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Safety

RASG-AFI

Annual Safety Report 2022



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Foreword

The Regional Aviation Safety Group for Africa-Indian Ocean (RASG-AFI)¹ Annual Safety Report Team (ASRT) has consistently produced an annual report on aviation safety in the RASG-AFI Region. The report provides safety information from consolidated sources to determine the main safety risks in the Region and generate recommendations to the RASG-AFI for formulation of safety enhancement initiatives. Stakeholders are therefore encouraged to collaborate and cooperate with the ASRT in sharing and exchanging safety information for the benefit of aviation safety within the Region.

The monitoring of the progress made by States to achieve regional targets is an on-going process. These regional targets are regularly revised to ensure their alignment with the Global Aviation Safety Plan (GASP). Reporting and monitoring progress enable States and the ICAO Regional Offices to adjust implementation support activities based on performance, and to address emerging safety issues. The RASG-AFI Annual Safety Report (ASR), is usually presented during the AFI Aviation Week Events.

Conclusions and recommendations made in this Report are for the attention of relevant parties for action and implementation.

An electronic copy of the RASG-AFI Annual Safety Report is available in PDF format, on the ICAO Regional Offices websites at <http://www.icao.int/wacaf/Pages/default.aspx> and <http://www.icao.int/esaf/Pages/default.aspx>.



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Chairperson, RASG-AFI

¹ The RASG-AFI Region refers to the accreditation area of the ICAO Eastern and Southern African Office (ESAF) and Western and Central African Office (WACAF). A list of RASG-AFI Member States is provided at Appendix 1 to this Report.

Background

The Ninth Edition of the RASG-AFI Annual Safety Report provides information related to aviation safety performance as well as safety occurrences in the RASG-AFI region.

RASG-AFI is the main driver of the planning and implementation of Safety Enhancement Initiatives (SEIs) in the region. It is composed of States, regional entities and aviation industry, among others. The RASG-AFI structure consists of a Chairperson, two Vice-Chairpersons from States and one Vice-Chairperson from the aviation industry, a Steering Committee, a Secretariat, the Annual Safety Report Team and four (4) Safety Support Teams.

All ICAO Contracting States and Territories recognized by ICAO within the area of accreditation of the ICAO Eastern and Southern African (ESAF) and Western and Central African (WACAF) Regional Offices, are entitled to participate as members in the RASG-AFI. A list of RASG-AFI Member States is provided at **Appendix 1** to this Report.

States located outside the areas of accreditation of the ICAO ESAF and WACAF Regional Offices can be invited on a case-by-case basis to attend as observers, in accordance with the RASG-AFI Procedural Handbook.

Aircraft operators, international organizations, maintenance and repair organizations, regional and sub-regional organizations, training organizations, aircraft original equipment manufacturers, airports and air navigation services providers and any other allied organizations/representatives will be invited to attend the RASG-AFI meetings in the capacity of Partners (see Appendix 2 for Permanent Partners).

Civil Aviation Authorities, supported by service providers as necessary, should participate in the work of the RASG-AFI and its contributory bodies.

The RASG-AFI Steering Committee (RASC) composed of representatives from States and international/regional organizations and the aviation industry, is established to guide the work of the Group. It acts as an advisory body to the RASG-AFI membership, and undertakes any actions required to ensure that the RASG-AFI achieves its objective to reduce aviation risks in the RASG-AFI Region. It is headed by three co-chairpersons (two from States and one from Industry, who are the Vice-Chairpersons of RASG-AFI). Its membership has been expanded to include the AFI Plan Steering Committee Chairperson, the Coordinator for the AFI Group at the ICAO Headquarters, and the members of the various Safety Support Teams (SSTs).

The Regional Directors for Eastern and Southern Africa (ESAF) and Western and Central Africa (WACAF) alternate in serving as Secretary to the RASG-AFI and APIRG to balance the Groups Secretariat responsibilities.

The Seventh Meeting of RASG-AFI elected Bureau officials entrusted with steering the affairs of the Group for two years ending at the RASG-AFI/9 Meeting in 2023.

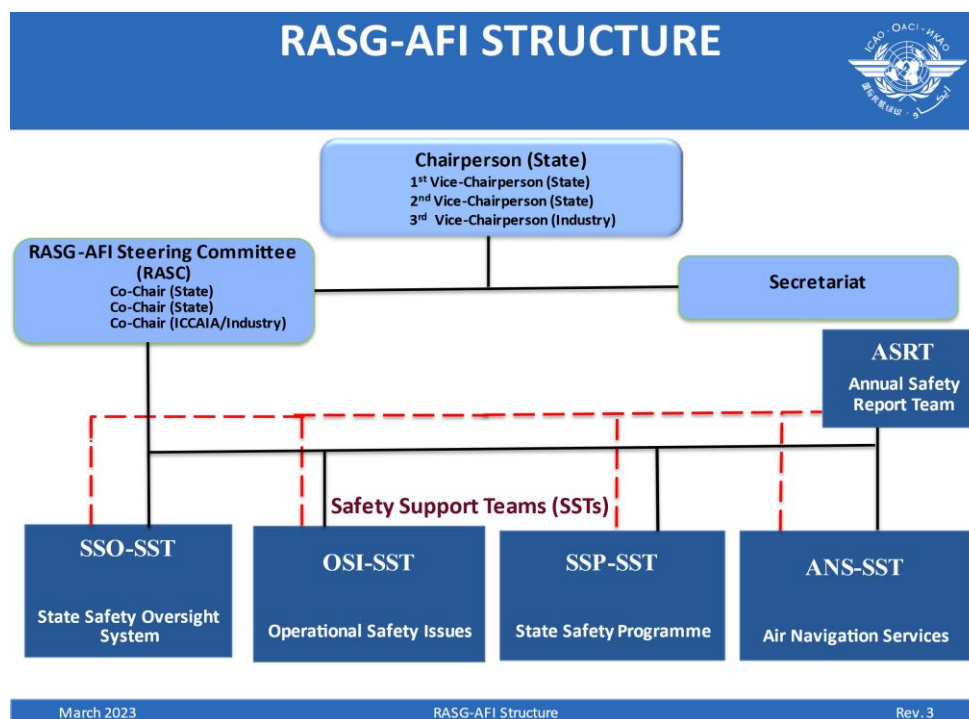
The RASG-AFI Steering Committee comprises a Chairperson, two Vice-Chairpersons; and IATA representing the Industry as follows:

- Chairperson – Togo;
- 1st Vice-Chairperson – Rwanda;
- 2nd Vice-Chairperson – Mauritius;
- 3rd Vice-Chairperson – IATA.

A Joint APIRG/RASG-AFI Coordination Task Force (ARC/TF), established by the RASG-AFI/3 Meeting, is a subsidiary body to APIRG and RASG-AFI. It strengthens existing arrangements and coordinates the activities of the two Groups in the areas of common interest.

A RASG-AFI Annual Safety Report Team (ASRT), comprising RASG-AFI Partners, was established to gather safety information to determine safety risks in the Region and generate an Annual Safety Report with recommendations for enhancement of safety.

Figure 1: RASG-AFI Organizational Structure, Revision 3.



Key:

— Reporting Lines; - - - Coordination

1. Executive Summary

This Ninth Edition of the RASG-AFI Annual Safety Report presents safety information collected from key stakeholders including ICAO, AFCAC, ACI, IATA, Boeing, Airbus, and other aviation partners. Information related to aviation occurrences in the RASG-AFI Region, for the period 2008 to 2022 was used by the Annual Safety Report Team (ASRT) to perform the necessary analyses. This edition of the ASR maintains some key elements from the previous editions, such as goals for States to improve their effective safety oversight capabilities and to progress in the implementation of State Safety Programmes (SSPs). The vision of the RASG-AFI is to achieve and maintain the aspirational safety goal of the zero fatalities in commercial operations by 2030 and beyond as enshrined in the GASP, which is consistent with the United Nations' *2030 Agenda for Sustainable Development*.

The Annual Safety Report comprises three main sections as follows:

- 1) Reactive safety information
- 2) Proactive safety information
- 3) Predictive safety information

The reactive safety information section represents the largest portion of the report. It contains analyses of aircraft accident data provided from the different sources, in order to draw conclusions on areas that require much attention and make recommendations for resolving the safety deficiencies by means of mitigating and corrective measures.

The proactive safety information section provides information based on the results of the ICAO USOAP-CMA activities, IOSA, ISAGO as well as other sources such as occurrences (Incidents) reported by States or operators in order to identify emerging risks in the Region. The ASRT recognizes the need for the region to be more proactive in providing safety data and addressing safety deficiencies; and advises RASG-AFI to urge States, aviation industry and other stakeholders, to increase their commitment to the establishment of SSPs/SMS, NASPs and RASP.

Regarding the Safety oversight system, nine USOAP- CMA activities were conducted in the Region, four audits (Angola, DRC, Djibouti, Liberia), one ICVM (Botswana) and four off-site validations (Eritrea, Guinea, Seychelles, Zimbabwe). These activities resulted in slight increments in the EI scores of the concerned States and the resolution of the SSC in Eritrea through mitigation measures, as shown in **Table 3** of this Report. However, two SSCs were identified in Liberia in Air Navigation Services on flight procedures design and validation, and calibration of navigation aids. The USOAP CMA results have consistently raised the lack of adequate technical staff (USOAP Critical Element 4) in the region.

Furthermore, the technical areas with lowest levels of EI are Air Navigation Services (ANS), Aerodromes and Ground Aids (AGA), and Accident and Incident Investigation (AIG). Data of 2022 also showed low performance in the area of Aircraft Operations (OPS), a situation to be monitored for possible inclusion in the list of priorities for the Region.

The aim of the predictive safety information section of the report is to collect and analyse safety data to anticipate safety concerns and to develop timely mitigation and prevention measures before accidents or incidents occur. The relevant section provides analyses of the status of safety data management in the region, as well as the implementation status of State Safety Programme (SSP) and Safety Management System (SMS) in the RASG-AFI Region, by the States and industry, respectively.

State Safety Programme (SSP) is an integrated set of regulations and activities aimed at improving safety. Goal 3 of the GASP is aimed at individual States and calls for the implementation of effective SSPs. The goal addresses organizational challenges faced by States when implementing an SSP and includes the implementation of SMS by service providers within individual States, in accordance with Annex 19. The 2023-2025 edition of the GASP now has three targets associated with this goal, which take into account the progress made by States in implementing their SSP and associated challenges.

Target 3.1 calls for all States to implement the foundation of an SSP by 2023

Target 3.2 calls for all States to publish a NASP by 2024.

Target 3.2 calls for all States to work towards an effective SSP as follows:

- a) by 2025 – Present
- b) by 2028 – Present and effective

Figure 13 and **Tables 6a** and **6b** show the SSP implementation status for the RASG-AFI States, based on the information reported by the States on the ICAO iSTARS, 2022. The overall average SSP Foundation PQs for the RASG AFI Region is 67.13 %, with 52.85% of validated and 14.28% CAP completed. 11 States haven't started SSP Gap analysis, 10 States have started SSP Gap analysis, 7 States have completed SSP Gap analysis, 19 States have defined SSP implementation plan and one States fully implemented SSP.

Despite the fact that the region reported zero (0) occurrence related to CFIT and LOC-I for 2022, evaluation of available RASG-AFI Region safety information indicates consistence of Runway Safety (RS) – Runway Excursion (RE) and Runway Incursion (RI), Loss of Control In-flight (LOC-I), Controlled Flight into Terrain (CFIT); and Mid-Air Collision (MAC)/ Aircraft Proximity (AIRPROX) occurrences as top high-risk categories of occurrences (HRC) to focus safety enhancements on.

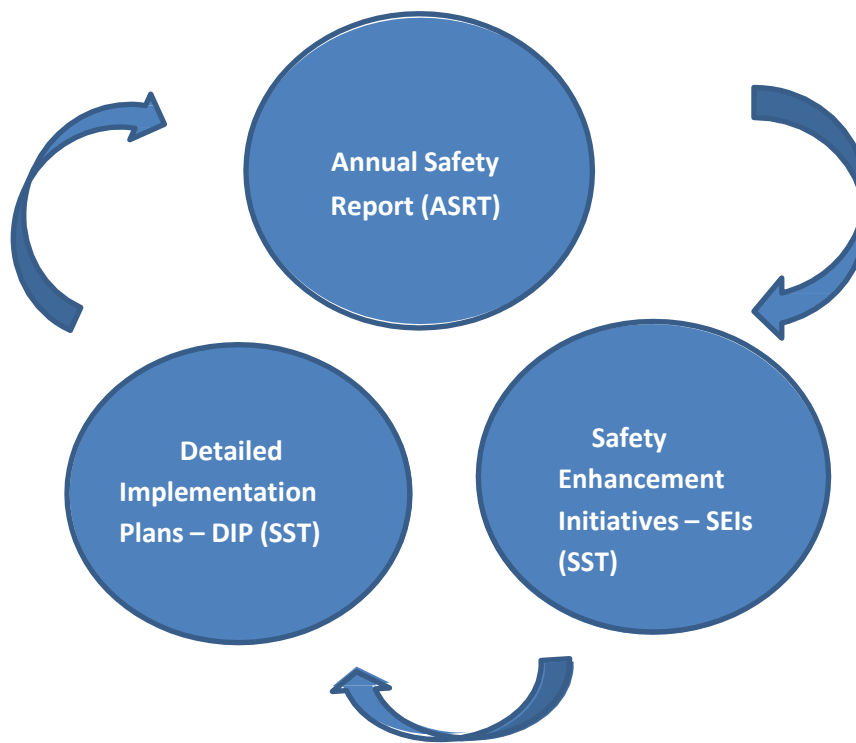
Aircraft accidents are categorized using the definition provided in Annex 13 to the Chicago Convention— Aircraft Accident and Incident Investigation. RASG-AFI is committed to improving aviation safety and fostering cooperation and communication - sharing of safety critical information among the principal aviation safety stakeholders.



