ICAO | UNITING AVIATION

P/02-REV2

NCLB: Regional Air Navigation/Safety/Security Developments and Achievements

Nassau, Bahamas, May 2016

Outline...

Implementation Status of the ICAO USOAP CMA and Resolution of the Air Navigation Deficiencies

Safety and Air Navigation Targets of the Port-of-Spain Declaration and RPBANIP

Aerodrome Certification

NAM/CAR Air Navigation Implementation Working Group (NAM/CAR ANI/WG)

AVSEC and FAL Review of National Security Programmes and Aviation Security State Improvement Plan (SIPs)

ICAO | UNITING AVIATION

Port of Spain Declaration

✈ Approved at the Fifth North American, Central American and Caribbean Directors of Civil Aviation Meeting(NACC/DCA/5) held in Port of Spain, Trinidad and Tobago, April 2014

✈ Harmonizes the regional air transport system through:

✈ Regional Safety Targets
✈ Regional Air Navigation Targets

Regional Safety Targets	Achievements
1 Safety Oversight • **80% Effective Implementation (EI) regional average by December 2016** • **No State in the Region to have EI of ICAO USOAP Critical Element 3 (CAA Staff) and Critical Element 4 (Inspector Competency) below 70% by December 2016**	• EI = 63.5% • CE 3 = 66.09% • CE 4 = 56.20%
2 Accidents • **Using 2010 as the baseline, reduce fatality risk for accidents in the CAR Region for Part 121 or like commercial air transport operations by 50% by the year 2020**	Estimated fatality risk in 2015 was 0.37 in Latin America and the Caribbean (RASG-PA)
3 Runway Excursions • **Reduce runway excursions by 20% relative to the 2007-2012 regional average by December 2016**	Adoption of mitigating measures: improvements to runway surface conditions, declared distances for RESAS, etc. Complete RE Information is not available at this time
4 Aerodrome Certification • **48% of international aerodromes in the CAR Region to be certified by December 2016**	36% aerodromes certified. Increment of 4% from previous year.
5 State Safety Programme (SSP)/ Safety Management System (SMS) Implementation • **60% of States to have SSP - Phase 1 implemented, service provider SMS safety performance indicators accepted, and an initial Acceptable Level of Safety Performance (ALoSP) established by December 2016** • **60% of service providers to have Phase 1 of their SMS implemented with a minimum of Reactive Phase functional risk management procedures by December 2016**	SSP • 2 No Progress Reported • 2 Gap Analysis Completed • 14 Gap Analysis Started • 3 Implementation Plan completed Complete SMS Information is not available at this time

Regional Air Navigation Targets	Achievements - Challenges
1 **Approach - Performance-Based Navigation (PBN)** • 80% of instrument approach runways to have Approach Procedures with Vertical Guidance (APV) with Barometric Vertical Navigation (Baro VNAV) implemented by service providers and users by December 2016	86.5%
2 **Air Traffic Flow Management (ATFM)** • 100% of Flight Information Regions (FIRs) within which all Area Control Centres (ACCs) to have ATFM measures available by December 2018	77%
3 **Aeronautical Information Management Transition (AIM)** • 100% of Aeronautical Information Services (AIS) to implement AIM Roadmap - Phase I required elements by December 2016	79.49%
4 **Ground-Ground Digital Coordination/Transfer** • 50% of FIRs within which all applicable ACCs to have implemented at least one interface to use Air Traffic Services Inter-Facility Data Communication (AIDC)/On-Line Data Interchange (OLDI) with neighbouring ACCs by December 2016	82%
5 **Environmental Benefit** • Reduce regional CO_2 emissions by 40,000 tons per year through PBN implementation by December 2016	TBD IATA

Regional representation of challenge Protocol Questions by Area and Critical Element intersection

✈ First challenge Area in the Region: **AGA** in **CE-6**

   48% of States in the Region present it as their biggest challenge

✈ Second challenge Area in the Region: **ANS** in **CE-4**

✈ Third challenge Area in the Region: **AIG** in **CE-5**

Number of States with open protocol questions by Area and CE intersection

	LEG	ORG	PEL	OPS	AIR	AIG	ANS	AGA
CE-1	42	6		14		46	19	3
CE-2	58		36	43	140	83	100	189
CE-3		36	21	30	16	83	351	47
CE-4		6	57	56	51	52	387	65
CE-5	13	3	18	61	155	289	63	131
CE-6			59	202	113		353	540
CE-7			43	68	44		261	235
CE-8			17	24	18	128	79	98

