REPORT OF THE THIRD MEETING OF THE RASG-MID STEERING COMMITTEE

(RSC/3)

(Cairo, Egypt, 9 – 11 December 2014)

The views expressed in this Report should be taken as those of the RASG Steering Committee and not of the Organization. This Report will, however, be submitted to the RASG-MID and any formal action taken will be published in due course as a Supplement to the Report.

Approved by the Meeting
and published by authority of the Secretary General

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PART I – HISTORY OF THE MEETING

1. PLACE AND DURATION

1.1 The Third Meeting of the RASG-MID Steering Committee (RSC/3) was held at the Meeting Room of the ICAO Middle East Regional Office in Cairo, Egypt (9 -11 December 2014).

2. OPENING

2.1 The meeting was opened by Mr. Mohamed Khonji, Regional Director, ICAO Middle East Office, Cairo. Mr. Khonji welcomed all the participants to Cairo and thanked them for their participation.

2.2 Mr. Khonji emphasized that the success of the RASG-MID is dependent on the commitment, participation and contributions of its members and partners from States and industry. Accordingly, he invited all aviation stakeholders to have an active role within the framework of RASG-MID in order to achieve the RASG-MID's objectives.

2.3 Mr. Khonji highlighted the most important subjects to be addressed by the RSC/3 meeting as part of its agenda, particularly the review of the Draft Third Edition of the Annual Safety Report and implementation of the Safety Enhancement Initiatives (SEIs) and Detailed Implementation Plans (DIPs); as well as the progress achieved with regard to the Safety Targets endorsed as part of the MID Region Safety Strategy.

2.4 Mr. Khonji invited all aviation stakeholders to attend and participate in the Second High-Level Safety Conference (HLSC/2) to be held at ICAO HQ (Montreal, 2-5 February 2015).

2.5 Mr. Haithem Gauwas, Aviation Safety Manager, GACA, Saudi Arabia, Co-Chairperson of RSC welcomed also the participants to the RSC/3 meeting.

3. ATTENDANCE

3.1 The meeting was attended by a total of twenty five (25) participants from seven (7) States (Egypt, Iran, Jordan, Kuwait, Qatar, Saudi Arabia and UAE) and four (4) Organizations/Industries (Boeing, COSCAP, FAA and IATA). The list of participants is at **Attachment A**.

4. OFFICERS AND SECRETARIAT

4.1 The meeting was chaired by Mr. Haithem Gauwas, Aviation Safety Manager, GACA, Saudi Arabia, Co-Chairperson of RSC.

4.2 Mr. Mashhor Alblowi, Regional Officer, Flight Safety (FLS) as the Secretary of the Meeting, assisted by Mr. Adel Ramlawi Regional, Officer, Aerodrome and Ground Aids (AGA).

4.3 Mr. Mohamed Smaoui, Deputy Regional Director supported the meeting.

5. LANGUAGE

5.1 The discussions were conducted in the English language and documentation was issued in English.

6. AGENDA

6.1 The following Agenda was adopted:

Agenda Item 1: Adoption of the Provisional Agenda

Agenda Item 2: Global Developments related to Aviation Safety

Agenda Item 3: Regional Performance Framework for Safety

Agenda Item 4: Coordination between RASG-MID and MIDANPIRG

Agenda Item 5: Future Work Programme

Agenda Item 6: Any other Business

7. CONCLUSIONS AND DECISIONS – DEFINITION

7.1 The RSC/3 records its actions in the form of Conclusions and Decisions with the following significance:

a) **Conclusions** deal with matters that, according to the Group's terms of reference, merit directly the attention of States and its stakeholders/partners, or on which further action will be initiated by the Secretary in accordance with established procedures; and

b) **Decisions** relate solely to matters dealing with the internal working arrangements of the Group and its subsidiary bodies.

8. LIST OF CONCLUSIONS AND DECISIONS

DRAFT CONCLUSION 3/1:	*MANDATORY AND VOLUNTARY REPORTING SYSTEMS*
DRAFT DECISION 3/2:	*STUDY ON THE ESTABLISHMENT OF A MID REGION SAFETY DATABASE*
DRAFT CONCLUSION 3/3:	*FLIGHT DATA EXCHANGE (FDX)*
DRAFT DECISION 3/4:	*ACCIDENTS AND INCIDENTS ANALYSIS WORKING GROUP (AIA WG)*

DRAFT CONCLUSION 3/5:	*REDUCTION OF UN-STABILIZED APPROACH RISK*
DRAFT CONCLUSION 3/6:	*DEVELOPMENT OF ADDITIONAL RUNWAY SAFETY PROVISIONS*
DRAFT CONCLUSION 3/7:	*ADDITIONAL RGS SEIS*
DRAFT CONCLUSION 3/8:	*SSP GAP ANALYSIS ON iSTARS*

PART II: REPORT ON AGENDA ITEMS

REPORT ON AGENDA ITEM 1: ADOPTION OF THE PROVISIONAL AGENDA

1.1 The meeting reviewed and adopted the Provisional Agenda as at paragraph 6 of the History of the Meeting.

REPORT ON AGENDA ITEM 2: GLOBAL DEVELOPMENTS RELATED TO AVIATION SAFETY

2.1 The meeting noted that the Second High-Level Safety Conference (HLSC/2), to be held at ICAO HQ (Montreal, 2-5 February 2015), will bring together High-level Civil Aviation Authorities to formulate decisions deemed necessary for the effective and efficient progress of key safety activities. It was highlighted that the Conference will include an opportunity to obtain insights and feedback from stakeholders regarding the update of the Global Aviation Safety Plan (GASP).

2.2 The meeting recalled that the 38th Session of the ICAO Assembly endorsed the current version of the GASP and that ICAO should review the GASP every three years. Accordingly, the RASGs were tasked to collect input from States, international organizations and industry regarding their views for updating the GASP for consideration by the ICAO Air Navigation Commission (ANC) and Council leading to endorsement by the 39th Session of the ICAO Assembly in 2016.

2.3 The meeting noted that a Working Paper including a consolidated feedback from the RASGs will be presented to the HLSC/2. The paper includes the following:

- States, international organizations and industry support the current GASP which sets out global aviation safety objectives and priorities, and provides a basis for Regions to set regional priorities and targets. A periodic review of the high-level safety strategy is needed and was also supported.

- Considering that changes proposed to the GASP are not implemented by States at the same pace due to their particular political, economic, technical circumstances, and that significant changes imposed in a short timeframe could lead to system instability, States, international organizations and industry recommend exercising caution in this respect, and that any proposal for changes to the GASP be evaluated thoroughly by the experts in order to comply with the objective of improving safety without adversely affecting the aviation system.

- States, international organizations and industry reiterate the importance of proactively collaborating to manage aviation safety, which is a key GASP component. While it is important to focus on addressing specific operational risk areas, new operational risks may emerge that require attention over time, which should be considered.

- States, international organizations and industry recognize that the GASP should be adequately promoted by ICAO and stakeholders. Therefore, a cycle of Workshops/Seminars should be considered and organized by ICAO.

- The GASP should promote international, multidisciplinary and coordinated support to States and service providers, and call for mechanisms to be established to secure adequate human and financial resources for this purpose.

- The GASP should clearly define the respective roles of RASGs, Regional Safety Oversight Organizations (RSOOs) and Cooperative Development of Operational Safety and Continuing Airworthiness Programmes (COSCAPs) in the implementation of the GASP taking into consideration the specificities and capabilities of these groups and organizations.

- The GASP should call for increased cooperation and coordination amongst RASGs, in particular through the respective regional offices, in order to avoid duplication of efforts and to find synergies whenever possible.

- The GASP should clearly identify the modalities of cooperation and coordination between RASGs and PIRGs for harmonious implementation of the GASP and GANP.

- The GASP should remain a high-level strategic document on safety policy and objectives that allows global harmonization and emphasizes the need to address regional specificities. The Best Practices contained in the appendix to the GASP support its effective implementation.

2.4 The meeting noted that the HLSC/2 will be invited to consider the above consolidated RASGs feedback and agree that the aviation safety strategy and policies contained in the current version of the GASP remain valid and should not change to allow the implementation at regional and national levels to progress.

2.5 The meeting noted that additional comments were also provided, in particular:

- The need for a harmonized methodology for the identification/prioritization of the regional priorities to be included in the GASP.

- The GASP should include a clear definition of the Risk Category Runway Safety. In the ICAO Annual Safety Report, it is mentioned that "Runway Safety related events include the following ICAO accident occurrence categories (ARC, BIRD, GCOL, RAMP, RE, RI, LOC-G, CTOL, USOS and ADRM).

2.6 The meeting noted that each of the RASG Chairpersons, including the RASG-MID Chairperson, will present an Information Paper on their RASG, which is a progress report against the established regional safety priorities and targets, along with any unique information on their RASG which they wish to provide the global audience.

REPORT ON AGENDA ITEM 3: REGIONAL PERFORMANCE FRAMEWORK FOR SAFETY

Review of the Draft Third MID Region Annual Safety Report (MID-ASR)

3.1 The meeting reviewed the Draft version of the Third MID Region Annual Safety Report (MID-ASR) at **Appendix 3A** which will be presented to the RASG-MID/4 meeting (Jeddah, Saudi Arabia, 24-26 February 2015) for final endorsement.

3.2 The meeting noted with appreciation that the Third Edition of the MID-ASR presents a clear improvement compared to the previous versions and commended the work of the MID-ASRT for the efforts put in place for the collection of safety information and consolidation of the ASR.

3.3 The meeting noted that for harmonization purpose (with the ICAO Global and Regional Safety Reports), ICAO accident statistics have been used as the main source of data to calculate accident rates and monitor the progress of achieving the Regional Safety Targets included in the MID Region Safety Strategy. However, it was highlighted that safety data was collected from other sources including Boeing and IATA and used for the identification of Focus Areas (FAs), determination of contributing factors and root causes, in order to support the development of mitigation measures.

3.4 It was highlighted that, for the first time, the Reactive Part of the MID-ASR included analysis of accidents based on State of Registry and State of Operator in addition to the main analysis based on the State of Occurrence. A Section related to the analysis of Serious Incidents was also added to the Reactive Part.

3.5 The meeting agreed with the analysis contained in the MID-ASR which demonstrated that the three FAs for the MID Region remained unchanged, as follows:

1) Runway Safety (RS);
2) Loss of Control In-flight (LOC-I); and
3) Controlled Flight Into Terrain (CFIT).

3.6 The meeting supported also the recommendation included in the MID-ASR which identified the following as Emerging Risks in the MID Region:

1) System/Component Failure or Malfunction-Non-Powerplant (SCF-NP);
2) Near miss (Airprox/TCAS Alert or Loss of Separation); and
3) Laser attacks.

3.7 In connection with the above, it was highlighted that System/Component Failure or Malfunction (SCF) is directly linked to aircraft maintenance and airworthiness of aircraft; and that the near miss (Airprox/TCAS Alert or Loss of Separation) if not addressed properly could lead to mid-air collisions.

3.8 The meeting noted that the Proactive Part of the MID-ASR is based on the results of the ICAO USOAP-CMA and IATA IOSA and ISAGO results, as well as, other occurrences (incidents) reported by States and airlines.

3.9 In line with the above, the meeting was apprised of the Enhanced IATA- IOSA (E-IOSA) programme, which was mandated by IATA Board of Governors for all registration renewal audits taking place on or after September 2015. The meeting noted that the use of the IATA-IOSA programme to complement safety oversight activities is one of the Safety Indicators included in the MID Region Safety Strategy with the following safety targets:

- maintain at least 60% of eligible MID airlines to be certified IATA-IOSA by the end of 2015 at all times; and

- all MID States with an EI of at least 60% accept the IATA Operational Safety Audit (IOSA) as an Acceptable Means of Compliance (AMC) by 2015 to complement their safety oversight activities

3.10 The meeting noted that only four (4) States have accepted IOSA as an Acceptable Means of Compliance to complement their safety oversight activities. Accordingly, the meeting urged States to accept the IATA-IOSA Programme as an acceptable means of compliance that would complement their safety oversight activities.

3.11 The meeting noted with concern that reporting of incidents is very low in the MID Region, which underlines the need to enhance the reporting mechanisms/systems at the national level. It was highlighted that although regulatory requirements for mandatory reporting of accidents and serious incidents are common, voluntary reporting of incidents should be encouraged in order to reach a mature safety management environment. Accordingly, the meeting agreed to the following Draft Conclusion:

DRAFT CONCLUSION 3/1: MANDATORY AND VOLUNTARY REPORTING SYSTEMS

That, States, be invited to take necessary measures to:

a) enhance their mandatory reporting system; and

b) establish, if not already done, an effective voluntary confidential and non-punitive reporting system, to enhance the collection of data on hazards and associated safety risks that may not be captured by the mandatory reporting system.

3.12 In connection with the above, the meeting recognized the necessity to conduct a study on the need and feasibility of establishing a MID Region Safety Database. Nevertheless, it was underlined that the sharing of safety data through the available ICAO and IATA systems/databases such as iSTARS, STEADES, FDX, etc., should be promoted and encouraged. Accordingly, the meeting agreed to the following Draft Decision:

DRAFT DECISION 3/2: STUDY ON THE ESTABLISHMENT OF A MID REGION SAFETY DATABASE

That, the MID-SST conduct a study on the need and feasibility of establishing a MID Region Safety Database.

3.13 The meeting was apprised of the outcome of the IATA Global Aviation Data Management (GADM) Workshop (Abu-Dhabi, UAE, 8 December 2014). It was highlighted that the GADM is the IATA's platform for safety data, which consists of several databases covering reactive, proactive and predictive safety information including Flight Data Exchange (FDX). In this respect, it was highlighted that the level of participation of airlines in the IATA FDX database is very low in the MID Region. The meeting recognized the need to promote the use of FDX as a means to enhance collection of predictive information in the Region. Accordingly, the meeting agreed to the following Draft Conclusion:

DRAFT CONCLUSION 3/3: FLIGHT DATA EXCHANGE (FDX)

That, IATA develop a Draft RASG-MID Advisory Circular to promote the use of the FDX.

3.14 It was highlighted that some differences have been identified between the accident data provided by the participating organizations for the MID-ASR due to the use of different criteria and classifications of accidents.

3.15 The meeting noted that at the level of ICAO-HQ, aircraft accidents and serious incidents are reviewed and categorized by the ICAO Safety Indicators Study Group (SISG) using the definition provided in Annex 13 to the Chicago Convention—Aircraft Accident and Incident Investigation.

3.16 The meeting recognized the need to review, analyse and categorize the accidents and incidents at regional level and agreed that an Accidents and Incidents Analysis Working Group (AIAWG) be established under the MID Annual Safety Report Team (MID-ASRT) to review, analyse and categorize on annual basis the accidents and incidents that occurred in the Region or involved an operator or aircraft from the Region and provide an agreed and harmonized regional dataset of accidents and incidents. It was highlighted that this Group would also, to the extent possible, identify the main root causes and contributing factors of the reviewed accidents and incidents. The meeting reviewed the proposed Terms of Reference (TORs) of the AIA WG at **Appendix 3B**, and agreed that they might need some improvements before the endorsement by the RASG-MID/4 meeting.

3.17 Based on the above, the meeting agreed to the following Draft Decision:

DRAFT DECISION 3/4: ACCIDENTS AND INCIDENTS ANALYSIS WORKING GROUP (AIA WG)

That, the Accidents and Incidents Analysis Working Group (AIA WG) be established.

3.18 The meeting noted that the AIA WG should be composed of Experts from the ATM and safety fields with good knowledge and experience in Accident and Incident Investigation (AIG), including the ADREP Taxonomy and ECCAIRS. Accordingly, the meeting urged States and Safety Partners to appoint members to the AIA WG with required experience and expertise in order to actively support the work of the Working Group.

Outcome of the First Meeting of the Runway and Ground Safety Working Group (RGS WG/1)

3.19 The meeting was apprised of the outcome of the first meeting of the Runway and Ground Safety Working Group (RGS WG/1) held in Cairo, Egypt, 7-9 April 2014.

3.20 The meeting noted with appreciation that Bahrain and Egypt presented to the RGS WG/1 meeting their experience/measures taken to reduce the number of missed approach at Bahrain and Cairo International Airports, respectively.

3.21 Based on the above, the meeting agreed to the following Draft Conclusion emanating from the RGS WG/1 meeting:

DRAFT CONCLUSION 3/5: REDUCTION OF UN-STABILIZED APPROACH RISK

That, States that have not yet done so, be urged to minimize the risk of un-stabilized approach through (but not limited to):

a) training of operators (pilots, air traffic controllers/air navigation service providers, and aerodrome operators);

b) development of relevant Guidance materials;

c) encouraging the reporting of un-stabilized approaches, assessment and mitigation of the associated risk and conduct of necessary safety oversight, as part of SMS implementation; and

d) review of Standards Operation Procedures.

MID Wildlife/FOD Workshop

3.22 The meeting noted that, the Wildlife and Foreign Object Debris (FOD) Workshop was successfully held in Cairo, Egypt from 24 to 26 March 2014. The event was jointly organized by ICAO and IATA and gratefully hosted by the Egyptian Civil Aviation Authority (ECAA). The main objective of the Workshop was to address the hazards, risk assessment and available mitigation measures related to Wildlife and FOD.

3.23 The meeting reviewed and supported the outcome of the Wildlife/FOD Workshop which highlighted the following:

1) the importance of data collection and sharing among industry stakeholders;

2) the need to improve reporting culture; States Regulators and Aerodrome Operators should be aware of existing standards and best practices (ICAO, FAA, ACI and other Organizations); the importance of collaboration and communication among operators, ATCs, Aerodromes and CAAs (including local authorities) to detect and mitigate wildlife/ FOD hazards;

3) technology is a great tool, yet not the only effective solution;

4) risk assessment is an important start to develop a Wildlife/FOD program. The Wildlife/FOD hazard management program should be a live document that is continually updated;

5) roles and responsibilities should be defined for Wildlife/FOD programs so that Regulators set the requirement while Aerodromes Operators and ATCs implement the programs;

6) in accordance with ICAO Doc 9774, Wildlife Hazard Management Plan should be part of the Aerodrome Certification requirements; and

7) Wildlife and FOD Control are to be included in the work programme of the RST.

Outcome of the MID-RRSS/2

3.24 The meeting noted that the Second MID Regional Runway Safety Seminar (MID-RRSS/2) was successfully held in Dubai, UAE, 2 - 4 June 2014.

3.25 It was highlighted that the first day of the MID-RRSS/2 focused on the need for collaborative approach, runway excursion and incursion hazards, and mitigation measures with an overview of the technology advances. The second day was dedicated to a Workshop on Runway Safety Team (RST) and the kick-off of the MID RS Go-Team. The third day was reserved to a Workshop on Aerodrome Certification.

3.26 The meeting noted that one of the outcomes of the MID-RRSS/2, was the launch of the MID RS Go-Team. In this respect, it was highlighted that during the MID-RRSS/2, it was agreed to conduct the first RS Go-Team visit to Khartoum, Sudan by end of 2014 and the second RS Go-Team visit to Muscat, Oman during the first quarter of 2015. In this regard, the meeting noted with appreciation that the first RS Go-Team visit has been successfully conducted to Khartoum, Sudan (30 November to 4 December 2014). The RS Go-Team mission was well appreciated by the Sudanese Civil Aviation Authority and the Khartoum International Airport management.

3.27 Based on the above, the meeting agreed to encourage States and airports to invite the RS Go-Team to support the establishment of RST in the international airports, as required. It was agreed that that potential candidates for the RS Go-Team visits include Muscat, Jeddah, Cairo, Imam Khomeini, Amman and Kuwait international airports.

3.28 The MID-RRSS/2 highlighted the importance of sharing best practices, use of available technology, and the use of RST as an effective and inexpensive tool to enhance runway safety. The Summary of Discussion of the MID-RRSS/2 is at **Appendix 3C**. The meeting agreed to the following Draft Conclusion emanating from the MID-RRSS/2:

DRAFT CONCLUSION 3/6: DEVELOPMENT OF ADDITIONAL RUNWAY SAFETY PROVISIONS

That, ICAO consider:

a) the development of additional Runway Safety Provisions; and

b) convening a Second Global Runway Safety Symposium.

Aerodrome Certification

3.29 The meeting reviewed the status of implementation of Aerodrome Certification at **Appendix 3D**. It was highlighted that 28 international aerodromes have been certified. This number represents 42% of the 66 international aerodromes listed in the MID ANP.

Update on SEIs and DIPs related to RGS

3.30 The meeting was provided with a progress report on the SEIs/DIPs related to RGS as follows:

Update on MID-RAST/RGS/1

3.31 The meeting recalled that the objective of the MID-RAST/RGS/1 was to reduce the number of un-stabilized approaches through specific training for pilots and air traffic controllers and promotion of pilot adherence to Standard Operating Procedures for approaches.

