



INTERNATIONAL CIVIL AVIATION ORGANIZATION

NINETH MEETING OF DIRECTORS GENERAL OF CIVIL AVIATION OF AFRICA-INDIAN OCEAN REGION (AFI-DGCA/9)

Abuja, Nigeria, 16 – 20 May 2022

Agenda Item 2: AFI Regional Aviation Performance

(Presented by the Secretariat)

SUMMARY	
This working paper presents the status of Aviation Performance of the AFI Region for the period from 2017 to 2021.	
Action by the meeting is at paragraph 3.	
REFERENCE(S)	<ul style="list-style-type: none">- GASP, GANP and GAsEP- APIRG and RASG-AFI Meeting Reports- RASG-AFI Annual Safety Reports- AFI Plan and AFI SECFAL Plan Steering Committees Meeting Reports
Strategic Objective(s)	<ul style="list-style-type: none">- Safety- Air Navigation Capacity and Efficiency- Security and Facilitation- Economic Development of Air Transport- Environmental Protection

1. INTRODUCTION

1.1 The continued implementation of the AFI Plan and AFI SECFAL Plan, AFI CIS and AFI CES programmes, as well as other initiatives related to the Economic development of Air Transport and the Environmental Protection, combined with the AFI States efforts, has significantly contributed to the gradual improvement of the States performance in all the ICAO Strategic Objectives since the 6th meeting of AFI DGCA held in November 2016.

1.2 This working paper presents a summary of the aviation performance of the AFI region during the period 2017 – 2021.

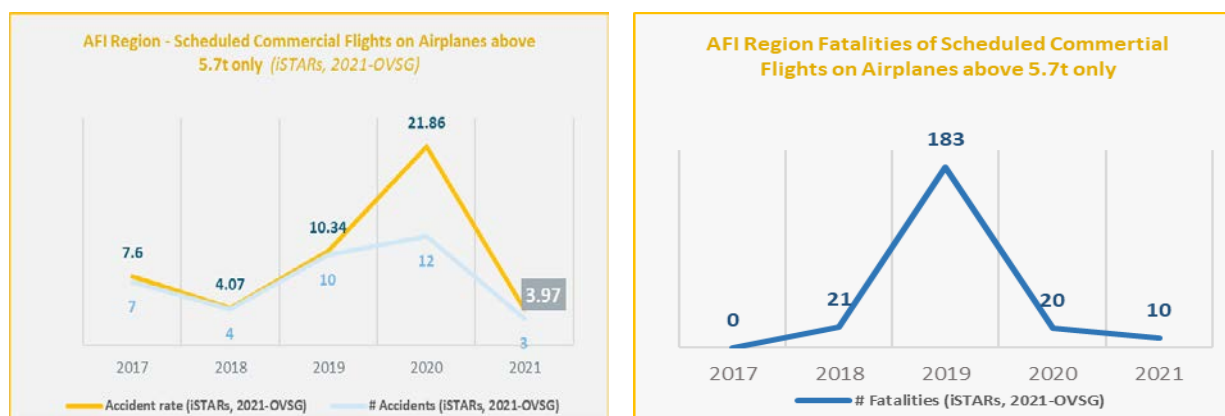
2. DISCUSSION

Since 2017, various programmes and projects developed and implemented in the AFI Region have contributed to progressively enhancing the overall aviation performance of the region. The following are key achievements of the AFI region over the last five years.

2.1. Aviation safety

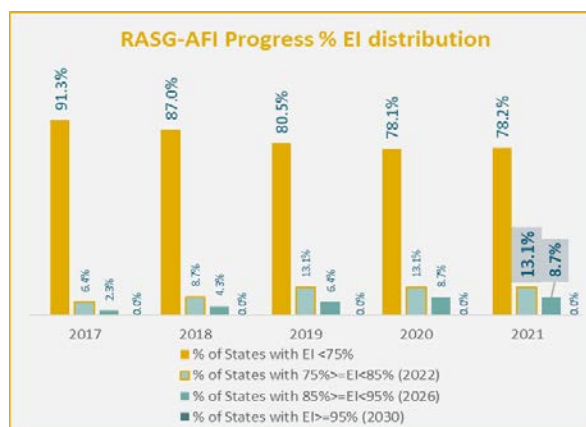
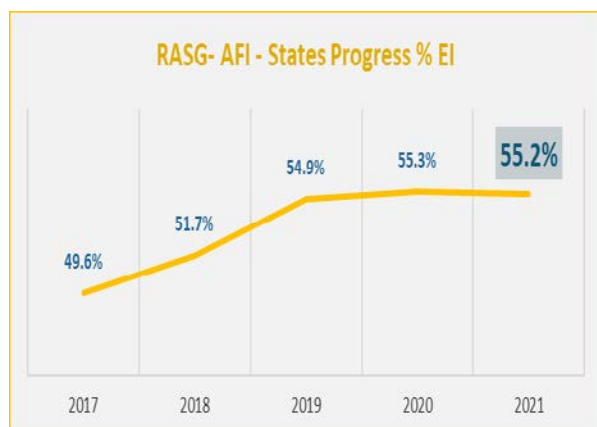
2.1.1. Aviation accident rate