Please note:

- All accidents statistics sourced from ICAO (ICAO iSTARS) are based on the Country /State of occurrence in RASG-AFI.
- All accidents statistics sourced from IATA (IATA GADM) are based on the operator’s Country/State of Registry in RASG-AFI.
- The framework used by RASG-AFI to identify and address safety risks in the Region through Safety Enhancement Initiatives – SEIs (SST), Detailed Implementation Plans – DIP (SST), and Annual Safety Report (ASRT) has been maintained.

Figure 2: Framework for Identifying and Addressing Safety Risks



Abbreviations

ACC – Area Control Centre
ACI – Airports Council International
AFI – Africa-Indian Ocean
AFI-CIS – AFI Cooperative Inspectorate Scheme
AFPP – African Flight Procedures Programme
AIG – Accident and Incident Investigation
AIAG – AFI ATS Incident Analysis Group
ANC – Air Navigation Commission
ANSPs – Air Navigation Service Providers
AOC – Air Operator Certificate
APAC – Asia Pacific
ARC – Abnormal Runway Contact
ASR – Annual Safety Report
ASRT – Annual Safety Report Team
ATC – Air Traffic Control
ATM – Air Traffic Management
ATS – Air Traffic Services
CAA – Civil Aviation Authority
CCO/CDO – Continuous Climb Operations/ Continuous Descent Operations
CMA – Continuous Monitoring Approach
COSCAP – Cooperative Development of Operational Safety and Continuing Airworthiness Programme
ESAF – Eastern and Southern Africa
ESI – Emerging Safety Issues
EUR – Europe
FIR – Flight Information Region
FLT – Flight
FSO – Fundamentals of Safety Oversight
GCOL – Ground Collision
GOA – Ground Operations Agent (ISAGO)
IATA – International Air Transport Association
ICAO – International Civil Aviation Organization
GADM – Global Aviation Data Management
ICVM – ICAO Coordinated Validation Mission
IFALPA – International Federation of Airline Pilots' Association
IFATCA – International Federation of Air Traffic Controllers' Association
IFBP – In-Flight Broadcasting Procedures
IOSA – IATA Operational Safety Audit
ISAGO – IATA Safety Audit of Ground Operations
LATAM – Latin America

MENA – Middle East and North Africa
MID – Middle East
MNT – Maintenance
MoC – Memorandum of Cooperation
NAM – North America
NAT – North Atlantic
NASA – North Asia
ORG – Organization and Management
PA – Pan American
RAIO – Regional Aircraft Accident Investigation Organization
RASC – RASG AFI Steering Committee RASG – AFI
RASG-AFI – Regional Aviation Safety Group for Africa-Indian Ocean
REC – Regional Economic Community
RE – Runway Excursion
RI – Runway Incursion
RSOO – Regional Safety Oversight Organization
RWY – Runway
SAM – South America
SARPs – Standards and Recommended Practices
SCF-PP – Systems Component Failure Powerplant
SCF-NP – Systems Component Failure Non-Powerplant
SMS – Safety Management Systems SSC – Significant Safety Concerns
SSC – Significant Safety Concerns
SSP – State Safety Programme
SST – Safety Support Team
TWY – Taxiway
UCR-Unsatisfactory Condition Report
UNK - Unknown
USOAP – Universal Safety Oversight Audit Programme
USOS – Undershoot/Overshoot
WACAF – Western and Central Africa

3. Safety Information and Analyses

The following sections show the results of safety information analysis in terms of reactive, proactive and predictive safety information.

3.1 Reactive Safety Information

The following five occurrences in no particular order of priority, are considered as the RASG-AFI high-risk categories of occurrences (R-HRCs) under the context of the number of fatalities and risk of fatalities associated with such events. They were identified based on analyses from mandatory and voluntary reporting systems, accident and incident investigation reports, safety oversight activities conducted on States in the region over the past ten years (from 2013 to 2022) and their respective State safety programmes, as well on regional analyses conducted by the RASG-AFI and APIRG and operational safety risks described in the GASP.

- Controlled Flight into Terrain (CFIT);
- Loss of Control In-Flight (LOC-I);
- Mid-Air Collision (MAC);
- Runway Excursion (RE);
- Runway Incursion (RI);

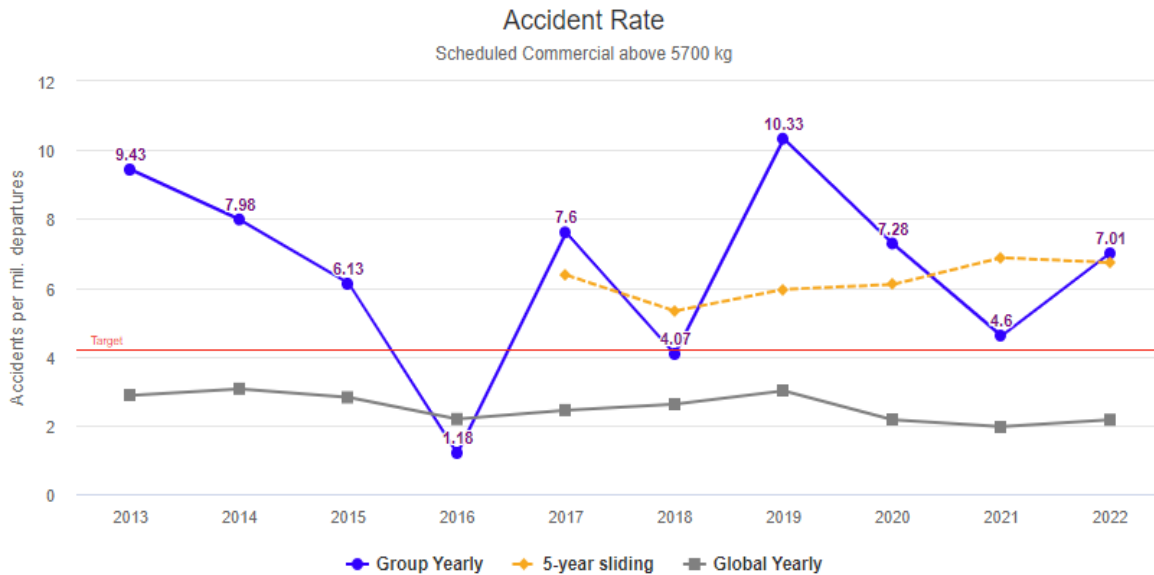
The RASG-AFI accident rate (involving scheduled commercial flights on aeroplanes with maximum certificated take-off mass over 5,700 Kg) at the end of 2022 was 7.01 per million departures compared to the world rate of 2.16. CFIT and LOC-I related Accidents and serious Incidents remain at a rate of zero (0) accident per million sectors from 2020 to 2022.

The Annual Safety Report Team (ASRT) retrieves safety data mainly from ICAO (as reported by States), AFCAC, BOEING, AIRBUS, ACI Africa, CANSO and IATA in order to analyze the available reactive safety information.

At the end of December 2022, the RASG-AFI Accident rate was 7.01 per million departures trending down, which is significantly higher than, and not in line with the global rate of 2.16. The current 5-year sliding average accident rate for the Region was 6.73.

To be in line with the global accident rate and taking into account the traffic volume, the yearly accident rate for RASG-AFI should be between 0.12 and 4.2.

Figure 3 below shows the RASG-AFI Accident Rate involving scheduled commercial flights on aeroplanes above 5,700 Kg Maximum Certificated Take-off Mass.

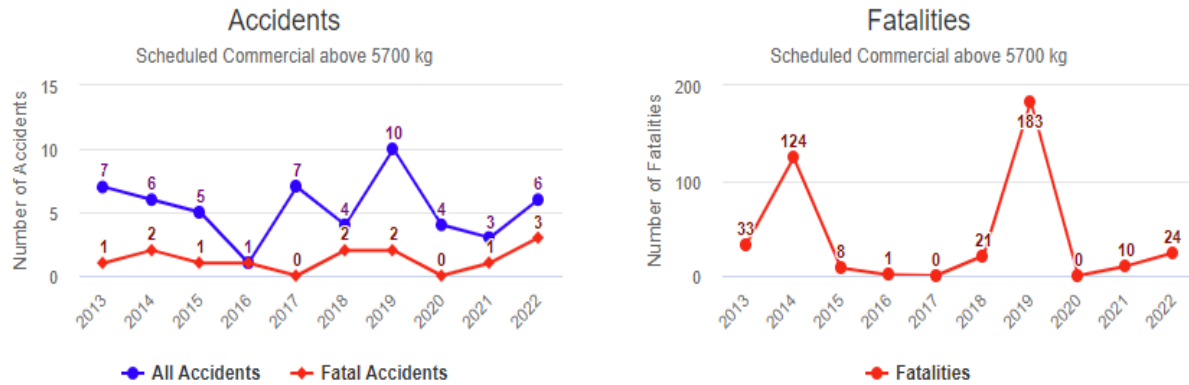
Figure 3: RASG-AFI Accident Rate


Source: ICAO iSTARS

3.1.1 RASG-AFI Fatal Accident Rate

The vision of the GASP is to achieve and maintain the aspirational safety goal of zero fatalities in commercial operations by 2030 and beyond, which is consistent with the United Nations’ *2030 Agenda for Sustainable Development*. The plan’s mission is to continually enhance the global aviation safety performance (and in consequence the regional aviation safety performance) and resilience by providing a collaborative framework for States and industry.

RASG-AFI had 3 fatal accidents on scheduled commercial flights with aircraft over 5,700 Kg in 2022. In total, those accidents caused 24 fatalities. See **Figure 4** below.

Figure 4: Comparison of Number of Accidents and Fatalities in RASG-AFI for 2022


Source: ICAO iSTARS

3.1.2 The World and Regional Air Traffic Volume and Accident Data for 2022

Table 1 below compares the air traffic volume, number of accidents, accident rates, and fatalities by the world and sub-regions for 2022. The accident rate in the RASG-AFI Region has increased from 1.53 per million departures in 2021 to 7.01 in 2022 and the number of accidents from 1 in 2021 to 6 in 2022.

There was a positive trend in traffic volume, which showed an increase from 652 thousand in 2021 to 970 thousand departures in 2022 in the RASG-AFI Region, a positive trend for further aviation recovery from the negative impact of COVID-19 pandemic.

Table 1: The World and Regional Air Traffic Volume and Accident Data for 2022

Sub-Region	Departures	Number of Accidents	Accident Rate (per million departures)	Number of Fatalities
RASG-AFI	0.97 M	6	7.01	24
RASG-APAC	9.31 M	15	1.67	133
RASG-EUR	7.64 M	8	1.09	0
RASG-MID	1.16 M	2	1.77	0
RASG-PA	11.71 M	35	2.97	3
World	30.79 M	66	2.16	160

Source: ICAO iSTARS

3.1.3 Further Analyses of RASG-AFI Region Accidents between 2013 & 2022

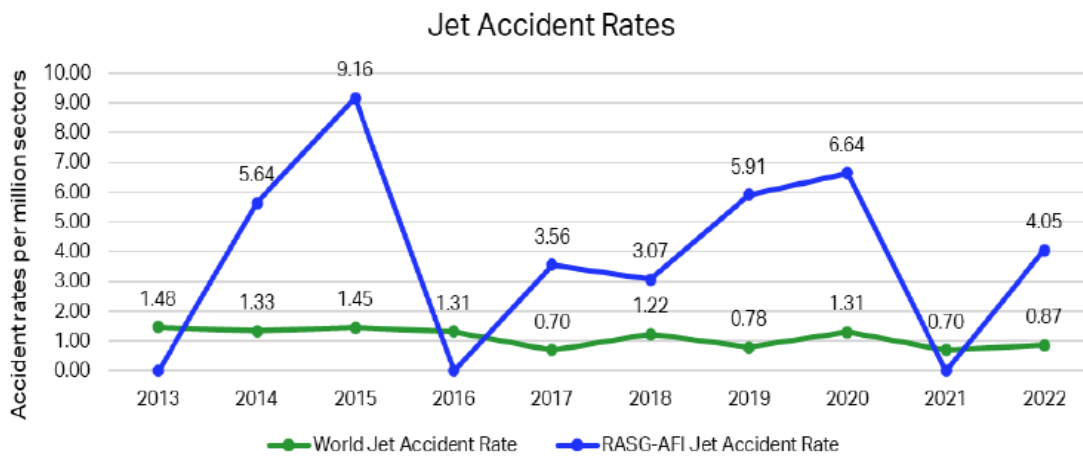
The International Air Transport Association (IATA) has analyzed accident data covering the period 2013–2022, according to Jet damage type (hull loss) and Turboprop damage type (hull loss), as depicted below in **Figures 5a** and **5b**. The RASG-AFI Region High-Risk Accident Trend (2013–2022) is provided in **Figure 6**; and the Hull Loss and/or Fatality Risk for the same period is shown in **Figure 7**.

