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UNITING AVIATION

ASRG/5

MID Annual Safety Report

12th Edition-Draft

Virtual Meeting 5 Oct 2023



Contents

- ❑ **Objective of ASRG**
- ❑ **Reactive safety information**
- ❑ **Proactive safety information**
- ❑ **Emerging Issues**
- ❑ **MID Region Safety Performance**
- ❑ **MID Region Safety Priorities**



- ❑ Gathering and Analyzing safety information
- ❑ MID Region Safety Priorities
- ❑ Production of the annual safety report

- 1st Edition, Nov 2012
- 2nd Edition, Jan 2014
- 3rd Edition, March 2015
- 4th Edition, May 2016
- 5th Edition, Jan 2017
- 6th Edition, June 2018
- 7th Edition, April 2019
- 8th Edition, April 20
- 9th Edition, March 2021
- 10th Edition, March 2022
- 11th Edition, May 2023
- 12th Edition, in progress





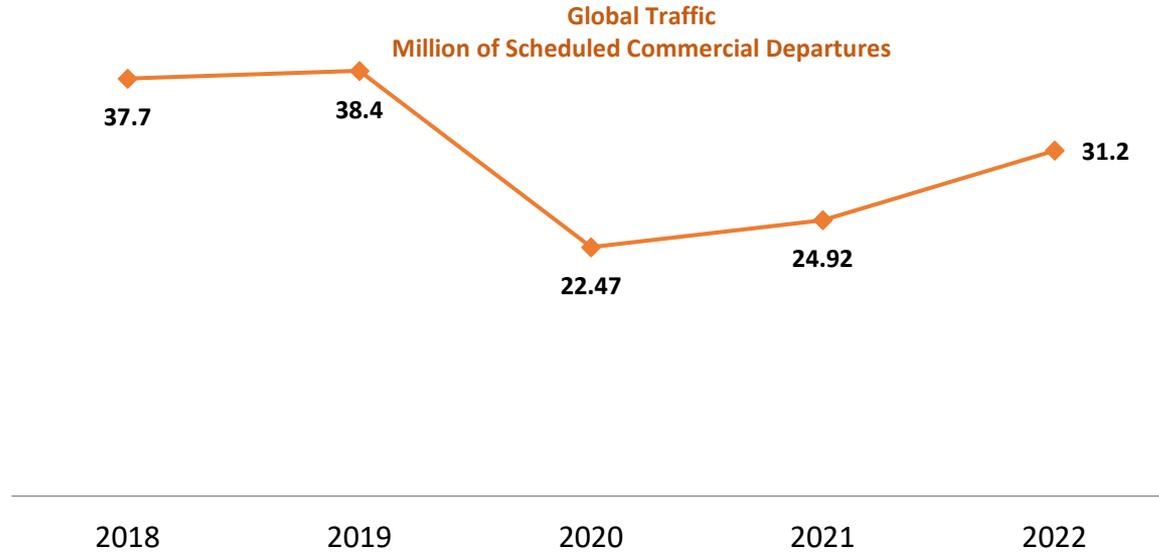
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TRAFFIC VOLUMES