2.1.1.1. Accident rate dropped from 7.6 per cent per million of departures in 2017 to 3.97 per cent in 2021. According to ICAO - OVSG data, in 2021 there were three accidents for scheduled commercial air transport operations, involving aircraft with maximum certificated take-off mass above 5,700 kilograms occurred in the RASG-AFI, one in ESAF with 10 fatalities and two in WACAF with no fatalities. The Graphs below present the distribution of accidents and fatalities respectively in the last five years.



2.1.2. States Safety Oversight System

2.1.2.1. The average Safety Oversight Level of Effective Implementation has increased from 49.6 per cent in 2017 to 55.2 per cent in 2021 which is 12 per cent below the world average of 67.2 per cent. It is important to highlight that in the past two years, the EI did not increase as expected due to the limited number of USOAP-CMA activities conducted in the Region because of the persistent COVID-19 pandemic and the changes associated with the migration to the 2020 version of the USOAP-CMA PQs. The Graphs below provide the progress of the EI in the Region and its distribution based on the GASP targets for the Safety oversight effective implementation.

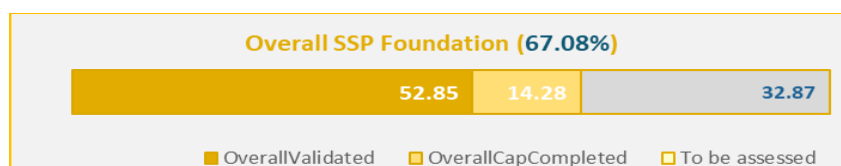


GASP EI Target	EI Interval	States
By 2022 – 75%,	States with EI < 75%	Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Central African Republic (the), Chad, Comoros (the), Congo (the), Democratic Republic of the Congo (the), Djibouti, Equatorial Guinea, Eritrea, Eswatini, Gabon, Gambia (the), Guinea, Guinea-Bissau, Lesotho, Liberia, Malawi, Mali, Mauritius, Mozambique, Namibia, Niger (the), Nigeria, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Uganda, United Republic of Tanzania (the), Zambia, Zimbabwe
By 2026 – 85%	States with 75% >= EI < 85%	Cabo Verde , Côte d'Ivoire, Kenya, Madagascar, Mauritania, Rwanda,
By 2030 – 95%	States with 85% >=EI < 95%	Ethiopia, Ghana, South Africa, Togo.
	States with EI > 95%	None

2.1.2.2. With regards to the Safety Oversight capabilities, 58.7 per cent (27) of States in the region have met the GASP Target 2.2 (SOI > 1) with all Safety Oversight Indexes above one, which indicates the States minimum expected capabilities considering the number of departures, as a proxy to the size of that State's aviation system.

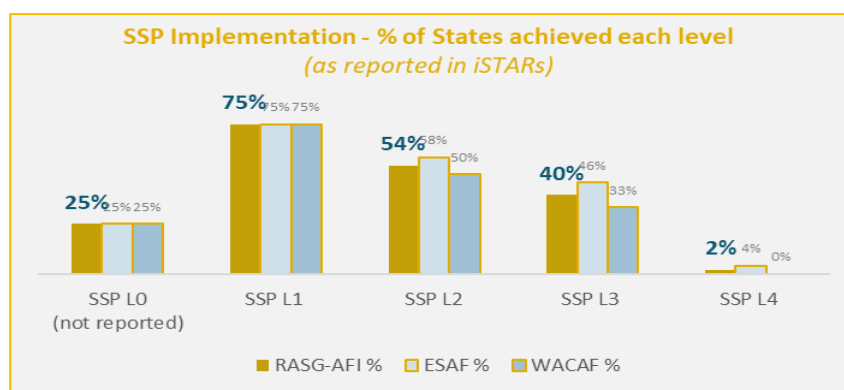
2.1.3. State Safety Programme

2.1.3.1. At end of 2021, no States has reported satisfactorily completed all SSP Foundational PQs. The overall implementation of SSP Foundational PQs in the region was 67.08 per cent, with 14.28 per cent of CAP completed and 52.85 per cent validated. However, six States have above 90 per cent completion, which can be considered satisfactory when measuring this target.