The graph below, **Figure 5a**, shows the accident rate according to the Jet damage type (hull loss) for RASG-AFI versus the world for the period 2013- 2022.

Figure 5a: Jet Damage Type (Hull Loss) RASG-AFI vs World (2013- 2022)

Jet (Yearly Trends)

Rates per Million Sectors



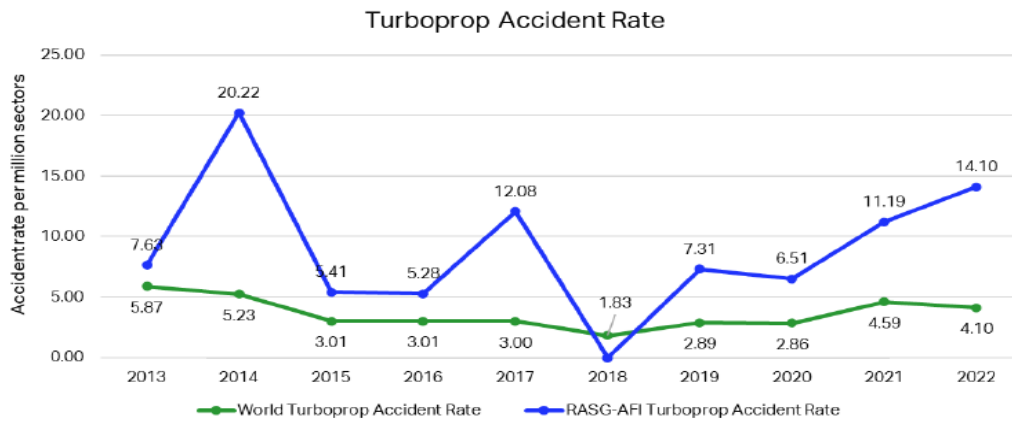
Source: IATA GADM

The graph below shows the accident rate according to the Turboprop damage type (hull loss) for RASG-AFI versus the world for the period 2013 - 2022.

Figure 5b: Turboprop Damage Type (Hull Loss) RASG-AFI vs World (2013-2022)

Turboprop (Yearly Trends)

Rates per Million Sectors

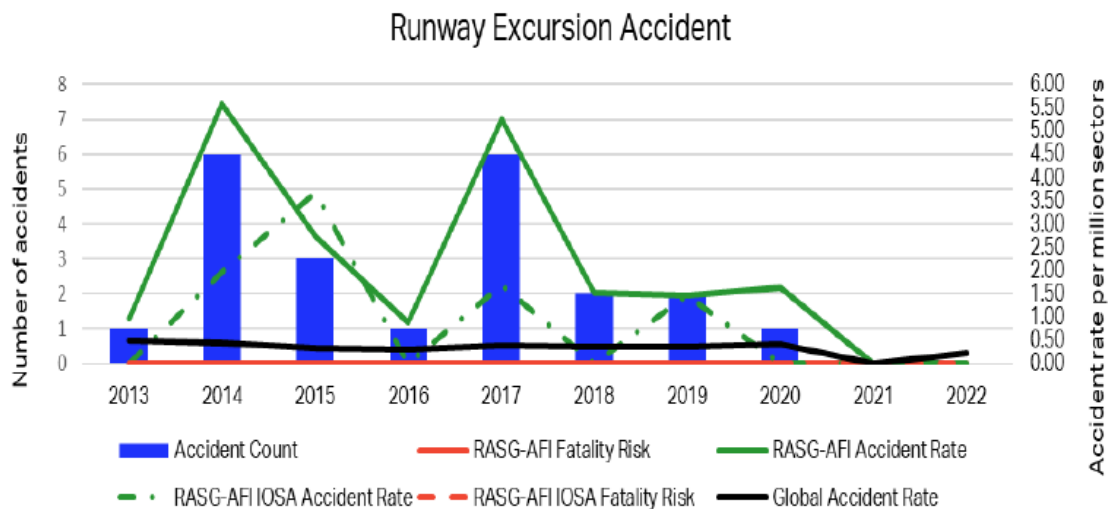


Source: IATA GADM

Figure 6: RASG-AFI Region High-Risk Accident Trend (2013– 2022)

Figure 6a: Runway Safety Related Accidents (Jet & Turboprop, 2013 – 2022)

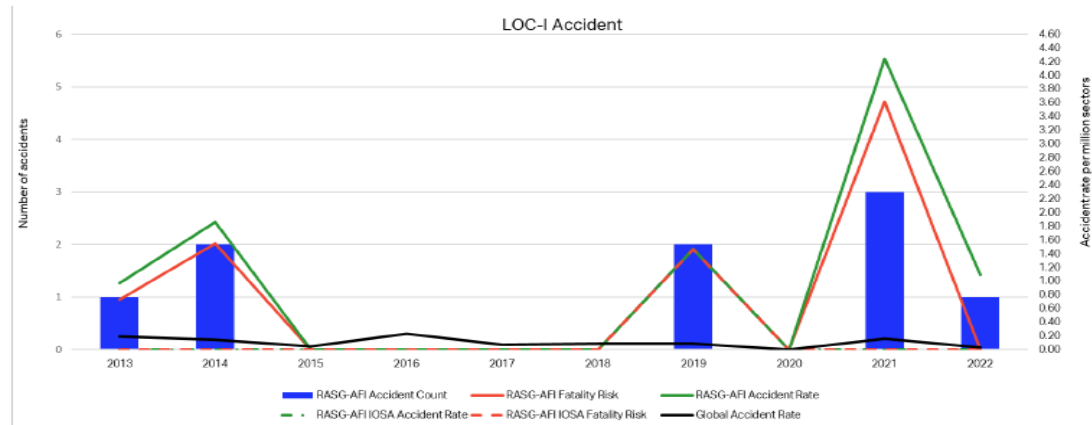
Runway Excursions (RE)



Source: IATA GADM

Figure 6b: LOC-I Accidents (Jet & Turboprop, 2013 – 2022)

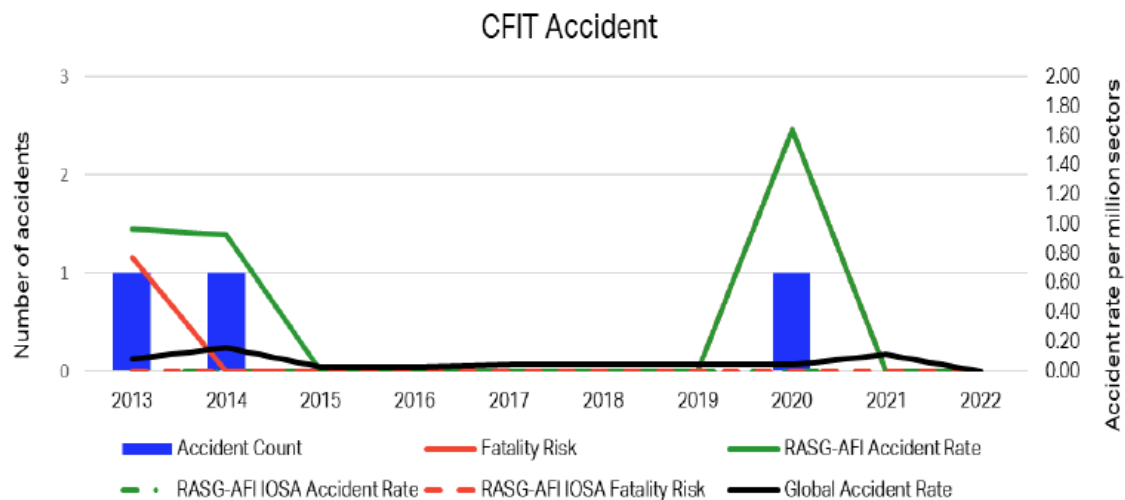
Loss of Control Inflight (LOC-I)



Source: IATA GADM

Figure 6c: CFIT Accidents (Jet & Turboprop, 2013 – 2022)

Controlled Flight Into Terrain (CFIT)



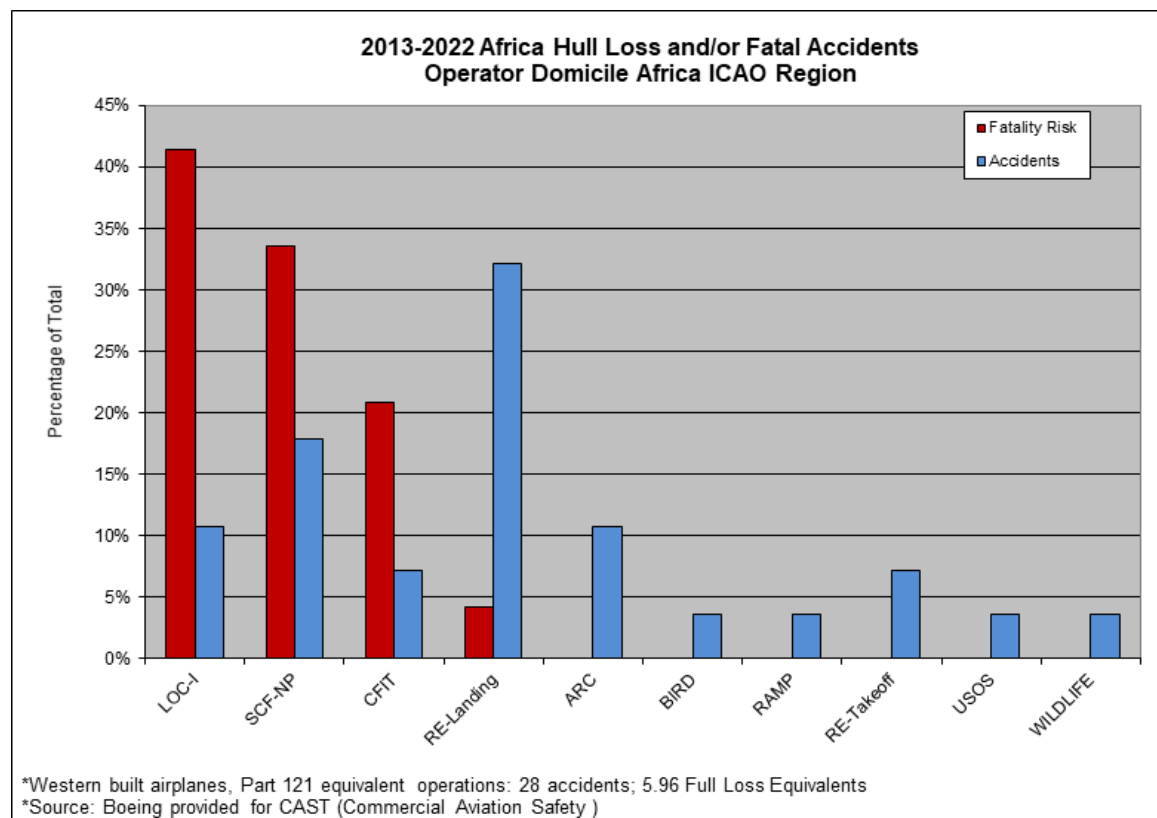
Source: IATA GADM

The graph below, **Figure 7**, depicts the distribution of fatality risk and hull loss type accidents by CICTT accident category for the last 10 years, pertaining to AFI operator domiciled countries.

Loss of Control In-flight (LOC-I), System Component Failure – Non-Powerplant (SCF-NP) and Controlled Flight Into Terrain (CFIT) are the leading accident types in fatality risk, while Runway Excursions on Landing (RE-Landing) are the leading cause for hull losses. It was notable that System Component Failure – Power Plant (SCF-PP) which was a significant contributor to the fatality risk in the previous 10 year window (ending in 2012) has not featured in the current 10 year window (ending in 2022), which showed a positive trend.

However, the System Component Failure – Non-Power Plant (SCF-NP) category saw an increase in 2019, and has maintained a high average rate through 2022. SCF-NP has an increasing trend in the percentage of total fatalities of the region since 2018 thus, the recommendation to add it to the list of HRC of occurrences for the Region.

Figure 7: AFI Hull Loss and/or Fatality Risk for the period 2013 - 2022



Key:

LOC-I: Loss of Control In-flight; **SCF-NP:** Systems Component Failure – Non-Power Plant; **CFIT:** Controlled Flight Into Terrain; **RE:** Runway Excursion; **ARC:** Abnormal Runway Contact; **USOS:** Undershoot/Overshoot.

Source: Boeing

Table 2: System Component Failure, Non-Powerplant (SCF-NP)

System Component Failure, Non-Powerplant (SCF-NP) Year of Occurrence	Percentage of total Fatalities (%)	Percentage of total Hull Loss (%)
2016	Nil	6
2017	Nil	6
2018	Nil	7
2019	8	4.5
2020	25	16
2021	27	17

Source: Boeing

3.1.4 Alignment of the Abuja Safety and Air Navigation Targets with the GASP and the GANP Goals and Targets.

The Abuja Safety Targets (ASTs) are high-level safety targets established to assist African member States to proactively and continuously improve aviation safety. These targets were adopted by the meeting of the African Ministers responsible for aviation held in Abuja, Nigeria, in July 2012 and were subsequently revised in December 2017 to include air navigation services performance targets and indicators.