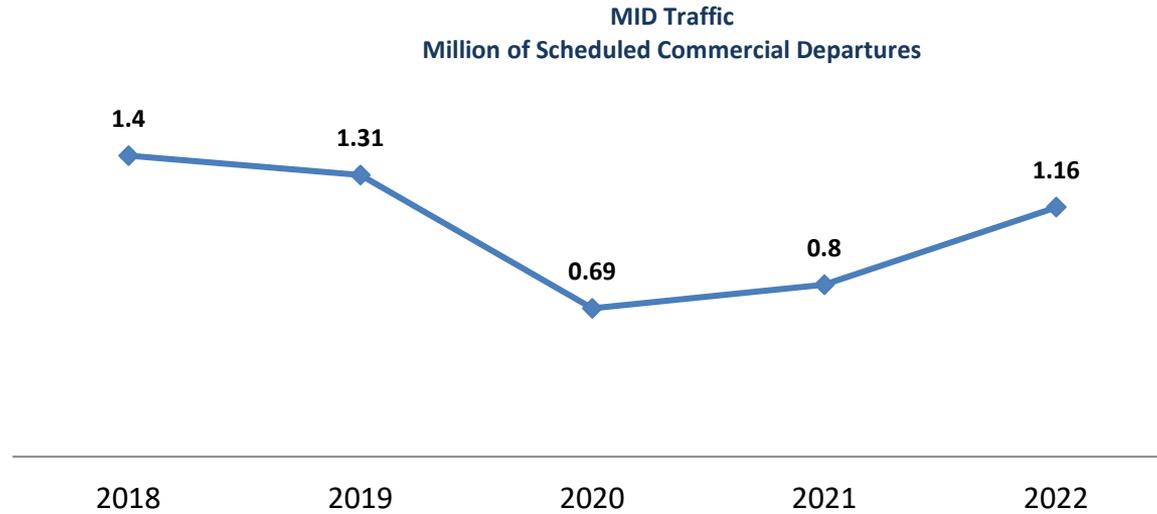
Global Traffic



(Source ICAO Safety Report 2023)



MID Traffic



(Source ICAO Safety Report 2023)



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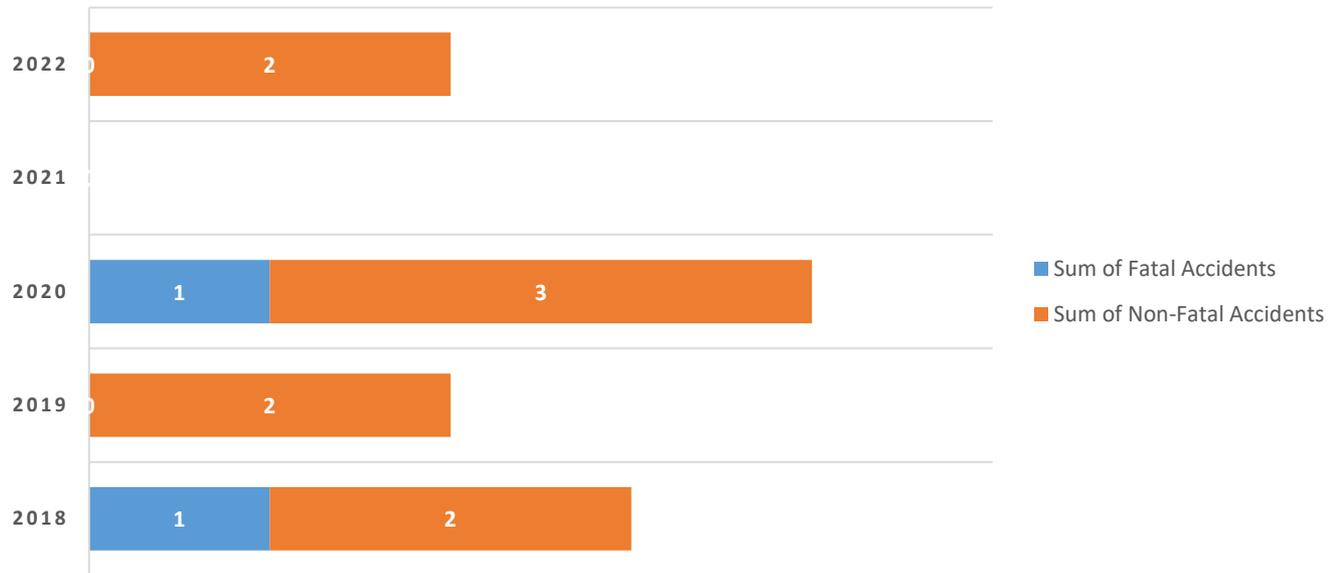
REACTIVE SAFETY INFORMATION

