



# AFI

{African & Indian Ocean}

# Aviation Week 2019

Kampala, Uganda | 14 - 17<sup>th</sup> May

# Safety & Security



**THEME: IMPLEMENTATION OF GANP AND  
REGIONAL ANS PERFORMANCE  
INDICATORS/TARGETS IN THE AFI REGION**

**TOPIC: AIRCRAFT PROXIMITY (AIRPROX)**

**Mr. Richard Ruhesi, Director ANS,  
Uganda CAA**



# Outline

- Introduction
- Reduction of AIRPROX
- causes of AIRPROX inn Uganda
- Actions taken in Uganda
- ANS systems Improvement
- Main Challenges
- Summary



# Introduction

## Background

- Initial Abuja Target 2012
- Revised Abuja targets 2017 - included ANS performance indicators
- 16 High level goals - derived from GASP, GANP and APIRG/AFI Plan
- Reduction of AIRPROX - One of the revised Abuja Safety Targets (AST)

*“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 errors by end year 2020. This will be achieved by correspondingly reducing errors in the following contributive factors”*



# Introduction Cont

## Expectations of AFI region

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

**Definition** *“Aircraft proximity (AIRPROX) is a situation in which, in the opinion of a pilot or ATC personnel, the distance between aircraft as well as their relative positions and speed have been such that the safety of the aircraft involved may have been compromised”*

## General Observation;

- FIR Boundaries - coordination issues
- Approach- complex procedures and mixed operations
- Beyond FIR boundaries – due to converging routes

## Trends / occurrences of AIRPROX

- 5 AIRPROX incidents in 2017
- 4 AIRPROX incidents in 2018



# Introduction Cont.

## **General Observation;**

- FIR Boundaries - coordination issues
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## **Trends / occurrences of AIRPROX**

- 5 AIRPROX incidents in 2017
- 4 AIRPROX incidents in 2018



# Reduction of AIRPROX

- Civil Aviation (Rules of the Air) Regulations- from Annex 2

*“an aircraft shall not be operated in such proximity to other aircraft as to create a collision hazard”.*

- APIRG/21 WP56 introduced proposal to ASTs, on AIRPROX to be implemented by 2020

*“all States should continuously reduce the rate of aircraft proximity (AIRPROX) occurrences in their managed airspace to attain and maintain a level of zero (0) Airprox*

- AFI Aviation week outcomes 2017- introduced reduction of AIRPROX as an ANS performance indicators,
- AFI Aviation week outcomes 2018- confirmed reduction of AIRPROX indicators and introduced a mechanism for monitoring AST



# Causes of AIRPORX in Uganda

- Non-compliance with established procedures.
- Failure of ground or airborne facilities/equipment- onboard transponders
- Ineffective supervision of trainees - pilots and ATC (80%)
- Human Error
- Deliberate violations of procedures.



# Actions taken by CAA Uganda

## Regulatory-CAA Actions

- Mandatory reporting of AIRPROX – Enforced
- Training in Human Factors for all ATCs- Mandatory
- Records of all AIRPROXIES – Database developed
- Airspace structure- Continuously reviewed
- Qualification and recurrence training –Emphasized
- Acceptance of SMS – Periodic review
- Monitoring implementation of safety recommendations- from investigations

## Operational-ANSP Actions

- Safety and Risk Assessment procedures – developed and implemented
- Procedures for reporting and investigation- Established
- Improvement of reporting culture – All AIRPROX in 2018
- Requirement for all flights above FL150 to be subject to positive control
- Effective sharing of lessons from incidents - periodic incident review workshops
- Effective monitoring of trainee – OJTI training for all Controllers
- Enhanced supervision of ATC – Regular supervisory training



# ANS Systems improvement

- Implementation of Enroute Surveillance control -2017
- Conversion of conventional routes to PBN routes - completed
- Deconflicting of SIDS and STARs at Entebbe-2017/2018
- Capacity building of ATCs- ongoing
- Developed corridors for VFR flights- ongoing
- Harmonization of waypoints at FIR Boundaries -2017/2018
- Review of airspace structure – CNS/ATM master plan 2019/2020



# ANS Systems improvement...

## **Enhancement of communication**

- Improvement of radio coverage
- VHF, VHF Extended Range, HF, radios- greater than 98% coverage
- AIM automation, - NOTAM, e-AIP, implementation of ETOD Area 4, ATIS and AWOS
- Implementation of AMHS- 2017/2018
- Upgrade of NAFISAT MMC and backup centre -2018

## **Improvement of Navigation systems**

- Upgrade of DVOR/DME in soroti and Entebbe, DME,
- Upgrade of ILS to CAT II

## **Upgrade of surveillance infrastructure**

- Installation/upgrade of MSSR- Mode S, Radar coverage –65 to 150 NM
- Upgrade of Airspace Management system (AMS) – future readiness 2017/2018
- Ongoing procurement of WAM/ABS-B. 2018/2019



# Main Challenges

- Implementation of State Safety Programme (SSP)
- Staffing and training costs
- Sharing/ protection of safety information
- Cost of acquisition and maintenance of systems
- Aircraft Equipage
- Military operations in civil airspace
- Coordination with neighbouring FIR – missing flight plans
- Fast evolution of ANS technologies



END.

THANK YOU