The RASG-AFI Annual Safety Report Team has been reporting the status of implementation of the ASTs over the years in the various editions of the Annual Safety Report. As most of the targets have since become obsolete, such as the 60% EI established in 2012 as an aspirational target for safety oversight that has since elevated to 75% by the 2020-2022 Edition of the GASP, thus, at variance with the ICAO Global Aviation Safety Plan (GASP). While the ICAO Global Aviation Safety Plan (GASP) sets Goals, Targets and Indicators that are applicable to all 193 ICAO Contracting States, the safety performance of RASG-AFI States continues to refer to the Abuja Safety Targets and Action Plan for Africa and the Abuja Declaration on Aviation Safety in Africa.

In view of the evolution of the global performance framework since 2013, the APIRG/25 & RASG-AFI/8 meetings of November 2022 held in Kigali, Rwanda, acknowledged that reference to Abuja targets for regional goals should be revisited and updated to ensure alignment with the current GASP and GANP goals and targets and global requirements to be met by all States. AFCAC was therefore directed to evaluate the Abuja Safety Performance Framework, update the Abuja Safety Targets incorporating the Air Navigation Services performance indicators in order to align them with the ICAO Global Aviation Safety Plan (GASP) and the Global Air Navigation Plan (GANP); and provide the region with an appropriate aviation safety and air navigation capacity and efficiency performance framework.

Therefore, the following conclusion was drawn to avoid maintaining a double standard approach for States and the region:

APIRG/25 & RASG-AFI/8 - Conclusion 4/02: Alignment of regional Plans and Programmes on the latest editions of ICAO’s GASP and GANP

That, to foster regional progress on key priorities and challenges, regional Programmes and Plans should be aligned on the provisions of the latest editions of ICAO Global Plans (GASP and GANP).

In light of the above and considering that all ICAO Regions are required to publish a Regional Aviation Safety Plan by end of 2023, the ninth meeting of the ASRT was of the view that the Abuja Safety and Air Navigation Targets should migrate to the Regional Aviation Safety Plan for Africa-Indian Ocean (AFI-RASP), which is under development. Therefore, this ninth edition of the Annual Safety Report has not featured the Abuja Safety Targets. A validation workshop on the draft AFI-RASP is expected to be held in September 2023.

3.2 Proactive Safety Information

3.2.1 ICAO Universal Safety Oversight Audit Programme (USOAP) Continuous Monitoring Approach (CMA) Activities in the RASG-AFI region in 2022

ICAO resumed its Universal Safety Oversight Audit Programme (USOAP) Continuous Monitoring Approach (CMA) activities after the COVID 19 Pandemic, that showed marked improvement in the overall EI scores in some States but setbacks in others, as depicted in **Table 4** below.

Table 3: ICAO USOAP CMA Activities conducted in RASG-AFI - 2022.

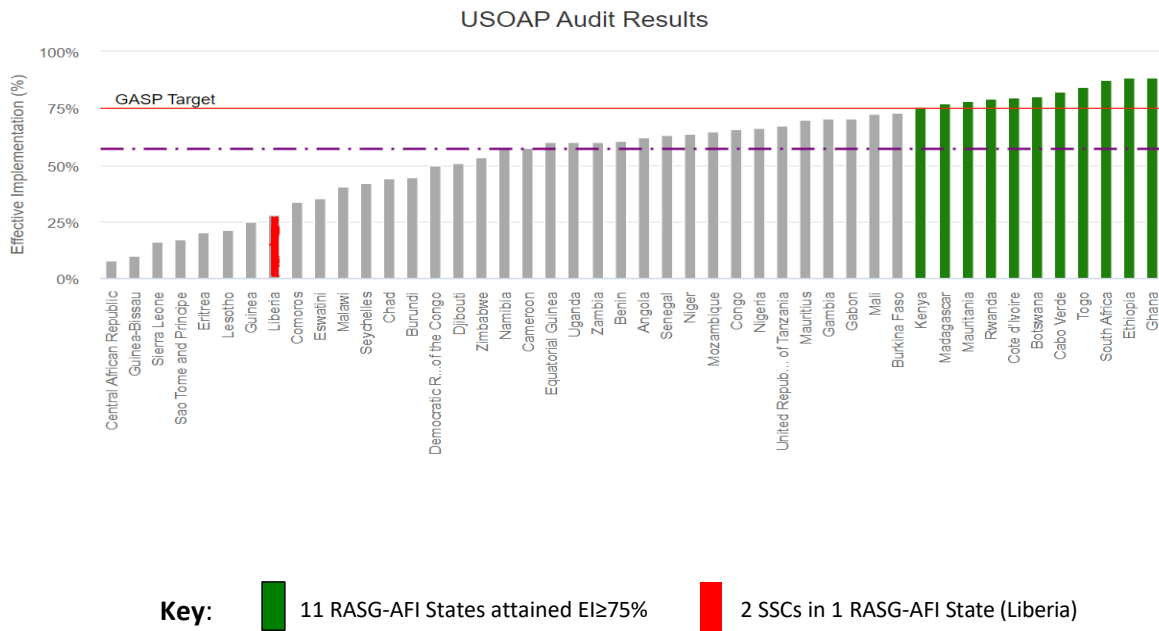
Eastern and Southern African (ESAF) Region				
State	Type of Activity	Dates	Results	Comments
Angola	Audit	30/11/2022 – 12/12/2022	62.03%	An increase from 48.35% EI.
Botswana	ICVM	15-22/2022	80.1%	An increase from 61.07% EI.
Djibouti	Audit	1-14/02/2022 25/10/2022 – 6/11/2022	50.74%	An increase from 39.77% EI. Conducted in two parts with different scopes.
Eritrea	Off-site SSC PQs validation	16’09 2022	20.14%	SSC Resolved through mitigation measures.
Seychelles	Off-site validation	14/09/2022- 31/10/2022	42.14%	An increase from 41.04%
Zimbabwe	Off-site validation	13-30/09/2022	53.14%	An increase from 52.52%

Western and Central African (WACAF) Region				
Democratic Republic of the Congo	Audit (limited scope)	31/08/2022-14/09/2022	50%	Conducted in two parts with different scopes, the second part conducted in February 2023 led to an increase to 66,7% EI pending confirmation upon release of the final report, but two SSCs were generated in ANS
Guinea	Off-site validation	26/10/2022-30/12/2022	24.65%	An increase from 23.09%
Liberia	Audit	20/04-02/05/2022	27.84%	An increase from 16.5% Two SSCs in ANS

3.2.1.1 ICAO USOAP CMA Overall Results

The RASG-AFI Member States have achieved an overall Effective Implementation level of 57.11 per cent in 2022 for the 46 of 48 audited States (Somalia and South Sudan, are yet to receive USOAP-CMA activities). This corresponds to an increase of 0.16 percentage point on the level of Effective Implementation compared to 2021 (56.95 per cent), which is still below the world average of 68.81 per cent. By the end of 2022, eleven RASG-AFI States had USOAP Overall EI of 75 per cent or greater (which was 23.91 per cent of States).

Goal 2, Target 2.1 of the GASP required all States to improve their score for the effective implementation (EI) of the critical elements (CEs) of the State’s safety oversight system (with focus on priority PQs) to 75 per cent by 2022A Significant Safety Concern (SSC) indicates that a State is not providing sufficient safety oversight to ensure the effective implementation of applicable ICAO Standards. SSCs may be issued in operations, air navigation services, aerodromes and ground aids, airworthiness, or licensing. At the end of 2022, two SSCs in the area of Air Navigation Services (ANS) in Liberia were unresolved and efforts are ongoing to address it as soon as possible. See **Figure 8** below.

Figure 8: USOAP CMA Results of RASG-AFI States – EI at the end of 2022.


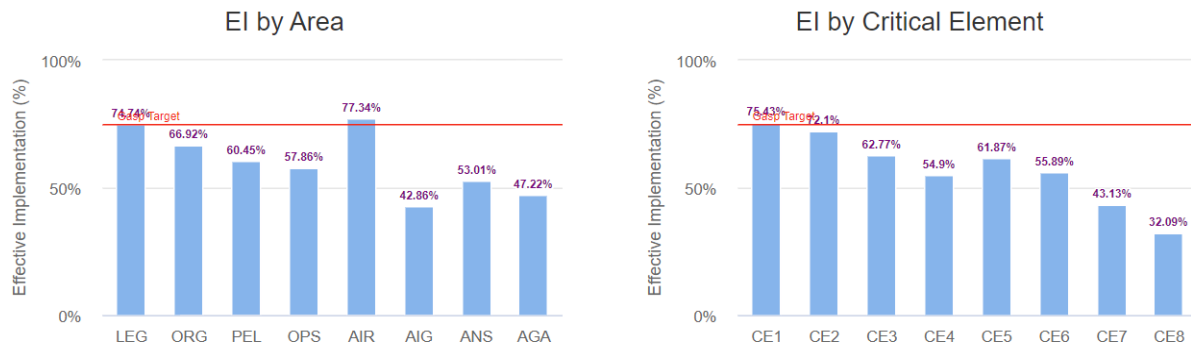
Source: ICAO iSTARS

The USOAP-CMA results for RASG-AFI States in 2022 did not indicate much change from those of 2021. That is, an EI score above 75 per cent in One audit area: AIR; and an EI score above 75 per cent in One Critical Element (which were the same for 2021): CE-1. For the region, the audit areas with the low EI scores were: ORG, PEL, OPS, AIG, ANS, AGA; and the Critical Elements with the low EI scores were: CE-2, CE-3, CE-4, CE-5, CE-6, CE-7, CE-8, as shown in **Figure 9** below.

Figure 9: ICAO USOAP CMA Results by Audit Area and Critical Elements

USOAP Results by Area and Critical Element

1 Audit Area and 1 Critical Element are above the target of 75% EI



Source: ICAO iSTARS

3.2.2 Safety Partner Programmes

The Federal Aviation Administration (FAA) rates States through their International Aviation Safety Audit (IASA) programme. The FAA does not allow air carriers from category 2 States to operate to the United States of America. By December 2022, One State (Ghana) in the RASG-AFI Region was rated Category 2.

The European Commission can decide to ban certain airlines from operating in European airspace if they are found to be unsafe and/or they are not sufficiently overseen by their authorities. In 2022, eight RASG-AFI States had operational restrictions with regards to European airspace: Angola, Congo, Democratic Republic of the Congo, Djibouti, Equatorial Guinea, Eritrea, Sao Tome and Principe, and Zimbabwe. This was an improvement from 13 States in 2021.

3.2.3 Regional Safety Initiatives

3.2.3.1 AFI Plan Activities 2022

The results of the ICAO USOAP CMA activities in the region continued to show low EI scores registered in the areas of Aircraft Operations (OPS), Aircraft Accidents and Incidents Investigation (AIG), Air Navigation Services (ANS), and Aerodromes and Ground Aids (AGA). Project documents have been developed, intended to improve capacities in these areas.

Funding for these projects come mainly from the comprehensive regional implementation plan for aviation safety in Africa (AFI Plan), ICAO Safety Fund (SAFE) and partners. The overall objective of the AFI Plan is to address civil aviation safety deficiencies in the Africa-Indian Ocean (AFI) region through provision of implementation support activities to States with a focus on the establishment and implementation of effective and sustainable safety oversight systems, resolution of identified safety deficiencies, fostering of aviation safety culture and aviation infrastructure planning in Africa. The following activities of the AFI Plan were successfully implemented in 2022:

- a) Provision of technical support to elevate Effective Implementation of the Critical Elements of the safety oversight systems of States under the FSO project to, Liberia, Sao Tome and Principe, Sierra Leone, Angola, Comoros, Djibouti, Eritrea, and Eswatini.
- b) Consultation with partners to convene a high-level meeting to present recommendations and roadmap of the Strategic Plan for supporting and strengthening Regional Safety Oversight Organizations (RSOOs) in Africa in 2023.
- c) Provision of training to two States that had internet connectivity challenges under a pilot project entitled “Increased Access to Training (IaT)” through an alternative mode of access using newly available technology, as part of assistance to 33 Least Developing Countries (LDCs) in Africa.

- d) Technical Missions conducted, and remote assistance provided to Botswana, Sierra Leone, Nigeria, Congo, Guinea, and Cameroon, to support the States' efforts in certifying their international Aerodromes. The Yaoundé International Airport in Cameroon and Quatro de Fevereiro International Airport in Luanda, Angola, were certified in 2022 ; and the certification of Sir Seretse Khama International Airport in Gaborone, Botswana, initiated in the year and expected to be completed in the first quarter of 2023. In addition, a hybrid workshop on aerodrome certification for French speaking States (Djibouti, Cameroon, Comoros, and Madagascar) was conducted in 2022 under the AFI Plan aerodrome certification Project.
- e) Aerodrome certification, Air navigation Peer Review, Fundamentals of Safety Oversight (FSO), State Safety Programme (SSP), and Aeronautical Information Management (AIM), were revised and approved by the 25th meeting of the AFI plan Steering Committee. The Steering Committee also approved 206,190 USD for the year 2022 to implement these projects.
- f) A major part of the aviation professionals capacity building study was carried out in 2022. It was envisaged that the remaining part of the study would be finalized during the first Quarter of 2023.

The AFI Plan continued to serve as a collaborative planning platform for the partners supporting aviation safety in Africa.