3.32 The meeting noted the difficulties/challenges that faced IATA, the Champion of this DIP, to progress the implementation of this DIP and agreed that a new version of the DIP with tangible and realistic actions be developed, if deemed necessary. In this respect, it was agreed that the revised DIP should be aligned with the Draft Conclusion emanating from the RGS WG/1 meeting related to the reduction of Unstabilized Approach Risk. The meeting noted that the un-stabilized approach is a common factor for Runway Excursion and CFIT. Accordingly, the meeting agreed that the scope of the MID-RAST/RGS/1 should be addressed under the CFIT DIPs.

Update on MID-RAST/RGS/2

3.33 The meeting recalled that UAE is the Champion of MID-RAST/RGS/2 which focuses on the development of guidance material and training programmes to support the creation of action plans by the Runway Safety Teams (RST).

3.34 The meeting noted with appreciation that 75% of the DIP actions have been completed. In particular, it was highlighted that:

- The first RASG-MID Safety Advisory (RSA-01) containing Guidance for Harmonising the Use & Management of Stop Bars at Airports was issued on 2 November 2014. The Safety Advisory is available on ICAO MID website under the RASG-MID publications at: http://www.icao.int/MID/Pages/rasgmid.aspx.

- A draft circular containing Guidance on Regulatory Framework Supporting Establishment of Runway Safety Teams was circulated on 28 September 2014 for review and comment by MID States and ICAO. An associated RASG-MID Safety Advisory is expected to be published by end of December 2014.

Update on MID-RAST/RGS/3

3.35 The meeting recalled that UAE is the Champion of MID-RAST/RGS/3 which focuses on the development of guidance material and training programmes to support Aerodrome Infrastructure and Maintenance Management.

3.36 The meeting noted with appreciation that 40% of the DIP actions have been completed. In particular, it was highlighted that:

- the development of a MID Region Aerodrome Certification toolkit is expected to be completed by end of January 2015;

- the development of guidance material on periodic surveillance audits of Aerodrome Infrastructure and Maintenance is expected to be completed by end of April 2015; and

- the development of guidance material on proactive oversight of Aerodrome Infrastructure development is expected to be completed by end of June 2015.

3.37 In connection with the above, the meeting appreciated the progress achieved in the implementation of the MID-RAST/RGS/2 and MID-RAST/RGS/3 and commended the work of the RGS Coordinator and the RGS Working Group. The meeting agreed and updated the list of SEIs and DIPs related to RGS as at **Appendix 3E** and agreed that the RGS WG/2 meeting should further review and update the list of SEIs and DIPs related to RGS taking into consideration the progress achieved and the developments at regional and global level.

Additional SEIs related to RGS

3.38 The meeting noted that the RGS WG/1 meeting reviewed and supported proposals by Egypt and Sudan to develop additional RGS SEIs on Aerodrome Safeguarding, Wildlife Control, and Laser-attacks. Accordingly, the meeting agreed to the following Draft Conclusion:

DRAFT CONCLUSION 3/7: ADDITIONAL RGS SEIS

That, additional RGS SEIs be developed as follows:

a) RGS/4 on Aerodrome Safeguarding with Egypt as Champion supported by Sudan;

b) RGS/5 on Wildlife Control with Sudan as Champion supported by Egypt and UAE; and

c) RGS/6 on Laser-attacks with Egypt as Champion supported by UAE.

Update on SEIs and DIPs related to related to LOC-I

3.39 The meeting recalled that the RASG-MID/3 meeting reviewed and endorsed the SEIs related to LOC-I and agreed that associated DIPs should be further reviewed and finalized taking into consideration the outcome of the LOC-I Symposium (20- 22 May 2014), and the new ICAO Guidance Material contained in the Manual on Aeroplane Upset Prevention and Recovery (Doc 10011).

3.40 The meeting noted with appreciation that the LOC-I Coordinator developed a revised set of SEIs and DIPs as at **Appendix 3F**. It was highlighted that a LOC-I Seminar would be organised and a LOC-I Tool Kit would be released by IATA in 2015. However, the LOC-I DIPs do not include any action related to these 2 initiatives. Accordingly, the meeting agreed that the LOC-I Coordinator should coordinate with IATA, the Champion of these DIPs, in order to update the DIPs and include the above initiatives.

Update on SEIs and DIPs related to CFIT

3.41 The meeting recalled that the RASG-MID/3 reviewed and endorsed three (3) SEIs and one (1) DIP related to CFIT. It was highlighted that the DIP was developed to address the top priority SEI "the implementation of PBN Approach procedures to all runways not currently served by precision approach procedures".

3.42 The meeting noted with concern the low progress in the implementation of the DIP RAST-MID/CFIT/1 at **Appendix 3G.** The meeting noted the challenge associated with the implementation of this DIP, particularly the difficulty to gather necessary data for the identification and prioritization of the airports/runways. In this respect, IATA informed the meeting that Flight Data Monitoring (FDM) data is available only for airlines internal use.

3.43 The meeting agreed that Mr. Ahmed Saleh AlMessabi, Fleet Safety Pilot, Etihad Airways, is appointed as the new CFIT Coordinator.

3.44 Based on the above, the meeting agreed that the CFIT Coordinator, coordinate with IATA the identification of the top 10 airports/runways in the MID Region with the highest risk of Runway Excursion and CFIT due to the high number of un-stabilized approach. It was also agreed that ICAO follow up with States the provision of data related to un-stabilized approaches.

3.45 The meeting tasked the CFIT Coordinator to develop additional CFIT DIPs to cover the SEIs endorsed by RASG-MID/3 including a DIP on specific training for pilots and air traffic controllers and promotion of pilot adherence to Standard Operating Procedures to reduce the number of un-stabilized approaches (RAST-MID/RGS/1 refers).

Detailed Implementation Plan (DIP) Template

3.46 The meeting tasked the MID-RAST to review, simplify and improve the DIP Template, as appropriate and present the outcome to the RSC/4 meeting. In addition, the meeting agreed that some DIPs should be simplified in order to include clear and realistic action items.

Emerging Risks Area

3.47 The meeting recalled that although the In-Flight-Damage (IFD) is no longer considered as one of the main risk areas (FAs), implementation of the developed DIP for the top priority SEI "Improve Aviation Safety in the MID Region through Mitigation of Birdstrike, Wildlife and FOD Hazards" will be carried out in 2014.

3.48 The meeting noted that Wildlife and Foreign Object Debris (FOD) were identified as contributing factors to IFD and accordingly mitigation measures were developed including the organization of a Wildlife/FOD Workshop, which was held in Cairo, Egypt (24-26 March 2014).

3.49 The meeting recalled that further mitigation measures and action plans related to Wildlife and FOD will be addressed by the RGS WG.

3.50 The meeting agreed that the follow-up on call sign confusion and similarity be based on the outcome of the Call Sign Confusion ad-hoc Working Group (CSC WG) established within the framework of MIDANPIRG.

3.51 The meeting appointed Mr. Badr A. Alharbi, Aviation Safety Specialist, General Authority of Civil Aviation, Saudi Arabia as the new Coordinator for the Emerging Risks Area.

3.52 Based on the above, the meeting agreed that the newly identified emerging risks (System/Component Failure or Malfunction (SCF) and Near miss (Airprox/TCAS Alert or Loss of Separation) should be addressed by the Emerging Risks Coordinator.

Laser Attacks on aircraft

3.53 The meeting recalled that RASG-MID/3 meeting, through Conclusion 3/3, agreed that a survey should be conducted under the MID-ASRT to collect additional information on the subject for the assessment of associated risks and development of mitigation measures.

3.54 The meeting was apprised of the results of the Laser Attacks analysis and survey, which are included in the MID-ASR, and urged States to:

1) keep record of the Laser Attack incidents reported by the different stakeholders;

2) encourage voluntary reporting related to Laser Attacks; and

3) formalize the State actions against Laser Attacks and violations.

3.55 The meeting noted that the RGS WG is developing a new SEI and DIP related Laser Attacks with Egypt as a Champion. Accordingly, the meeting agreed that Laser Attacks will be addressed under RGS WG taking into consideration the outcome of the Laser Attacks analysis and survey.

MID-SST activities and update on SEIs and DIPs

3.56 The meeting recalled that the RASG-MID/3 endorsed the top priority SEIs related to MID-SST as follows:

1) improve status of implementation of State Safety Programs (SSPs) in the MID Region;

2) strengthening of States' Safety Oversight capabilities through the establishment of Regional/Sub-regional Safety Oversight Organization(s); and

3) improve regional cooperation for the provision of Accident & Incident Investigation.

3.57 The first meeting of the MID Safety Support Team (MID-SST/1) was held in the ICAO MID Regional Office (Cairo, Egypt, 18-20 March 2014). The meeting developed draft DIPs to support the SSP implementation in the MID Region, including the establishment of an RSOO-SSP to support States in the implementation of SSP in the Region. Other issues such as NGAP were also addressed.

1.1 The meeting reviewed the DIP/1 related to the establishment of an RSOO-SSP, at **Appendix 3H**, which includes the following actions:

1) Promote the establishment of an RSOO-SSP during the Second MID Safety Summit (Oman, 27-29 April 2014, particularly through the high-level briefing/meeting (DGs and CEOs)).

2) Send out a Questionnaire to the MID States in order to get the States' interest and commitment to the establishment of an RSOO-SSP to support States in the implementation of SSP.

3) Analyze the States' replies and develop a Summary Report.

4) Coordinate with ICAO MID Regional Office and ACAC in order to consider the proposal of establishment of an RSOO-SSP in the Study on the establishment of RSOO(s) for ACAC and MID Region States, which will start early 2015.

3.58 The meeting noted that the ICAO MID Regional Office sent State Letter, requesting States to complete the SSP Questionnaire, which was developed to collect information related to the status of the SSP implementation in the MID Region, as well as, States' views regarding the establishment of an RSOO-SSP.

3.59 It was highlighted that 11 States replied to the SSP Questionnaire and 8 out of 11 States showed interest in joining a Regional Safety Oversight Organization for SSP (RSOO-SSP). A summary of replies is at **Appendix 3I.**

3.60 The meeting noted the first 3 actions of DIP/1 had been completed; however the action number 4 would be pending until the completion of the Study on the establishment of RSOO(s) for ACAC and MID Region States.

3.61 The meeting reviewed and supported two additional DIPs proposed by the SST/1 meeting with COSCAP-GS as a Champion related to SSP/SMS guidance material (DIP/2) and SSP/SMS Workshops (DIP/3), as at **Appendices 3J** and **3K**, respectively.

3.62 The meeting noted that the DIP/3 related to SSP/SMS Workshops includes:

1) a joint ICAO/COSCAP-GS Safety Management Workshop which is scheduled to be held in Kuwait, 26-28 May 2015; and

2) 2 day Workshop on Annex 19 and SMM to be conducted on request by the MID States (2 Workshops are already planned in Kuwait and Bahrain, beginning of 2015).

3.63 The meeting was apprised of the UAE activities related to Regional coordination of the Accident and Incident Investigation.

3.64 In connection with the above, the meeting agreed that the MID-SST should develop additional DIPs related the second and third SEI, as follows:

1) a DIP related to strengthening of States' Safety Oversight capabilities addressing the Study on the establishment of RSOO(s) for ACAC and MID Region States, to be presented to the RASG-MID/4 meeting; and

2) a DIP related to the improvement of regional cooperation for the provision of Accident & Incident Investigation (to be developed by the MD-SST/2 meeting).

Second MID Region Safety Summit and high level Briefing/Meeting (DGCAs and CEOs)

3.65 The meeting was apprised of the outcome of the Second MID Region Safety Summit held in Muscat, Oman from 27 to 29 April 2014. It was highlighted that the third day of the Summit (29 April 2014) was reserved to provide a High-Level Briefing to the Top Management (DGCAs and CEOs) about the safety management accountability and responsibility.

3.66 The Summit was gratefully hosted by Oman Air and supported by the Public Authority for Civil Aviation (PACA), Oman.

3.67 The meeting reviewed the Summary of Discussion of the Summit at **Appendix 3L**; and noted that the following has been addressed during the Summit:

1) The revised GASP and the link between the global and regional safety plans as outlined in the MID Region Safety Strategy.

2) The RASG-MID working arrangements and activities of its different subsidiary bodies, as well as, the challenges faced and the support required achieving their objectives.

3) The need for support, commitment/engagement, participation and contributions of all States and Stakeholders in the MID Region to the RASG-MID activities to achieve the agreed objectives.

4) The status of the RS, LOC-I and CFIT related accidents (global and regional) as well as, the activities under the RASG-MID related to the development and implementation of SEIs and DIPs.

5) Operational experiences related to SSP & SMS implementation in the MID Region.

6) Development and implementation of SEIs and DIPs to support the SSP Implementation in the MID Region as part of the RASG-MID activities.

7) Review and update of the Safety Indicators and Targets as outlined in the MID Region Safety Strategy.

3.68 The meeting noted that the major outcome of the Summit/High-Level Briefing to the Top Management (DGCAs and CEOs) was the endorsement of a revised version of the MID Region Safety Strategy, which was consolidated based on the outcome of the different sessions of the Summit.

3.69 It was highlighted that the MID Region Safety Summit will be held on biennial basis and that the Third MID Region Safety Summit will be held in 2016 in Doha, Qatar.

MID Region Safety Strategy

3.70 The meeting reviewed the MID Region Safety Strategy as endorsed by the High-Level Briefing/Meeting, which was held on the third day of the Second MID Region Safety Summit.

3.71 The meeting noted that the following Safety Themes were endorsed for the monitoring of safety performance:

1) Accidents;

2) Runway Safety (RS);

3) Loss of Control In-Flight (LOC-I);

4) Controlled Flight Into Terrain (CFIT);

5) Safety Oversight capabilities (USOAP-CMA, IOSA and ISAGO);

6) Aerodrome Certification; and

7) SSP/SMS Implementation.

3.72 The meeting was apprised of the current status of the different safety indicators included in the safety strategy and assessed the progress achieved towards the agreed safety targets.

3.73 In accordance with the Strategy, the first safety target is to reduce the accidents rate to be in line with the global average by the end of 2016. In this respect, it was highlighted that although the MID Region average accident rate for the past 5 years (2009-2013) is 7.28 accident per million departures, which is almost twice the average global rate for the same period, there was a big improvement in the Region during the past 3 years during which the accident rate was slightly above the global accident rate. A big debate took place regarding the interpretation of the some safety targets (i.e. if the rate of accident for the last year should be compared to the global rate for the same year; or if the average rate for the past 5 years should be compared to the average global rate for the same period).

3.74 Based on the above, it was agreed, that in addition to the agreed indicators providing the comparison of the regional average rates to the global ones for the same 5 year period, it is important to highlight in the MID-ASR the comparison of the last year regional accident rates with the global rates for the same year. Accordingly, the meeting updated the status of the different safety indicators as at **Appendix 3M**.

3.75 In connection with the above, the meeting agreed that for the development of the MID-ASRs and compilation of the Safety Indicators, a moving 5 year period should be used (i.e. 2009-2013, 2010-2014, etc).

3.76 The meeting noted with concern that the current status of some safety indicators is far from the agreed targets, in particular those related to IATA IOSA and ISAGO programmes, SSP Gap Analysis on iSTARS, SSP Implementation Plan, and Implementation of SSP (Phases 1, 2 and 3). Accordingly, the meeting urged IATA and ICAO to follow-up with States and airlines for the improvement of the situation. With regard to the SSP Gap Analysis on iSTARS, the meeting agreed to the following Draft Conclusion:

DRAFT CONCLUSION 3/8: SSP GAP ANALYSIS ON iSTARS

*That, States, that have not yet done so, be urged to complete their SSP Gap Analysis on iSTARS and request assistance from ICAO, as deemed necessary, to complete this task before **15 February 2015**.*

3.77 Based on all the foregoing, and taking into consideration that the DGCA-MID/3 meeting will be held in Doha, Qatar, 27-29 April 2015, the meeting agreed that an improved version of the Safety Strategy with some necessary adjustments/fine-tunings need to be presented to the RASG-MID/4 for final endorsement by the DGCA-MID/3 meeting.

3.78 The meeting urged States and stakeholders to provide necessary information/feedback to the ICAO MID Regional Office related to all the Safety Indicators included in the Strategy.

RASG-MID Engagement Strategy

3.79 The meeting reviewed and updated an improved version of the Draft RASG-MID Engagement Strategy which was consolidated by the Secretariat based on the outcome of the Second MID Region Safety Summit as at **Appendix 3N**.

3.80 The meeting agreed that the Engagement Strategy be presented to RASG-MID/4 for final endorsement.

Study on the establishment of RSOO(s)

3.81 The meeting recalled that the RASG-MID/3 meeting noted that in accordance with the Strategy for the establishment of RSOO(s), a step-by-step approach would be followed:

- Phase 1, an initial Questionnaire to be sent to the ACAC and ICAO MID States in order to get their commitment to participate in the study. It is to be highlighted that the replies to this Questionnaire serve as the basis for the planning of visits to States by an appropriate Consultant during Phase 2 of the Study.

- Phase 2, an appropriate Consultant to analyze the replies to the Questionnaire, plan and conduct visits to the States that show interest and commitment and develop a report on the study providing recommendations for the establishment of the RSOO(s) including legal, political, organizational, and financial frameworks.

3.82 In connection with the above, the meeting noted that a simplified Questionnaire was sent to the ACAC and ICAO MID States. It was highlighted that 13 States replied to the Questionnaire and confirmed their commitment to participate in the Study.

3.83 The meeting noted that a Consultant was hired by ACAC to complete the Study, which includes visits to the committed States. This is planned to start by mid-January 2015.

3.84 The meeting noted with appreciation that the study is funded by ACAC, Boeing and ICAO. However, it was underlined that the committed States would be requested to provide hotel accommodation to the Consultant during his visit (2-3 days). Accordingly, the meeting urged the committed States to support the conduct of the Study and facilitate the visits to be conducted by the Consultant.

3.85 It was highlighted that the Final Report on the Study will be presented to the DGCA-MID/3 meeting for their review and agreement on the way forward.

Regional Workshop for the Air Operator Certificate (AOC) Register

3.86 The meeting was informed that a Regional Workshop for the Air Operator Certificate (AOC) Register, organized by ICAO with the collaboration of IATA was held in Dubai (23-24 November 2014), with the objective to provide States and users with training on how to use the ICAO AOC Registry tool online.

RASG-MID Work Programme for 2015

3.87 The meeting reviewed and updated the Schedule of 2015 safety events and task the RSC Co-Chair to coordinate with all stakeholders in order to provide a consolidated Work Programme for 2015.

REPORT ON AGENDA ITEM 4: COORDINATION BETWEEN RASG-MID AND MIDANPIRG

4.1 The meeting recalled that while RASGs have been established to initially deal with safety issues directly related to flight operations, planning should be initiated as soon as circumstances permit to adopt a systems approach so that RASGs address safety issues from an integrated perspective that includes flight operations, aerodrome and ATM safety.

4.2 The meeting recalled that the RASG-MID/3 meeting (Kuwait, 27 - 29 January 2014) agreed with MIDANPIRG/14 meeting (Jeddah, Saudi Arabia, 15-19 December 2013) on the transfer of aerodrome safety activities from MIDANPIRG to RASG-MID. Thus, all aerodrome safety issues, which represent the main activity of the MIDANPIRG AOP Sub-group and ADCI Task Force were transferred to RASG-MID. The RASG-MID/3 meeting also agreed that SMS implementation be fully addressed by RASG-MID.

4.3 The meeting noted that RASG-MID and MIDANPIRG have been coordinating specific air navigation safety related issues such as mitigation measures for CFIT and call sign confusion. Other subjects of interest to both groups have been identified, in particular those related to ATM safety such as SMS implementation for ANS/ATM, Language Proficiency for Air Traffic Controllers, RVSM safety monitoring, etc.

4.4 The meeting noted that a Working Paper was presented to and well received by the MSG/4 meeting highlighting the RASG-MID activities and the coordination between MIDANPIRG and RASG-MID on specific subjects such as the call sign confusion and similarity, unstabilized approaches, etc. It was also noted that a Working Paper highlighting the relevant MIDANPIRG activities would be presented to the RASG-MID/4 meeting.

4.5 In connection with the above, the meeting noted that the MSG/4 meeting (Cairo, Egypt, 24 - 26 November 2014) recognized the urgency of implementing mitigation measures for the call sign confusion and similarity and agreed accordingly to the following Draft Conclusion and Decision:

MSG CONCLUSION 4/22: CALL SIGN CONFUSION

That,

a) a survey based on the questionnaire at Appendix 5A related to the acceptance/processing of flight plans containing "alphanumeric" call signs ending with letter(s) be conducted;

b) States that have not yet done so be invited to take necessary measures to comply with ICAO Annex 10 and Doc 4444 provisions related to the acceptance of the alphanumeric call signs; and

c) States be invited to inform the ICAO MID Regional Office of the preferred option for the mitigation of the risks associated with the call sign confusion before 31 January 2015.

MSG DECISION 4/23: CALL SIGN CONFUSION AD-HOC WORKING GROUP

That, a Call Sign Confusion ad-hoc Working Group be established in order to:

a) analyze the results of the survey on the acceptance/processing of flight plans containing "alphanumeric" call signs ending with letter(s); and

b) develop solutions to mitigate the risk associated with call sign confusion and similarity.

