



6TH AFI AVIATION WEEK

AVIATION SAFETY SYMPOSIUM

Monitoring of implementation of the revised Abuja Safety Targets and AFI Air Navigation Performances Indicators

(Kampala, Uganda, 14 May 2019)



OUTLINE

- ▶ **Brief background of the ABUJA SAFETY TARGETS (AST)**
- ▶ **Monitoring and Reporting Mechanism**
- ▶ **Monitoring and Evaluation at State Level**
- ▶ **Current Developments**
- ▶ **Conclusion**



Brief background of the **ABUJA SAFETY TARGETS**

- ❑ AST are high level safety goals established to assist African States to proactively ensure safety
- ❑ AST were adopted by the African Ministers, in July 2012
- ❑ Necessary to review them and also to incorporate new emerging trends especially in the ANS area
- ❑ Coordination meetings among AFCAC and ICAO with other Stakeholders to finalize and propose the new Safety Targets, taking into consideration the GASP, GANP and relevant regional safety initiatives
- ❑ 16 revised ASTs were established
- ❑ Necessary to establish a revised monitoring mechanism to track level of compliance with the ASTs



Monitoring Mechanism

Many challenges in the current safety data collection and dissemination of Abuja Safety Targets compliance information

AFCAC developed the Mechanism for Monitoring Implementation of Safety Systems & Initiatives endorsed by the AFCAC Plenary at its 30th Ordinary Plenary 5th of December 2018

Mechanism describes the revised approach and strategies for **monitoring and measurement of progress** made by AFCAC member States as they implement specific safety systems or initiatives consistent with agreed regional safety targets

Mechanism is based on **IT solutions** as effective tools for measurement of safety systems and targets implementation

Standardized safety data gathering tools at national and regional level, promote automated safety oversight systems at State level, integrating and consolidating selected safety data for analysis and reporting purposes



Monitoring Mechanism

New strategies for the monitoring of the safety targets will be based on:

- ▶ Use of dashboard techniques to show level of compliance of each member State and overall performance of RASG-AFI States;
- ▶ Promote automation of safety oversight systems for all member States and integrate safety data collection tools analysis and reporting;
- ▶ RSOOs will be included to promote awareness of the ASTs, data collection and technical assistance missions;
- ▶ Use of revised questionnaires requiring member States to give feedback on ASTs implementation through the updated list of Focal points;



Monitoring Mechanism

- ▶ Measure feedback given by member States and calculate level of compliance with ASTs as a percentage with targets for each progressive year up to year 2022
- ▶ Share the result with all key stakeholders and provide feedback to member States showing individual and group level of compliance with the ASTs
- ▶ Use of AFCAC website as a means of communicating ASTs to member States and what is expected from them
- ▶ Identify champion States who will take the lead to assist other States in the implementation of the ASTs
- ▶ Use of results of the monitoring mechanism to identify States below targets and offer technical assistance to fast track compliance with ASTs



Monitoring Mechanism

Outcomes expected from the mechanism:

- ▶ Effective monitoring of implementation status of Safety and ANS Targets
- ▶ Integrated Safety data collection, analysis and reporting tools
- ▶ Calculated performance of each AFCAC member State measured in terms of percentage compliance with the ASTs
- ▶ Targeted technical assistance missions to States requesting assistance
- ▶ Improved EI above 60% for all African States
- ▶ Identification of Champion States to promote implementation of ASTs



Monitoring Mechanism

Key performance enablers will be:

- ▶ **Standardization**
- ▶ **Resource sharing**
- ▶ **Collaboration**
- ▶ **Safety information exchange**



Monitoring at State Level

TARGET # 1

Progressively reduce the African accident rate from 8.6 to 2.5 per million departures by the end of 2022.

Safety Data/Action Required

- Describe your State established accident/incident reporting and investigation system;
- Number of scheduled and non scheduled departures (*aircraft above 5,700kgs only*);
- Number of accidents and serious incidents scheduled and non-scheduled departures (*aircraft above 5,700kgs only*);
- Number of runway related accidents and serious incidents (*aircraft above 5,700kgs only*);
- Number of LOCI related accidents and serious incidents (*aircraft above 5,700kgs only*);
- Number of controlled flight into terrain (CFIT) related accidents and serious incidents (*aircraft above 5,700kgs only*);
- Number of fatal accidents for all scheduled and non scheduled departures (*aircraft above 5,700kgs only*)



Monitoring at State Level

TARGET # 2

All States establish and strengthen autonomous Civil Aviation Authorities with independent regulatory oversight functions, sustainable sources of funding and resources to carry out effective safety oversight and regulation of the aviation industry by 2022