3.2.3.2 APIRG/25 and RASG-AFI/8 Meetings

The eighth meeting of the Regional Aviation Safety Group for Africa-Indian Ocean (RASG-AFI/8) was held at the Kigali Serena Hotel, Kigali, Rwanda, from 7 to 11 November, 2022. The meeting was chaired by Col. Latta Dokisime Gnana (Togo), Chairperson of the RASG-AFI. Mr. Prosper Zo'o Minto'o, Regional Director, ICAO Western and Central African Office, Dakar, served as Secretary to the meeting. The meeting was hosted with the twenty-fifth meeting of the AFI Planning and Implementation Regional Group (APIRG/25). Two joint sessions (APIRG25/RASG-AFI/8) were convened on 7 and 11 November 2022; and the meetings of the two Groups were held back-to-back between the joint sessions. Four Conclusions and One Decision were formulated by the joint sessions. Fifteen Conclusions and three Decisions were formulated by the RASG-AFI/8 Meeting.

The meetings were attended by 200 participants from AFI States, the ICAO Council, the Air Navigation Commission, the ICAO Headquarters and Regional Offices, international and regional Organizations, industry and other partners and stakeholders.

3.2.3.3 Aerodrome Certification Project

The AFI plan aerodrome certification project was revised in May 2022 to add additional airports for certification.

The Project team members supported the certification of Sir Sereste Airport in Botswana and were involved in the onsite activities for the assistance provided to Djibouti and Cameroon.

The current percentage of certified aerodromes in the RASG-AFI region is 41.17 per cent (See **Appendix 4**).

3.2.3.3.1 Implementation of the new Global Reporting Format (GRF) for Runway Surface Condition

In 2022, a GRF post-implementation webinar was conducted by the ESAF and WACAF Regional Offices to share and exchange lessons learned from the implementation of the new format for reporting Runway Safety. The webinar encouraged States that were yet to complete effective implementation of GRF to learn from the experience of other States and to take opportunity of the support of ICAO Regional Offices and regional Organizations.

By December 2022, 56.25% of States in the ESAF and WACAF regions reported full implementation of the GRF.

3.2.3.4 Upset Prevention and Recovery Training (UPRT)

The Loss of Control In-Flight (LOC-I) and Upset Prevention and Recovery Training (UPRT) Workshop was held in a hybrid mode at the Ethiopian Airlines Aviation Academy, Addis Ababa, Ethiopia, from 22 to 23 November 2022, under the auspices of the two ICAO Regional Offices (WACAF and ESAF) and Kenya, as the RASG-AFI Champion State for LOC-I.

This was conducted under the framework of the RASG-AFI agenda for LOC-I in line with the Group's 5-year implementation plan on LOC-I. This year's Workshop included sessions on competency-based training and assessment (CBTA).

The agenda of the workshop included the latest developments on UPRT, regulations and procedures, competency-based training and assessment (CBTA) in personnel licensing, the overview of the training programmes on various aeroplanes as well as practical sessions on UPRT-compliant flight simulation training devices (FSTD). The workshop attracted 77 on-site participants from CAAs, airlines and other service providers. Additional attendance was made possible through online arrangements.

The objectives of the workshop were, in particular, to assist in the implementation of the RASG-AFI 5-year LOC-I Plan; to help enhance the safety initiatives for NASPs and RASP as per the ICAO GASP; and to enable the building on CBTA to enhance UPRT.

The workshop documentation are available at: <https://www.icao.int/ESAF/Pages/LOC-I-and-UPRT-2021.aspx>

3.2.3.5 Controlled Flight Into Terrain (CFIT) Workshop

The CFIT Workshop which was conducted virtually on 21 November 2022, was one of the RASG-AFI annual events.

The event was supported by the ICAO ESAF and WACAF Regional Offices; and aviation partners such as AFRAA and IATA. It was attended by 174 participants from Civil Aviation Authorities, Airlines, Air Navigation Services Providers, Aircraft Accident Investigation Agencies, Approved Training Organizations, Regional and International Organizations, as compared to 106 participants in 2021.

The Workshop discussed the Safety Enhancement Initiatives (SEIs) identified by the previous workshop to avoid/mitigate CFIT related risks, amongst others; and their status of implementation in the RASG-AFI Region, CFIT Prevention in Africa as well as CFIT Accidents.

CFIT-related Protocol Questions (PQs) from the ICAO USOAP CMA Online Framework have been used as a tool to assess the level of implementation of the 8 Safety Enhancement Initiatives (GPWS; SOPs, CDFA, FDA, CRM/TEM, ALAR, MSAW, PBN) identified to mitigate risks associated with CFIT occurrences in the RASG-AFI Region.

From the analyses, only 9 out of the 48 RASG-AFI States have fully implemented all the identified CFIT-related SEIs (PQs), representing 18.75%.

The workshop recognized the low level of implementation of the SEIs by States and,

- 1) Urged States to commit the required resources to ensure the full implementation of the SEIs;
- 2) Include the SEIs identified by the workshop in the National Aviation Safety Plans (NASPs); and
- 3) Provide regular update on the status of implementation of the SEIs to the RASG-AFI on quarterly basis.

The RASG-AFI Operational Safety Issues Safety Support Team (OSI-SST) will continue monitoring the level of implementation of the SEIs identified by the region and provide reports to the RASG-AFI through the RASC on regular basis.

The Workshop documentation are available at: <https://www.icao.int/WACAF/Pages/meetings.aspx>

3.2.3.6 Performance Based Navigation (PBN) Operations Approval

Under the African Flight Procedures Programme (AFPP), African States are being assisted in implementing PBN flight procedures at their international and domestic airports and the Civil Aviation Authorities are empowered with PBN concept and products, PBN oversight, quality assurance, PANS-OPS approval (regulatory approval and operational approval). This safety initiative is intended to mitigate CFIT related accidents and serious incidents, improve flight efficiency, increase airport accessibility, and reduce CO₂ emissions due to aviation to achieve associated environmental benefits.

The AFPP Phase I was launched by ICAO in 2014 for an initial duration of three (3) years, and is hosted in Dakar, Senegal with support of ASECNA, the French DGAC and AIRBUS. The Programme has been

renewed for another three (3) years from 8 February 2019. AFPP has currently 36 participating members including, twenty-seven (27) active members and nine users but also one (1) Observer and Eight (8) Donors (Some States are active members and donors).

Activities conducted under the AFPP registered the following results on the AFI Region:

- RNP Approach procedures implementation: 75.8%: (ESAF: 71.0%; WACAF: 82.8%)
- National PBN Implementation Plan (NPIP) in Africa: 81.3% per cent; ESAF: 70.8%; WACAF: 91.7%.
- Flight procedure design: 165 flight procedures designed or being designed:
- Other assistance to States/Organizations in the resolution of a Significant Safety Concern (one State and one Organization) and preparation of National PBN Implementation Plans (NPIP) (two States)
- PBN refresher training course: 7 participants from two States and Organizations.
- Conventional Flight Procedure design training course: 12 participants from eight States.

Notes:

- *Some of these NPIP are not robust and still need to be reviewed.*
- *The implementation rate of the flight procedures was negatively impacted by PANS-OPS related SSC which requested the suspension of the procedures or the facilities.*

3.2.3.7 The Cooperative Inspectorate Scheme for Africa-Indian Ocean (AFI-CIS)

The following Organizations that are international partners in collaboration with AFCAC, provided financial support to sustain the AFI-CIS program during the 2021-2022 period:

- EU-Africa Safety in Aviation (EU-ASA) Project - The EU-ASA Project agreed to fund 10 AFI-CIS expert missions and 2 AFI CIS induction workshops for the 2021 – 2022 period.
- African Development Bank (AfDB) - In the framework of the AfDB Institutional Support to AFCAC for the Implementation of the Single African Air Transport Market (SAATM) project, and to achieve its real and full potential, the Project has included a provision for the assistance to SAATM member States, CAAs, airlines and airports in order to improve their safety performance and their level of effective implementation of ICAO SARPs in safety. CAAs are being assisted through the AFI-CIS technical assistance programmes.

AFCAC took a project approach for the implementation of AFI CIS technical assistance missions. In this regard, member States having overall EI score below 60% were targeted for the period 2021 -2024. AFCAC conducted seven AFI-CIS technical assistance missions during year 2022 and deferred other planned missions due to concurrent activities such as, the AFCAC Extra-Ordinary Plenary held in June 2022, the ICAO 41st Assembly held in October 2022, among others. It is envisaged that at least three technical assistance missions will be conducted to each target State in 2023. **Table 4** below shows targeted States below 60% EI.

Table 4: AFI CIS targeted States with EI below 60%

Beneficiary State	No. of planned Missions (2021-2024)	No. of missions conducted	Funding	AFI CIS Assistance offered	ICAO Validation	EI Status (Jan 2021)	EI Status (Dec 2022)
Guinea	3	1 physical - 2021	EU-ASA	PEL/OPS/AIR/ANS/AGA	Off-site Validation	23.09%	24.65%
Zimbabwe	3	1 virtual - 2021 1 physical 2022	AfDB	PEL/OPS/AIR/ANS/AGA	Pending	52.52%	53.1%
Liberia	3	1 physical - 2022 1 physical - 2022	AfDB EU-ASA	PEL/OPS/AIR/ANS/AGA	Audit conducted - May 2022	16.5%	27.84%
Chad	3	1 physical - 2022	EU-ASA	PEL/OPS/AIR/ANS/AGA	Pending	44.16%	44.16%
South Sudan	6	3 physical - 2022	EU-ASA	PEL/OPS/AIR/ANS/AGA	Pending	-	-

3.2.3.8 AFI Regional Safety Oversight Organizations (RSOOs) Study

As an outcome of the ICAO and the European Aviation Safety Agency (EASA) Forum on Regional Safety Oversight Organizations for Global Aviation Safety, held in March 2017, in Ezulwini (Kingdom of Eswatini), and especially to the Ezulwini Ministerial Declaration on Regional Safety Oversight Organizations (RSOOs) which consented for the development of a Global Strategy and Action Plan aimed at improving and strengthening the capacity of RSOOs to carry out safety oversight functions and actively contribute to ICAO programmes and activities, ICAO was requested to coordinate, in collaboration with AFCAC and partners the development of the Strategic Plan for supporting and strengthening RSOOs in the Africa-Indian Ocean Region and an action Plan for its implementation.

To this effect, the ICAO Comprehensive Regional Implementation Plan for Aviation Safety in Africa (AFI Plan) conducted a study from 1st July to 8th September 2021, with the objective of identifying the necessary actions for ensuring effective and sustainable implementation and operation of RSOOs in the region and to consolidate these actions into a Strategic Plan and associated Roadmap.

The study was conducted and validated during a regional workshop virtually held on 25 November 2021 to present the outcomes of the survey conducted, analyses of the status and challenges of African RSOOs, and specific actions to strengthen these organizations. It also drawn relevant conclusions and appropriate recommendations that led to, and inform the development of the strategic plan and implementation roadmap. The issues addressed by the Strategic Plan include the following:

- a) Financial sustainability and feasibility of a joint/common funding mechanism
- b) Competence/capacity building requirements and sharing of human resources
- c) Delegation of tasks/mandate by States
- d) Operational effectiveness
- e) Harmonization of safety oversight regulatory material and documents
- f) Optimum number, size and configuration of RSOOs
- g) Cooperation and Collaboration with other safety oversight programmes and projects in the region.

The Strategic Plan and its associated roadmap have been submitted on 3rd May 2022 to the African Ministers in charge of civil aviation via correspondence for their consideration in the light of the decisions contained in the 2017 Ezulwini Ministerial Declaration on RSOOs including, among others, the decision to ensure the necessary political and technical commitment at the national, regional and continental level for the optimization of RSOOs in Africa, and to accelerate their establishment and strengthening to effectively support regulatory oversight for aviation safety. The study also shreds to key stakeholders including Regional Economic Communities in Africa to incorporate the strategy in their respective regions and support and strengthening RSOOs.

3.2.3.8.1 Memorandum of Cooperation (MoC) between SASO and CASSOA

SASO and CASSOA discussed and signed a Memorandum of Cooperation (MOC) during the last AFI aviation week held in Abuja Nigeria from 16-20 May 2022 to promote closer co-operation through the

harmonization of their policies, laws, programmes, strategic objectives and activities in aviation safety and where appropriate activities in aviation security too. This development were done in line with the recommendations of the RSOO strategy that calls collaboration among themselves to effectively utilize the available scarce resource.

The two thirds threshold required to operationalize the SASO Charter was reached on the 28th of February 2023.

3.2.3.8.2 MoC between AAMAC and WACAF States; and other RSOOs

The African and Malagasy Civil Aviation Authorities (AAMAC) RSOO signed Memoranda of Cooperation related to Air Navigation Services Safety oversight functions with Central African Republic, Cote d'Ivoire, Gabon and Niger Civil Aviation Authorities; and with the Banjul Accord Group Aviation Safety Oversight Organisation (BAGASOO) as well as the West African Economic and Monetary Union (WAEMU/UEMOA).

3.2.3.9 Establishment of AFCAC Expert Working Groups

AFCAC in collaboration with the relevant ICAO Regional Offices, initiated the establishment of 16 Expert Working Groups (EWG) in-line with Article 11 of the AFCAC Constitution. Criteria based on qualifications and experience were established to ensure selection of most suitable candidates from member States.

The main objectives for establishment of the 16 EWGs included:

- Considering and facilitating the implementation of the technical, economic, social and legal aspects of civil aviation related activities and programmes in the AFCAC Approved Work Programme;
- Providing advice on emerging issues in civil aviation as appropriate;
- Establishing capacity for analyses of aviation safety data and reporting;
- Establishing a baseline for performance-based safety oversight systems in Africa.