4.6 Based on the above, the meeting agreed that the follow-up on call sign confusion and similarity be based on the outcome of the Call Sign Confusion ad-hoc Working Group (CSC WG).

4.7 With regard to the implementation of the ICAO New Flight Plan, the meeting noted with concern that the following States (Egypt, Iran, Iraq, Libya, Saudi Arabia, Syria and Yemen) are still using converters, which might represent a safety issue. In this respect, the meeting recalled MIDANPIRG/14 meeting Conclusion 14/25, and ICAO MID Regional Office State Letter Ref.: AN 6/2B –14/122 dated 4 May 2014 requesting concerned States to take necessary measures to upgrade their systems and provide the ICAO MID Regional Office with an update on the action(s) undertaken not later than 30 June 2014. The meeting noted that as a follow-up action, the CNS SG/6 meeting (Tehran, Iran, 9-11 September 2014) agreed to the following Draft Conclusion:

DRAFT CONCLUSION 6/10: ACTION PLANS FOR INFPL SYSTEM UPGRADE

That, concerned States be urged to provide the ICAO MID Regional Office with their action plan for the upgrade of their systems to ensure full handling of the ICAO New Flight Plan format ***before 30 November 2014****.*

4.8 Based on the above, the meeting agreed that ICAO should follow-up with concerned States to expedite the process.

REPORT ON AGENDA ITEM 5: **FUTURE WORK PROGRAMME**

5.1 The meeting noted that the RASG-MID/4 meeting is scheduled to be held in Jeddah, Saudi Arabia (24-26 February 2015). The meeting reviewed and supported the Provisional Agenda at **Appendix 5A** which will be proposed to the RASG-MID/4 meeting.

5.2 In accordance with the RASG-MID Procedural Handbook, the meeting agreed that the RSC/4 meeting be held in Cairo, 8-10 December 2015.

5.3 In connection with the above, it was agreed that the RASG-MID/5 meeting be scheduled for March 2016.

REPORT ON AGENDA ITEM 6: ANY OTHER BUSINESS

6. 1 The meeting recalled that the RASG-MID/1 meeting agreed that the List of Members, Alternates and Advisers of the Group should be updated on a regular basis. Accordingly, the meeting reviewed and updated the list of RASG-MID, Members, Alternates, Advisers; and Partners' Representatives and Alternates as at **Appendix 6A** and the list of the Safety Teams' Focal Points (MID-ASRT, MID-RAST and MID-SST) as at **Appendix 6B**.

6. 2 The meeting encouraged States and Partners to support the work of the Safety Teams by providing experts and specialists to effectively participate in the RASG-MID work programme and contribute to the work related to each Team.

6. 3 It was highlighted that in accordance with the current version of the RASG-MID and MIDANPIRG Procedural Handbook, the Chairperson, the First Vice-Chairperson and Second Vice-Chairperson could serve only for three cycles and a possible extension for one additional cycle. The meeting noted that the MSG/4 meeting was of the view that this might represent a constraint for the normal proceedings and efficiency of the Group. Accordingly, and to ensure better continuity and support to RASG-MID, the meeting supported the MSG/4 views and agreed that paragraph 4.5.1 of the RASG-MID Procedural Handbook should be amended as follows:

"In order to ensure the necessary continuity in the work of the Group ~~and unless otherwise determined by special circumstances~~, the Chairperson, the First Vice-Chairperson and Second Vice-Chairperson of the Group should assume their functions at the end of the meeting at which they are elected and serve for three cycles unless otherwise decided.~~re-elected, in that case the term would be limited to one additional cycle only.~~"

6. 4 The meeting noted that the United States will present a Working Paper to the upcoming ICAO High Level Safety Conference on the harmonization of minimum standards for multi-national partnerships in third party manufacturing. It was highlighted that the United States will propose the following:

a. ICAO Member States require manufacturers demonstrate effective implementation of safety oversight through all stages of manufacturing from the State of Manufacture through all levels of outsourcing. These oversight procedures must lead back to the original approved type design and ensure conformity to the approved product;

b. ICAO Member States ensure their ability to oversee manufacturers producing aerospace products in their States. This requires Member States to have the resources as well as the legal, regulatory, and organizational infrastructure necessary to satisfy their fundamental safety oversight obligations; and

c. ICAO establish a training and developmental safety oversight program for its Member States that ensures they have the minimum capability to guarantee oversight competencies. The program should be reviewed and accepted by Member States involved in the oversight chain.

APPENDICES

APPENDIX 3A

RASG-MID Annual Safety Report – Third Edition

Third Edition, December 2014
Regional Aviation Safety Group – Middle East (RASG-MID)

RASG-MID Annual Safety Report

Table of contents

1. Foreword

The Regional Aviation Safety Group-Middle East (RASG-MID) was established in September 2011 to develop an integrated, data driven strategy and implement a work program that supports a regional performance framework for the management of safety.

RASG-MID supports the implementation of the ICAO Global Aviation Safety Plan (GASP) and addresses global aviation safety from a regional perspective. The RASG-MID membership includes representatives from ICAO, MID states, and international organizations.

RASG-MID consists of three main teams; the Annual Safety Report Team (ASRT), the Regional Aviation Safety Team (RAST), and the Safety Support Team (SST). The three teams work together in a collaborative manner to identify and address safety risks in the MID region as follows:

1. The Annual Safety Report Team (ASRT) is in charge of collecting and analysing safety information. The team is also responsible for the identification of the safety focus areas and the production of the RASG-MID Annual Safety Report (ASR).

2. The Regional Aviation Safety Team (RAST) is in charge of developing Safety Enhancement Initiatives (SEIs) and Detailed Implementation Plans (DIPs) for the key safety focus areas identified by the Annual Safety Report Team (ASRT).

3. The Safety Support Team (SST) is in charge of supporting the Regional Aviation Safety Team (RAST) with safety enhancement initiatives that are not directly related to safety focus areas such as emerging risks.

The diagram below illustrates the framework adopted by RASG-MID to identify and address safety risks in the MID region.

2. Executive Summary

The RASG-MID Annual Safety Report (ASR) – Third Edition presents analysis performed by the RASG-MID Annual Safety Report Team (ASRT). The safety information presented in this report is based on the compilation and analysis of data provided by ICAO, IATA and Boeing. The ASR includes the following three main sections:

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 analysis of accident data provided from different sources ICAO, IATA and Boeing, in order to conclude the Focus Areas (main killers) in the MID Region. For harmonization purpose (with the ICAO Global and Regional Safety Reports), ICAO accident statistics have been used as the main source of data to calculate accident rates and monitor the progress of achieving the Regional Safety Targets as outlined in the MID Region Safety Strategy. However, safety data collected from other sources including IATA and Boeing was used also for the identification of Focus Areas, determination of contributing factors and root causes in order to support the development of mitigation measures.

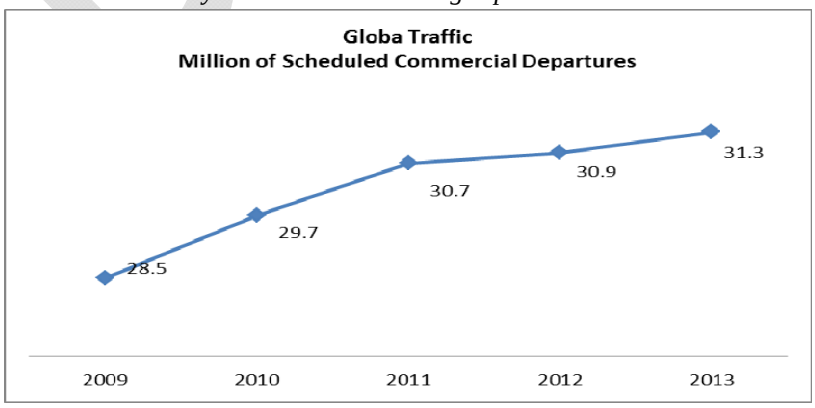
The proactive safety information is based on the results of the ICAO USOAP-CMA and IATA IOSA and ISAGO, as well as, other occurrences (Incidents) reported by states or airlines in order to identify emerging risks in the Region.

The aim of the predictive safety information is to collect and analyse safety data to proactively identify safety concerns before accidents or incidents occur, to develop timely mitigation and prevention measures. This section provides analysis of the implementation status of State Safety Programme (SSP) in the MID Region.

2.1 Traffic Volumes

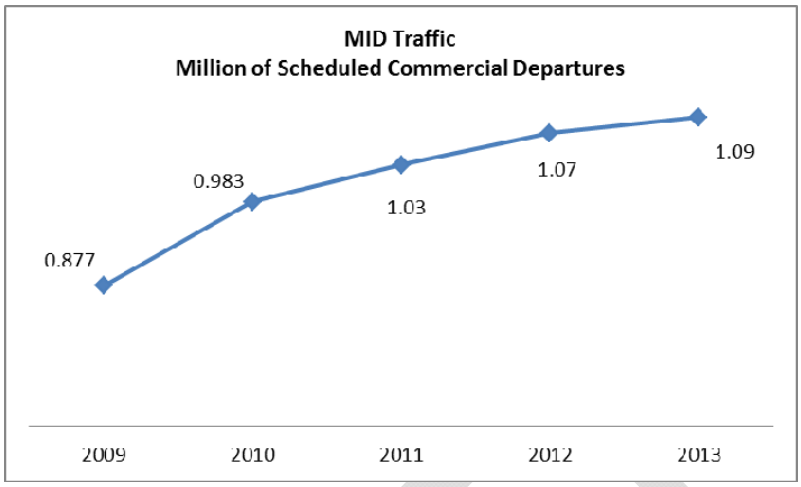
The global scheduled commercial international operations accounted for approximately 31.3 million departures in 2013, compared to 28.5 million departures in 2009.

Note:
The traffic data presented here is used by ICAO when estimating exposure to risk or when calculating accident rates.



Source: ICAO-iSTARS

The MID Region shows a stable growth in traffic volumes. Total scheduled commercial departures in 2013 included approximately 1.09 million departures compared to 0.877 million departures in 2009.



Source: ICAO-iSTARS

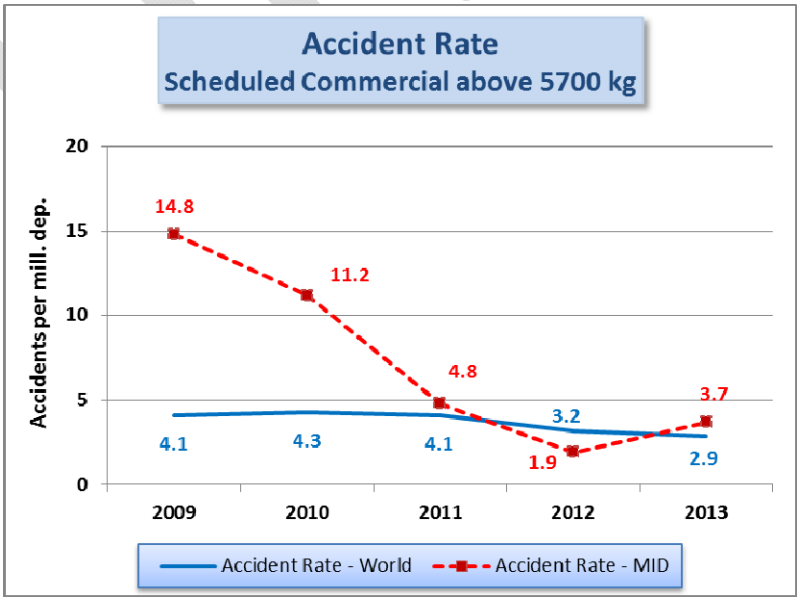
2.2 Accidents Rate

The year-over-year accident statistics indicate a reduction in the overall number of global accidents as well as the accident rate, a positive trend for air transportation safety. The average global accident rate for the period 2009-2013 is 3.72 accidents per million departures.

The average accident rate in the MID Region for the same period (2009-2013) is 7.28.It's also to be highlighted that the MID Region witnessed a reduction of 75% in accidents rate in 2013 compared to 2009. However, compared to 2012, the MID Region registered an increase of 194.7% in the accidents rate.

Note:

The accident data presented here is the official ICAO accident statistics, used for the development of the ICAO safety reports. The data is based on scheduled commercial operations involving aircraft having a Maximum Take-off Weight (MTOW) above 5700 kg.

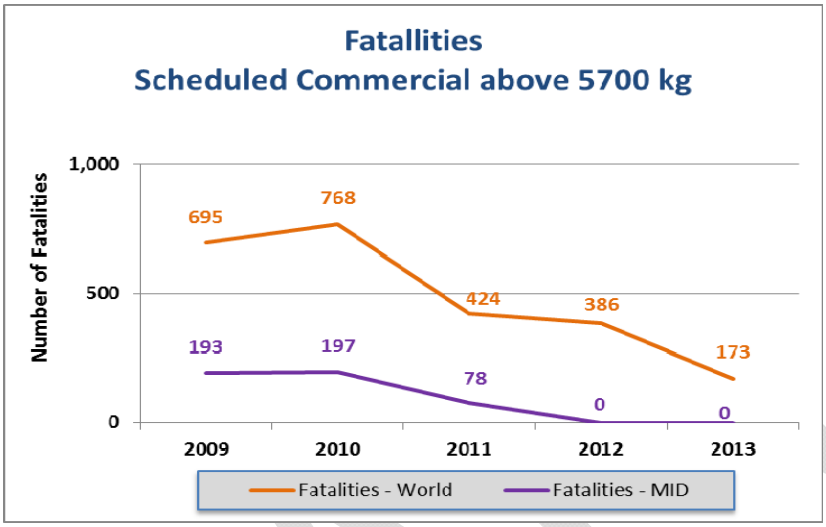


Source: ICAO-iSTARS

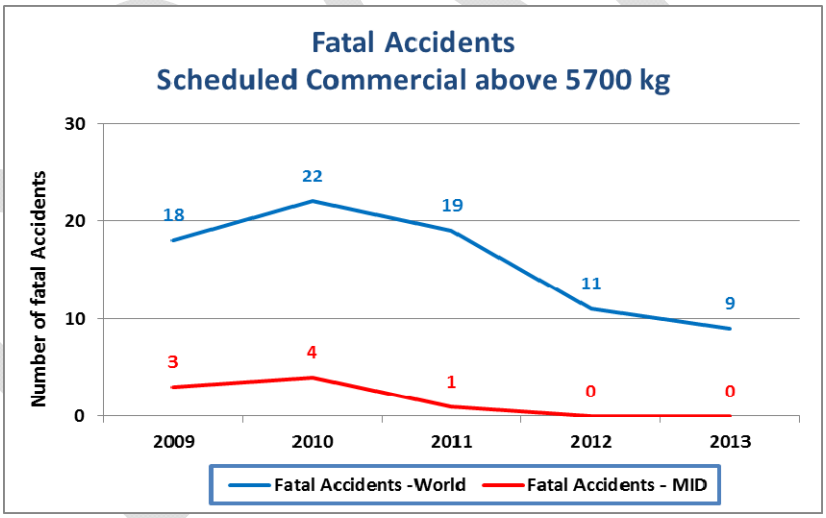
2.3 *Fatalities*

In terms of fatalities, the 173 fatalities in 2013 represent the least number of fatalities in commercial scheduled air transport since the year 2000. When compared to previous years, the number of fatalities in 2013 represents a decrease of 53% from 2012 and is 65% below the average number of fatalities over the previous five year period.

The MID Region is considered the safest in term of fatalities with ZERO fatal accidents in 2012 and 2013.



Source: ICAO-Istars



Source: ICAO-iSTARS

2.4 *Bottom Line*

1. The MID Region witnessed a stable and continuous growth in traffic volumes (1.09 million departures in 2013 compared to 0.877 million departure in 2009).
2. The accidents rate in the MID Region has been decreasing continuously since 2009 to 2012 from 14.8 to 1.9 accidents per million departures, which is below the global rate 3.2.
3. In 2013, the accidents rate in the MID Region increased to 3.7 (approximately twice the rate in 2012), which is above the global rate 2.9.
4. The MID Region is the safest ICAO Region in terms of fatalities (no fatal accidents in 2012 and 2013).

3. Reactive Safety Information

The ICAO accident statistics, which are used for the development of the ICAO Safety Reports, is used also to calculate accident rates and monitor the progress of achieving the Safety Targets outlined in the MID Region Safety Strategy.

It should be highlighted that the analysis of safety data collected from other sources including IATA and Boeing was taken into consideration for the identification of Focus Areas, determination of contributing factors and root causes in order to support the development of appropriate mitigation measures.

It's to be highlighted that there are differences in the safety information provided by the participating organizations (ICAO, IATA and Boeing) due to the use of different criteria and classifications of accidents.

As part of the reactive safety information, statistical data related to Serious Incidents occurred in the MID Region is provided in this section.

This section also provides the progress of achieving the Safety Targets included in the MID Region Safety Strategy.

3.1 ICAO Data

ICAO's primary indicator of safety in the global air transport sector is the accident rate based on scheduled commercial operations involving aircraft having a Maximum Take-off Weight (MTOW) above 5700 kg. Exposure data is comprised of scheduled commercial operations that involve the transportation of passengers, cargo and mail for remuneration or hire, and is a preliminary estimate solely for the calculation of the accident rates.

ICAO iSTARS (ADREP et al.) application contains an aggregation of different accident and incident data sources including ADREP, Aviation Safety Network and Aviation Herald. This application provides the official ICAO accident statistics used for the development of the ICAO Safety Reports.

The main part of this section provides analysis of the accidents that occurred in the MID Region (State of Occurrence) for the period (2009-2013), which provides the official accident data used for monitoring the progress of achieving the Safety Targets in the MID Region Safety Strategy.

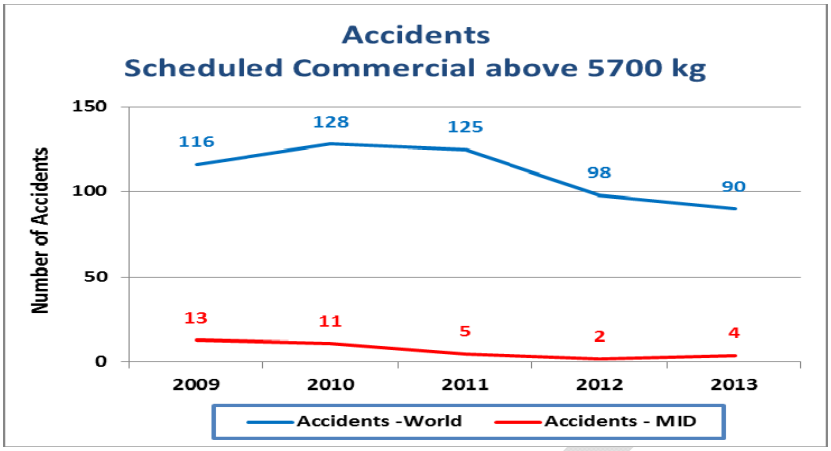
In addition, it provides statistical information concerning accidents of aircraft registered in the MID Region (State of Registry) as well as for the MID air operators (State of the Operator) using the same criteria mentioned above.

Note:
According to ICAO Annex 13 (Aircraft Accident and Incident Investigation):
***State of Occurrence** is the State in the territory of which an accident or incident occurs.*
***State of the Operator** is the State in which the operator's principal place of business is located or, if there is no such place of business, the operator's permanent residence.*
***State of Registry** is the State on whose register the aircraft is entered.*

3.1.1 Regional Accident Statistics (State of Occurrence)

(a) Total Number of Accidents

According to the chart below, a total number of 35 accidents occurred in the MID Region during the period 2009-2013 whereas a total of 557 accidents occurred worldwide.



