

Way Forward in Addressing Loss of Control in Flight



Presented by
KCAA & ICAO ESAF

Introduction



- Africa acknowledged its poor safety performance in contrast with aviation safety records; in July 2012,
- decision makers expressed clear political will to improving Aviation Safety and adopted a set of regional safety targets which implementation will progressively reduce the African accident rate to be in line with the global average.
- Under ICAO leadership, the Regional Aviation Safety Group (RASG-AFI) has been established to bring all stakeholders in partnership to improve safety in Africa.

Introduction



- A dashboard has been developed to measure progress against the set regional safety targets. Hence the need for pertinent projects to foster implementation towards the achievements of the said targets.
- Second meeting of AFI-RASG has approved the terms of reference for LOC-I safety support team and has nominated Kenya as Champion for this team, among others.

Justification



- ❑ Safety is Aviation's first priority globally and its constant improvement in Africa remains the biggest challenge, which brings together aviation stakeholders to set strategies.
- ❑ Loss of control in-flight (LOC-I) is major concern globally as it has been found to be the main cause of accidents with the highest fatality rate and hull loss.
- ❑ Aircraft upset is an in-flight condition whereby the pitch of the aeroplane unintentionally exceeds either 25 degrees nose up or 10 degrees nose down; or a bank angle exceeding 45 degrees; or flight within those parameters but at inappropriate speed.

Justification



- ❑ LOC-I is a categorization of an accident or incident resulting from a deviation from the intended flight path. Hence an aircraft upset can lead to a LOC-I accident.
- ❑ Proactive measures should be taken by air operators, training organizations, civil aviation authorities and other stakeholders to contribute in reducing aviation accident rates in the AFI, in particular in LOC-I.
- ❑ The contributory safety deficiencies that have an impact on LOC-I need also to be addressed.

Justification



- ❑ It has been found that the most effective defense is through sensitization, training and improvement of procedures.
- ❑ This Project is about the implementation of Upset Prevention and Recovery Training (UPRT) SARPs and best industry practices on issues related to LOC-I through sensitization, training, establishment of tools and guidance material as well as monitoring progress made on this regard.

REGIONAL AVIATION SAFETY GROUP – AFI (RASG-AFI): EMERGING SAFETY ISSUES (ESI) SAFETY SUPPORT TEAM: TERMS OF REFERENCE



TERMS OF REFERENCE: Purpose of the ESI Safety Support Team:

With the aim of assisting States to progressively reduce the African accident rate by first addressing the most pressing issues with respect to runway related accidents and serious incidents and those related to controlled flight into terrain (CFIT) and Loss of Control (LOC) and achieve the relevant AFI target in this respect, the team is to:

- **Analyze data-driven safety risk areas identified by RASG-AFI using the Safety Performance Areas and Best Practices for ICAO, States and Industry as contained in the Global Aviation Safety Plan (GASP)**
- **Adopt and use relevant guidance materials relating to the prevailing safety issues**
- **Identify possible mitigation measures and recommend implementation actions categorized by:**
 - a) **Impact (High, Medium and Low)**
 - b) **Feasibility (Difficult, Moderate and Easy) taking into consideration political will, commitment/consensus, resource requirements/availability for implementation, potential blockers – what conditions exist that could prevent implementation**
 - c) **Impact – Changeability (IC) Indicators**
 - d) **Priority (P1, P2, P3 etc.) and**
 - e) **Champion**
- **Recommend establishment of achievable projects based on prioritized mitigation measures with well-defined deliverables (including metric to assess the effectiveness of the proposed mitigation actions and clear timeframes established and proposed to RASG-AFI for further action.**

Desired Outcome



- To sensitize all stakeholders on LOC-I issues by holding a seminar in both ESAF and WACAF region.
- To establish an implementation plan for LOC-I and UPRT based on the areas of intervention.
- To establish additional guidance material for the industry.
- To establish guidance material for regulatory bodies.
- To establish a dashboard based on the areas of intervention.
- To monitor the implementation plan and undertake any additional actions.

Critical elements (CEs) of a State's safety oversight system



DOC 9734 Part A

Intervention Matrix



LOC-I: SYNTHESIS AREAS OF INTERVENTION									
	STAKE-HOLDERS	AIR OPERATORS		TRAINING ORGANIZATIONS		CAAs		DATA (All stakeholders)	
1	Key areas	Operations manual : Parts A, B, D; SOPs	Training	Training and procedures manual and training programs	Training	Safety oversight: CE-2, 4, 5, 6, 7 and 8.	Safety management	AFI UPRT deficiencies related accidents and serious incidents	Information on other safety areas in AFI region having an impact on LOC-I and LOC-I accidents and serious incidents worldwide
2	Regulatory requirements	Operations manual to take into account UPRT requirements	Training to take into account UPRT requirements	Training and procedures manual to take into account UPRT requirements	Training programs to take into account UPRT requirements	CE-2: incorporation of UPRT related SARPs in specific operating regulations.	Safety management principles to be incorporated in UPRT training	Serious Incidents to be also shared. Framework to be established.	Sharing of data between stakeholders. Framework to be established.
3	Training	Part D of Operations manual to include UPRT programs	Training of flight crew, instructors and examiners on UPRT.	Programs to include UPRT	Training of instructor and examiners on UPRT	CE-4: training of inspector and examiners	Safety management principles to be incorporated in UPRT training	Sensitization on aircraft Upset and LOC-I for Accident investigators.	Sensitization on aircraft Upset and LOC-I for Accident investigators