Table 5: AFCAC Expert Working Groups

Item	EWG Name	Subject (ICAO Annexes)/Domain	Scope
1.	Airworthiness of Aircraft (AIR)	Annexes 6, 7, 8 and 16	Fixed Wing airframes and powerplant, Rotorcraft airframes and powerplant, Avionics
2.	Aircraft Operations (OPS)	Annexes 2, 6, 18 and PANS-OPS	Commercial Air Transport operations, General Aviation Operations, Helicopter Operations, UAS Operations.
3.	Personnel Licensing and Training (PEL)	Annex 1, AATO, Training and Human Resources Development	Licensing/Certification of Pilots, Aircraft Maintenance Personnel, Air Traffic Controllers, Cabin Crew, Flight Dispatchers and Approved Training Organizations
4.	Aerodromes & Ground Aids (AGA)	Annex 14 and PANS-Aerodromes	Aerodromes
5.	Air Navigation Services (ANS)	Annexes 2, 3, 4, 5, 10, 11, 12, 15 and PANS-ATM, PANS-AIM, PANS-OPS	Rules of the Air, Meteorological Service for International Air Navigation, Aeronautical Charts, Units of Measurement to be Used in Air and Ground Operations, Aeronautical Telecommunications, Air Traffic Services, Search and Rescue, MoUs, Coordination with various entities Aeronautical Information Services
6.	Aircraft Accident and Incident Investigation (AIG)	Annex 13	Aircraft Accident and Incident Investigations
7.	Environmental Protection	Annex 16	Air Quality, Aircraft Noise, Engine Emissions, Climate Change, Operations, Fuels, CORSIA and Technology
8.	Facilitation	Annex 9	Facilitation and Border control issues

9.	Aviation Security	Annex 17	Aviation Security
10.	State Safety Programme/ Safety Management Systems (SSP/SMS)	Annex 19	Safety Management, Safety Risk assessment and mitigation
11.	Legal Affairs	Broad coverage of legal aspects, Corporate Services, Administration and governance.	Legal Policies, Instruments, Laws and Regulations
12.	Air Transport and Economic Regulation	Aspects of Air Transport and Economic Regulation	Air Transport, Economic regulation
13.	Unmanned Aircraft Systems (UAS)	Innovation & Technology	Unconventional Aircraft
14.	SAATM Implementation	YD, BASAs, Competition and Consumer Protection, Dispute resolution	Implementation of SAATM
15.	HR & Strategic Development		HR & Strategic Development
16.	Administration & Governance		Administration & Governance

3.2.4 IATA Operational Safety Audits (IOSA)

The IATA Operational Safety Audit (IOSA) is the benchmark for global safety management in airlines and is an internationally recognized and accepted evaluation system designed to assess the operational management and control systems of an airline.

IOSA scope covers eight (8) areas, which include: Organization and Management (ORG), Maintenance (MNT), Cargo (CGO), Security (SEC), Flight Operations (FLT), Dispatch (DSP), Cabin Safety (CAB) and Ground Handling Operations (GRH).

The following graph (**Figure 10**) shows the AFI trend in 2022 IOSA top findings per audit area where issues in Organization and Management and Maintenance ranked high. The pattern remains unique for each region and generally varies year-in, year-out.

Figure 10: RASG-AFI Region Trend in IOSA Top Findings per Audit Area



Source: IOSA Program Office

Key:

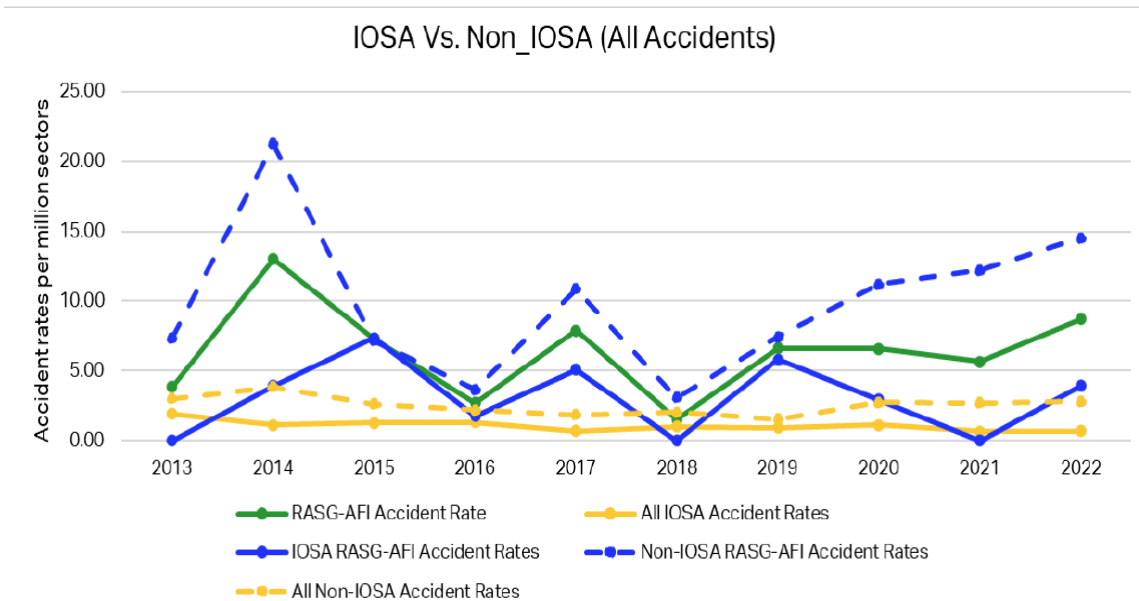
ORG 1.1.10. - SMS Implementation; **DSP 1.6.1** - Dispatch Documentation System; **CGO 2.1.4** - Training of Cargo Handling Personnel; **MNT 1.12.6** - SMS Training for Engineering and Maintenance Personnel; **ORG 3.4.13** - Specific Risk Assessment ; **GRH 1.6.4** - Handling of Dangerous Goods ; **ORG 3.1.2** - Safety Risk & Mitigation Program; **SEC 4.1.1** - Management of Security and cybersecurity Threats ; **MNT 1.12.2** - Safety Risk Assessment and Mitigation Program in **Maintenance Operations**; **FLT 1.12.2** - Safety Risk Assessment and Mitigation Program in Flight Operations; **MNT 1.12.1** - Hazard Identification Program for Maintenance Operations; **ORG 3.4.1** - Policy/Procedures Transportation in Cargo Compartment; **ORG 3.5.2** - Identification/Investigation of Irregularities/precursors.

The graph below (**Figure 11**) represents the rate of occurrence of all accidents over the period 2013-2022, per million flight sectors for overall RASG-AFI operators (green versus RASG-AFI IOSA- registered operators (solid blue) and RASG-AFI non-IOSA-registered operators (dotted blue). From the trend, the IOSA certified operators continue to outperform the non-IOSA certified carriers in the Region. Meanwhile the solid yellow line is the global IOSA registered operators while the broken yellow line is the global non IOSA operators.

Figure 11: Accident Rate for IOSA versus Non-IOSA Operators in RASG-AFI Region

Jet & Turboprop (IOSA Vs. Non-IOSA)

Rates per Million Sectors



Source: IATA GADM

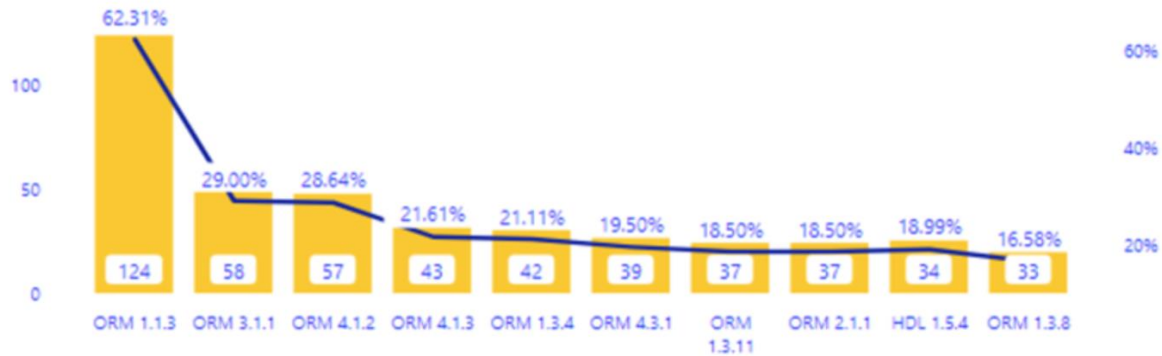
3.2.5 IATA Safety Audit for Ground Operations (ISAGO)

A total of 34 ISAGO audits were conducted in RASG-AFI throughout the year 2022. This constitutes 13% of the total number of audits (255) conducted globally. There has also been more demand for audits especially initial phase which is an indication of growth of the program. The programme also had ten (10) new endorsements by Regulators and Airports worldwide one (1) of which was from RASG-AFI namely ANAC Togo.

The graph below (**Figure 12**) shows the 2022 top findings by audit area globally and pretty much applicable to RASG-AFI. The top most finding on the list was in Organization and Management (ORM 1.1.3) which is all related to SMS implementation throughout the organization.

Figure 12: RASG-AFI Region Trend in ISAGO Top Findings per Audit Area

Top Findings


Key:

- ORM 1.1.3** SMS integrated and implemented throughout the organization to manage of safety risk
- ORM 3.1.1** Management and control of interna, and external documentation
- ORM 4.1.2** Training Program - Initial training prior to operational duties
- ORM 1.3.4** Training program to ensure personnel complete initial training before being assigned to operational duties
- ORM 4.3.1** Training program – Ensure trained and competent staff performs basic and specific SMS duties

Source: IATA

IGOM is the established global industry standard for ground handling worldwide. The IGOM Portal is an online platform where, with IGOM as the primary reference, airlines and ground service providers (GSPs) can exchange information, including any variations, on their ground handling requirements. Standardization and harmonization of procedures through the IGOM adoption is a key enabler that will be validated through ISAGO auditing scheme.

In 2022 a total of 130 new airlines joined the portal bringing the global total to 430 airlines 30 of which are from RASG AFI.

3.3 Predictive Safety Information

Goal 3 of the 2023-2025 edition of the GASP is aimed at individual States and calls for the implementation of effective SSPs. The goal addresses organizational challenges faced by States when implementing an SSP and includes the implementation of SMS by service providers within individual States, in accordance with Annex 19. Although some degree of progress has been registered in this respect, the pace of SSP implementation in the region was still at a very slow pace and availability of a reliable predictive safety information continues to pose challenges.

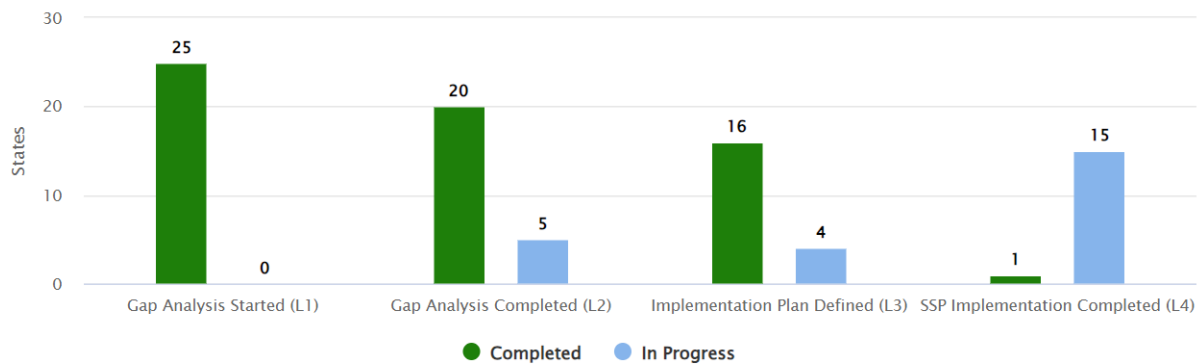
In this regard, an SSP project has been established under the comprehensive implementation plan for aviation safety in Africa (AFI Plan) to support States in the implementation of SSP.

SSP is an integrated set of regulations and activities aimed at improving safety. The SSP statistics release

high level information about each Gap Analysis project.

A Safety Information Monitoring System and Safety Performance Indicator workshop was conducted in Lusaka, Zambia, in December 2022, to support the States' efforts in the implementation of the State Safety Program. The main objective of the workshop was to provide participants with, an understanding of the importance of data for managing safety; building meaningful Safety performance indicators using operational data; practicing decision-making based on data and the fundamentals of data visualizations; an opportunity to learn from shared experiences related to safety data collection and processing systems; hands-on experience and insights on how to use SIMS applications; and fostering collaboration with industry for monitoring safety information. The workshop was attended by 36 participants from 12 ESAF States and two RSOOs.

Figure 13: RASG-AFI States' Safety Programme Implementation (SSP) Progress.



State Safety Programme (SSP) Implementation

ICAO measures SSP implementation in levels as follows:

- Level 0: States not having started a GAP analysis
- Level 1: States having started a GAP analysis
- Level 2: States having reviewed all the GAP analysis questions
- Level 3: States having defined an action plan for all non implemented questions
- Level 4: States having closed all actions and fully implemented their SSPs

Source: ICAO iSTARS














By 31 December 2022, 25 States had started Gap Analysis (Level 1); and only one State (Rwanda) had reported a full SSP Implementation (Level 4). **Table 6a** below shows the status of SSP implementation in the RASG-AFI Region at the end of 2022.