The tables below provide a comparison of the accident numbers and rates as well as the fatalities between the world and the MID Region. The MID Region is considered the safest in terms of fatalities (no fatal accidents in 2012 and 2013)

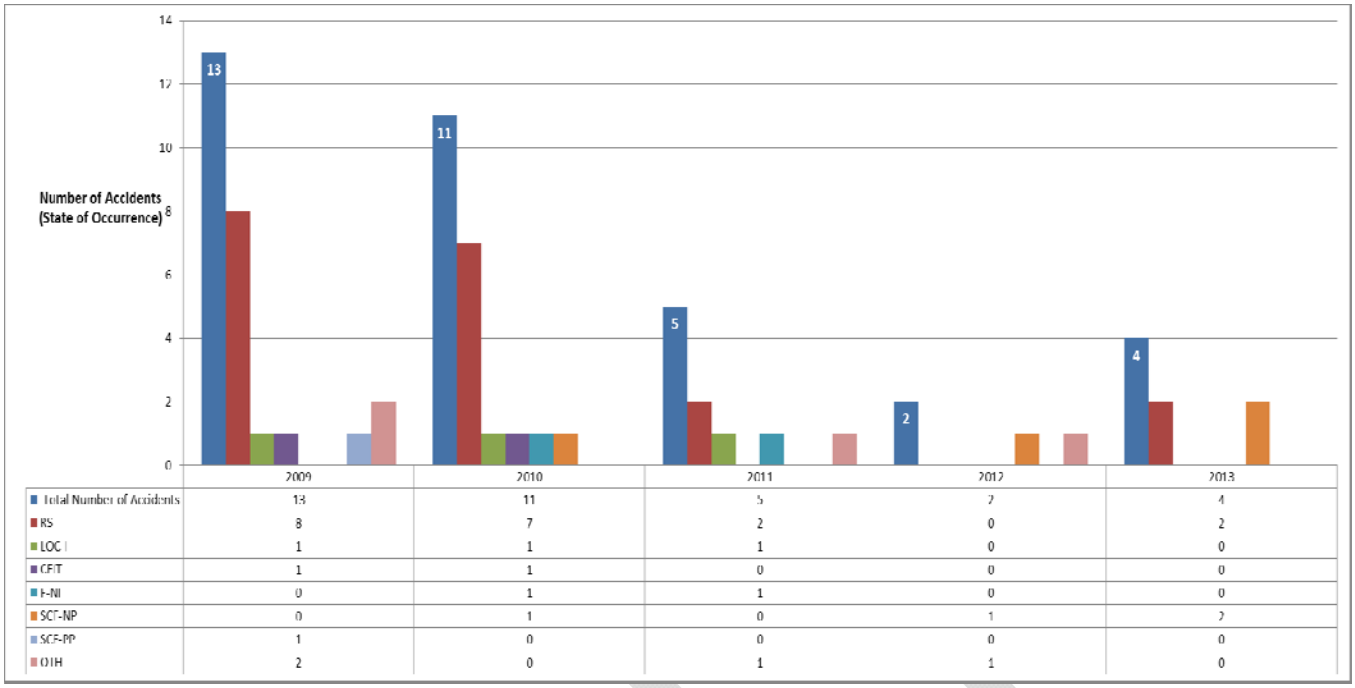
Year		2009	2010	2011	2012	2013
MID	**Accident Nr.**	13	11	5	2	4
	Accident rate	14.8	11.2	4.8	1.9	3.7
World	**Accident Nr.**	116	128	125	98	90
	Accident rate	4.1	4.3	4.1	3.2	2.9

Year	2009	2010	2011	2012	2013
MID-Fatalities	193	197	78	0	0
World-Fatalities	695	768	424	386	173

Year	2009	2010	2011	2012	2013
MID-Fatal Accident	3	4	1	0	0
MID Rate	3.4	4.1	0.97	0	0
World-Fatal Accident	18	22	19	11	9
World Rate	0.63	0.74	0.62	0.36	0.29

(b) In Depth Analysis

The chart below shows the total number of accidents and accidents categories that occurred in the MID Region during the period (2009-2013). It's to be highlighted that 25 out of 35 accidents involved aircraft registered in the MID Region (22 out of these 25 belong to Air Operators in the MID Region).



	2009	2010	2011	2012	2013
Total Number of Accidents	13	11	5	2	4
RS	8	7	2	0	2
LOC I	1	1	1	0	0
CFIT	1	1	0	0	0
F-NI	0	1	1	0	0
SCF-NP	0	1	0	1	2
SCF-PP	1	0	0	0	0
OTH	2	0	1	1	0

Note: *For safety reporting, and in accordance with ADREP/ECCAIRS Taxonomy:*

RS: *Runway Safety, ICAO has grouped the following Occurrence Categories in RS:* ***ARC*** *(Abnormal Runway Contact),* ***CTOL*** *(Collision with obstacle(s), during take-off and landing),* ***USOS*** *(Undershoot/Overshoot),* ***ADRM*** *(Aerodrome)* ***BIRD*** *(Birdstrike),* ***GCOL*** *(Ground Collision),* ***RAMP*** *(Ground Handling),* ***LOC-G*** *(Loss of Control-Ground),* ***RE*** *(Runway Excursion) and* ***RI*** *(Runway Incursion).*

LOC-I: *Loss of Control –Inflight, loss of aircraft control while or deviation from intended flight path inflight.*

CFIT: *Controlled Flight Into or Toward Terrain, Inflight collision or near collision with terrain, water, or obstacle without indication of loss of control.*

F-NI: *Fire/Smoke (Non-Impact), fire or smoke in or on the aircraft, in flight or on the ground, which is not the result of impact.*

SCF-NP: *System/Component Failure or Malfunction (Non-Powerplant), failure or malfunction of an aircraft system or component - other than the Powerplant.*

SCF-PP: *System/Component Failure or Malfunction (Powerplant), failure or malfunction of an aircraft system or component - related to the Powerplant.*

OTH: *Other, any occurrence not covered under another category.*

UNK: *Unknown or Undetermined, insufficient information exists to categorize the occurrence.*

The MID Region witnessed 7 fatal accidents in the period (2009-2011); however, no fatal accident accrued in the MID Region in 2012 and 2013:

	Number of fatal Accidents	Risk Category	No of Fatalities	Aircraft registered in the MID Region	Air Operator in the MID Region
2009	3	1 LOC-I	6	Yes	Yes
		1 CFIT	168	Yes	Yes
		1 RS	19	No	No
2010	3	1 LOC-I	90	No	No
		1 CFIT	103	Yes	Yes
		1 F-NI	2	No	No
2011	1	1 LOC-I	78	Yes	Yes
2012	None				
2013	None				

Based on an in-depth analysis of the ICAO accidents statistics for the MID Region, the following is highlighted:

a) In terms of frequency, the most frequent accidents in the MID Region for the period 2009- 2013 are:
   1. Runway Safety (RS)
   2. System/Component Failure-Non-Power plant (SCF-NP)
   3. Loss of Control –Inflight (LOC-I)
   4. Controlled Flight Into Terrain (CFIT)
   5. Fire/Smoke, Non-Impact (F-NI)

b) In terms of fatality, the top three fatal accident categories in the MID Region for the period 2009 – 2013 are:
   1. LOC-I
   2. CFIT
   3. RS
   4. F-NI

c) The distribution of the Runway Safety related accidents (19), is as follows:
   i. 7 Runway Excursion (RE) (36.8%)
   ii. 7 Abnormal Runway Contact (ARC) (36.8%)
   iii. 2 Ground Handling (RAMP) (10.5%)
   iv. 2 Ground Collision (GCOL) (10.5%)
   v. 1 Loss of Control-Ground (LOC-G) (5.2%)

In order to facilitate the identification and prioritization of the main Regional Focus Areas (FAs), the RASG-MID/3 meeting agreed that the accidents are categorized in terms of frequency and severity. The severity assessment is based on the fatalities, injuries and damage to aircraft, property and equipment. The level of severity is categorized as follows:

1. Catastrophic: multiple deaths; serious damage to aircraft/equipment (destroyed).
2. Major: serious injury/fatalities; major aircraft/equipment damage;
3. Minor: little consequences.

Accordingly, the following matrix, endorsed by the RASG-MID/3 meeting, shows the assessment for the top accidents categories;

Frequency / Severity	1	2	3	4	5	6
1	1	2	3	4	5	6
2	2	4	6	8	10	12
3	3	6	9	12	15	18

Accident Category	Frequency	Severity	Frequency x Severity
RS	1	2	2
SCF-NP	2	3	6
LOC-I	3	1	3
CFIT	4	1	4
FN-I	5	3	15

In accordance with the matrix above and based on the analysis of the ICAO data, the priorities in the MID Region should be:

1) RS
2) LOC-I
3) CFIT
4) SCF-NP

It's to be highlighted that the regional priorities (RS, LOC-I and CFIT) are in line with the global priorities as outlined in the ICAO Global Aviation Safety Plan (GASP). The following tables provide a comparison between the global and regional trends related to these priorities, including accidents numbers and rates and number of fatalities for the period (2009-2013).

Runway Safety (RS)

Year		2009	2010	2011	2012	2013
MID	**Accident Nr.**	8	7	2	0	2
	Accident rate	9.1	7.1	1.9	0	1.8
World	**Accident Nr.**	61	71	68	43	56
	Accident rate	2.1	2.4	2.2	1.4	1.8

Year	2009	2010	2011	2012	2013
MID-Fatalities	19	2	0	0	0
World-Fatalities	26	179	28	1	11

LOC-I

Year		2009	2010	2011	2012	2013
MID	**Accident Nr.**	1	1	1	0	0
	Accident rate	1.1	1.01	0.93	0	0
World	**Accident Nr.**	3	3	4	1	3
	Accident rate	0.1	0.1	0.1	0	0.1

Year	2009	2010	2011	2012	2013
MID-Fatalities	6	90	78	0	0
World-Fatalities	287	112	122	31	104

CFIT

Year		2009	2010	2011	2012	2013
MID	**Accident Nr.**	1	1	0	0	0
	Accident rate	1.1	1.01	0	0	0
World	**Accident Nr.**	4	4	5	3	2
	Accident rate	0.1	0.1	0.2	0.1	0.1

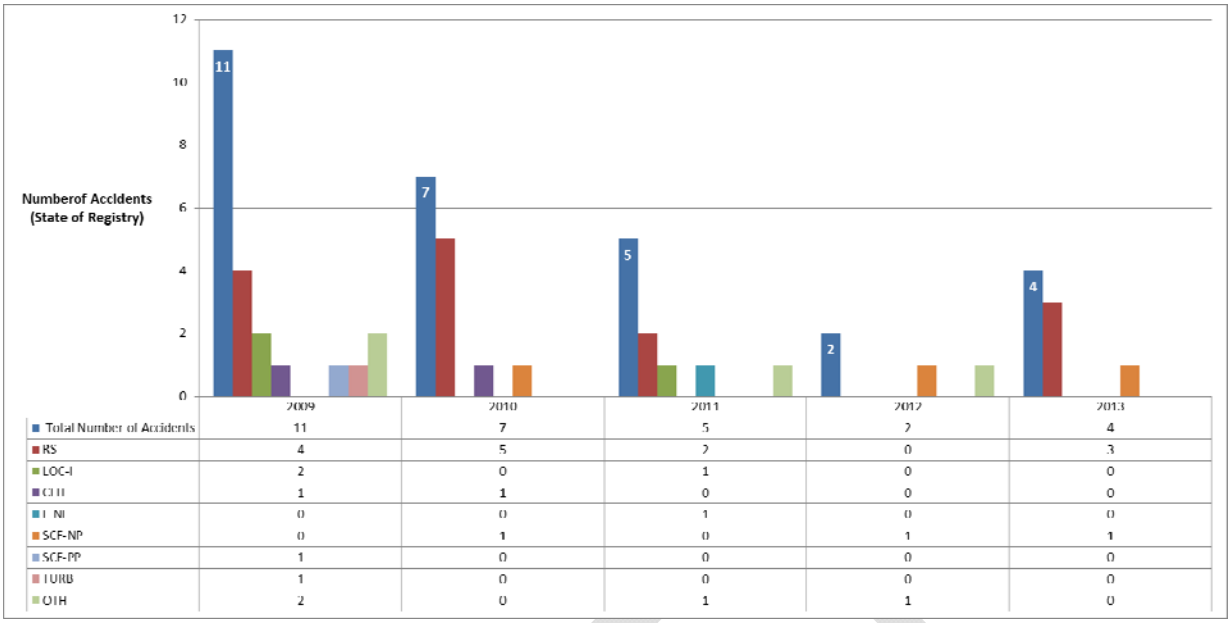
Year	2009	2010	2011	2012	2013
MID-Fatalities	168	103	0	0	0
World-Fatalities	9	204	131	139	23

3.1.2 Regional Accident Statistics (State of Registry)

ICAO data shows that 29 is the total number of accidents that involved aircraft registered in the MID States for the period 2009 - 2013. 25 out of these 29 accidents occurred in the MID Region as indicated in Section 3.1.1 above. The remaining 4 accidents (3 in 2009 and 1 in 2013) involved aircraft registered in the MID Region; however, they occurred outside the Region, as follows:

	Risk Category	Fatalities
2009	RS	None
	LOC-I	152
	TURB (Turbulence Encounter)	None
2013	RS	None

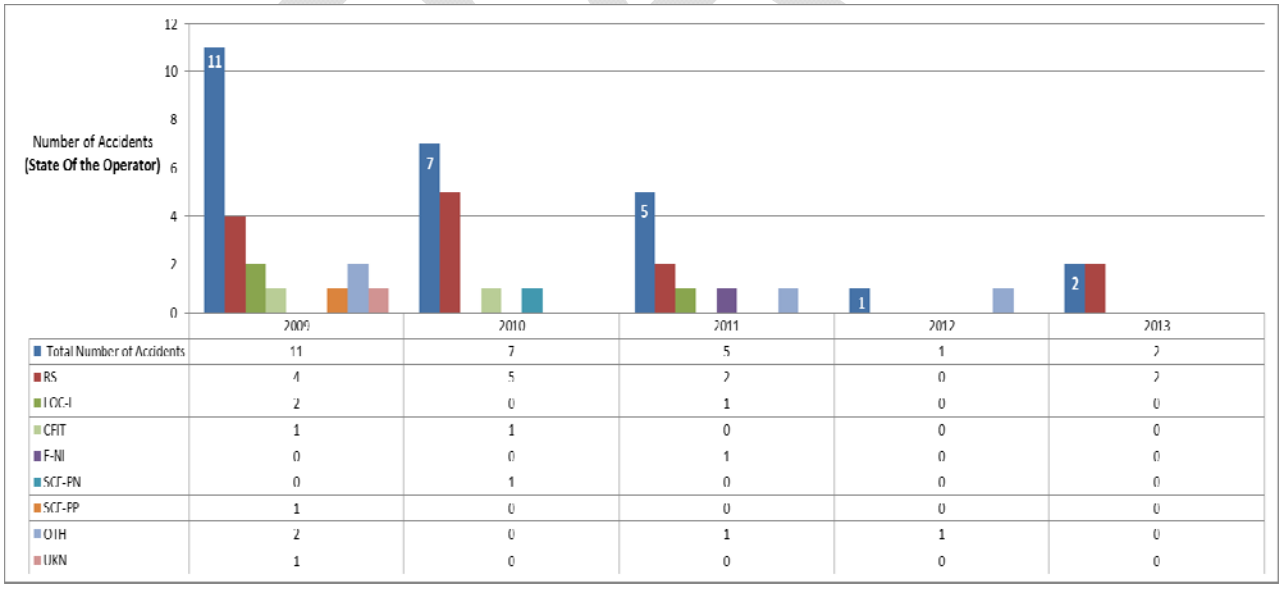
Accordingly, the distribution of risk categories based on accidents involving aircraft registered in the MID Region is shown in the chart below:



	2009	2010	2011	2012	2013
Total Number of Accidents	11	7	5	2	4
RS	4	5	2	0	3
LOC-I	2	0	1	0	0
CFIT	1	1	0	0	0
F-NI	0	0	1	0	0
SCF-NP	0	1	0	1	1
SCF-PP	1	0	0	0	0
TURB	1	0	0	0	0
OTH	2	0	1	1	0

3.1.3 Regional Accident Statistics (State of the Operator)

ICAO data shows that 26 is the total number of accidents that involved aircraft belonging to Air Operators in the MID Region for the period 2009-2013.
2 out of the 26 accidents occurred outside the MID Region and 4 with aircraft registered out the Region as well. The chart below shows the distribution of risk categories based on accidents involving MID Air Operators:



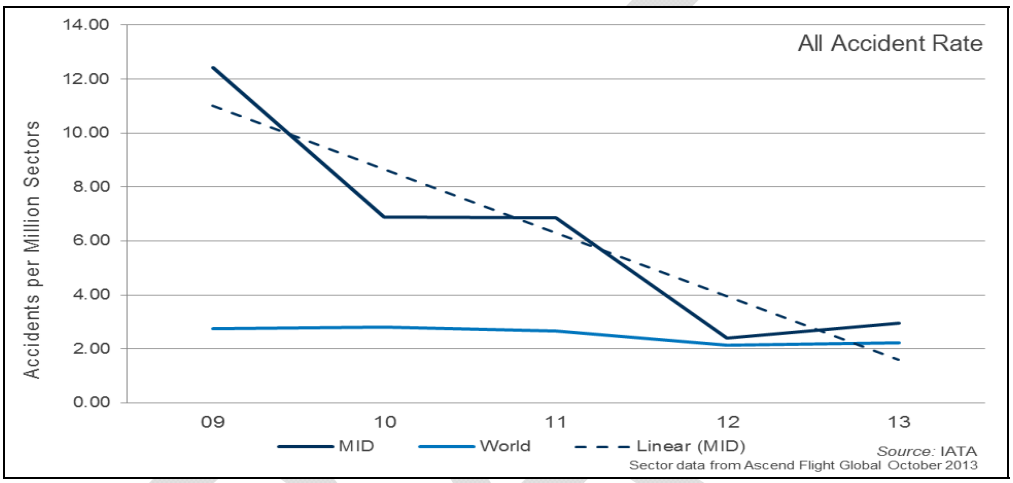
	2009	2010	2011	2012	2013
Total Number of Accidents	11	7	5	1	2
RS	4	5	2	0	2
LOC-I	2	0	1	0	0
CFIT	1	1	0	0	0
F-NI	0	0	1	0	0
SCF-PN	0	1	0	0	0
SCF-PP	1	0	0	0	0
OTH	2	0	1	1	0
UKN	1	0	0	0	0

3.2 IATA Data

To calculate the regional accident rates, IATA determines the accident region based on the operators country. Moreover, the operator's country is specified in the operator's Air Operator Certificate (AOC). For example, if a French-registered operator has an accident in the MID region, this accident is counted as "European" accident as far as regional accident rates are concerned.

Moreover, the IATA accidents database captures operational accidents for aircraft with maximum take-off weight (MTOF) 5,700 KG which happen during a commercial operation – operation including flights listed as a scheduled or unscheduled passenger or cargo flight, or positioning flights). Non-operational accidents are excluded (military, human relief, test flights, training…etc). The data below, captures accident information for the time period 2009 – 2013 and is narrowed down to the MID States.

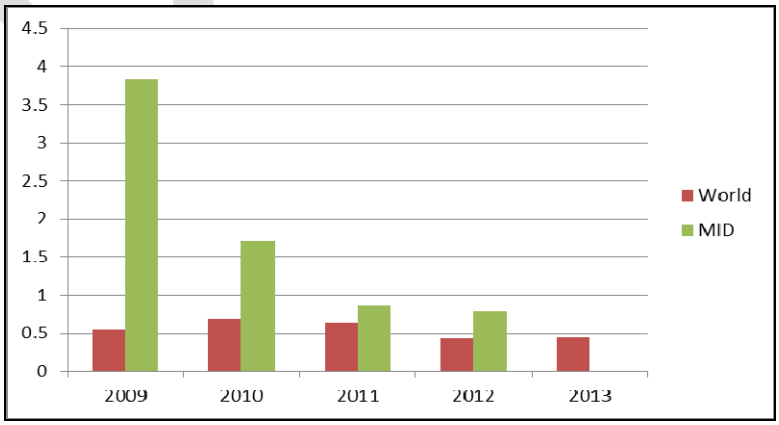
3.2.1 **Regional Accidents Rates** (Per million departures)



3.2.2 **Regional Fatal Accident Rates** (Per million departures)

World	09	10	11	12	13
World	0.55	0.68	0.64	0.43	0.44

MID	09	10	11	12	13
MID	3.83	1.72	0.86	0.79	0.00

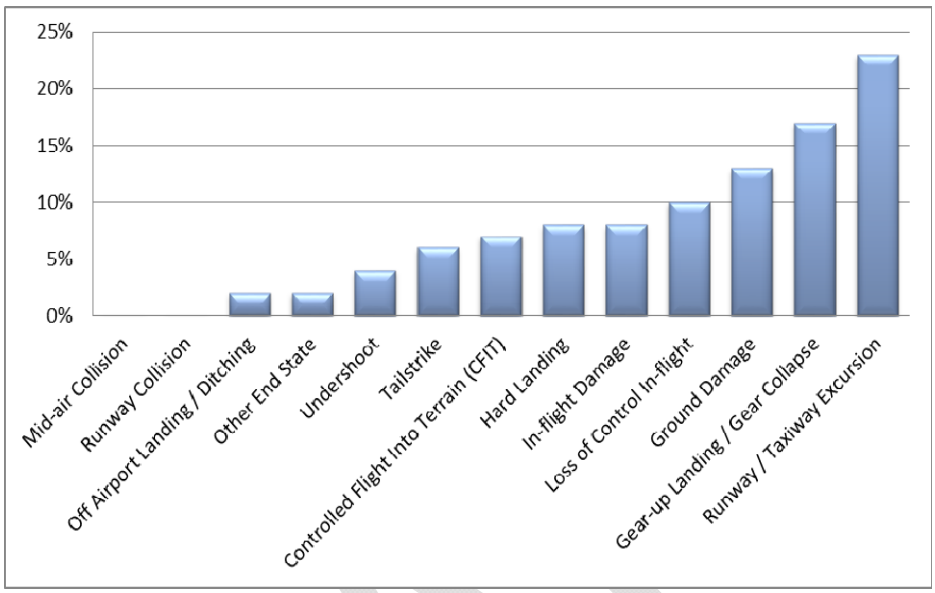


3.2.3 Analysis of MID Accidents between 2009 and 2013

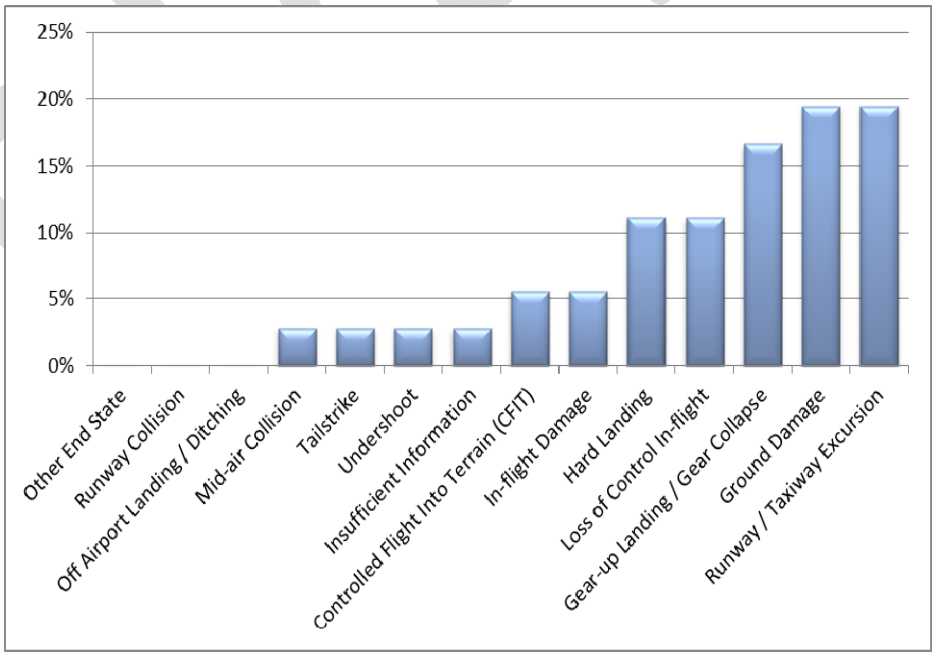
This analysis provides an overview of the accidents between 01 Jan 2009 and 31 Dec 2013.