	LEG	ORG	PEL	OPS	AIR	AIG	ANS	AGA
CE-1	16	6		13		19	10	3
CE-2	20		17	17	19	18	19	20
CE-3		14	7	10	8	18	17	17
CE-4		4	15	19	15	15	19	18
CE-5	12	3	7	14	19	21	14	19
CE-6			15	20	19		21	21
CE-7			16	18	16		21	19
CE-8			10	9	8	21	17	18

ICAO SAFETY

Safety Oversight Regional Challenges

| Lack of inspectorate training programmes | The lack of qualified inspectorate staffing due to poor attraction mechanisms impact inspection programmes | The staff responsibilities within the Aerodrome and ANS (ATS, PANS-OPS, AIM, SAR & CNS) inspectorate are not clearly defined | Inspectors are simultaneously involved in a wide range of activities and therefore there is no staff assigned exclusively to AIG, AGA and ANS |

The training of AGA inspectors should include the specialist disciplines involved in the certification and surveillance of aerodromes such as:

• aerodrome operation – rescue and firefighting – wildlife management – aeronautical studies – risk assessments – enforcement – airfield signs, markings and lighting – obstacle evaluation – acceptance and oversight of safety management systems

Implementation Status of the ICAO USOAP CMA and Resolution of the Air Navigation Deficiencies

- ✈ USOAP analysis:
  - ✈ Promote Regional Training on Safety inspector
  - ✈ NCMC Meeting
    - ✈ Regional RLA/09/801 Project SME to specific deliverables: ANS Manual and guidance on Safety Inspector documentation
- ✈ Enhance RSOO (ACSA, CASSOS)
  - ✈ Promote cooperation
  - ✈ Seek for alliances
- ✈ To support AIG improvement – RAIO Proposal
- ✈ Resolution of Air Navigation Deficiencies:
  - ✈ ICAO assistance to States
  - ✈ Regional RLA/09/801 Project Assistance
  - ✈ Regional Project implementation: MEVA III, E/CAR AFS
  - ✈ NCLB follow-up ex. AGA Deficiencies Honduras

USOAP is the basis for the evaluation of other metrics like aerodrome certification, SAR, AIG, etc.

Safety and Air Navigation Targets of the Port-of-Spain Declaration and RPBANIP

Safety Target Survey:

Follow-up of Safety Targets RPBANIP at:

Conclusion on Status:

ICAO State Letter Ref. NT-N1-7, NT-NE57 — E.OSG - NACC60333, dated 14 April 2016

National Continuous Monitoring Coordinators (NCMCs) in the NAM/CAR Regions Meeting/Workshop, ICAO NACC Regional Office, Mexico City, Mexico, 28 November to 1 December 2016

25% Responses received from 40 States/Territories (21 States / 19 Territories)

NACC SSP Gap Analysis

21 States:

2 No Progress Reported	2 Gap Analysis Completed	14 Gap Analysis Started	3 SSP Implementation Plan Defined

Source: iSTARS

GANP / RPBANIP: RPOs & Block 0

ASBU / RPO	PIA1 Airport Operations					PIA2 SWIM			PIA3 Global Collaborative ATM							PIA4 Trajectory-based Operations		
	B015 RSEQ	B0 65 APTA	B070 WAKE	B075 SURF	B0 80 ACDM	B025 FICE	B030 DAIM	B0105 AMET	B010 FRTO	B035 NOPS	B084 ASUR	B085 ASEP	B086 OPFL	B0101 ACAS	B102 SNET	B005 CDO	B020 CCO	B040 TBO
PBN Implementation		X							X		X					X	X	
Implement FUA									X		X							
Improve DCB	X					X	X			X								
ATM Situational Awareness	X			X							X				X			X
Improve Cap/Efficiency Aerodrome Operations				X	X													
Optimization of COM infrastructure					X	X												X
Implement AIM							X											
Improve MET information								X										
Improve SAR																		
Safety Management																		

	PBN Implementation	FUA	DCB	ATM Situational Awareness	Improve SAR	Improve Cap/Efficiency Aerodrome Operations	COM	AIM	MET	Safety Management
Anguilla										
Antigua and Barbuda										
Aruba										
Bahamas										
Barbados										
Belize										
Bermuda										
Bonaire										
British Virgin Islands										
Canada										
Cayman Islands										
Costa Rica										
Cuba										
Curacao										
Dominican Republic										
El Salvador										
French Antilles										
Grenada										
Guatemala										
Haiti										
Honduras										
Jamaica										
Mexico										
Montserrat										
Nicaragua										
Saba										
Saint Kitts and Nevis										
Saint Lucia										
Saint Pierre et Miquelon										
Saint Vincent and Grenadines										
Sint Eustatius										
Sint Maarten										
Trinidad and Tobago										
Truks and Caicos										
Untied States										

Air Navigation Targets of the RPBANIP

Air Navigation Target Survey: ICAO State Letter Ref. NACC59843 dated 7 March 2016

Follow-up on Air Navigation Targets RPBANIP at: http://www.icao.int/NACC/Pages/Implementation-Targets.aspx.