STATE OF OCCURRENCE



Number of Fatal Accidents & Accidents

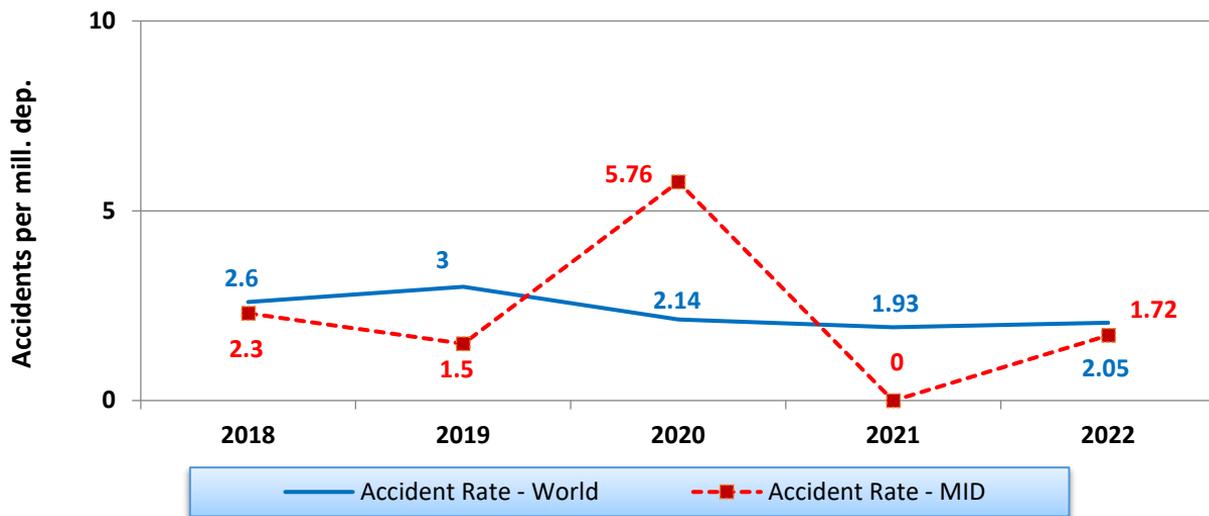
11 Accidents



(Source OVSG Data & ICAO ASR 2023)

Accident Rate

Accident Rate
Scheduled Commercial above 5700 kg



Average 2018-2022

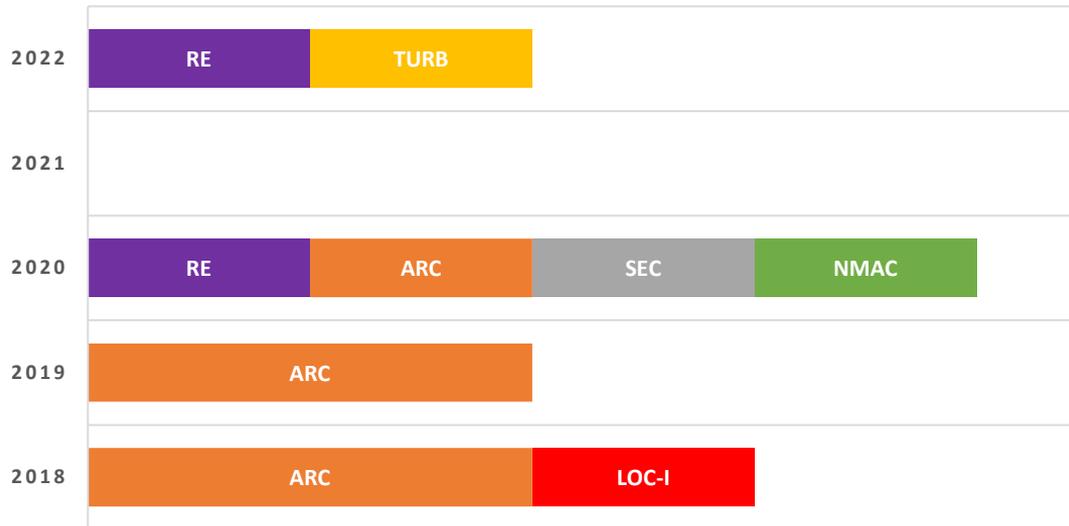
Average MID
2.25

Average Global
2.45

(Source OVSG Data & ICAO ASR 2023)