3.2.3.1 Accidents categories and analysis

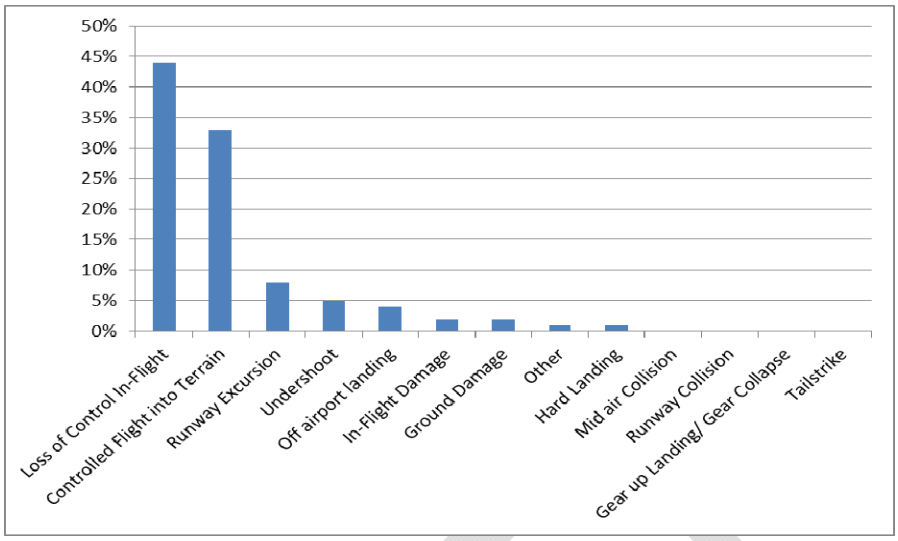
(a) World Accident Categories: 2009-2013



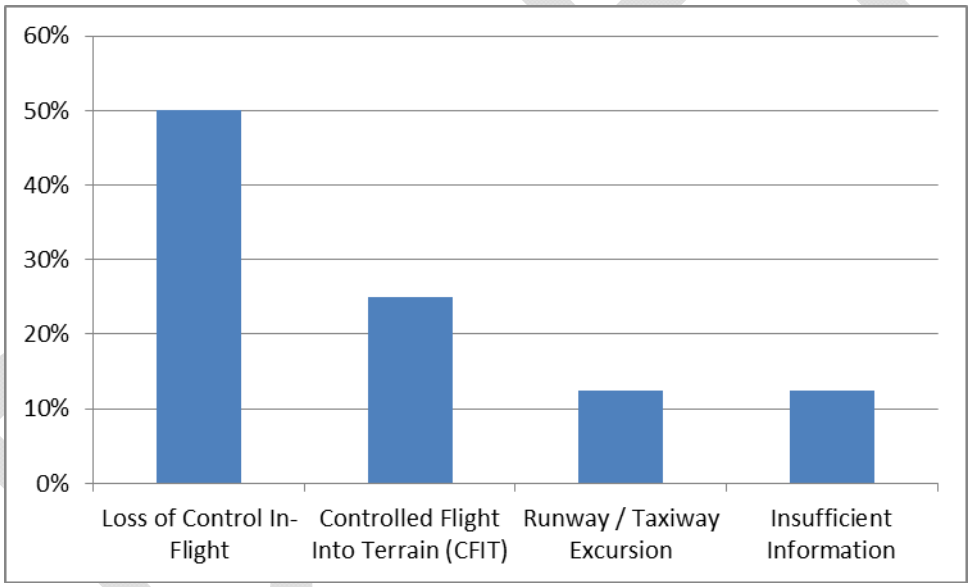
(b) MID Accident Categories: 2009-2013



(e) World Fatal Accident Categories (2009 – 2013)



(f) MID Fatal Accident Categories (2009 - 2013)



(g) IATA In-Depth Analysis of MID accidents

Taking a more in-depth look at the IATA accidents statistics for the MID Region (2009-2013), the following observations are made;

a) In terms of frequency, the most frequent accidents categories in the MID Region for the period 2009 – 2013 are;
   1. Runway / Taxiway Excursions
   2. Ground Safety
   3. Gear-up Landing / Gear Collapse
   4. Loss of Control Inflight
   5. Hard Landing

b) In terms of fatality, the top three fatal accidents categories in the MID Region for the period 2009 – 2013 are;
   1. LOC-I
   2. CFIT
   3. Runway/Taxiway Excursions

c) Top four flight phases when fatal accidents occur in the MID Region are Go-around (GOA), Take off (TOF), Engine Start/Depart (ESD) and Landing (LND).

d) To facilitate the identification of the safety priority areas; the accidents data has been analysed in terms of frequency and severity using the below risk matrix (for Frequency rating: 1 is the most frequent and 6 is the least frequent. For Severity: 1 is the most severe and 3 is the least severe):

Accident Category	Frequency	Severity	Frequency*Severity
Runway/ Taxiway Excursion	1*	2	2
Ground Safety	1*	3	3
Gear up Landing / Gear Collapse	3	3	9
Hard Landing	4	3	12
Loss of Control In Flight	5	1	5
Controlled Flight Into Terrain	6	1	6

** Note: Runway/ Taxiway Excursion and Ground Safety were rated the same because they had the same number of accidents throughout the period 2009 - 2013*

e) Based on the above risk matrix, priority was given to the categories which scored 6 or below. Therefore, the safety priority areas according to IATA's accidents data are:
   i. Runway/ Taxiway Excursion
   ii. Ground Safety
   iii. Loss of Control In Flight (LOC-I)
   iv. Controlled Flight Into Terrain (CFIT)

f) Below is an in-depth analysis for each of the priority areas identified by IATA for the MID Region covering the period 2009 till 2013:

Runway Excursion

1. Trend 2009 to 2013

Region		09	10	11	12	13
MID	Accident rate	1.91	0.86	2.57	0.79	0.00
	# Accidents	2	1	3	1	0
World	Accident rate	0.70	0.59	0.49	0.60	0.47
	# Accidents	23	20	17	21	17

2. Severity of outcomes

Accident Fatal	
Fatal	1
Non Fatal	6
Total Fatalities	16

3. Contributing factors:

i. Errors related to Manual Handling/ Flight controls
ii. Errors related to SOP adherence/ SOP cross verification
iii. Continued landing after unstable approach
iv. Long/floated/bounced/firm/off-center/crabbed landing
v. Unstable approach
vi. Overall crew performance

Ground Safety

1. Trend 2009 to 2013

Region		09	10	11	12	13
MID	Accidents rate	0.96	1.72	0.86	0.00	2.20
	# Accidents	1	2	1	0	3
World	Accidents rate	0.27	0.30	0.43	0.23	0.33
	# Accidents	9	10	15	8	12

2. Severity of outcomes

Accident Fatal	
Fatal	0
Non Fatal	7
Total Fatalities	0

Level of Damage	
Hull Loss	1
Substantial Damage	6

3. Contributing factors:

i. Deficiencies in Regulatory Oversight
ii. Errors related to Crew to External Communication
iii. Errors related to SOP Adherence/ SOP cross verification
iv. Overall crew performance

Loss of Control In-flight (LOC-I)

1. Trend 2009 to 2013

Region		09	10	11	12	13
MID	Accidents rate	2.87	0.00	0.86	0.00	0.00
	# Accidents	3	0	1	0	0
World	Accidents rate	0.27	0.30	0.23	0.17	0.22
	# Accidents	9	10	8	6	8

2. Severity of outcomes

Accident Fatal	
Fatal	4
Non Fatal	0
Total Fatalities	404

3. Contributing factors:

   i. Aircraft Malfunction: Contained Engine Failure/ Power plant Malfunction
   ii. Overall crew performance

Controlled Flight into Terrain (CFIT)

1. Trend 2009 to 2013

Region		09	10	11	12	13
MID	Accidents rate	0.00	0.86	0.00	0.79	0.00
	# Accidents	0	1	0	1	0
World	Accidents rate	0.06	0.21	0.29	0.17	0.17
	# Accidents	2	7	10	6	6

2. Severity of outcomes

Accident Fatal	
Fatal	2
Non Fatal	0
Total Fatalities	135

3. Contributing factors:

   i. Deficiencies in Safety Management
   ii. Poor visibility/ IMC
   iii. Ground-based nav-aid malfunction or not available

3.3 Other Data

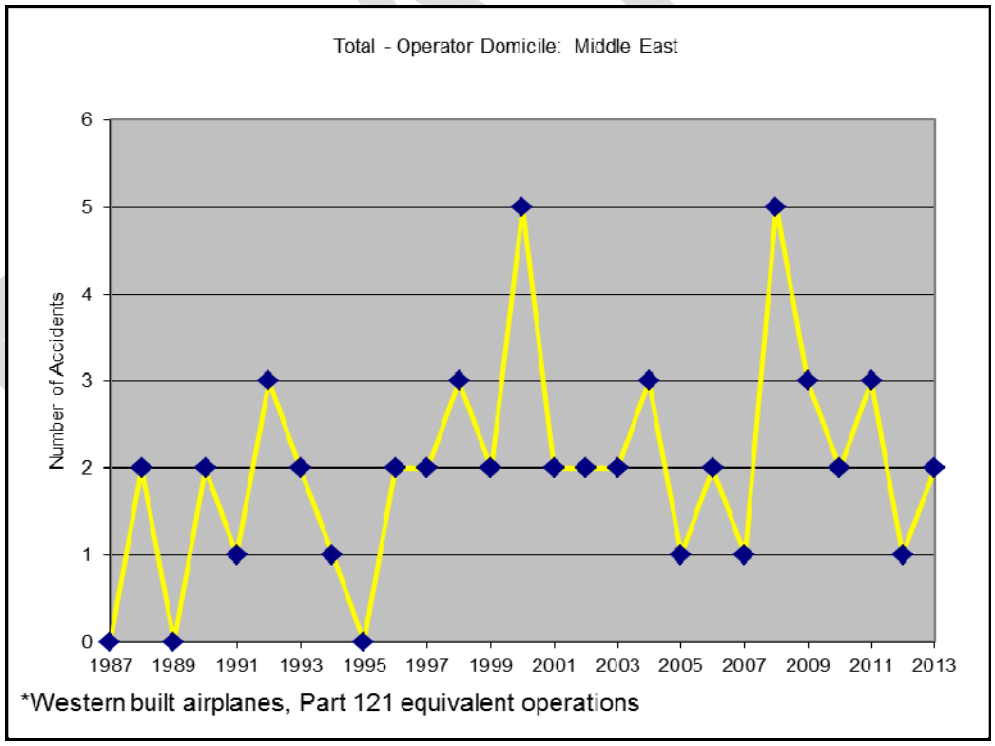
3.3.1 Boeing Data

Boeing safety data comes from the accident set which CAST (Commercial Aviation Safety Team) compiles each year. The accident set includes the following:

a) Worldwide hull loss of Western Built airplanes
b) Accidents are grouped per state of registry as per the ICAO MID region
c) Operations covered in the analysis includes the below criteria:
   i. All commercial passenger operations (scheduled or non-scheduled) as long as the number of passenger seats exceeds 9
   ii. Cargo operations are included (assuming the plane meets the 7500lb requirement)
   iii. Military-operated planes are excluded. Contracted military cargo flights (i.e. on a commercial operator) are included)
   iv. Transport of military/paramilitary/peacekeeping forces and workers on non-military planes are included as part of the 121 equivalent (>9 passengers)
   v. Company owned planes transporting their own employees are not included
   vi. Chartered planes are included

3.3.1.1 Number of accidents:

The Chart below shows the total number of accidents for the period (1987-2013)



3.3.1.2 Fatality risk per type of accident:

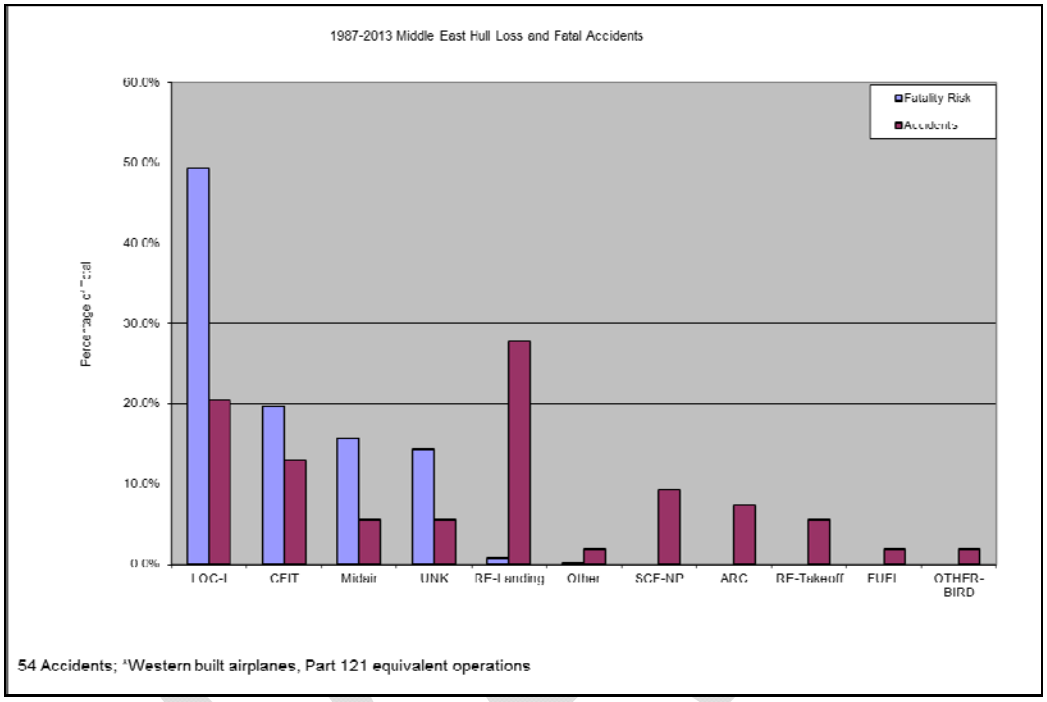
The chart below illustrated that in terms of frequency, the most frequent accidents in the MID Region for the period are:

i. Runway Excursions (landing)
ii. LOC-I

iii. CFIT
iv. Mid-air collision

In terms of fatality, the top three fatal accidents categories are:

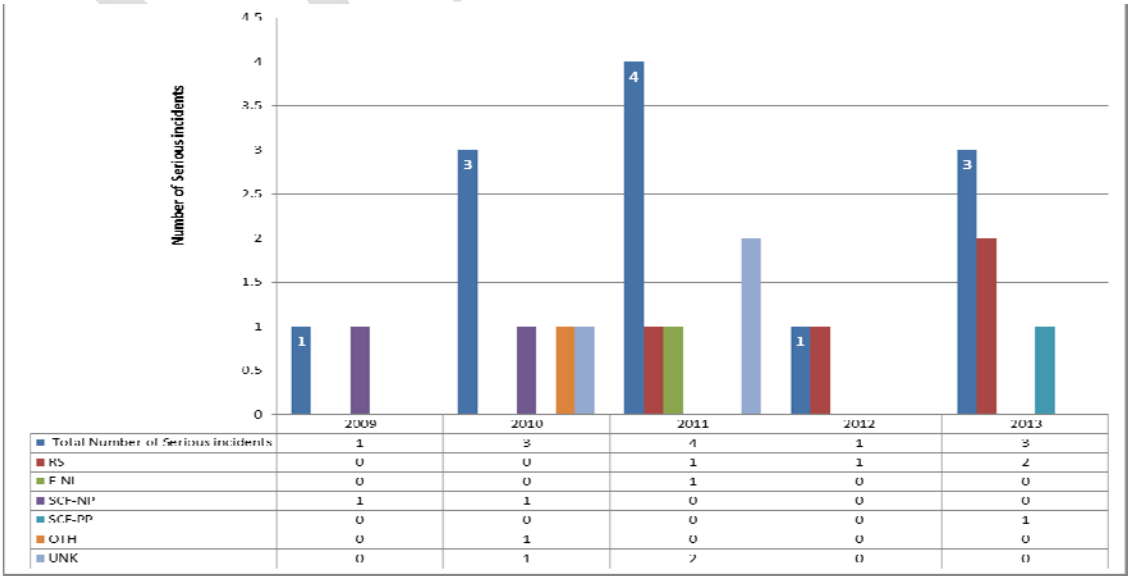
1. LOC-I
2. CFIT
3. Mid-air collision



3.3.2 Serious Incidents

Serious Incident is defined in ICAO Annex 13 as an incident involving circumstances indicating that an accident nearly occurred (examples of serious incidents can be found in Attachment D of ICAO Annex 13 and in the ICAO Accident/Incident Reporting Manual (ICAO Doc 9156)).

According to ICAO iSTARS (ADREP et al.), 12 Serious Incidents were reported during the period (2009-2013). The following chart shows the risk distribution for each year:



	2009	2010	2011	2012	2013
Total Number of Serious Incidents	1	3	4	1	3
RS	0	0	1	1	2
F-NI	0	0	1	0	0
SCF-NP*	1	1	0	0	0
SCF-PP	0	0	0	0	1
OTH	0	1	0	0	0
UNK	0	1	2	0	0

3.3.3 General Aviation

The MID Annual Safety Report Team (MID-ASRT) will be developing a section for the General Aviation in the future editions of the MID-ASR.

3.4 Identification of Focus Areas for MID Region

The identification of the Focus Areas takes into account the global priorities in addition to the regional specific needs arising from the analysis of the regional safety data provided by the different organizations (ICAO, IATA, and Boeing).

It should be noted that some differences have been identified between the safety information provided by the participating organizations (ICAO, IATA and Boeing) due to the use of different criteria and classifications of accidents.

There were two discrepancies identified between ICAO and IATA data sets, as follows:

1. One accident in 2009 was classified as CFIT in ICAO data whereas IATA classified the same accident as LOC-I; and

2. IATA data shows one CFIT accident in 2012; however, this accident is not included in ICAO data since it is related to unscheduled operation (ICAO criteria is based on scheduled commercial operations).

Based on the analyses of all accident data, it is concluded that the Focus Areas for the MID Region and their priorities are unchanged:

1. Runway Safety
2. Loss of Control Inflight (LOC-I)
3. Controlled Flight into Terrain (CFIT)

The identified Focus Areas for the MID Region are in line with the Global Priorities included in ICAO Global Aviation Safety Plan (GASP).

With respect to Runway Safety, it was concluded that Runway Excursion (RE) related accident is the most frequent accident category followed by Abnormal Runway Contact (ARC) and Ground Safety.

The following are the top contributing factors for each Focus Area:

Runway Safety

i. Errors related to Manual Handling/ Flight controls
ii. Errors related to SOP adherence/ SOP cross verification
iii. Unstable approach (continued landing after unstable approach)
iv. Long/floated/bounced/firm/off-center/crabbed landing
v. Deficiencies in Regulatory Oversight
vi. Errors related to Crew External Communication
vii. Overall crew performance

Loss of Control Inflight (LOC-I)

i. Aircraft Malfunction: including Engine Failure/ Power plant Malfunction
ii. Overall crew performance

Controlled Flight Into Terrain (CFIT)

i. Deficiencies in Safety Management
ii. Poor visibility/ IMC
iii. Ground-based nav-aid malfunction or not available

In addition to the identified Focus Areas, analysis of ICAO data identified the System/Component Failure or Malfunction (SCF), as one of the emerging risks in the MID Region. This is directly related to aircraft maintenance and airworthiness of aircraft.