2.1.3.2. Regarding the State Safety Programme (SSP) implementation, the iSTARS information shows that 75 per cent (36) of States reported have achieved Level 1, 54 per cent (26) achieved Level 2, 40 per cent (19) achieved Level 3, and 2 per cent (1) achieved Level 4. The State Safety Programme (SSP) implementation in the region has been a challenge, with slow progress towards the achievement of GASP goal 3 - Implement

effective State safety programmes (SSPs).

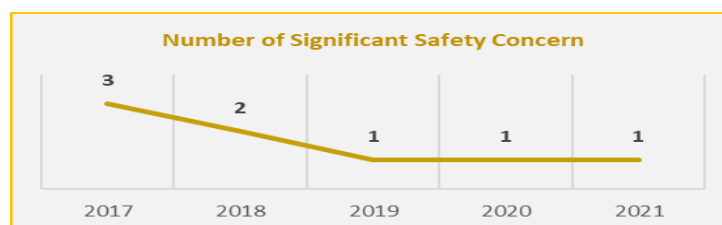


2.1.3.3. To support the States, the ICAO Regional Offices have been providing assistances to States, including the review of SSP Foundation PQs, conduct of SSP Gap Analysis, development of SSP Implementation Plans. In order to improve the level of SSP implementation in the AFI Region and progress towards the achievement of the GASP goals and targets, it is essential that States:

- Update and implement the corrective action plan to address the SSP Foundation USOAP-CMA Protocol Questions
- Continuously use the iSTARs to update the SSP GAP-Analysis
- Participate in RASG-AFI activities and share SSP best practices, guidance material and tools
- Coordinate with ICAO Regional Offices and request assistance on the SSP implementation

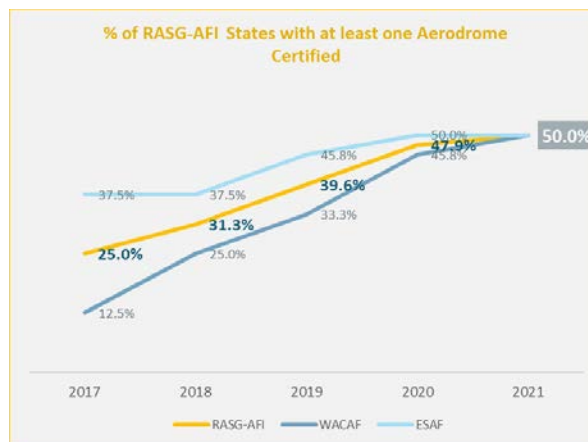
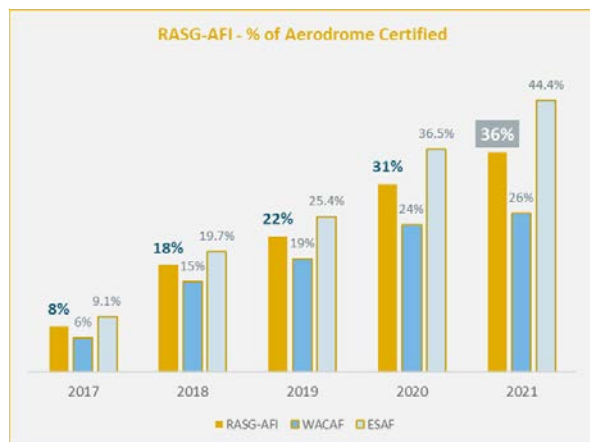
2.1.4. Significant Safety Concerns

2.1.4.1. The number of SSCs declined from seven in six States in 2014 to only one SSC in Eritrea in 2021. The long standing SSCs of Malawi and Djibouti have been resolved and there was no new SSC.

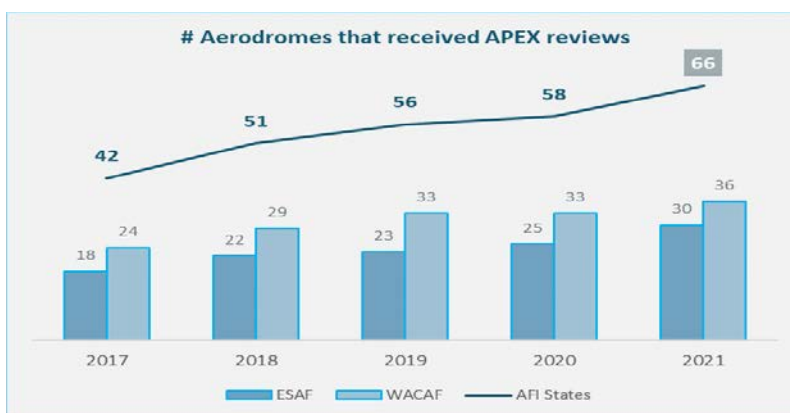


2.1.5. Aerodrome certification and APEX Reviews

2.1.5.1. Assistance was provided to States with an increased number of certified aerodromes from nine in 2017 to 42 in 2021. The same trend was observed with respect to the number of States that have developed aerodrome certification capacities, by certifying at least one aerodrome, which increased from 12 to 26 States (50 per cent of AFI States).