Safety Data/Action Required

- **Did your State promulgate a comprehensive and effective Aviation Law, consistent with the size and complexity of the State's aviation activity and with the requirements contained in the Convention on International Civil Aviation?**
- **Did your State establish and strengthen the Civil Aviation Authority with full autonomy? (for example, powers and independence, sustainable sources of funding and resources to carry out effective safety oversight and regulation of the aviation industry)**
- **Is the Authority empowered to collect and retain revenue to sustain its operations including training, development and retention of key regulatory personnel?**
- **Are oversight functions separated from provision of services?**
- **Does the State have capability to oversee all regulated entities and persons to ensure compliance with regulatory requirements ?**
- **Did the Authority delegate any of its functions and tasks to an RSOO or other African State(s)?**
- **Does the Aviation Law provide requirement for implementation of a State Safety Program?**



Monitoring at State Level

TARGET # 3

States to resolve:

- Existing SSCs by June 2018;
- Newly identified SSCs within 6 months from the date of its official publication by ICAO.

Safety Data/ Action Required

- If applicable, indicate the number of SSCs and areas affected (e.g. OPS, AIR, PEL, ANS, AGA);
- Status of implementation Corrective Action Plan and activities with timelines;
- If SSC(s) was resolved, provide total time taken for State to resolve such SSC(s).



Monitoring at State Level

TARGET # 4

States to abide by the timelines and provide resources for implementation of ICAO/State Plans of Action

- All States to have accepted ICAO Plans of Action by 2019 and abide by the timelines and provide resources for their implementation.

Safety Data/ Action Required

- State Plan of Action established and submitted to ICAO and when it was revised;
- Number of activities State has committed to implement consistent with ICAO Plan of Action;
- Number of activities that were completed and verified by ICAO; and
- Activities that could not be completed because of resource constraints or that may need external interventions.



Monitoring at State Level

TARGET # 5

States progressively increase the Effective Implementation (EI) percentage under the ICAO USOAP such that States with:

- EI < 60% attain 60% by 2020;
- $60\% \leq EI \leq 70\%$ attain 80% by 2022;
- $70\% < EI$ attain 95% by 2028.

Safety Data/ Action Required

- Current EI for the State;
- Status of the USOAP CMA Corrective Action Plan;
- List of CAP items requiring external assistance such as ICAO ROST, AFI-CIS, AFI Plan, GSI Training, SMS/SSP Training, etc.



Monitoring at State Level

TARGET # 6

For the purposes of SSP/SMS Implementation, all States:

- To have a Foundation SSP established, addressing all pre-requisites by end 2022.
- To have an Effective SSP with appropriate maturity level established by end of 2025.
- To contribute information on safety risks, including SSP SPIs, to the RASG-AFI by end of 2022.
- With a positive safety margin, and an Effective SSP, to actively engage in RASG-AFI safety risk management activities (analysis of safety risks, design and implementation of risk mitigation actions) by end of 2022.

All Service Providers to use globally harmonized SPIs as part of their SMS.

Safety Data / Action Required

- **Did the State conduct SSP Gap analysis and report through ICAO iSTARS platform**
- **Level of SSP implementation reached by State through ICAO iSTARS reports (Level 1; 2; 3 or 4);**
- **If your State has positive safety margin according to ICAO OLF, did your State share its SPIs and safety risk with RASG-AFI or other regional bodies**



Monitoring at State Level

TARGET # 7

All International Aerodromes to be certified by 2022,

- At least one international aerodrome in every State to be certified by end of 2020;
- All airport operators to participate in the ICAO-recognized industry assessment programme for airports (APEX) by end of 2022;
- At least one international aerodrome in every State to establish a Runway Safety Team (RST) by end of 2020.

Safety Data / Action Required

- Determine number of operational International Aerodromes;
- Number of International Aerodromes certified in accordance with ICAO Annex14 and other ICAO guidance materials;
- Number of airport operators participating in the ICAO-recognized industry assessment programme for airports (APEX)
- Number of Runway Safety Teams (RST) established
- Indicate Action Plan for the certification of all International Aerodromes with timelines, if applicable



Monitoring at State Level

TARGET # 8

All States to establish an appropriate framework for recognition of IATA operational safety audit (IOSA) and IATA Standard Safety Assessment (ISSA) as effective safety mechanisms; All African airlines to obtain IOSA or ISSA certification, as appropriate, by the end of 2022.