Several targets (PBN Planning, AIDC, CPDLC, MEVA Network, and MET) have been achieved

Some targets are still ongoing: ATFM, ADS-C, AIM Phase 1

Some targets have not been achieved: AMHS, ADS-C, AMAN, DMAN, …

Several targets need to be completed in their definition as for ex. "selection" required

ATM Regional Challenges

Improve PBN approach procedure design expertise

Improve ATC, ATFM, PBN and SAR Training programmes

Improve ATS/SAR staffing

Improve SMS implementation plans and Safety risk assessments in ATS

Improve Civil-Military coordination for the flexible use of airspace (FUA)

AIM Regional Challenges

Establish a SWIM implementation project

Improve AIM staffing due to the amount of retirements as well as the technological emerging tools

Improve AIM training programmes such as:

- **AIM Basic and recurrent training**
- **DNOTAM, statistical and dynamic data**
- **AIM integrated documentation**
- **AIM-QMS and AIXM ver 5.1**
- **Electronic aeronautical charts update and eTOD**

CNS Regional Challenges

Need to improve coordination efficiency - harmonize the Air Navigation infrastructure implementation

Need for a performance-based planning culture / engage on ASBU methodology

Regional implementation Groups- need for effective participate

Improvements to Air-Ground communications with new technologies (data link applications)

Regional enhancement of ATS situational awareness, including regional solution (ADS-B deployment) and ACAS II implementation

System automation available but not fully used and/or interoperability concerns

Diversity of Systems and Aviation infrastructure

Reduced number of Qualified Technical Staff

Keep staff current for their performance and for new technologies

MET Regional Challenges

Implementation of quality management systems – QMS

Implementation of ICAO/WMO competency and qualification standards

Aeronautical Meteorological Observers Satisfy competence requirements by Dec-2013.

Aeronautical Meteorological Forecasters Satisfy competence requirements by Dec-2013 and Satisfy the qualification requirements by Dec-2016.

Maintain and improve the technological infrastructure to build meteorological networks capable to support the provision of MET service

SIGMET for Volcanic Ash, Tropical Cyclone, other en-route weather phenomena

METAR, SPECI, TAF, Aerodrome warnings…

Sustainability and competitiveness of meteorological service provision

Aerodrome Certification

Several events during 2016 and to continue towards 2017

Joint efforts with partners (FAA/ACI/CASSOS) in the Caribbean towards airport certification, runway safety team, and safety improvements

Under NCLB - ICAO/ACI TEAM follow up mission to Honduras, aerodrome certification implementation in San Pedro Sula, 30 March to 1 April 2016

ICAO/FAA Workshop for Aerodrome Certification Inspector, Kingston, Jamaica, 24 – 26 May 2016

ICAO/FAA Workshop for Aerodrome Certification Inspector and NCLB – ICAO/FAA TEAM follow up mission (RLA/09/801), aerodrome certification implementation, Santo Domingo, Dominican Republic, 14 – 17 June 2016

ICAO/FAA Workshop on Best Practices for the Development of Aerodrome Manuals and the Use of Procedures for Air Navigation Services — Aerodromes (PANS-AGA) for the CAR Region, Port of Spain, Trinidad and Tobago, 14 – 17 November 2016

Aerodrome Certification status

By 31 March 2015 - 32.7 % aerodromes were certified

By 30 April 2016 – 36% aerodromes certified

It is expected to reach 48% for December 2016 considering the actual certification process initiated by:

Belize, Costa Rica and Honduras in Central America

Aruba, Cuba (2 airports), Dominican Republic (3 airports for 2016), Jamaica (1 airport) and Mexico (14 airports for 2016) in Central Caribbean

Saint Lucia, Saint Vincent and Sint Maarten

Aerodromes Regional Challenges

The approved SARPs can be difficult to implement at certain aerodromes and some States having significant non-compliance with the standards

There is scarce participation of States in the approval of new ICAO SARPs that affect the aerodromes area

Non-compliance issues:

The core functions of the Aerodrome regulatory authority do not include:

Aerodrome regulations development, design specification and certification & operation standards

Aerodrome certification, aerodrome surveillance and aerodrome safety data collection as well as aerodrome construction projects review and approval not complied with