Table 6a: RASG-AFI States' SSP Implementation Status 2022

Levels:	Level 1 (L1): Gap Analysis started		Level 2 (L2): Gap Analysis completed		Level 3 (L3): Implementation Plan Defined		Level 4 (L4): SSP Implementation completed	
	Completed	In progress	Completed	In progress	Completed	In progress	Completed	In progress
#States:	25	0	20	5	16	4	1	15

Table 6b: SSP Implementation Status of the list of RASG-AFI States by 2022

Code	State Name	Progress	Level (Up %)	
AGO	Angola	Gap Analysis Started	L1 / 33.3% L2	● ● ● ○
BEN	Benin	Implementation Plan Defined	L3 / 04.8% L4	● ● ● ○
BWA	Botswana	Gap Analysis Started	L1 / 83.3% L2	● ● ● ○
BFA	Burkina Faso	Gap Analysis Completed	L2 / 81% L3	● ● ● ○
CPV	Cabo Verde	Gap Analysis Completed	L2 / 97.6% L3	● ● ● ○
COG	Congo	Implementation Plan Defined	L3 / 11.9% L4	● ● ● ○
CIV	Cote d'Ivoire	Implementation Plan Defined	L3 / 19% L4	● ● ● ○
ETH	Ethiopia	Gap Analysis Completed	L2 / 92.9% L3	● ● ● ○
GAB	Gabon	Implementation Plan Defined	L3 / 23.8% L4	● ● ● ○
GMB	Gambia	Implementation Plan Defined	L3 / 19% L4	● ● ● ○
GHA	Ghana	Gap Analysis Completed	L2 / 97.6% L3	● ● ● ○
KEN	Kenya	Implementation Plan Defined	L3 / 52.4% L4	● ● ● ○

MDG	Madagascar	Implementation Plan Defined	L3 / 52.4% L4	
MLI	Mali	Implementation Plan Defined	L3 / 21.4% L4	
MRT	Mauritania	Implementation Plan Defined	L3 / 23.8% L4	
MUS	Mauritius	Implementation Plan Defined	L3 / 61.9% L4	
MOZ	Mozambique	Gap Analysis Started	L1 / 23.8% L2	
NER	Niger	Gap Analysis Started	L1 / 97.6% L2	
NGA	Nigeria	Implementation Plan Defined	L3 / 40.5% L4	
RWA	Rwanda	SSP Implementation Completed	L4 / 100% L4	
SEN	Senegal	Gap Analysis Started	L1 / 59.5% L2	
ZAF	South Africa	Implementation Plan Defined	L3 / 88.1% L4	
TGO	Togo	Implementation Plan Defined	L3 / 88.1% L4	
TZA	United Republic of Tanzania	Implementation Plan Defined	L3 / 52.4% L4	
ZMB	Zambia	Implementation Plan Defined	L3 / 59.5% L4	

Showing 1 to 25 of 25 entries

Source: ICAO iSTARS

4.0 Conclusions and Recommendations

4.1 Conclusions

Based on the analyses of the available data for 2022, the following conclusions are drawn:

A. Achievements registered:

- 1) Resolution of the SSC in Eritrea through mitigation measures (revocation of AOCs).
- 2) Zero CFIT and LOC-I related accidents maintained.
- 3) Continued provision of remote assistance and guidance to States by the Regional Offices through the use of online platforms (Zoom, MS Teams, etc.)
- 4) Significant improvement in the overall EI scores after USOAP CMA activities in Djibouti (from 34.13% to 50.7%) and Botswana (from 61.07% to 80.1%).
- 5) The average USOAP Overall EI for States in the RASG-AFI region has marginally improved from 56.93 per cent at the end of 2021 to 57.11 per cent in 2022, which is below the world average of 68.81 per cent.

B. Challenges encountered:

- 1) Identification of two SSCs in Liberia in the area of ANS.
- 2) Runway Excursion (RE) remained the most predominant High Risk Category of Occurrence and continues to be main priority for Safety Enhancement Initiatives (SEI) in the RASG-AFI Region;
- 3) Constraints in conducting USOAP CMA on-site activities or remote assistance to some States due to unsafe political situations or lack of/unreliable internet systems.
- 4) The slow pace of SSP implementation and unavailability of a reliable predictive safety information in the region continues to pose challenges.

4.2 Recommendations:

- 1) Liberia, in collaboration with other stakeholders, should demonstrate strong commitment in resolving the two SSCs in ANS, in addition to addressing the safety deficiencies identified by the USOAP CMA audit conducted in 2022.
- 2) RASC should ensure that the AFI-RASP is developed and aligned to the GASP by 31 December 2023; and that States' NASPs are aligned to the AFI-RASP and GASP.
- 3) RASC should urge all States to establish effective RSTs, pursue certification of their international aerodromes in collaboration with key stakeholders; and provide feedback on progress made to the RASC.
- 4) RASC should urge all States scheduled for USOAP CMA activities, as well as assistance missions, to do their utmost to receive such activities and to the extent possible avoid their postponement.

- 5) To ensure quality and efficiency of the AFI-CIS programme, AFCAC should accelerate the establishment of an AFI CIS toolkit or platform upon which an appropriate database of generic technical guidance materials, including but not limited to mission programmes, checklists etc, are deposited and accessible even remotely.
- 6) Concerted efforts should be made to maintain the zero CFIT/LOC-I related occurrences reported in 2022.
- 7) Considering the repetitive reports on SCF-NP occurrences over the years, the phenomenon should be included as a high-risk category of occurrence for the RASG-AFI region.
- 8) RASG-AFI should urge States to conduct thorough investigations into aircraft accidents and serious incidents and report to ICAO in a timely manner, in accordance with the provisions of Annex 13 to the Chicago Convention.
- 9) The Abuja Safety and Air Navigation Targets should migrate to the Regional Aviation Safety Plan for the Africa-Indian Ocean region (AFI-RASP), under the framework of Safety Support Teams (SSTs) - Contributory Bodies of RASG-AFI.

Appendix – 1: List of Member States of the RASG-AFI (Alphabetic order in English language)

Angola	Lesotho
Benin	Liberia
Botswana	Madagascar
Burkina Faso	Malawi
Burundi	Mali
Cabo Verde	Mauritania
Cameroon	Mauritius
Central African Republic	Mozambique
Chad	Namibia
Comoros	Niger
Congo	Nigeria
Côte d'Ivoire	Rwanda
Democratic Rep. of Congo	Sao Tome and Principe
Djibouti	Senegal
Equatorial Guinea	Seychelles
Eritrea	Sierra Leone
Eswatini	Somalia
Ethiopia	South Africa
Gabon	South Sudan
Gambia	Togo
Ghana	Uganda
Guinea	United Republic of Tanzania
Guinea-Bissau	Zambia
Kenya	Zimbabwe

Appendix – 2: List of Permanent Partners of RASG-AFI

Airports Council International (ACI)

African Civil Aviation Commission (AFCAC)

African Airlines Association (AFRAA)

Airbus Aircraft Manufacturer (AIRBUS)

Agence pour la Sécurité de la Navigation Aérienne en Afrique et à Madagascar (ASECNA)

Boeing Commercial Airplane Company (BOEING)

Civil Air Navigation Services Organization (CANSO)

Cooperative Development of Operational Safety and Continuing Airworthiness Programmes (COSCAPs)

European Aviation Safety Agency (EASA)

Federal Aviation Administration – United States of America (FAA-USA)

Flight Safety Foundation (FSF)

International Air Transport Association (IATA)

International Federation of Airline Pilots Association (IFALPA)

International Federation of Air Traffic Controllers Association (IFATCA)

Regional Safety Oversight Organizations (RSOOs)

Regional Aircraft Accident and Incident Investigation Organizations (RAIOs)

World Food Programme - United Nations (WFP-UN)

Appendix – 3: List of Eleven (11) RASG-AFI States that had an Effective Implementation (EI) of the Critical Elements of a State’s Safety Oversight System of 75% and greater under the USOAP CMA by 31 December 2022.

Botswana (**80.1%**)
Cabo Verde (**82.43%**)
Cote d’Ivoire (**79.84%**)
Ethiopia (**88.59%**)
Ghana (**88.6%**)
Kenya (**75.41%**)
Madagascar (**77.35%**)
Mauritania (**78.3%**)
Rwanda (**79.29%**)
South Africa (**87.39%**)
Togo (**84.67%**)

Appendix – 4: Status of Aerodrome Certification in the RASG-AFI Region, December 2022

STATE/TERRITORY	No of INT AERODROMES (Att A_AFI eANP-Table AOP I-1)	RESPONSIBLE BODY	AERODROMES STATUS		
			Certified	Not Certified	% of implementation
WACAF	54		15	39	27.77
Benin	1		1	0	100.00
Burkina Faso	2		1	1	50.00
Cameroon	5		1	4	20.00
Cape Verde	2		2	0	100.00
Central African Republic	2		0	2	0.00
Chad	1		0	1	0.00
Congo	2		0	2	0.00
Cote d'Ivoire	1		1	0	100.00
Democratic Republic of Congo	5		0	5	0.00
Equatorial Guinea	1		0	1	0.00
Gabon	3		1	2	33.33
Gambia	1		0	1	0.00
Ghana	1		1	0	100.00
Guinea	1		0	1	0.00
Guinea-Bissau	1		0	1	0.00
Liberia	1		0	1	0.00
Mali	6		1	5	16.67
Mauritania	5		1	4	20.00
Niger	3		1	2	33.33
Nigeria	5		2	3	40.00
Sao Tome and Principe	1		0	1	0.00
Senegal	2		1	1	50.00
Sierra Leone	1		0	1	0.00
Togo	1		1	0	100.00
ESAF	65		34	31	52.30
Angola	1		1	0	100.00
Botswana	5		1	4	20.00
Burundi	1		0	1	0.00

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Comoros	3	0	3	0.00	
Djibouti	1	0	1	0.00	
Eritrea	2	0	2	0.00	
Eswatini	1	1	0	100.00	
Ethiopia	4	4	1	100.00	
Kenya	3	2	1	66.67	
Lesotho	1	0	1	0.00	
Madagascar	5	2	3	40.00	
Malawi	2	0	2	0.00	
Mauritius	1	1	0	100.00	
Mozambique	3	3	0	100.00	
Namibia	3	2	1	66.67	
Rwanda	1	1	0	100.00	
Seychelles	1	0	1	0.00	
Somalia	5	0	5	0.00	
South Africa	10	10	0	100.00	
South Sudan	1	0	1	0.00	
Uganda	1	0	1	0.00	
Tanzania	3	2	1	66.67	
Zambia	4	3	1	75.00	
Zimbabwe	3	2	1	66.67	
TOTAL (WACAF/ESAF)	119		49	70	41.17

APPENDIX 5: REGIONAL AVIATION SAFETY GROUP FOR AFRICA – INDIAN OCEAN (RASG-AFI) REGION – CONTRIBUTORY BODIES (SSTs)

1. Introduction

- 1.1 To assist in its work and support the development, implementation and prioritization of the Regional Aviation Safety Group for Africa – Indian Ocean Region (RASG-AFI) safety initiatives, the Group may create contributory bodies (Safety Support Teams) to discharge the RASG-AFI work programme by working on defined subjects requiring detailed technical expertise. A contributory body shall only be formed when it has been clearly established that it is able to make a substantial contribution to the required work. A contributory body will be dissolved by the RASG-AFI when it has completed its assigned tasks or if the tasks cannot be usefully continued.
- 1.2 The Safety Support Teams (SSTs) will operate in coordination with and under the guidance of the RASG-AFI Steering Committee (RASC). The SSTs should accomplish their tasks by developing mitigation strategies by means of a Regional Aviation Safety Plan (AFI – RASP), based on gathering and processing safety data and information. These mitigation strategies shall be focused on the Global Aviation Safety Plan (GASP), corresponding Safety Enhancement Initiatives (SEIs) and the associated Global Aviation Safety Roadmap (GASR), which serves as an action plan to assist the aviation community in achieving the GASP goals through a structured, common frame of reference for all stakeholders.
- 1.3 Participation in Safety Support Teams should be by specialists or experts in the subjects under consideration. Such specialists should have relevant experience in the field concerned. Secretaries of Safety Support Teams established by the Group will be appointed by the Secretary of the RASG-AFI.
- 1.4 The RASG-AFI Contributory Bodies (Safety Support Teams, SSTs) are hereby restructured for efficiency and better alignment with the current GASP Goals and Targets as follows: State Safety Oversight System Support Team (SSO-SST); Operational Safety Issues Support Team (OSI-SST); State Safety Programme Support Team (SSP – SST); Air Navigation Services Safety Support Team (ANS – SST).

2. Purpose of the SSTs

- 2.1 Support the RASG-AFI in the development/update of the RASG-AFI Regional Aviation Safety Plan (AFI-RASP) and the monitoring of the implementation of Safety Enhancement Initiatives (SEIs) related to identified safety issues.
- 2.2 Assist in the development, implementation and review of SEIs to reduce aviation safety risks. These SEIs could be established based on the analysis of regional data, based on ICAO initiatives or the initiatives of other relevant organizations or based on the risks and issues identified through the USOAP CMA Activities.
- 2.3 Recommend safety mitigations to the RASG-AFI, related to identified safety issues which would reduce aviation risks.