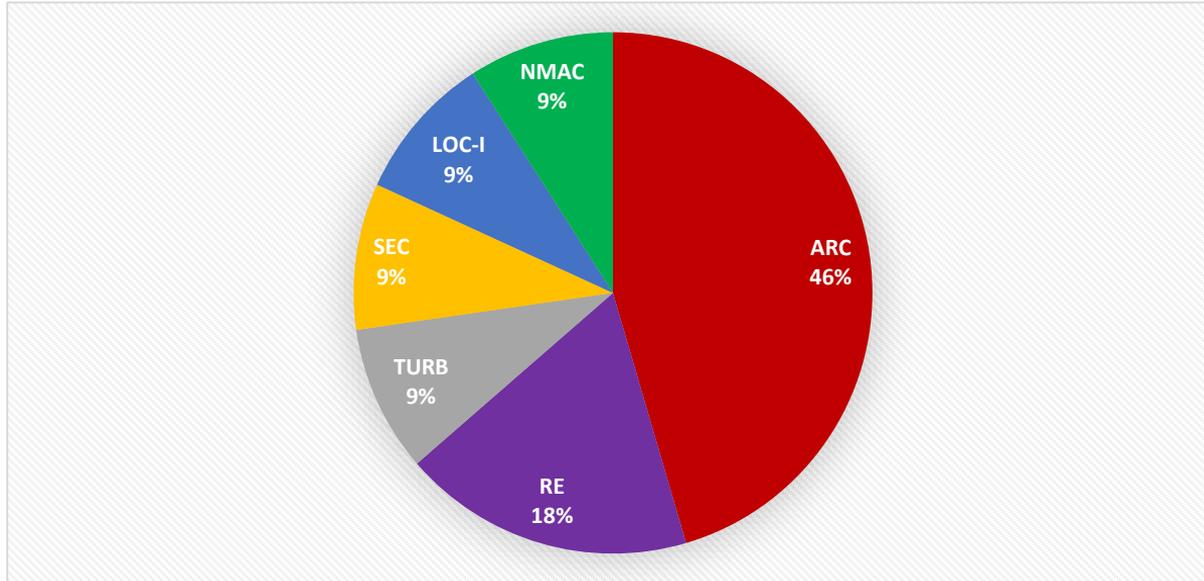
Distribution of Occurrence Category



Source OVSG Data & ICAO ASR 2023



Occurrence Category Distribution as Percentage



Source OVSG Data & ICAO ASR 2023

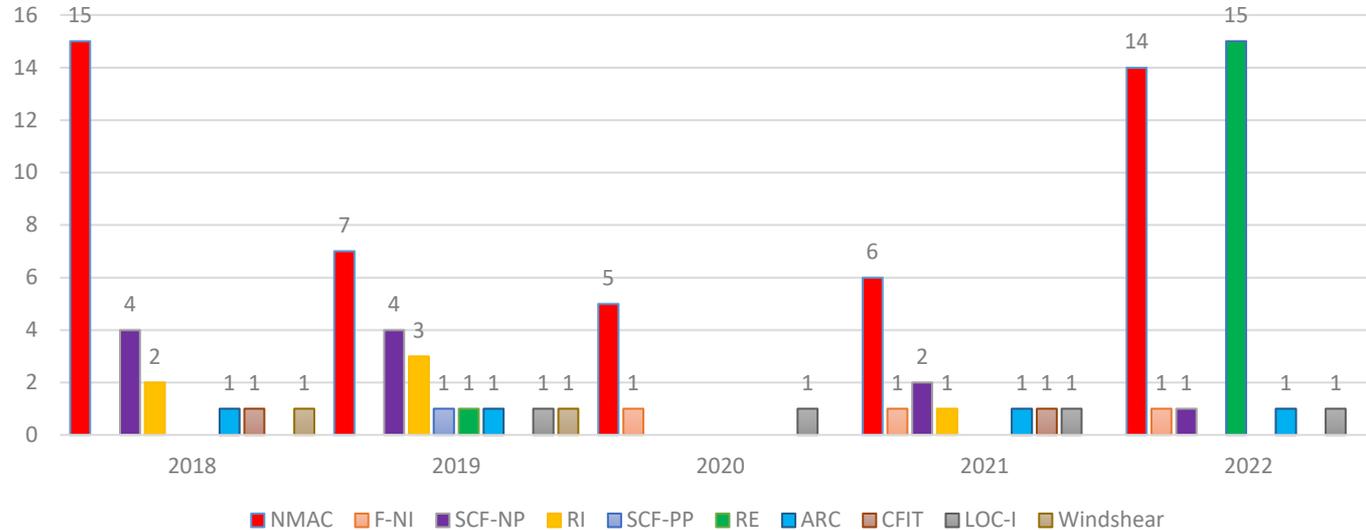


The Key risk area identified according to the State of occurrence's accidents data are:

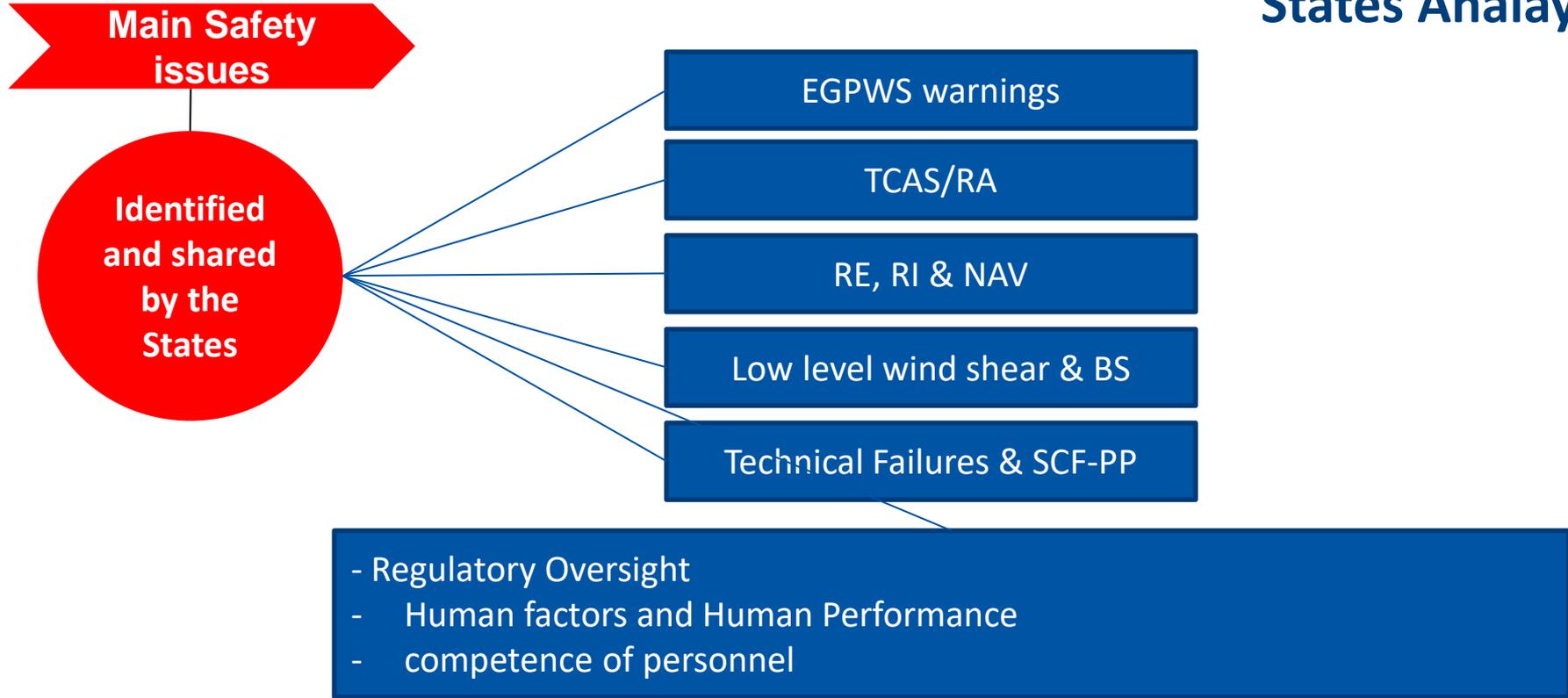
- 1 Loss of Control – Inflight – (LOC-I)
- 2 Runway Excursion (RE) and Abnormal Runway Contact (ARC) during landing
- 3 Security related-(SEC)
- 4 MID Air Collision-(MAC)