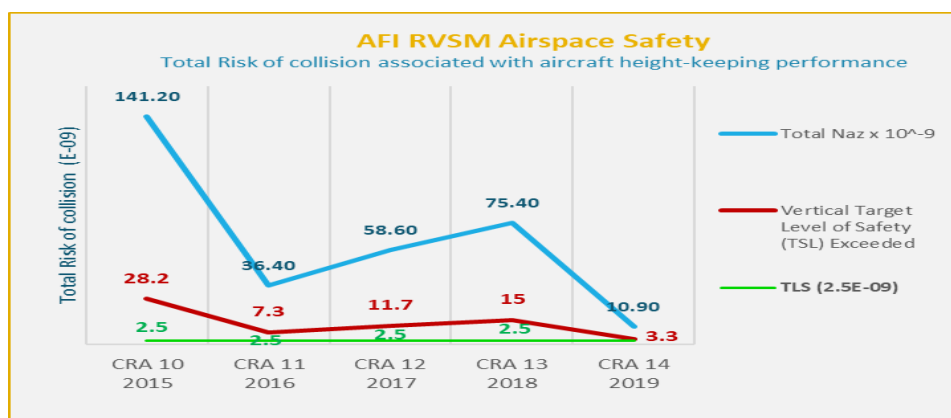


2.1.5.2. The number of APEX reviews significantly increased showing States interest in such assessment that can assist in addressing deficiencies and other safety issues on aerodromes.



2.1.6. AFI RVSM Airspace Safety

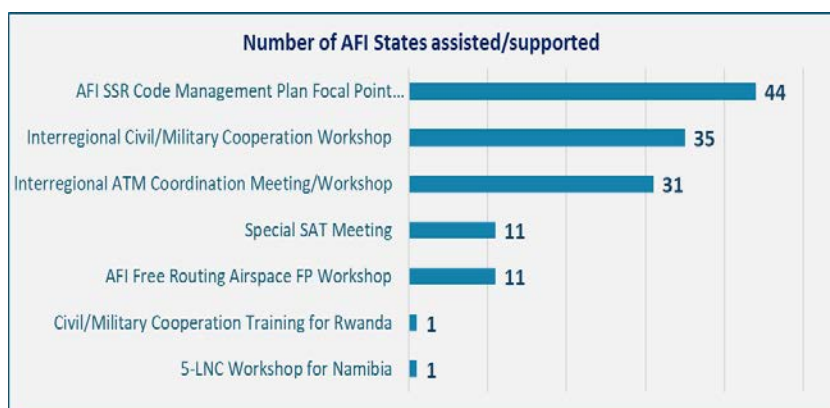
The vertical Target Level of Safety (TLS) has improved since 2017. Efforts are however still required to attain the acceptable TLS.



2.2. Air Navigation Capacity and Efficiency

2.2.1. Air Traffic Management – Search and Rescue (ATM/ SAR)

- 2.2.1.1. There has been a number of achievements realized in the area of ATM/SAR in the last five years. Training and capacity building were carried out to ensure these achievements as indicated in the chart below:



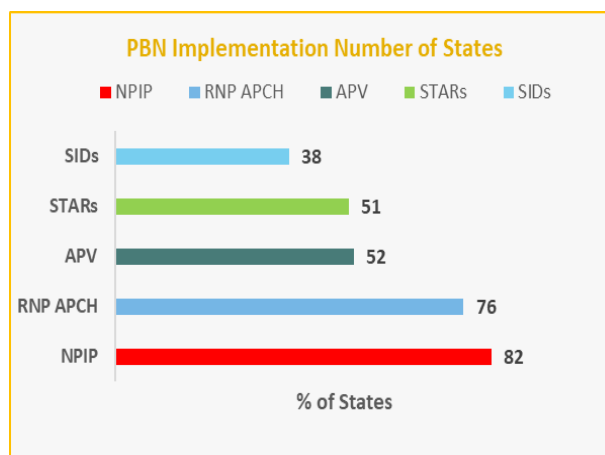
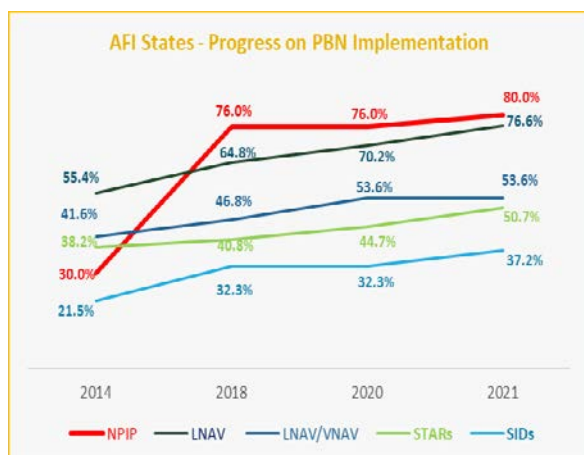
- 2.2.1.2. The key achievements include:

- Development of the AFI ATM Contingency Plan, reviewed and release of the second edition of the Plan.
- Implementation of the new SSR Code Management Plan (AFI SSR CMP).
- Development of the Free Route Airspace (FRA) Concept of Operations (FRA CONOPS).
- Improvement of the AFI Route network by developing 30 new PBN routes in preference to existing conventional routes resulting in reduction distance of 1,844.7 NM, fuel savings of 9,123 Kgs, and carbon savings of 28,660 Kgs; review of the AFI regional route network and implementation of all pending approved routes;
- Reduced duplication of the Five Letter Code (5-LNC) in the AFI ATM system.
- Operationalization of the South Atlantic (SAT) Group.
- Improved coordination of the ATS units and reduction in large height deviation (LHD) reports.
- Enhancement of airspace restructuring; promoted the civil/military cooperation in ATM and improved use of airspace enhancing direct routing;
- Supported the process of implementing Class A and the provision of air traffic services in the Mogadishu FIR upper airspace; the operational trials operationalizing the new airspace is NOTAMed to commence on 11 May 2022.

- 2.2.1.3. There was a marked improvement in the area of aeronautical search and rescue (SAR). The achievements included the development and release of the first edition of the AFI SAR Plan and the publication of SAR regulations and SAR National Plans by a number of states.

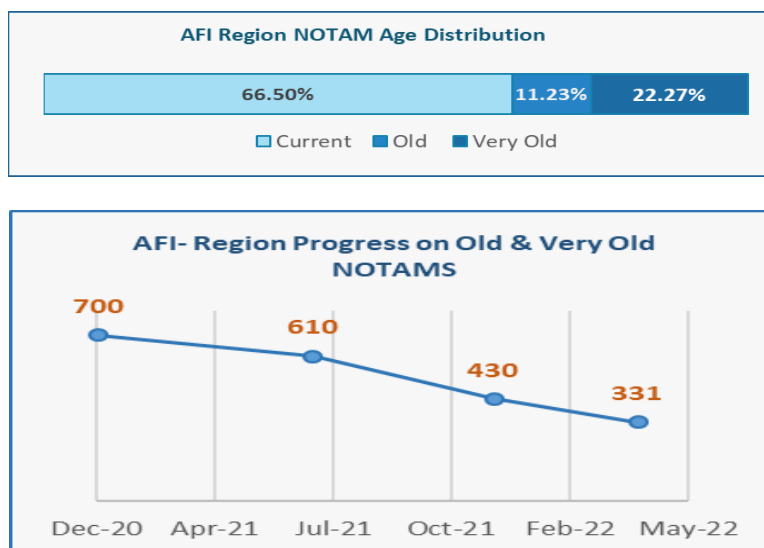
2.2.2. PBN implementation

The percentage of States implementing PBN has increased with the support of the African Flight Procedures Programme (AFPP).



2.2.3. Aeronautical Information Management (AIM)

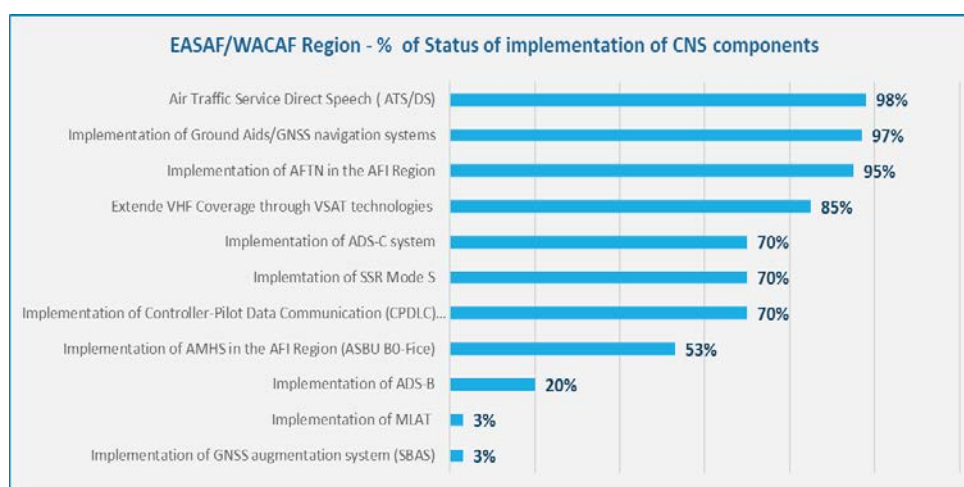
- 2.2.3.1. The Global campaign on NOTAM improvement, which was conducted in 2021, has raised awareness of States on the matter of old NOTAM and the need to remove them. The AFI States made some efforts towards reducing their old NOTAMs. As of April 2022, a total of 331 old and very old NOTAM were observed for the AFI Region compared to 700 in January 2021, this is a progress of 369 old NOTAMs removed or 47% reduction. The follow-up is ongoing to improve this progress, with the target of zero old NOTAMs in the system by the end of 2022.