2.4 In order to meet its Terms of Reference, the SSTs shall:

- a) follow-up the updates of the Global Aviation Safety Plan (GASP) and support the development, update and implementation of the RASG-AFI Regional Aviation Safety Plan (AFI-RASP) at the regional level and provide feedback to the RASG-AFI;
- b) identify and develop the SEIs, which are aligned with the regional priorities and targets, for implementation within the RASG-AFI Region. The focus of these SEIs is to effectively and economically mitigate the safety risks identified by the Annual Safety Report Team (ASRT);
- c) identify difficulties, challenges and deficiencies related to the implementation of each SEI and propose mitigation measures;
- d) identify assistance Programmes such as, but not limited to, workshops, seminars and capacity building activities to improve the level of implementation of the approved SEIs by the RASG-AFI;
- e) share expertise and experience and provide recommended actions for each SEI, in a prioritized manner based on best practices;
- f) monitor the status of achieving related safety objectives and targets included in the RASG-AFI Region Safety Strategy;
- g) identify areas of concern to aviation safety that may be unique to the region, and develop data and mitigations to address those concerns;
- h) work closely with States and stakeholders to ensure that SEIs and mitigation measures are implemented through coordinated efforts;
- i) propose input to the development of the RASG-AFI Annual Work Programme through the RASG-AFI Steering Committee (RASC); and
- j) Coordinate with the RASG-AFI through the RASC; and the APIRG contributory bodies on issues of common interest.

3. Composition

The SST is composed of Members designated by the RASG-AFI States and Partners. Chairpersons of the SSTs shall be elected by the Members.

4. Roles and Responsibilities

- **SSTs Chairpersons:** – Coordinate SST activities and provide overall guidance and leadership;
- **ICAO:** Provision of Secretariat and Technical Support; and
- **Partners:** collaborate in the development of materials as requested by the SST, and provide technical expertise and support, as required.

5. Meetings Arrangements

- The Chairperson, in close cooperation with the Secretary, shall make all necessary arrangements for the most efficient working of the SSTs. The SSTs shall at all times conduct their activities in the most efficient manner possible with a minimum of formality and paper work (paperless meetings). Permanent contact shall be maintained between the Chairperson, Secretary and Members of the SSTs to advance the work. Best advantage should be taken of modern communications facilities, particularly video-conferencing (Virtual Meetings) and e-mails.
- Face-to-face meetings will be conducted when considered necessary.

6. TERMS OF REFERENCE (ToRs) OF THE SAFETY SUPPORT TEAMS

6.1 State Safety Oversight System Support Team (SSO-SST)

6.1.1 Purpose of the SSO Support Team

The purpose of the Team is to assist States improve their effective implementation (EI) of the critical elements of a State's safety oversight system, including safety indexes in the Operations, Air Navigation and Supporting functional categories; prevent SSCs and resolve existing ones within the set deadline. Priority will be given to States with existing Significant Safety Concerns (SSCs) and those with low EI score to achieve the relevant RASG-AFI safety target in line with the current Edition of the Global Aviation Safety Plan (GASP):

- Goal 2** - Strengthen States' safety oversight capabilities;
- Goal 4** - Increase collaboration at the regional level and
- Goal 5** - Expand the use of industry programmes.

In this respect, the team is to:

- a) 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 Regional Aviation Safety Plan (AFI-RASP) and the current Global Aviation Safety Plan (GASP);
- b) Identify possible mitigation measures and recommend implementation actions;
- c) Recommend establishment of, and develop proposals for, achievable projects based on prioritized mitigation measures with well-defined deliverables (including metrics to assess the effectiveness of the proposed mitigation actions) and clear timeframes established and proposed to RASG-AFI for further action. Additional consideration should be given to Organizational and Operational Issues, as well as Safety Performance Measurement as necessary.

6.1.2 Membership

- ICAO Member States of the RASG-AFI Region
- AAMAC
- AFCAC
- ASSA-AC
- BAGAIA
- BAGASOO
- CASSOA
- iSASO
- URSAC
- Funding Partners
- Other representative organizations, or entities directly involved with aviation safety may be invited to join the working group either as a full member or observer as may be decided by the RASG-AFI Secretariat.

6.1.3 Roles and Responsibilities

- a) ICAO Regional Offices to serve as Secretariat
- b) SSO Support Team members – provide technical expertise in analyzing and identifying achievable mitigation measures for identified safety risk areas in the RASG-AFI region, especially to avoid emergence of Significant Safety Concerns (SSCs).

6.1.4 Working methods/arrangements

The SSO-SST discharges the RASG-AFI work programme by working on defined subjects as per the RASG-AFI Procedural Handbook.

6.2 Operational Safety Issues Support Team (OSI-SST)

6.2.1 Purpose of the OSI-SST

The purpose of the Team is to assist States to progressively reduce the rate of accidents and serious incidents in Africa-Indian Ocean Region by first addressing the Regional High Risk Categories of occurrences (R-HRCs) and mitigate the risk of fatalities through Runway Excursion (RE), Runway Incursion (RI), Controlled Flight Into Terrain (CFIT), Loss of Control In-flight (LOC-I), and Mid-Air Collision (MAC). The Team will also assist States to establish and maintain a regulatory framework and technical guidance materials for operations and integration of Remotely Piloted Aircraft Systems (RPAS), including Unmanned Aerial Systems (UAS), in the conventional Air Traffic Management system at both national and regional levels. The ultimate purpose is to achieve the relevant RASG-AFI safety targets and the Global Aviation Safety Plan (GASP) goals and targets:

Goal 1 - Achieve a continuous reduction of operational safety risks; and

Goal 5 - Expand the use of industry programmes

In this respect, the team is required to:

- a) 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 Regional Aviation Safety Plan (AFI-RASP) and the current Global Aviation Safety Plan (GASP)
- b) Share reports on operation of RPAS/UAS among RASG-AFI Aviation stakeholders;
- c) Establish a RASG-AFI Dashboard, periodically collect Safety data and utilize Safety Performance Indicators (SPIs) to maintain the Dashboard, which should be available to the member States.
- d) Monitor the SPIs and share data with other SSTs. If deviation from expected relevant performance is noted on the SPIs, other SSTs will be notified for further analysis.
- e) Contribute key regional safety information from the previous year to the RASG-AFI Annual Safety Report.
- f) Periodically propose updates to the RASG-AFI Regional Aviation Safety Plan for alignment with the current GASP.
- g) Adopt and use relevant guidance materials relating to the prevailing safety issues.
- h) Identify possible mitigation measures and recommend implementation actions.
- i) Recommend establishment of achievable projects based on prioritized mitigation measures with well-defined deliverables (including metrics to assess the effectiveness of the proposed mitigation actions) and clear timeframes established and proposed to RASG-AFI for further action. Consideration should also be given to Organizational and Operational Issues, as well as Safety Performance Measurement, especially as they relate to the R-HRCs (RE; RI; CFIT; LOC-I; and MAC).

6.2.2 Membership

- ICAO Member States of the AFI Region
- ACI
- AFRAA
- ASECNA
- CANSO
- EASA
- FSF
- IATA
- IFALPA
- IFATCA
- US FAA
- Aircraft Manufacturers (AIRBUS, BOEING, etc.)
- Other representative organizations, or entities directly involved with aviation safety may be invited to join the working group either as a full member or as an observer as decided by RASG-AFI Secretariat.

6.2.3 Roles and Responsibilities

- a) ICAO Regional Offices as Secretariat
- b) HRC Support Team members – provide technical expertise in analyzing and identifying achievable mitigation measures for identified safety risk areas in the AFI region.

6.2.4 Working methods/arrangements

The OSI-SST discharges the RASG-AFI work programme by working on defined subjects as per the RASG-AFI Procedural Handbook.

6.3 State Safety Programme Support Team (SSP – SST)

6.3.1 Purpose of the SSP Support Team

The purpose of the Team is to assist States establish and implement an effective State Safety Programme (SSP) to achieve the relevant RASG-AFI safety targets (AFI-RASP) and the Global Aviation Safety Plan (GASP) goals and targets:

- Goal 3** - Implement effective State safety programmes (SSPs);
- Goal 4** - Increase collaboration at the regional level ; and
- Goal 5** - Expand the use of industry programmes.

In this respect, the team is required to:

- a) 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 AFI-RASP and the current GASP.
- b) Identify possible mitigation measures and recommend implementation actions.
- c) Recommend establishment of achievable projects based on prioritized mitigation measures with well-defined deliverables (including metrics to assess the effectiveness of the proposed mitigation actions) and clear implementation timeframes established and proposed to RASG-AFI for further action. In this regard, consideration should be given to Organizational and Operational Issues, as well as Safety Performance Measurement.

6.3.2 Membership

- ICAO Member States of the RASG-AFI Region
- AAMAC
- AFCAC
- ASSA-AC
- BAGAIA
- BAGASOO
- CASSOA
- EASA
- ISASO
- URSAC

- Other representative organizations, or entities directly involved with aviation safety may be invited to join the working group either as a full member or observer as may be decided by the RASG-AFI Secretariat.

6.3.3 Roles and Responsibilities:

- a) ICAO Regional Offices to serve as the Secretariat
- b) SSP Support Team members – provide technical expertise in analyzing and identifying achievable mitigation measures for identified safety risk areas in the AFI region.

6.3.4 Working methods/arrangements:

The SSP-SST discharges the RASG-AFI work programme by working on defined subjects as per the RASG-AFI Procedural Handbook.

6.4 Air Navigation Services Safety Support Team (ANS – SST)

6.4.1 Purpose of the ANS Safety Support Team:

The purpose of the Team is to assist States to establish and maintain appropriate air navigation infrastructure to support safe aviation operations, this will include an effective and efficient Aeronautical Information Management system at both national and regional levels to achieve reliable aeronautical information from trusted sources; and the relevant AFI-RASP and current GASP targets and in particular:

Goal 4 - Increase collaboration at the regional level

Goal 6 - Ensure the appropriate infrastructure is available to support safe operations.

In this respect, the team is required to deal with **issues related to:**

- a) Safety improvements in the areas of air navigation services (ANS) in the fields of Air Traffic Management (ATM), Procedures for Air Navigation Services – Aircraft Operations (PANS-OPS), Aeronautical Information Services (AIS), Aeronautical Charts (Chart), Communications, Navigation and Surveillance (CNS), Aeronautical Meteorology (MET), and Search and Rescue (SAR).
- b) Data-driven analyses on safety risk areas identified by RASG-AFI using the Safety Performance Areas and Best Practices for ICAO, States and Industry and:
 - i. Share reports on missing flight plans among RASG-AFI Aviation stakeholders;
 - ii. Review current best practices in improving ANS safety and oversight and other relevant guidance materials;
 - iii. Review existing Safety Enhancement Initiatives (SEIs) related to ANS safety and oversight and, when available, detailed Implementation Plans, including outputs, developed by other regional aviation safety groups (including other RASGs, PIRGs);
 - iv. Develop and propose SEIs pertaining to ANS safety and oversight in the RASG-AFI;

- v. Ensure coordination of activities with APIRG and its contributory bodies in the areas of safety implementation, where required;
 - vi. Analyse the List of Air Navigation Deficiencies.
 - vii. Implement facilities and procedures that enable the timely supply of required MET information to flight information Centres, Area Control Centres, Approach Control Units, Aerodrome Control towers, and Communication stations.
 - viii. Maintain close coordination with stakeholders, including aeronautical meteorological information users, World Meteorological Organization (MWO) and other Partners dealing with MET.
- c) Identify possible mitigation measures and recommend implementation actions;
 - d) Recommend establishment of achievable projects based on prioritized mitigation measures with well-defined deliverables (including metrics to assess the effectiveness of the proposed mitigation actions) and clear timeframes established and proposed to RASG-AFI for further action. Consideration should also be given to Organizational and Operational Issues, as well as Safety Performance Measurement.

6.4.2 Membership:

- ICAO Member States of the RASG-AFI Region
- ACI
- AFCAC
- ASECNA
- ATNS
- CANSO
- IATA
- RSOOs
- WMO
- Other representative organizations, or entities directly involved with aviation safety may be invited to join the working group either as a full member or as an observer as decided by RASG-AFI Secretariat.

6.4.3 Roles and Responsibilities:

- a) ICAO Regional Offices as Secretariat
- b) ANS Support Team members – provide technical expertise in analyzing and identifying achievable mitigation measures for identified safety risk areas in the RASG-AFI region.

6.4.4 Working methods/arrangements:

The ANS-SST discharges the RASG-AFI work programme by working on defined subjects as per the RASG-AFI Procedural Handbook.

Appendix - 6: Acknowledgement

The RASG-AFI acknowledges the invaluable works of the following RASG-AFI Annual Safety Report Team (ASRT) Members who contributed to the productions of the *RASG-AFI Annual Safety Reports*; and all those who in one way or the other, contributed inputs to the Reports:



From Left to Right: Mr. Maury Seck, AIRBUS Rep. (Member); Mr. Blessing T. Kawai, IATA Rep. (Chairperson); Mr. Kebba L. Jammeh, ICAO Rep. (Secretary); Mr. James Danga, AFCAC Rep. (Member); Mr. Akachi Iroezi, BOEING Rep. (Member).



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