Serious Incidents reported by States

MID-Serious incident 2018-2022



States Analysis



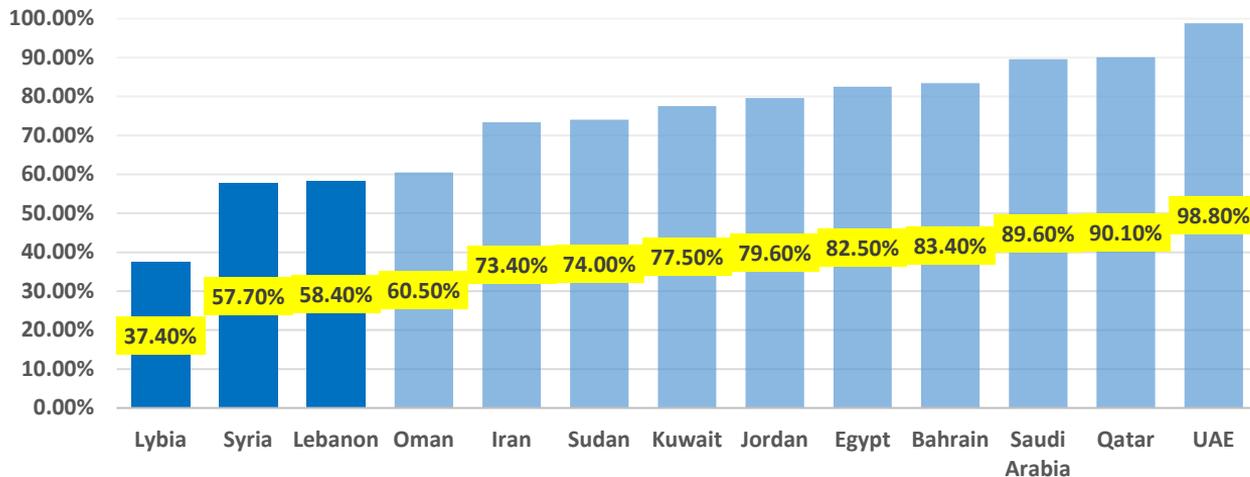


PROACTIVE SAFETY INFORMATION



USOAP

OVERALL EI



13 out of 15 States have been audited

Overall MID EI = 74, 07% which is above Global average (68.81%)

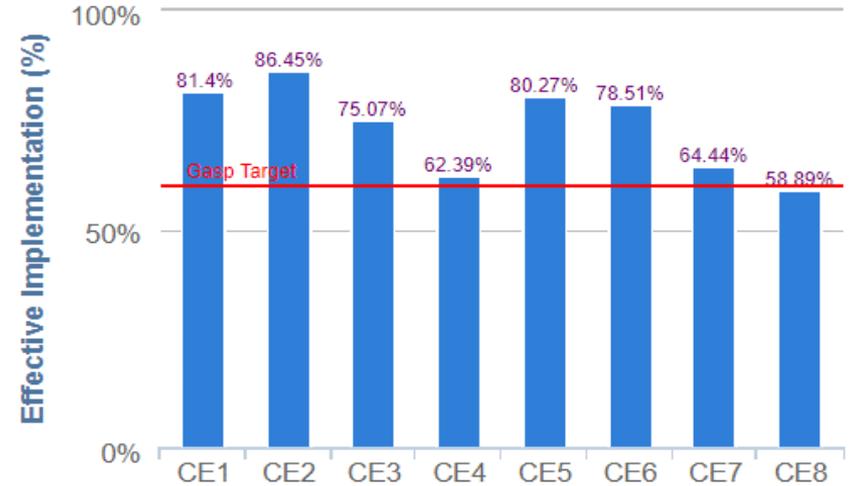
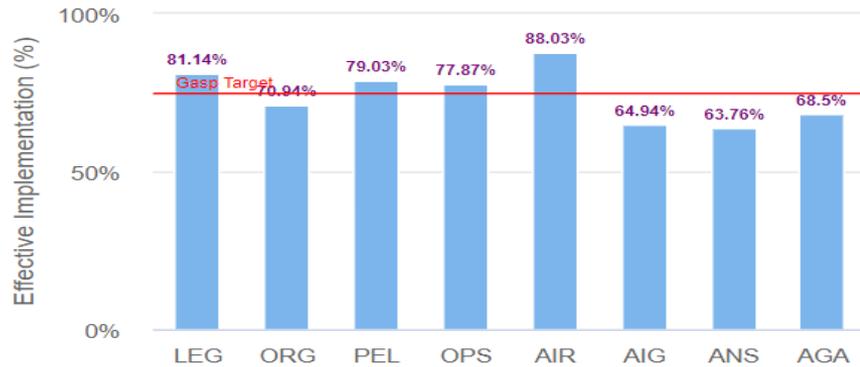
3 states are below 60% (Libya, Syria, Lebanon)