2.2.4. Communications, Navigation and Surveillance (CNS)

- 2.2.4.1. Implementation and modernization of CNS infrastructure requirements by States and organizations are ongoing, in line with the GANP technology roadmaps, under eight dedicated APIRG projects.
- 2.2.4.2. Significant progress have been made in implementing conventional ground/ground communications (ATS/DS, AFTN) as well as air/ground communications with the deployment of extended VHF and CPDLC coverages.

- 2.2.4.3. In addition to conventional navigational aids, many States have introduced core GNSS services to support en-route and terminal RNAV/RNP operations in the AFI Region. Studies and trials on augmented GNSS (SBAS) are ongoing in the region. The African Union Commission (AUC) and AFCAC have initiated an independent continental SBAS cost-benefit analysis to facilitate AFI States' decision-making in accordance with APIRG GNSS Strategy. A validation workshop on the study has been scheduled for 30-31 May 2022 in Kigali (Rwanda), the outcome of which will be presented to the next APIRG meeting by the end of this year.
- 2.2.4.4. Good progress has also been made in the area of aeronautical surveillance with the gradual implementation of Surveillance Secondary Radar Mode S (SSR Mode S) and Automatic Dependent Surveillance (ADS)-Contract (ADS-C) or Broadcast (ADS-B). Recent developments includes the implementation of space based ADS-B in five ASECNA managed FIRs (Antananarivo, Brazzaville, Dakar, Niamey, Ndjamena), effective 19 May 2022.



- 2.2.4.5. The modernization of the satellite VSAT networks infrastructure and enhancement of aeronautical surveillance data sharing are yet to be completed.

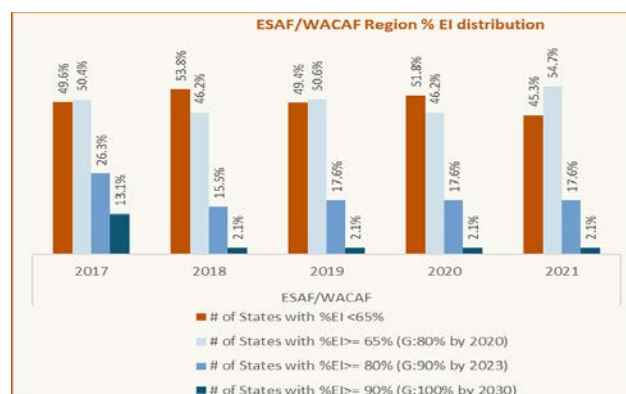
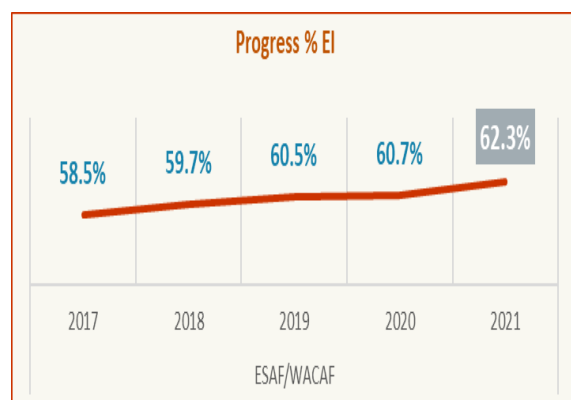
2.2.5. Meteorological Services (MET)

- 2.2.5.1. Several assistance activities were carried out in the area of aeronautical meteorology, as summarized in the table below. Key activities include awareness campaign and preparation for the implementation of Annex 3 requirements for space weather information, continuation of the CODEVMET project based on updated implementation documents taking due account of States' challenges; conduct of the first AFI-wide volcanic exercise in November 2021 to assess preparedness with respect to volcanic activity alerting, exchange of AIS and MET related information, issuance of volcanic information, as well as coordination and communication procedures among all involved parties.

