aviation Policy
- Registration of Licenses
- Airport Fees and Costs

2.1.9 TRAIN THE TRAINER AND TRAINING FOR INSPECTORS

- QMS
- DG Education Appellant
- Management Training
- Aeronautics Supervision
- Human Resources Management
- Service Levels
- Instructor Development Workshop
- Instructor Certification (2)
- Quality Management in Aviation
- Operations Management
- National Inspectors