NO SSC in MID Region



USOAP

EI by Area



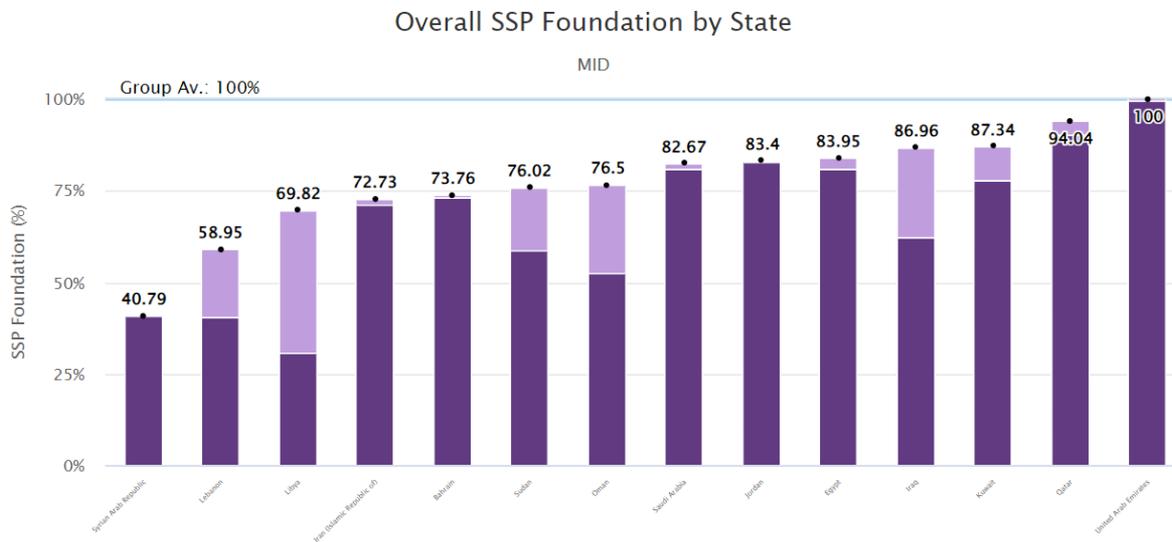
5 areas and 5 critical elements are above 70%

CE4, CE7, & CE8 are the lowest in terms of EI (below 70%)

MID Region State Safety Programme (SSP) Foundation



SSP Foundation
Status of SSP Foundation Protocol Questions



Average EI for SSP foundation PQs for States in the MID Region is **76, 18%**.

Source: iSTARS as of 18 June 2023)

Implementation Packages



- Aerodrome Restart, NASP, USOPA, & UAS iPacks have been deployed and completed to support States in the MID region.

Competence of Personnel

- Availability of well-trained and competent aviation personnel is paramount to the safety and resilience of the aviation industry. Some of States in MID Region has a mature and detailed regulatory framework in place to ensure proper training, licensing, adequacy of training devices and oversight.
- several factors are challenging this mature framework:
 - ✓ new technologies and increasing automation are changing the safety needs for aviation personnel and new training devices are emerging.
 - ✓ New aircraft types and technological advancements in virtual reality/artificial intelligence are revolutionizing pilot training altogether.



Manage Risk Interdependencies

- Cybersecurity Risks
- GNSS Interference/Spoofing Risks
- 5G interference with Radio Altimeter Risks
- Security Risks with an Impact on Aviation Safety
- Risks Arising from Conflict Zones
- Aviation Health Safety (AHS) Risks





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EMERGING ISSUES

1. UAS and manned VTOL-capable aircraft

- The safe integration on the basis of granting fair access to airspace of all new entrants into the airspace network will be one of the main challenges in relation to the integration of UAS technologies and related concepts of operation.
- Enabling the safe integration of UAS, being a fast evolving and emerging market segment, as well as of (VTOL-capable aircraft, also intended for urban air mobility (UAM) operations, continue to be priority activities.



2. Artificial intelligence (AI) in Aviation

- The next generation of automation in aviation systems is enabled and accelerated by the use of AI technologies.
- Whilst the trend towards increasing automation has resulted overall in improved safety, the introduction of AI will likely be modifying the paradigm of interaction between the Human and the AI-based systems (reduced crew operations),
- and in parallel even open the path towards more autonomous types of operations urban air mobility (UAM).



3. Digitalization in the aviation field

- Aviation is moving fast to digitalize all areas, as there are demonstrated tangible benefits in safety, economics, operations, traffic management and control, manufacturing, training and maintenance.
- Automation, remote control, machine-to-machine communication, robotics: 3D printing, virtual and augmented reality, block chain, AI/cognitive computing, and sensors are among the technologies that will increasingly be used in aviation and that will impact the activity of regulators and aviation authorities.