AFI Webinar on Annex 3 Space Weather Requirements	Continuation of CODEV/MET AFI Project	AFI Volcanic Ash Exercise – Related APIRG/23 Conclusion 23/28
<ul style="list-style-type: none"> South African National Space Agency, ANSP (ASECNA) and AFI States participated in this webinar. States were updated on the Annex space weather requirements and the results of regional survey showing the current level of readiness to space weather requirements were presented. The way forward actions were identified 	<ul style="list-style-type: none"> Second Meeting of the SC (SC/2) was held : 25 States participated. Project Management Services Agreement (MSA) and Project Document (ProDoc) revised and endorsed for start date in February 2022. 	<p>Exercise Leader : Cape Verde</p> <p><u>Participating Agencies</u></p> <ul style="list-style-type: none"> → 5 AFI Volcano Observatories States → 1 ANSP → 2 Airlines → IATA → VAAC Toulouse

2.3. Aviation Security and facilitation

2.3.1. The average Effective Implementation rate of the States Security Oversight System increased from 58.45 per cent to 62.34 per cent in the last five years.

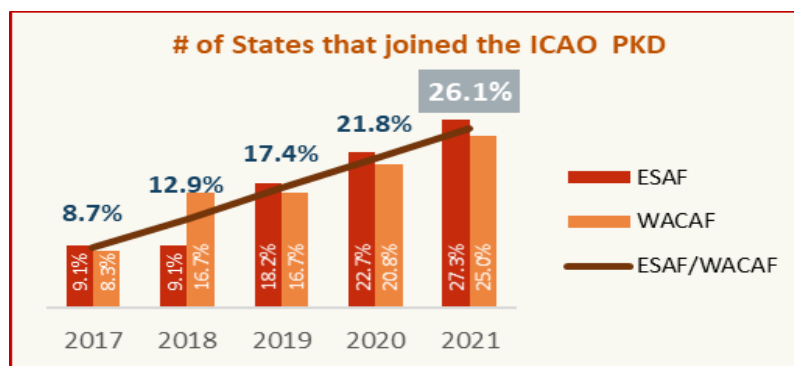


2.3.2. Currently all AFI States issue only Machine-Readable Passports and all non-machine-Readable Passports have been removed from circulation.

2.3.3. Sustainable aviation security and facilitation training capability and adequate human resources policies within the States are being promoted through Security Culture webinars and workshops, AFI ASTCs network mechanism, and State specific projects.

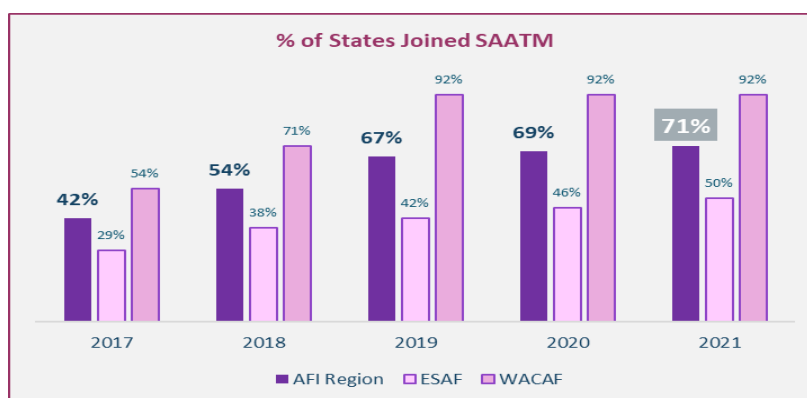
2.3.4. Equally, programmes have been put in place to support States efforts in the implementation of the security related provisions of Annex 9-Facilitation, including API/PNR, and membership to the ICAO PKD. In addition, capacity development programmes have been enhanced, including continental wide training on Annex 9 -FAL targeted at 500 experts upon its conclusion.

2.3.5. The number of States implementing PKD increased from four in 2017 to 12 in 2021 .



2.4. Economic Development of Air Transport

2.4.1. Before the outbreak of COVID-19 pandemic, Africa was among the fastest-growing air transport markets in the world at the average of 4% per annum. The pandemic crisis aggravated issues such as financial vulnerability against exogenous shocks, fragmentation in air transport facilitation due to different protocols concerning COVID-19 among States, slowdown in adhesion of States to SAATM, proliferation of taxes and charges, and insufficient funding and financing for aviation infrastructure modernization and expansion. In addition, Covid-19 pandemic affected the reporting of required data by the States under State Air Transport Action Plan System (SATAPS). However, there was an improvement in 2021 due to survey related to study on the benefits of SAATM.