NAM/CAR ANI/WG Objectives

Consolidate the existing sub-regional working groups → **Reduce the number of meetings** → **Avoid duplication** → **Expedite the work progress** → **Improve regional harmonization focused on the ATM, CNS and AIM air navigation fields**

NAM/CAR Air Navigation Implementation Working Group (NAM/CAR ANI/WG)

Review PBN implementation Plan-ATS routes in the CAR Region	**Successful MEVA III Network**	**Implementation Initial agreement for a single E/CAR QMS AIM**	**AIDC implementation in Central America**
CPDLC/ADS-C implementation planned in Central American and PIARCO FIRs	**FPL error mitigation actions**	**VHF Communication improvements in CAR Region**	**Revision of ASBU metrics/ reporting forms**

Recommendations to improve the NAM/CAR ANI/WG and other Implementation Groups

Evolve according to the new emerging challenges	Incorporate SWIM Project	More interaction with AGA, MET and SAR	More executive meetings, presentation only the outcome of the TFs work	Improve availability of documentation
Not working the tasks of the TFs in the ANI WG meetings	Improve the working methods of the TFs	Define the tasks of the TFs term dates	Combining some TFs	Update the membership of the TFs

Optimize the sessions of the ANI WG Meetings

Aviation Security (AVSEC)
Outstanding activities in the NAM/CAR Regions

Continuous Monitoring Approach USAP-CMA Audits:

- Six States were audited from May 2015 to April 2016
- Some States showed progress of effective implementation (EI) averaged in 20%
- This increased NAM/CAR Regional average of EI approximately to 81%

ICAO/Canada grant Agreement 2015-2018 training activities:

- Six ICAO Cargo and mail Courses conducted English/Spanish (August 2015-February 2016)
- All 21 NAM/CAR States were benefited with this training
- Enhance cargo security system through cargo secure supply chain
- Host State, and ICAO provides 3 fellowships by States (travel/Daily Subsistence Allowance) and training material
- Six ICAO Instructors Course will be conducted from August 2016 to March 2017
- All 21 NAM/CAR States will be benefited with this training assistance

Aviation Security (AVSEC)
Outstanding activities in the NAM/CAR Regions

ICAO ASTCs Regular programme training activities:

- Three ASTC: Dominican Republic, Mexico and Trinidad and Tobago continue providing different AVSEC training matters
- 13th ICAO ASTC Global Directors Meeting, 17 - 19 May 2016, hosted by Mexico

ICAO/LACAC NAM/CAR/SAM Aviation Security and Facilitation Regional Group (AVSEC/FAL/RG) activities

- Second Meeting of the Strategic Plan Working Group (SPWG/2) from AVSEC/FAL/RG, Mexico City, Mexico, 6 - 7 June 2016
- Sixth Meeting ICAO/LACAC NAM/CAR/SAM AVSEC/FAL/RG/6, Mexico City, Mexico, 8 - 10 June 2016

Continuous technical assistance for enhancing AVSEC SARPs effective implementation

- Special Technical Assistance for El Salvador
- AVSEC State Improvement Plan (SIP)
  - Finalised in Haiti (2014)
  - In process of implementation for Honduras
  - On hold and waiting audit results are issued for Bahamas

Facilitation (FAL)
Outstanding activities in the NAM/CAR Regions

ICAO Traveller Identification Programme (TRIP) Seminar and Exhibition

- Three day Seminar and Exhibition planned for NAM/CAR and SAM States for second semester of 2016
- Expected the support of a host State for this important event
- ICAO TRIP Strategy Implementation and Assistance Survey conducted January –March 2016
- Publication of Doc 9303, Seventh Edition – Machine Readable Travel Documents English/Spanish

Development of training material for an introductory Facilitation Course by the AVSEC/FAL/RG

Continuous technical assistance for enhancing FAL SARPs effective implementation

Facilitation Regional NAM/CAR/SAM Seminar, 6 - 9 September 2016, Lima, Peru

Security and Facilitation Regional Challenges

Political will for Effective Implementation of ICAO Annex 9 and Annex 17 SARPs

Civil aviation operations and passengers growth versus infrastructure

AVSEC / FAL legal framework up-date

AVSEC / FAL national programmes up-date involving stakeholders

CAA's resources and qualified personnel for quality control and sustainable resolutions of concerns

Self-capacity building with AVSEC Instructors and Personal certification systems

Raising awareness on aviation security and facilitation with Governmental entities, principally those who perform duties at international airports

Security and Facilitation Procedures harmonization at national level

Respond ICAO AVSEC/FAL request timely