MID REGION SAFETY PERFORMANCE



		Average 2018-2022		2022	
Safety Indicator	Safety Target	MID	Global	MID	Global
Number of accidents per million departures	Reduce/Maintain the Regional average rate of accidents to be in line with the global	2.25	2.34	1.72	2.05
Number of fatal accidents per million departures	Reduce/Maintain the Regional average rate of fatal accidents to be in line with the global	0.42	0.19	0	0.22
Number of Runway Excursion related accidents per million departures	Reduce/Maintain the Regional average rate of Runway Excursion related accidents to be below the global	0.85	0.29	0.45	0.28
Number of Runway Incursion accidents per million departures	Regional average rate of Runway Incursion accidents to be below the global	0	0.02	0	0.09
Number of LOC-I related accidents per million departures	Reduce/Maintain the Regional average rate of LOC-I related accidents to be below the global average	0.14	0.07	0	0.06
Number of CFIT related accidents per million departures	Reduce/Maintain the Regional average rate of CFIT related accidents to be below the global rate	0	0.02	0	0.03
Number of Mid Air Collision (accidents)	Zero Mid Air Collision accident	0	0	0	0



Safety Indicator	Safety Target	MID	Remark
A. Regional average EI	a. Increase the Regional average EI to be above 80 by 2025	74.07	
B. Number of MID States with an overall EI over 60%.	b. All MID audited States to be above 60% EI by 2025	10 States	
C. Regional average EI by area	c. Regional average EI for each area to be above 70% by 2025	5 areas	
D. Regional average EI by CE	d. Regional average EI for each CE to be above 70% by 2025	5 CEs	
E. Regional average EI of PPQs	E. Regional average EI PPQs above 75% by 2025	66%	



Safety Indicator	Safety Target	MID	Remark
Regional Average SSP Foundation	85% by 2025	76.18%	
Number of States having an SSP that is present*	At least 4 States	TBD	
Number of States that have developed and published a national aviation safety plan (NASP)	All States by 2025	4	
Number of States that require applicable service providers under their authority to implement an SMS	All States	TBD	



Safety Indicator	Safety Target	MID	Remark
Percentage of safety enhancement initiatives (SEIs) completed	80% by 2025	TBD	
Number of States seeking/receiving assistance, to strengthen their Safety Oversight capabilities through NCLB MID Strategy/Technical assistance	States with SSC as a first priority All States as a second priority having EI below 80%	7 States	
Number of States seeking assistance to facilitate SSP & NASP implementation through NCLB MID Strategy/Technical assistance	All States	3 States	
Number of States sharing safety information including operational safety risks and emerging issues to support the development of MID ASR	All States	10	



Safety Indicator	Safety Target	MID	Remark
Use of the IATA Operational Safety Audit (IOSA), to complement safety oversight activities.	All MID States with an EI of at least 60% use the IATA Operational Safety Audit (IOSA) to complement their safety oversight activities by 2018	6 states (40%)	
Use of the IATA Safety Audit for Ground Operations (ISAGO) certification, as a percentage of all Ground Handling service providers	The IATA Ground Handling Manual (IGOM) endorsed as a reference for ground handling safety standards by all MID States by 2020	6 states (40%)	
MID RASP developed in consultation with industry	MID-RASP 2023-2025 Edition	Completed	



Safety Indicator	Safety Target	MID	Remark
Percentage of Certified International Aerodromes*	65% by 2025	58,62%	
Percentage of established Runway Safety Team (RST) at MID International Aerodromes.	80% by 2025	68,97%	
Percentage of Global reporting Format (GRF) Plans implemented for International Aerodromes*	70% by 2025	65.33%	



MID REGION SAFETY PRIORITIES

MID Region Safety Priorities



Operational safety risks

Organizational issues

Emerging issues

MID Region Safety Priorities

Regional
Operational Safety
Risks

LOC-I, RE/ARC, MAC, CFIT, and RI

- States' Safety Oversight capabilities
- Safety Management
- Human Factors & Human Performance
- competence of personnel
- Risk interdependencies

Cybersecurity risks
GNSS Interference Risks
5G interference with Radio Altimeter
aviation health safety (AHS) risks
Risks arising from conflict zones, and
Security risks with an impact on aviation safety.

Organizational
Issues

Emerging Issues

- UAS and manned VTOL-capable aircraft;
- Artificial intelligence (AI) in Aviation; and
- Digitalization in the aviation field.

12th MID Annual Safety Report Draft



SAFETY

MID Region Annual Safety Report



Sharing of Safety Data Analysis & safety information



States are encouraged to provide necessary safety information to the ICAO MID Office, by April 2025

The Draft of the 13th edition of the MID ASR will be presented to the ASRG/6 meeting for review.



Challenges

- Sharing of safety information including safety data analysis



THANK YOU!