Based on the Boeing data (1987-2013), Mid-air collision is identified as one of the frequent (Nr. 4) and fatal (Nr. 3) accident categories in the MID Region. In addition, the analysis of the ICAO data shows that some accidents and incidents that are classified OTH are related to near miss (Airprox/TCAS Alert or Loss of Separation), which if not addressed properly could lead to mid-air collisions. Therefore, near miss is identified as an emerging risk in the Region.

3.5 MID Region Safety Performance - Safety Indicators-Reactive

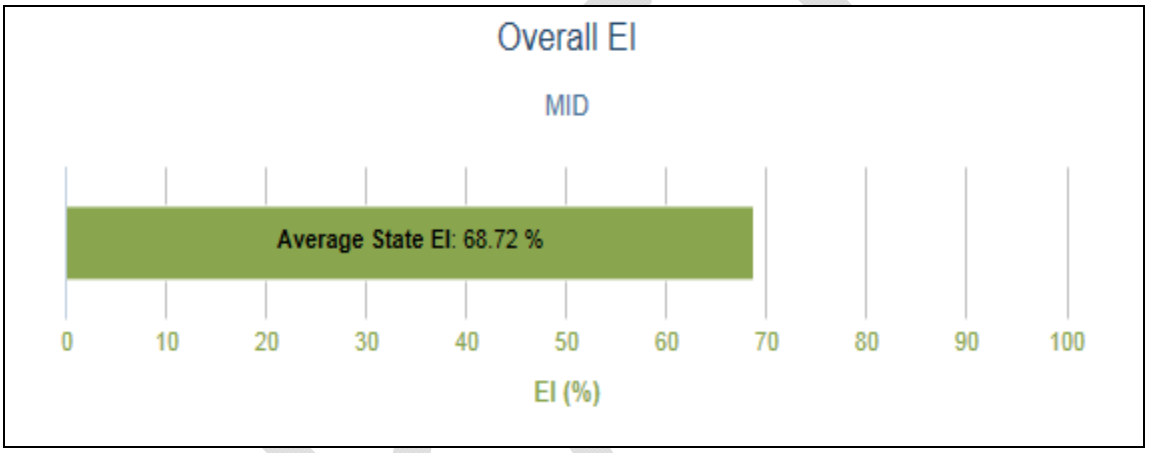
Safety Indicator	Safety Target	Global	MID	Remark
Number of accidents per million departures	Reduce the accident rate to be in line with the global average by the end of 2016	2013 (**2.9**) Av 2009-2013 (**3.72**)	2013 (**3.7**) Av 2009-2013 (**7.28**)	The Av MID accident rate is almost twice the global.
Number of fatal accidents per million departures	Reduce the rate of fatal accidents to be in line with the global average by the end of 2016.	2013 (**0.29**) Av 2009-2013 (**0.53**)	2013 (**0**) Av 2009-2013 (**1.69**)	The Av MID accident rate is almost three times the global rate. However, there are no fatal accidents in 2012 and 2013.
Number of Runway Safety related accidents per million departures	Reduce the Runway Safety related accidents to be below the global rate by end of 2016	2013 (**1.8**) Av 2009-2013 (**1.98**)	2013 (**1.8**) Av 2009-2013 (**3.98**)	The Av MID accident rate is almost twice the global rate. However, in 2013 the global and MID rates are exactly the same.
Number of Runway Safety related accidents per million departures	Reduce the Runway Safety related accidents to be less than 1 accident per million departures by end of 2016		**1.8** per million departures in 2013	
Number of LOC-I related accidents per million departures	Reduce the LOC-I related accidents to be below the global rate by end of 2016	2013 (**0.1**) Av 2009-2013 (**0.08**)	2013 (**0**) Av 2009-2013 (**0.61**)	Already below global rate for 2013
Number of CFIT related accidents per million departures	Maintain the CFIT related accidents below the global rate by end of 2016	2013 (**0.1**) Av 2009-2013 (**0.12**)	2013 (**0**) Av 2009-2013 (**0.42**)	Already below global rate for 2013

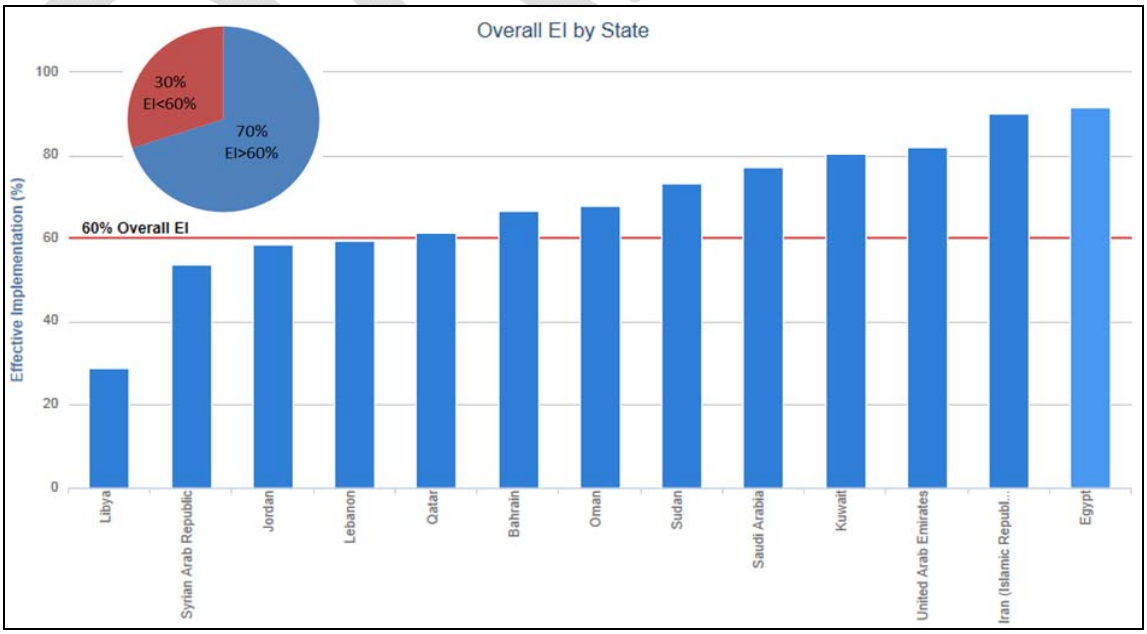
4. Proactive Safety Information

A mature safety management system requires the integration of reactive, proactive and predictive safety data. This section of the Annual Safety Report focuses on proactive safety data analysis to identify additional focus areas that form the basis for the development of SEIs and DIPs for Emerging Risks under RASG-MID.

4.1 ICAO USOAP-CMA

The average overall effective implementation (EI) of the audited States (13 out of 15 States have been audited) in the MID Region is 68.72%, which is above the world average 61.71 %. Since the effective launch of the Continuous Monitoring Approach in January 2013, the EI is continuously updated to reflect results from CMA activities including the ICAO Coordinated Validation Missions (ICVMs).

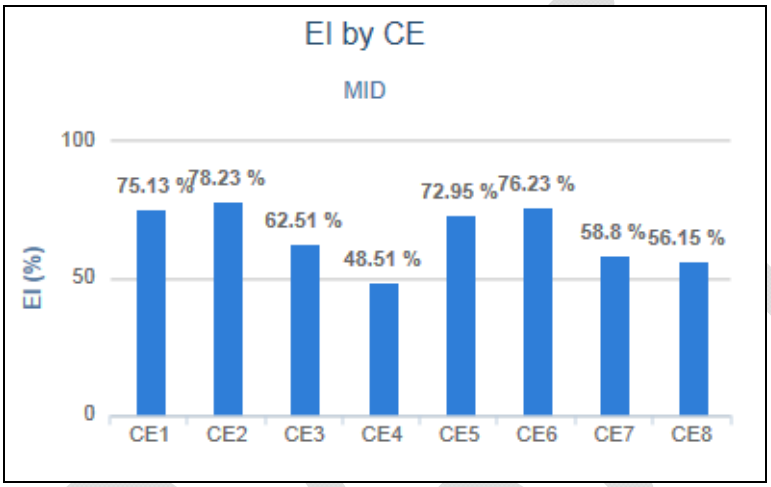


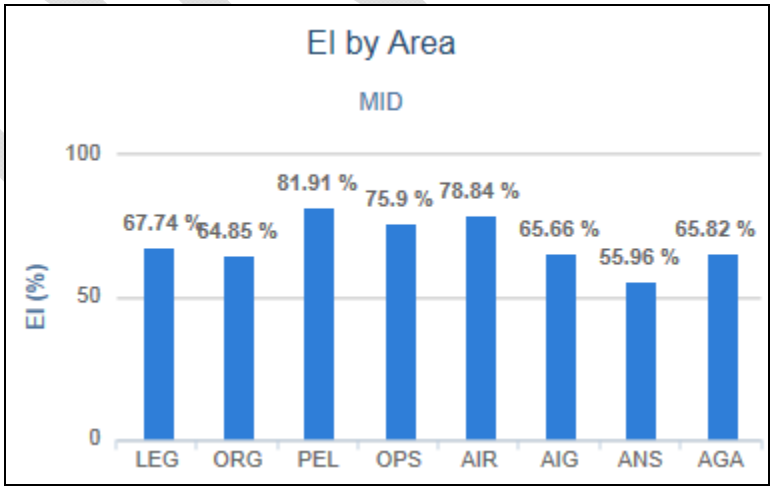


It should be noted that 9 out of 13 audited States with an overall EI over 60% include.

The results of the ICAO USOAP are presented to either show the Effective Implementation (EI) in reference to the eight critical elements (CEs) of the State's Safety Oversight System or the EI per Audit Areas. The lowest EI remains in CE4 (48.51%) related to Qualification and Training of Technical Staff involved in carrying out regulatory functions. Areas of PEL, OPS and AIR still show the highest EI in the MID Region.

Note: The EI values may differ slightly from those published in the USOAP audit reports that were published from the period 2006 to 2010 due to changes in the EI calculation algorithm as well as changes in the protocol question grouping structure performed since the State's audit.





4.2 IATA IOSA and ISAGO

4.2.1 IATA Operational Safety Audit (IOSA)

IOSA is an internationally recognized and accepted evaluation system designed to assess the operational management and control systems of an airline. It is worth mentioning that all MID accidents rate among non-IOSA registered operators was above the world average by an average of 8.61.

The IOSA program covers 8 areas including: Organization and Management System (ORG), Maintenance (MNT), Cargo (CGO), Security (SEC), Flight Operations (FLT), Dispatch (DSP), Cabin Safety (CAB) and Ground Handling Operations (GRH).

The IOSA audit results analysis captured under this section cover the period between February and December 2012. A summary of the IOSA audit findings is as follows:

1. 11 audits were performed in the MENA region with an average of 2.8 findings per audit.
2. Findings were mainly in the areas of Organization and Management System (ORG), Maintenance (MNT), Cargo (CGO), Security (SEC), and Flight Operations (FLT). Top non-conformances can be summarized per area as follows:

#	Area	Top findings
1	Organization & Management System (ORG)	Identification of the Accountable Executive Documentation management and control processes Contracts management processes
2	Maintenance (MNT)	Airworthiness of used parts
3	Cargo (CGO)	Dangerous goods information display
4	Security (SEC)	Corporate security policy Management and control of documentation under the security program Security training program
5	Flight Operations (FLT)	Continuing qualification training schedule Normal and non-normal procedures and maneuvers flight crew training Operator proficiency evaluation for flight crew members Wind shear avoidance and recovery flight crew training Terrain awareness and procedures flight crew training TCAS and ACAS procedures training

4.2.2 IATA Safety Audit for Ground Operations (ISAGO)

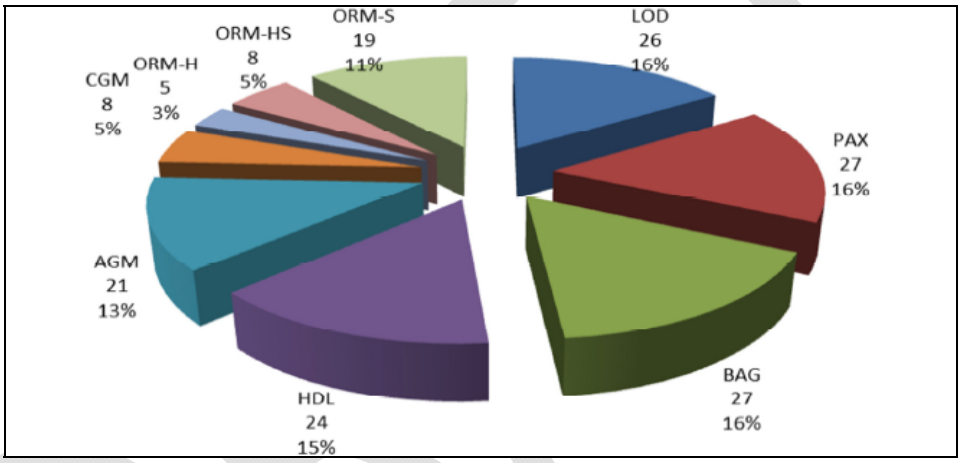
ISAGO implementation aims at improving ground safety and cutting the airlines' costs by drastically reducing the ground accidents and injuries.

The ISAGO program has 9 sections including: Load control (LOD), Passenger handling (PAX), Baggage handling (BAG), Aircraft Handling & Loading (HDL), Aircraft Ground Movement (AGM), Cargo & Mail Handling (CGM), Organization & Management – Corporate (ORM-H), Organization & Management – Co-located (ORM-HS) and Organization & Management – Station (ORM-S).

The ISAGO audit results analysis captured under this section cover the period between January 2012 and July 2013. A summary of the ISAGO findings is as follows:

1. A total of 32 audit reports (5 corporate, 8 combined and 19 station) have been included in the analysis covering the IATA MENA Region.

2. Findings were mainly in the areas of Passenger handling (PAX), Baggage Handling (BAG), and Load Control (LOD). Below is a graph that illustrates the distribution of findings per area:



3. Top non-conformances per area can be summarized as follows:

#	Area	Top findings
1	Load control (LOD)	Provider shall ensure the Load sheet, when transmitted to the aircraft via ACARS, is in a standard format that is in accordance with requirements of the customer airline(s)
2	Passenger handling (PAX)	The Provider, in accordance with requirements of the customer airline(s), handles passengers that are law enforcement officers or other persons authorized to carry weapons onboard the aircraft in the performance of their duties, the Provider shall have procedures in accordance with applicable laws and/or requirements of the customer airline(s) for the check in, handling and boarding of such passengers carrying weapons Other non-conformances were also around the Provider having procedures in place to ensure security and address any security threats upon handling passengers
3	Baggage handling (BAG)	Provider having procedures in place to ensure security and address any security threats upon handling baggage
4	Aircraft Handling & Loading (HDL)	Aircraft Handling and Servicing Operations

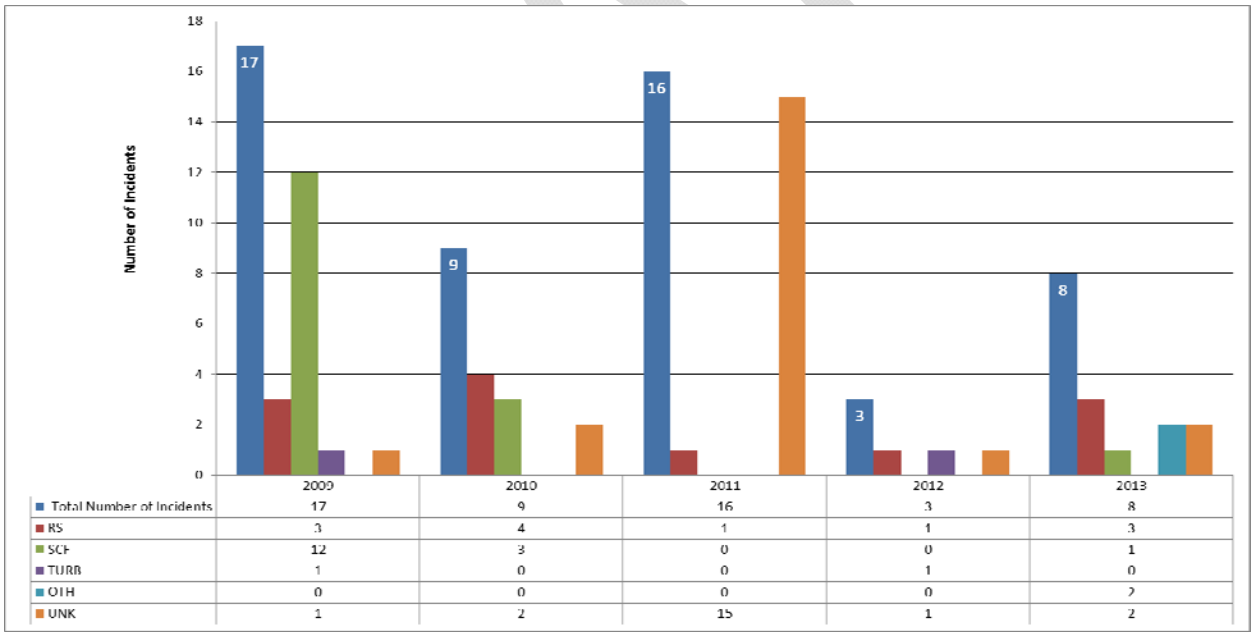
5	Aircraft Ground Movement (AGM)	Aircraft Main Gear-Controlled Pushback Operations Aircraft Powerback Operations Aircraft Ground Movement Operations
6	Cargo & Mail Handling (CGM)	Cargo/Mail Acceptance and Handling
7	Organization & Management – Corporate (ORG–H)	Aircraft Turnaround Coordination Safety & Quality Management
8	Organization & Management – Station (ORG–S)	Ground Support Equipment Management (GSE) Unit Load Device Management (ULD) Event Response

4.3 Incidents and Occurrences

4.3.1 Incidents Reported by States

Incident is defined in ICAO Annex 13 as an occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation (the type of incidents which are of main interest to the ICAO for accident prevention studies are listed in the ICAO Accident/Incident Reporting Manual (ICAO Doc 9156) and ICAO Annex 13).

According to ICAO iSTARS (ADREP et al.), 53 Incidents were reported during the period (2009-2013). The following chart shows the risk distribution for each year:



	2009	2010	2011	2012	2013
Total Number of Incidents	17	9	16	3	8
RS	3	4	1	1	3
SCF	12	3	0	0	1
TURB	1	0	0	1	0
OTH	0	0	0	0	2
UNK	1	2	15	1	2

Note: Further analyses will be developed as part of the final ASR which will be presented to the RASG-MID/4 meeting.

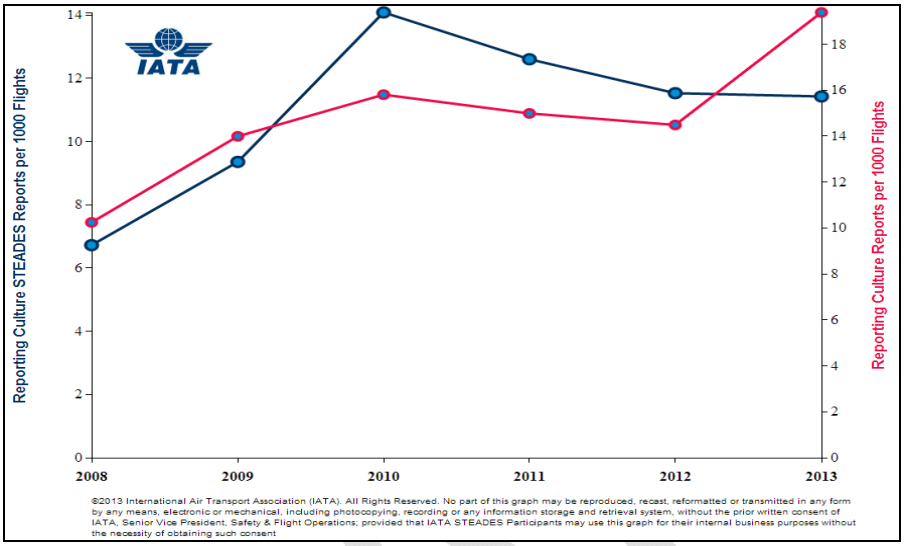
4.3.2 Incidents and Occurrences Reported by Airlines - STEADES Data

The Safety Trend Evaluation, Analysis & Data Exchange System (STEADES) is IATA's aviation safety incident data management and analysis program. It is a database of de-identified airline incident reports. Safety trend analysis using STEADES is included in this report allows proactive safety mitigation, provides rates on key safety performance indicators, and helps to continuously assess and establish safety performance targets.