Safety Data/ Action Required

- **Did your State establish Legislative/Regulatory framework recognizing IOSA and requiring airlines to be IOSA certified;**
- **Number of active airlines in your State to be IOSA certified;**
- **Indicate your Action Plan for IOSA certification of your airlines with timelines;**
- **Number of airlines successfully certified through IOSA program.**



Monitoring at State Level

TARGET # 9

All States to establish an effective and operational SAR organization:

- Development of a National SAR Plan by end of 2018;
- Conclusion of SAR Agreements/ MoUs with all neighboring States by end of 2018;
- Organisation of multi-agency, multi-State and combined Regional SAR exercises to test SAR systems in place involving as many SAR units as practicable by end of 2019.

Safety Data/ Action Required

- **Existence of SAR Provisions in National Legislation**
- **Promulgated National SAR Plan indicating the delineation of responsibility of the various SAR national agencies**
- **Existence of legally established and functioning SAR Mission Coordination Unit**
- **Existence of updated SAR Regulations and Manuals**
- **Number of SAR Experts available for SAR missions**
- **Existence of SAR Training Programme**



Monitoring at State Level

TARGET # 9

All States to establish an effective and operational SAR organization:

- Development of a National SAR Plan by end of 2018;
- Conclusion of SAR Agreements/ MoUs with all neighboring States by end of 2018;
- Organisation of multi-agency, multi-State and combined Regional SAR exercises to test SAR systems in place involving as many SAR units as practicable by end of 2019.

Safety Data/ Action Required

- Available funding and allocation of resources for effective National SAR Organisation
- Existence of national interagency SAR Committee
- Existence of robust civil/military cooperation regime for effective National SAR Organization
- Number of signed and unsigned SAR Agreements/MOUs; Indicate with which States/Organizations your State is yet to sign a SAR Agreement
- Date, type and scope of the most recent SAR Exercises; planning of SAR Exercises
- Designation of a SAR point of contact for the receipt of COSPAS-SARSAT distress data and messages



Monitoring at State Level

TARGET # 10

All States to implement the transition from AIS to AIM:

- Development of a National Action Plan By end of 2018;
- Implementation of the National Action Plan in accordance with the ASBU Block 0 D-ATM by end of 2020.

Safety Data/ Action Required

- Existence of approved National Action Plan including the 21 steps of the roadmap for the transition
- Establishment of an Integrated Aeronautical Information Database, with capability to exchange information based on the Aeronautical Information Exchange Model (AIXM) with other aeronautical databases
- Is the Aeronautical data exchange based on the use of Internet protocol for the transmission and dissemination of aeronautical data and information
- Are Cybersecurity measures implemented to ensure the safety and security of information
- Is an Electronic AIP (eAIP) developed and available
- Are Electronic Terrain, Obstacle Data and Aerodrome Mapping Information provided
- Indicate the status of development of the Digital NOTAM Concept
- Number of qualified AIM Experts and trainings include databases, AIXM, XML, HTML, cybersecurity, etc.)



Monitoring at State Level

TARGET # 11

All States to implement PBN procedures for all instrument runways:-

- 100% of Instrument Runways to have PBN Procedures by end of 2025;
- 75% of Instrument Runways to have PBN procedures by end of 2020.

Safety Data/ Action Required

- Dates of approval and revision of the National PBN implementation Plan
- Number of qualified PBN Procedures Designers
- Number of qualified inspectors for validation of PBN procedures,
- Number of qualified inspectors for aircraft operations approval
- Conduct of stakeholder consultations
- Training Programme for PBN Implementation
- Number of Instrument Runways
- Number of Instrument Runways with PBN Procedures



Monitoring at State Level

Target # 12

All States to progressively reduce the rate of aircraft proximity (AIRPROX) occurrences in their managed airspaces by at least 50% annually from Dec. 2017 baseline, in order to attain and maintain a level of zero (0) Airprox by correspondingly reducing errors in the following contributive factors:

- Co-ordination between ATS Units (50%);
- Airspace Organization and ATC Procedures (50%);
- Mobile Communications (50%);
- Poor Crew Discipline on board aircraft (50%)

Safety Data/ Action Required

- **Establish accurate aviation occurrences reporting system;**
- **Number of AIRPROX occurrences recorded for year 2017 (baseline year) and 2018;**
- **Breakdown of AIRPROX occurrences for year 2017 and 2018 into the following contributive areas-:** (i) **Coordination between ATS Units;**
(ii) **Airspace Organisation and ATC Procedures;**
(iii) **Mobile communications;**
(iv) **Poor Crew Discipline on board aircraft.**



Monitoring at State Level

Target # 13

Establishment of seamless Air Navigation Services in the AFI Region by end of 2024:

- All States to ensure provision of harmonized Air Navigation Services in terms of flight separation, interoperability of CNS/ATM systems to reduce airspace complexity and achieve seamless operations along major air traffic flows.
- Various initiatives formulated by the Regional Economic Communities (RECs) and ANSPs within the AFI Region to be harmonized.