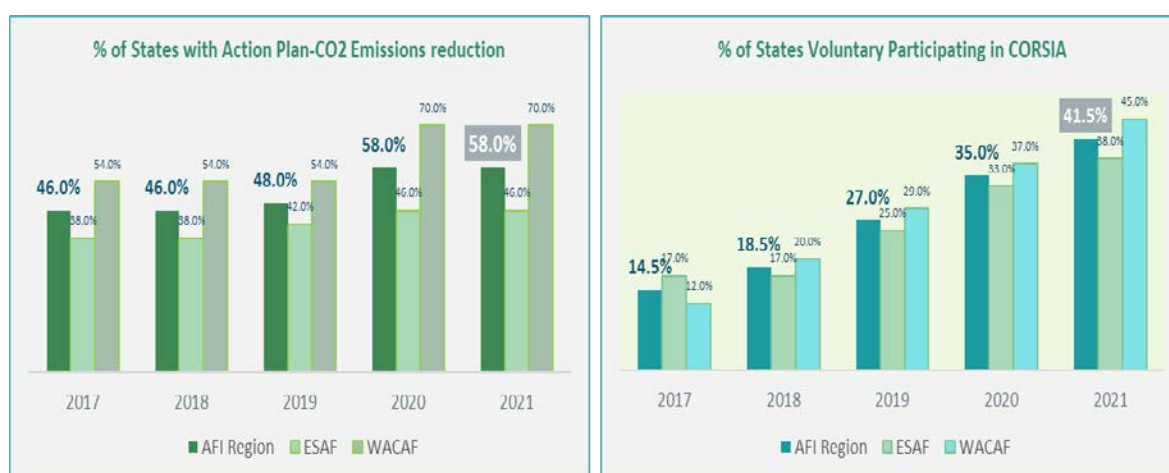
2.4.2. States are domesticating, at different pace, actions taken by the ICAO Council on the economic recovery since the start of the pandemic matters namely the implementation of CART Recommendation 11 and the outcome of HLCC.

2.5. Environmental Protection

2.5.1. Since 2018, the ICAO Regional Offices have enhanced their capacity to provide further assistance to their Member States on environment, including for the development and update of the plans of action for the reduction of CO₂ emissions due to international aviation towards the achievement of ICAO global goals. On CORSIA, the two Regional Offices provide support directly to States as well as under the ICAO ACT-CORSIA assistance programme. Under ACT CORSIA, Buddy Partnerships are established among States across various ICAO Regions to support States to implement CORSIA requirements. These established CORSIA Buddy Partnerships involve 16 Donor States (including three from the AFI Region- Kenya, Nigeria and South Africa) and 98 Recipient States (including 44 from the AFI Region).

2.5.2. The ICAO Regional Offices have organized several meetings on sustainable aviation fuels, on the ICAO State Action Plan initiative and on CORSIA focusing on the implementation elements such as the CORSIA Central Registry, the CORSIA eligible fuels, as well as on the CORSIA requirements. In addition, the Secretariat provided training to States on the ICAO Environment Tools and guidance document used when developing or updating SAPs.

2.5.3. As a result of the support provided to the States the current situation on environment for the AFI States is as follows:



2.5.4. The Region has been faced with the challenge of lack of Experts specialized in aviation and environment in the CAAs. Several Focal Points have been nominated by States but most do not have the environmental background. States are encouraged to consider recruiting experts in the area of aviation environmental science. In addition, over the years, there have been regular changes to the Focal Points (FPs). Nevertheless, the ICAO Regional Offices have been providing training to the new FPs on SAP and CORSIA. It is recommended that States appoint alternate FPs for environmental protection for knowledge retention within the State. This will also immensely contribute to the development of Annex 16 regulatory frameworks.

2.5.5. Furthermore, the Secretariat collaborates with Regional Organizations such as the African Civil Aviation Commission (AFCAC) to organize joint events on environment on CORSIA and SAPs and support as well the work of AFCAC on environmental protection by providing expertise and technical presentations at AFCAC meetings. In parallel, ICAO has established a collaborative platform with the Regional Partners representing the Air Operators (AOs) in the AFI Region. At their requests, the ICAO Regional Offices organize additional events every year to keep them informed on the ICAO latest development on environment.

2.5.6. Collaboration with the Regional Partners to further enhance the environmental performance of the AFI Region has also been initiated. The Regional Offices continue promoting ICAO's work on the environment by providing support to States and Regional Partners on the ICAO environmental policies.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) Encourage AFI States for the efforts made to improve aviation performance in the region during the period under consideration as presented in this paper, despite the challenges posed by COVID-19 pandemic;

- b) Recognize the contribution of ICAO Technical Assistance and Technical Cooperation programmes toward these achievements;
- c) Call for ICAO's continued support to assist the AFI Region in addressing the challenges of the post-pandemic recovery and effective identification and implementation of initiatives aimed at building back better the aviation sector; and
- d) Call for continued cooperation between ICAO, AFCAC, RSOOs, RECs and other international/regional organizations, industry and partners, in order to optimize the impact of assistance activities and initiatives in the AFI Region.

-END-