The scope of analysis captured in this report covers the period 2008 - 2013. Some events are captured to complement the analysis under different sections of the report and show trends that can support the work of RASG-MID.

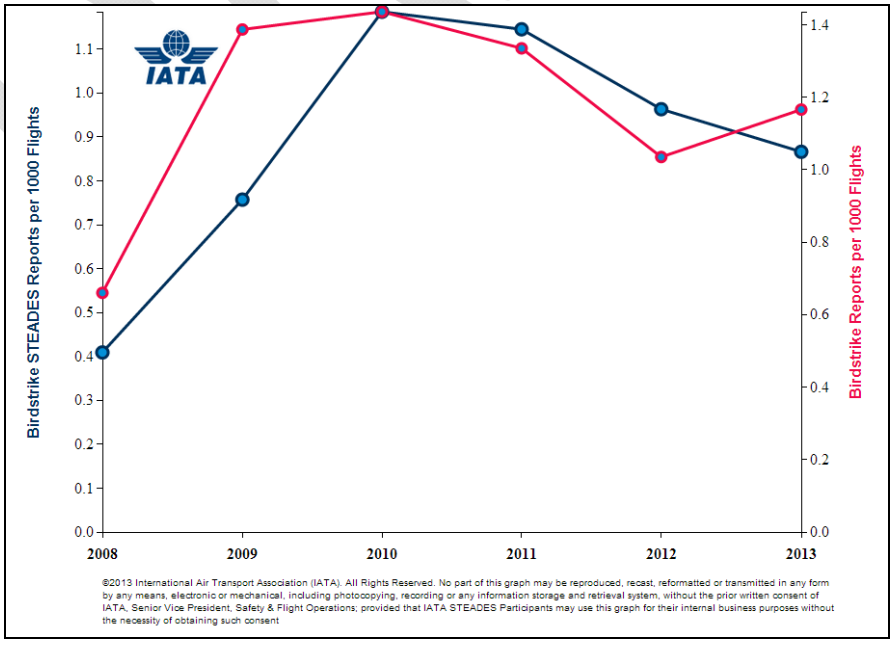
Reporting Culture

Below figure indicates a better reporting culture for the MENA Region (in red) compared to the global rate (in blue). A significant improvement has been noticed for the year 2013.



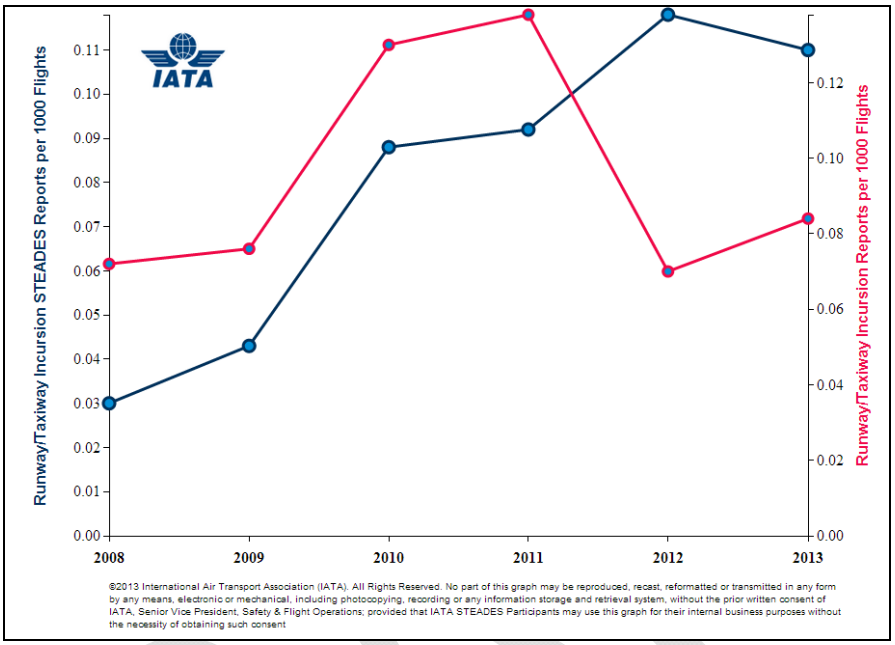
Birdstrikes

The figure below indicates a decreasing trend of birdstrikes at both regional (in red) and global (blue) levels. While the trend has been continuously decreasing at the global level, there has been a slight increase in MENA for the year 2013.



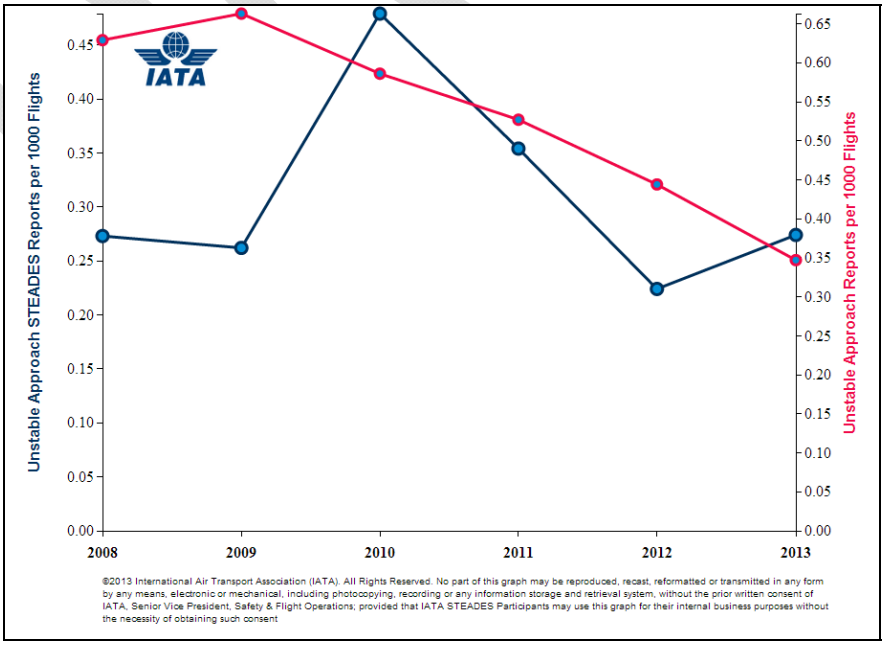
Runway/taxiway Incursions

It can be noted from the figure below that the trend of runway/taxiway incursions for the MENA Region (in red) is below the global trend (in blue). It can be also noted that as the trend is increasing at the global level, it witnessed a good decrease at the regional level after 2011.



Unstable Approaches

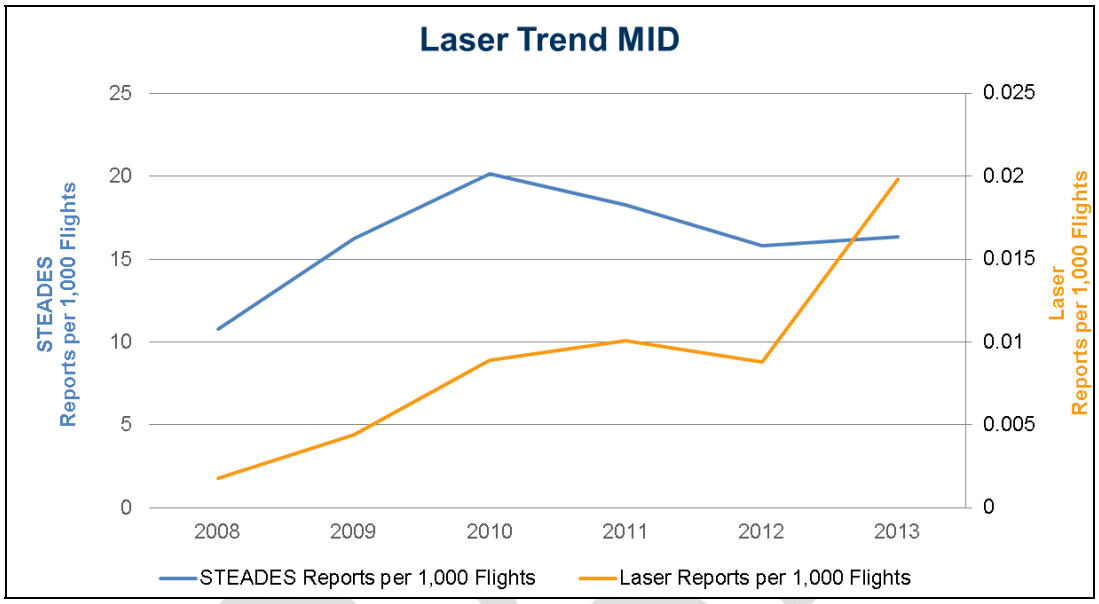
The figure below indicates a lower rate of unstable approaches for the MENA Region (in red) compared to the global level (in blue). It can be also noted that the trend of unstable approaches is continuously decreasing for the MENA Region.



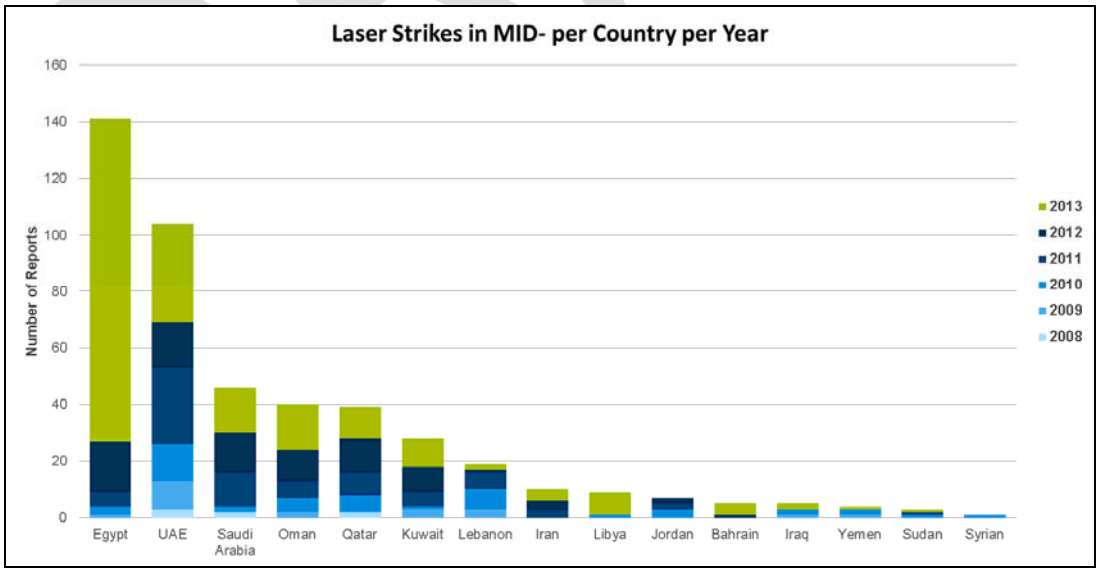
4.3.3 On Demand Analysis of Identified Emerging Risks – Laser Attacks

Following the RASG-MID/3 meeting, the risk of increasing laser attacks has been highlighted by the different States and therefore, a study was launched to assess this risk. The following data was collected from the IATA STEADES database which captures Air Safety Reports submitted by the airlines related to laser attacks.

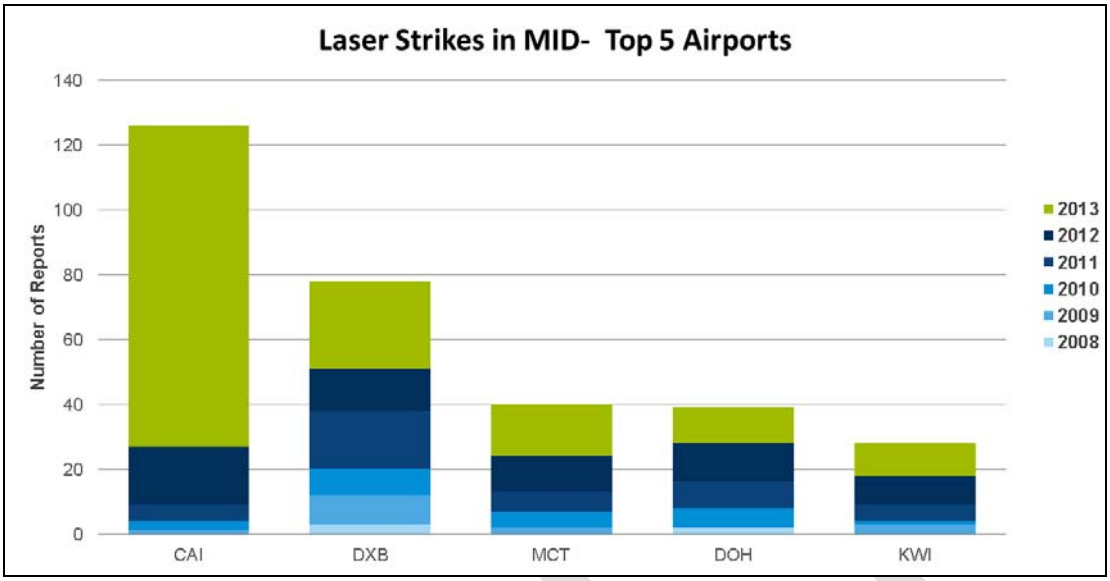
a) Trend of laser attack incidents reported in MID region *(Source: IATA)*



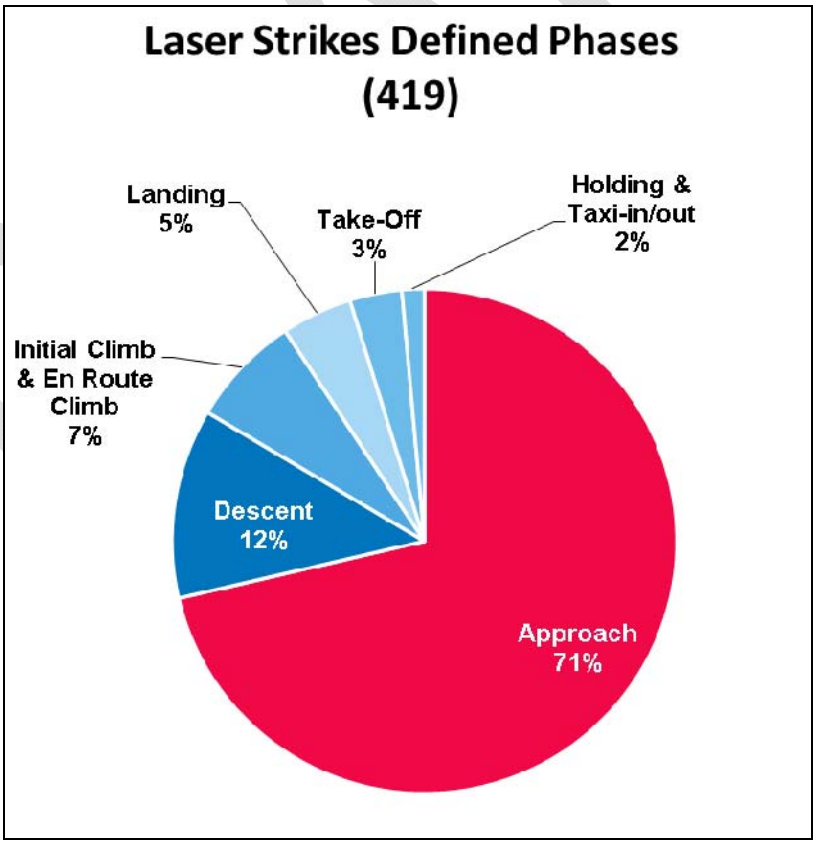
b) Laser attacks reported per MID State (Source: IATA)



c) Top five airports in which laser attacks are reported (Source: IATA)



d) Laser attacks per flight phase (Source: IATA)



A survey was also launched to collect necessary data to verify the severity of laser attacks and get necessary information from the States on any existing measures to mitigate such risk. The survey was launched as per

RASG MID (Conclusion 3/3). A questionnaire was circulated to the 15 MID States by ICAO and 7 replies were received. The following points are the main conclusions of the analysis:

1. 71% of the States agreed that laser attack incidents are of an increasing trend in their respective States.
2. 86% of the States have established a mechanism to monitor and record laser attacks on aircraft, and have published guidance material for the mitigation and prevention of such threats, yet the trend of such incidents is still increasing.
3. 57% of the States promulgated particular legislations/Regulations related to Laser attacks and violations. Remaining States do not have a legal framework which supports laser attacks mitigation strategy to prevent such violations.
4. 43% of the States indicated that no warning signs exist around the airports to address the prohibition of using laser pointers.
5. 86% of the States agreed that a more collaborative effort is necessary to counteract the emerging risk of laser attacks and the development of mitigation strategies in the MID Region.

The detailed results of the survey results will be shared with the Regional Aviation Safety Team (RAST) to develop/update required safety enhancement initiatives and detailed implementation plans. It is worth mentioning here, that there is a need to:

1. Raise the awareness among the States to keep record of the laser attack incidents reported by the different stakeholders. Voluntary reporting should be encouraged and a database should be established to keep record of such incidents.
2. Establish a guidance material for mitigating and preventing laser attack incidents. Best practices shared by the different States should be taken into account.
3. Formalize the State actions against laser attacks and violations by incorporating necessary legislations/regulations.

4.3.4. MID Region Safety Performance - Safety Indicators-Proactive

Safety Indicator	Safety Target	MID	Remark
USOAP-CMA Effective Implementation (EI) results: (a) Number of MID States with an overall EI over 60%	Progressively increase the USOAP-CMA EI scores/results: a- 11 MID States to have at least 60% EI by the end of 2015.	9 States	Currently 9 States out of 13 audited States are with EI>60%.
(b) Number of MID States with an EI score less than 60% for more than 2 areas (LEG, ORG, PEL, OPS, AIR, AIG, ANS and AGA)	b- All the 15 MID States to have at least 60% EI by the end of 2017. c- Max 3 MID States with an EI score less than 60% for more than 2 areas by the end of 2015.	6 States	6 States with an EI score less than 60% for more than 2 areas.
Number of Significant Safety Concerns	a. MID States resolve identified Significant Safety Concerns as a matter of urgency and in any case within 12 months from their identification b. No significant Safety Concern by end of 2016	1 SSC	

Use of the IATA Operational Safety Audit (IOSA), to complement safety oversight activities	a. Maintain at least 60% of eligible MID airlines to be certified IATA-IOSA by the end of 2015 at all times b. All MID States with an EI of at least 60% accept the IATA Operational Safety Audit (IOSA) as an acceptable Means of Compliance (AMC) by 2015 to complement their safety oversight activities.	a.69% b. 2 out of 9 countries (Bahrain & Egypt) have IOSA as AMC	a. This is as of 30 Sep 2014 b. Remaining countries to work with are Iran, Kuwait, Oman, Qatar, SA, Sudan, UAE
Number of Ground Handling service providers in the MID Region having the IATA Safety Audit for Ground Operations (ISAGO) certification, as a percentage of all Ground Handling service providers	a. 75% of the Ground Handling service providers to be certified IATA-ISAGO by the end of 2017 b. The IATA Ground Handling Manual (IGOM) endorsed as a reference for ground handling safety standards by all MID States with an EI above 60% by end of 2017.	This information is not available at the moment and will be provided in future ASR editions	
Number of certified international aerodrome as a percentage of all international aerodromes in the MID Region	a. 50% of the international aerodromes certified by the end of 2015 b. 75% of the international aerodromes certified by the end of 2017	28 out of 71 **39%**	As per the report of RGS WG/1 meeting (7-9 April 2014)

5. Predictive Safety Information

5.1 State Safety Programme (SSP)

RASG-MID/3 meeting (Kuwait, 27-29 January 2014) agreed that effort should be put toward the establishment of a Regional Safety Oversight Organization (RSOO) to support States in the implementation of SSP in an expeditious manner in order to meet the Global and Regional Safety Targets. Accordingly, the first meeting of the MID Safety Support Team (MID-SST/1 meeting, Cairo, Egypt, 18-20 March 2014) updated the Detailed Implementation Plan (DIP) related to the establishment of an RSOO-SSP.

Based on the above, an SSP Questionnaire has been developed and sent to the MID States by the MID Regional Office in order to collect information related to the status of the SSP implementation in the MID Region, as well as, States' views regarding the establishment of an RSOO-SSP. Elven (11) States out of the 15 MID States replied to the SSP Questionnaire.