Intervention Matrix

LOC-I: SYNTHESIS AREAS OF INTERVENTION

	STAKE-HOLDERS	AIR OPERATORS	TRAINING ORGANIZATIONS	CAAs	DATA (All stakeholders)				
4	Guidance material and procedures	Air operators to include additional procedures and information on aircraft Upset and LOC-I in Part A and Part B of the operations manual and in SOPs	Additional guidance by the CAA or industry on LOC-I and UPRT to be familiar with	Training and procedures manual to include additional procedure on UPRT	Additional guidance by the CAA or industry on UPRT to be familiar with	CE-5: inspectors' guidance materials and procedures to include UPRT. Guidance to the industry to include UPRT	Procedures for air operators and training organizations UPRT training to include safety management	Procedures for accidents and serious incidents to include aircraft Upset and LOC-I	Procedures for the analysis of data to derive relevant information and to report
5	Licensing and Approvals. Proficiency training.	-Type rating. -Multi-crew pilot training. -Flight crew training. -Academic training.	-Type rating. -Multi-crew pilot training. -Flight crew training. -Academic training.	-Type rating. -Multi-crew pilot training. -Academic training. -On-airplane training.	-Type rating. -Multi-crew pilot training. -- Academic training. -On-airplane training. -Non-type specific FSTD training.	CE-6: -Type rating issuance; -Multi-crew pilot issuance. - Instructor authorizations.	-SMS for On-aeroplane UPRT.	-Validation of data. -Proof-of-concept trial or operational review of training programs	Monitoring and benchmarking

Intervention Matrix



LOC-I: SYNTHESIS AREAS OF INTERVENTION									
STAKE-HOLDERS	AIR OPERATORS		TRAINING ORGANIZATIONS		CAAs			DATA (All stakeholders)	
	-On-airplane training. -Non-type specific FSTD training. -Type-specific FSTD training.	-On-airplane training. -Non-type specific FSTD training. -Type-specific FSTD training	-Non-type specific FSTD training. -Type-specific FSTD training	-Type-specific FSTD training	-Approval of training organizations. -Approval of the operations manual.				
7	Monitoring and taking measures	Recurrent training	Recurrent training	Quality and SMS	Quality and SMS	CE-7 and CE-8: -Surveillance of training organizations. -Resolution of safety issues.	Apply Safety Management processes in the conduct of surveillance of training organizations.	Lessons learnt from flight data analysis to enhance training and for mitigation measures	Lessons learnt to enhance training and for mitigation measures
NB: UPRT: Upset Prevention and Recovery Training.									
FSTD: Flight Simulation Training Devices.									

Tools



1. SARPs and ICAO guidance materials on Upset Prevention and Recovery Training (UPRT):

- Annex 1, Amendment No 172.
- Annex 6, Part I, Amendment No 38.
- Procedures for Air Navigation Services —Training (PANS-TRG, Doc 9868).
- Manual on Aeroplane Upset Prevention and Recovery Training (Doc 10011).
- Manual of Criteria for the Qualification of Flight Simulation Training Devices (Doc 9625).
- Manual on Evidenced-Based Training (Doc 9995).
- ICAO ADREP 2000 taxonomy

Tools



2. Industry guidance materials:

- IATA LOC-I prevention tool-kit (still in development).
- Flight Simulation Training Device Design and Performance Data Requirements (IATA).
- Commercial Aviation Safety Team_CAST LOC-I Joint Safety Implementation Team Report

Tools



3. Flight Safety Foundation:

- Airplane Upset Recovery Training Aid (AURTA).

4. Additional guidance material to be developed by RASG AFI LOC-I Safety Team

Regional Strategic Value

- ❑ Ensures proactive reduction of LOC-I relating accidents in line with the first regional safety target:
“Progressively reduce the African accident rate to be in line with the global average by the end of 2015.”
- ❑ This structured approach may also be used as a means to address other safety issues.
- ❑ This project is high in terms of priority given the high expected rate of growth of air traffic in the AFI region and the need to meet Abuja Safety Targets.

Provisional Timescales



Envisaged Setup / Seed / Feasibility Investment

Timeline of the Project implementation

Item				
Meeting with RASG Champion	24-SEP-2014			
Implementation Plan		19-JAN-2015		
RASG Guidance material on LOC-I			MAY 2015	
Seminar on LOC-I				APRIL,NOV 2015
Project Implementation	FROM JAN 2015			



THANK YOU