Safety Data/ Action Required

- Indicate neighboring States/Area Control Centres (ACCs) of a State/ACC
- Has the State identified challenges, obstacles hindering establishment of seamless with adjacent States/ACCs
- Has the State included the establishment of seamless ANS in coordination with adjacent States/ACCs?
- Did the State take steps to ensure provision of harmonized ANS in terms of flight separation, interoperability of CNS/ATM to achieve seamless operations along major air traffic flows?
- Has the State harmonised the initiatives formulated by Regional Economic Communities



Monitoring at State Level

TARGET # 14

All States to implement ASBU B0 Modules:

- All States to develop National ASBU Plan by end of 2018.

Safety Data/Action Required

- Indicate Status of National Airspace Master Plan/National Air Navigation Plan;
- Indicate the status of Development of National ASBU Plan based on APIRG's categorization and prioritization of ASBU Modules
- Has the State responded to ICAO Survey on Status of Implementation of ASBU in Africa
- ASBU tracker review and analysis to ensure that the implementation of the ASBU modules in FIRs boundaries are done in a proper manner to facilitate interoperability of the systems
- Has the State and ANSP designated a focal point for ASBU trackers



Monitoring at State Level

TARGET # 15

All States to develop and implement a National Plan for the reduction of CO2 emissions due to international civil aviation:

- develop a National Plan for CO2 reduction by end of 2020; full implementation of the National Plan by 2022.

Safety Data/ Action Required

- Focal point and persons responsible for the compilation and submission of the Action Plan?
- Does the State establish a team that will adequately address the data collection?
- Baseline (situation without actions) – Fuel consumption and associated CO2 emissions and traffic at 2010 or earlier: provide annual historic fuel consumption and traffic from international aviation from 2010 or earlier
- Measures to mitigate CO2 emissions – The measures being proposed to address CO2 emissions from international aviation, distinguishing between those that are already in place and those that are being considered for future implementation, should be listed.
- Indicate the expected results (fuel consumption, CO2 emissions and traffic with the Measures being taken 2014 to 2050)
- Assistance needs – A description of any specific needs (for example, financial, technological or capacity building) for the implementation of future actions should be described, if applicable.



Monitoring at State Level

TARGET # 16

All States to ensure that their ANSPs effectively participate in the African ANSP Peer Review Programme by:

- Joining the programme and having in place, an annual Peer Review plan of activities.
- Develop and implement appropriate corrective action plans to satisfactorily address Peer Review recommendations.

Safety Data/ Action Required

- Did your State join the programme and have in place an annual African ANSP Peer Review plan of activities?
- Contact Person for African ANSP Peer Review Mechanism
- Has the ANSP/State identified peers based on similar characteristics (e.g. airspace, equipment, procedures or even sub-region etc.) to assist in pairing ANSPs for peer review purposes
- Has ANSP/State signed a confidentiality agreement between and among each other Peers to co-opt Safety experts to supplement the peer review team
- Have ANS Experts of your State joined teams to visit and conduct the peer reviews based on identified questionnaires of the Peer Review Manual
- Has the State adopted and facilitated the periodic peer review exchange visit among Partner ANSPs, as part of the procedure
- Did your State develop and implement appropriate corrective action plans to satisfactorily address Peer Review recommendations?



Current Developments

- ▶ Development of Specifications and Identification of suitable IT Tools for monitoring level of implementation of safety targets;
- ▶ Utilisation of ICAO OLF as possible model for evaluation of status of implementation of AST;
- ▶ Financial Institutions such as World Bank Group and Technical Partners solicited to provide funding and expertise for the Project of establishment of IT Tools for monitoring implementation of Safety Targets in Africa;
- ▶ States should be capable to use IT based Tools to self-evaluate and report progress
- ▶ Conduct of Evaluation and Confirmation Missions in States if necessary



CONCLUSION

- ❑ **Mechanism for Monitoring Implementation of Safety Systems & Initiatives as endorsed by the 30th AFCAC Plenary**
- ❑ **AFCAC member States are invited to follow implementation guidance provided in this presentation and collect safety data for consolidation whenever requested**
- ❑ **AFCAC member States are encouraged to embrace available IT tools to integrate safety data collection, analysis and reporting consistent with the Mechanism**
- ❑ **ICAO is requested to **COLLABORATE** with AFCAC to promote automation of safety oversight systems and offer solutions for integration of safety data collection, analysis and reporting systems**



THANK YOU