5.2 MID Region Safety Performance – Safety Indicators – Predictive

Safety Indicator	Safety Target	MID	Remark
Number of MID States with EI>60%, having completed the SSP gap analysis on iSTARS	All MID States with EI>60% by the end of 2014.	2 State completed the SSP gap analysis on iSTARS 5 States Started the SSP gap analysis on iSTARS 2 States in progress	Currently 9 States of 13 audited States are with EI>60% Information is based on: 1- data available on iSTARS and collected from States; and 2- Data collected from States' replies to an SSP Questionnaire (11 States replied so far, 7 of them are with EI>60%. A follow up is in progress to monitor the achievement.
Number of MID States with **EI>60%,** that have developed an SSP implementation plan	All MID States with **EI>60%** by end of **2014**	5 States developed an SSP implementation plan 4 States in progress	
Number of MID States with **EI>60%**, having completed implementation of SSP **Phase 1**.	All MID States with **EI>60%** to complete phase 1 by the end of **2015**.	2 States completed implementation of SSP Phase 1 5 States partially completed implementation of SSP Phase 1	
Number of MID States with **EI>60%**, having completed implementation of SSP **Phase 2**.	All MID States with EI>60% to complete phase 2 by the end of 2016.	1 State completed implementation of SSP Phase 2 7 States partially completed implementation of SSP Phase 2	
Number of MID States with **EI>60%**, having completed implementation of SSP **Phase 3**.	All MID States with **EI>60%** to complete phase 3 by the end of **2017**.	1 State partially completed implementation of SSP Phase 3	
Number of MID States with **EI>60%** that have established a process for acceptance of individual service providers' SMS	a. 30% of MID States with **EI>60%**by the end of 2015 b. 70% of MID States with **EI>60%**by the end of 2016 c. 100% of MID States with **EI>60%**by the end of 2017	6 States established a process for acceptance of individual service providers' SMS	

6. Final Conclusions

Following the analysis of the reactive safety information provided by ICAO, IATA, and Boeing for the period 2009 - 2013, it was concluded that the main Focus Areas for the MID Region remain the same and include Runway Safety (RS), Loss of Control In Flight (LOC-I) and Controlled Flight Into Terrain (CFIT). Major contributing factors for those accident categories include:

1. SOP Adherence/ SOP Cross verification
2. Manual Handling/ Flight Controls
3. Overall Crew Performance
4. Regulatory Oversight
5. Safety Management
6. Monitor/ Cross-check
7. Long/ floated/ bounced/ firm/ off-center/ crabbed landing
8. Unstable Approach
9. Vertical / Lateral / Speed Deviation
10. Aircraft Malfunction: Gear / Tire

In addition to the identified Focus Areas, System/Component Failure or Malfunction (SCF), which is directly linked to aircraft maintenance and airworthiness of aircraft, is considered as an emerging risk in the Region. Furthermore, near miss (Airprox/TCAS Alert or Loss of Separation) is identified as an emerging risk, which if not addressed properly could lead to mid-air collisions.

Emerging risks includes also laser attacks which has an increasing trend in the MID States. A need has been identified to promote awareness among the different States to encourage voluntary reporting and establish a database to keep record of laser attack incidents. States would also need to incorporate necessary legislations and regulations for the mitigation of the laser attacks risk.

With respect to ICAO USOAP-CMA, Critical Element (CE-4) of the State's Safety Oversight System related to Qualification and Training of Technical Staff involved in carrying out regulatory functions, still shows the lowest EI, while Areas of PEL, OPS and AIR still show the highest EI in the MID Region.

70% of the audited States in the MID Region have a USOAP-CMA EI greater than 60%. Therefore, in accordance with the GASP, these States should work on the full implementation of SSP.

It should be highlighted that reporting of accidents and serious incidents is still low in the MID Region, which underlines the need for regional cooperation to enhance reporting culture including the establishment of a regional database.

Additional efforts should be put in place by the Annual Safety Report Team for collecting and analysing predictive safety information. This is necessary to allow the identification and mitigation of safety concerns before accidents or incidents would even take place.

The RASG-MID Annual Safety Report is a timely, unbiased and transparent source of safety related information essential for all aviation stakeholders interested in having a tool to enable sound decision-making on safety related matters.

Appendix A: List of Acronyms

ARC	Abnormal Runway Contact
ADRM	Aerodrome
ANSP	Air Navigation Service Provider
ATC	Air Traffic Control
ATS	Air Traffic Services
ASRT	Annual Safety Report Team
BIRD	Birdstrike
CTOL	Collisions with Obstacles during Take Off or Landing
CFIT	Controlled flight into terrain
DIP	Detailed Implementation Plan
F-IN	Fire/Smoke (Non-Impact)
FDA	Flight Data Analysis
FOQA	Flight Operations Quality Assurance
GCOL	Ground Collision
RAMP	Ground Handling
GASP	ICAO Global Aviation Safety Plan
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
LOC-G	Loss of Control - Ground
LOC-I	Loss of control - inflight
MTOW	Maximum Take-off Weight
MENA	Middle East & North Africa (IATA region)
MID	Middle East region (ICAO region)
RAST	Regional Aviation Safety Group
RE	Runway Excursion (departure or landing)
RI	Runway Incursion
RS	Runway Safety
SEI	Safety Enhancement Initiative
SMS	Safety Management System
SOP	Standard Operating Procedure
SSP	State Safety Programme
USOS	Undershoot/Overshoot
UAS	Undesirable Aircraft State
USOAP	Universal Safety Oversight Audit Program
WILD	Wildlife

CREDITS

The Coordinator of the MID Annual Safety Report Team (MID-ASRT), Capt. Adnan Takrouri on behalf of the Team and RASG-MID thanks all those who contributed to the elaboration of this RASG-MID Annual Safety Report and provided necessary support and information.

Special thanks to Mr. Mohamed Smaoui, ICAO Deputy Regional Director, Mr. Mashhor Alblowi, Regional Officer FLS and Ms. Rose Al Osta, Regional SFO Manager, IATA, for their outstanding efforts and contributions.

APPENDIX 3B

ACCIDENTS AND INCIDENTS ANALYSIS WORKING GROUP (AIA WG)

TERMS OF REFERENCE

A) PURPOSE OF THE AIA WG:

The AIA WG is established to review, analyse and categorize on an annual basis the accidents and incidents that occurred in the MID Region or involved an operator or an aircraft from the MID Region for all kind of operations, including but not limited to commercial/non-commercial, scheduled/non-scheduled, general aviation and helicopters.

In order to meet its Terms of Reference, the AIA WG shall:

1) gather information from different available sources on the accidents and incidents that:
    a) occurred in the MID Region (State of Occurrence);
    b) involved aircraft registered in the MID Region (State of Registry); or
    c) involved aircraft belonging to an Air Operator from the MID Region (State of the Operator).
2) review, analyse and categorize the accidents and incidents using the definition provided in ICAO Annex 13 and ADREP/ECCAIRS Taxonomy,
3) develop an agreed and harmonized MID Regional dataset of accidents and incidents and provide feedback to the ICAO Safety Indicators Study Group (SISG);
4) identify, to the extent possible, the root causes and contributing factors in order to support the MID-RAST in the development of mitigation measures;
5) provide necessary information on accidents and incidents to the MID-ASRT for the development of the MID Annual Safety Report; and
6) share the outcome of its meetings with the concerned MIDANPIRG subsidiary bodies, as appropriate.

B) COMPOSITION:

The Working Group is composed of of Experts from the ATM and safety fields with good knowledge and experience in Accident and Incident Investigation (AIG), including the ADREP Taxonomy and ECCAIRS, nominated by:

a) RASG-MID Member States; and

b) Partners-
    i. IATA, IFALPA, IFATCA, and FAA; and
    ii. other representatives from industry and user Organizations could participate as observers, whenever required.

C) ROLES AND RESPONSIBILITIES:

- AIA WG Chairperson – Coordinate the WG activities and provide overall guidance and leadership;

- Member States and Partners – Provide technical expertise and collaborate in the collection and analysis of data; and

- ICAO – Provide Secretariat services and necessary support.

D) ROLES AND RESPONSIBILITIES:

- AIA WG Chairperson – Coordinate AIA WG activities and provide overall guidance and leadership;

- AIA WG Focal Points- Specialists in the AIG related subjects, particularly the analysis of accidents and incidents data in order to actively participate in and contribute to the work of the AIA WG; and

- ICAO – Support

RSC/3-REPORT
APPENDIX 3C

Second MID Regional Runway Safety Seminar

(MID-RRSS/2)

2-4 June 2014
Dubai, UAE

TABLE OF CONTENTS

I. GENERAL

1.1 Place and Duration

1.1.1 The Second MID Regional Runway Safety Seminar (MID-RRSS/2) was successfully held at the Intercontinental Hotel, Festival City, Dubai, UAE from 2 to 4 June 2014. The first day of the MID-RRSS/2 focused on the need for collaborative approach, runway excursion and incursion hazards, and mitigation measures with an overview of the technology advances. The second day was dedicated to a Workshop on Local Runway Safety Team (LRST) and the kick off of the MID RS Go-Team. The third day was reserved to a Workshop on Aerodrome Certification.

1.2 Attendance

1.2.1 The Seminar was attended by a total of one hundred ninety four (194) participants from six (6) MID States (Egypt, Iran, Oman, Saudi Arabia, Sudan and United Arab Emirates) and eight (8) Organizations/Industries (ACI, Airbus, Boeing, COSCAP-GS, Eurocontrol, FAA, IATA and IFATCA).

1.3 Agenda/Work Programme

1.3.1 The MID-RRSS/2 Programme included the following Sessions:

a) Session 1: Opening Ceremony
b) Session 2: The Big Picture
c) Session 3: Runway Excursions
d) Session 4: Runway Incursions
e) Session 5: Technological Advances
f) Session 6: Local Runway Safety Team, Integrated Approach to Runway Safety
g) Session 7: Managing Runway Safety, Aerodrome Case Studies
h) Session 8: Local Runway Safety Teams, Supporting Initiatives
i) Session 9: Regional Go-Team Initiative
j) Session 10: Appreciation Ceremony
k) Session 11: Aerodrome Certification Overview
l) Session 12: Aerodrome Certification Interactive Workshop
m) Session 13: Seminar Outcomes and Closing

1.3.2 The MID-RRSS/2 detailed Agenda/Work Programme and Presentations are available at the ICAO MID Regional Office Website: http://www.icao.int/MID/Pages/2014/RRSS-2.aspx.

1.4 Objective

1.4.1 The MID-RRSS/2 aimed to:

a) provide a forum to exchange views and share experience/best practices techniques for managing runway safety;

b) provide States and service providers in the MID Region with guidance related to the establishment of an effective Runway Safety Team (RST);

c) launch the MID RS Go-Team initiative; and

d) explore ways and means to enhance implementation of Aerodrome Certification in the MID Region.

II. SUMMARY AND OUTCOME OF DISCUSSIONS

2.1 The Big Picture - Panel Discussion

2.1.1 This session provided an overview of the Runway Safety (RS) on global and regional level. It highlighted the main runway safety risks and mitigation options. In particular, it was highlighted that:

- RS is still the top safety risk area, since more than 50% of the accidents worldwide and in the MID Region are related to RS.
- RS is multi-layered and multi-dimension and accordingly a collaborative approach towards the reduction of the RS-related risks is a must.
- One of the best mechanisms to foster the collaborative approach is the establishment of LRST.
- There is a need for improved communication about RS-related occurrences and best practices, within an organization and inter-organizations.
- The enhancement of Aerodrome Certification processes in the Region would enhance RWY Safety significantly.

Recommendation:

1. *To foster and expedite the implementation of the provisions of the Assembly Resolution A37-6 (1/2) and the Recommendations of the GRSS and MID-RRSS/1, including those related to the establishment of LRSTs.*

2.2 Runway Excursions (RE) – Panel Discussion

2.2.1 This session provided an overview of the RE hazards and prevention measures from different perspectives. It was highlighted that:

- RE is the highest accident category, representing 23% of all accidents over the period (2009-2013).
- Un-stabilized approach remains the major contributing factor to RE, especially when an unstable approach is associated with a failure to go-around.
- Although un-stabilized approach is a critical factor, there are other factors that should be considered such as tailwind, long landing, high speed and runway condition. In particular, quality of runway condition, which requires specific action at airport level and adequate standardization.
- A Detailed Implementation Plan (DIP) is being developed under the RASG-MID to reduce the number of un-stabilized approaches through specific training for pilots and ATCOs and promotion of pilot adherence to SOPs for approaches (IATA is the Champion of this DIP).

- Another DIP was developed by the RASG-MID in coordination with MIDANPIRG in order to identify and prioritize the airports/runways where the implementation of PBN approaches would reduce the number of un-stabilized approaches and accordingly the number of REs. Emirates Airlines indicated its willingness to support this initiative.

- There is a need for enhancement of communication between pilots and ATCs.

Recommendation:

1. *To expedite the development/implementation of the DIPs related to RE (un-stabilized approach) under the RASG-MID.*

2.3 Runway Incursions (RI) – Panel Discussion

2.3.1 This session provided an overview of the RI hazards and preventions from different perspectives. The following was highlighted:

- Importance of ensuring that aeronautical data and charts (AIS publications) related to aerodromes are available, accurate, and maintained up-to-date.

- All aviation disciplines are to be represented in the Aerodrome Runway Safety Team.

- Importance of having standardized operations for use of stop bars.

- The new provisions of Amendment 11 to Annex 14 Vol I would improve runway safety.

Recommendation:

1. *To develop and publish standardized guidance on acceptable use of stop bars.*

2.4 Technological Advances

2.4.1 This session provided an overview of the available technology to support Runway Safety with examples of its use.

Recommendations:

1. *Future technological efforts should focus on "Predictive" systems, rather than reactive.*

2. *A multi-stakeholder aviation forum should be established to work with system providers to undertake R&D advances in relation to sharing of systems and single platform concepts (integrated systems).*

3. *Industry to find a way of sharing areas of best practice where technological solutions are being trialed, or formal installation has been undertaken to solve a runway safety issue.*

2.5 LRST Workshop and Launch of the MID RS Go-Team

2.5.1 The LRST Workshop provided an overview of LRSTs requirements highlighting the need for Integrated Approach supported by best practices.

2.5.2 The MID RS Go-Team was officially launched further to the endorsement through the RASG-MID/3 Conclusion 3/2. The "Guidance for the conduct of MID Runway Safety Go-Team visits" was finalised as at **Appendix A.** The initial plan is to conduct two Go-Team visits per year. The first Go-Team visit will be to Khartoum, Sudan end of 2014 and the second one will be to Muscat, Oman beginning of 2015.

2.5.3 In particular, the following was highlighted:

- RST provides effective and inexpensive tool to enhance runway safety.
- Participation by all stakeholders in the LRST is paramount.
- IATA Global Aviation Data Management (GADM) could be used by the LRSTs and RS-Go Team to identify areas of improvement.

Recommendations:

1. *Support the RS Go-Team initiative as a way to expedite the establishment of LRSTs.*
2. *Go-Teams may benefit from data and information available with the recipient State, RASG, ICAO, IATA (GADM), and ACI (APEX) to support their missions.*
3. *Encourage the establishment of National RWY Safety Team (NRST).*

2.6 Aerodrome Certification Workshop

2.6.1 The Aerodrome Certification Workshop provided an overview on the status of Aerodrome Certification implementation in the MID Region and the associated safety targets which were endorsed as part of the MID Region Safety Strategy. The Workshop included Table Top Exercises on:

- Application and initial assessment process
- Certification verification activities
- Issuance of aerodrome certificate and oversight

2.7 General/Common Outcomes

2.7.1 The Seminar provided valuable panel sessions and opportunities for sharing of experiences, collaboration and coordination on runway safety. The following was highlighted during the different sessions of the Seminar:

- sharing lessons learnt, efficient training, awareness and communication;
- the use of common/standard taxonomy for reporting RS incidents and accidents;

- reporting culture, data sharing, and the establishment of a Regional Aviation Safety database;

- RST as an essential element of required SMS Aerodrome change management process.

Recommendations:

1. Invite ICAO to consider convening a second Global RWY Safety Symposium.

2. Invite ICAO to develop additional RS provisions.

2.8 ICAO Runway Safety i-KIT

2.8.1 USBs including the ICAO Runway Safety i-KIT have been distributed to all participants. The USB memory sticks were donated by ICAO, ACI, UAE, and IATA.

2.9 Exhibition

2.9.1 An exhibition, was conducted concurrently with the Seminar. Two Companies participated in this Exhibition to showcase their products, as follows:

a) **Bayanat Airports Engineering & Supplies** which represents International Technology Developers, to deliver a full range of Terminal, Airside & Runway and Air Traffic Management systems and services. Bayanat introduced MALMS as a supplier of airfield lighting photometric test systems and inspection services. In addition, it introduced the MALMS automated runway lighting cleaning machines, which minimizes operational costs and enhances runway safety.

b) **Stratech Systems Limited** is engaged in the design, development, integration, implementation, maintenance and project management of information technology and advanced technology systems. Stratech introduced iFerret(tm) as the first intelligent Vision-based FOD detection system, providing real-time, automated FOD detection, location, classification, measuring and recording. iFerret(tm) was approved by FAA and deployed at Singapore Changi International Airport and others.

APPENDIX 3D

STATUS OF AERODROME CERTIFICATION IMPLEMENTATION IN MID REGION

Sr	State	Listed aerodromes					Certified Aerodromes					Percentage certified	Remarks
		RS	RNS	AS	ANS	Total	RS	RNS	AS	ANS	Total		
1	Bahrain	1				1	1				1	100%	
2	Egypt	8	1	7		16	4				4	25%	
3	Iran	7	1			8	2				2	25%	
4	Iraq	5	1			6	2				2	33%	
5	Jordan	2		1		3	1				1	33%	
6	Kuwait	1				1	1				1	100%	
7	Lebanon	1				1	0				0	0%	
8	Libya	3				3					0	0%	
9	Oman	1		1		2	1		1		2	100%	
10	Qatar	2				2	2				2	100%	
11	Saudi Arabia	4				4	4				4	100%	
12	Sudan	3			0	3	1				1	33%	
13	Syria	3				3	0				0	0%	
14	UAE	7	1			8	7	1			8	100%	
15	Yemen	5				5	0				0	0%	
	Total	53	4	9	0	66	26	1	1	0	28	42%	
	% certified						49%	25%	11%		42%		

APPENDIX 3E

Runway Ground Safety (RGS) SEIs - Mohammad Al Dossari - UAE General Civil Aviation Authority

No	Safety Enhancement Action	GASP Safety Initiative (ICAO Doc 10004)	Best Practices Supporting GASP Safety Initiative (ICAO Doc 10004, Appendix 2)	Safety Impact	Changeability	IC Indicator	Priority	Possible Champion	Time Frame	Notes
~~MID-RAST/RGS/1~~	~~Specific training for pilots and air traffic controllers to avoid the risk associated approaches and promotion of pilot adherence to Standard Operating Procedures for approaches including go-around decision making~~	~~**Safety Management Standardisation:** Consistent Implementation of Safety Management Systems Implementation of Risk Based Standardization Initiatives~~ ~~**Safety Oversight Standardization:** Compliance with National Regulations and Adoption of Industry Best Practices~~	~~BP-GEN-1 BP-GEN-2 BP-GEN-4 BP-STD-I-1 BP-STD-I-4~~	~~High~~	~~Moderate~~	~~P2~~	~~1~~	~~IATA~~	~~Short Term~~	~~Pilot training is top priority of RAST PA and RAST AP. DIP may be coordinated on global level - or benchmarked against other regions.~~ ~~ASR Comment: 4.1.3.2.1 - RE Accidents - 83% occur during landing and 67% during daytime - "Flight Crew Procedures" meaning non-compliance with SOPS was present in 59 accidents. - See 4.1.2.4.1 and 2 - Top Common incidents/occurrences from MID reports - "Unstable Approach" with Root Cause airport/airline of SOP Compliance and Training.~~
MID-RAST/RGS/2	Develop guidance material and training programs to support creation of action plans by local aerodrome runway safety teams.	**Safety Management Collaboration:** Promotion of a Multi-Disciplinary Risk Management Approach **Safety Information Exchange:** Support of Safety Management Implementation	BP-GEN-1 BP-GEN-2 BP-GEN-4 BP-GEN-6 BP-STD-I-4 BP-SIE-I-3	High	Easy	P1	2	United Arab Emirates	Mid-Term	ASR Comment: 4.1.3.2.1 - RE Accidents - 83% occur during landing and 67% during daytime - weather is contributing in 47% (1st rain/2nd windsheer) Runway Incursion data not included in RASG-MID ASR - First Edition - however acknowledged by RSC/01 Agenda Item 2 paragraph 2.14
MID-RAST/RGS/3	Focus on Aerodrome Infrastructure and Maintenance Management with priority given to the following: - Promote /monitor Implementation RESA including other means such as arresting systems; - Regulation, guidance and specific training in relation to maintaining aerodrome runway/taxiway related markings; and - Regulation, guidance and specific training in relation to maintaining runways in accordance with Annex 14	**Safety Management Standardization:** Consistent Implementation of Safety Management Systems **Safety Oversight Standardization:** Consistent Implementation of International Standards Compliance with National Regulations and Adoption of Industry Best Practices	BP-STD-S-11 BP-STD-I-2 BP-STD-I-4	High	Difficult	P3	3	United Arab Emirates	Long Term	ASR Comments: 4.1.3.2.1 - Ground damage in 33% of accidents related to inadequate markings or signage or inadequate RESA. 4.1.3.2.1 - bar chart of contributing factors

Detailed Implementation Plan Template

Rast No	Safety Enhancement Action	GASP Safety Initiative (ICAO Doc 10004)	Best Practices Supporting GASP Safety Initiative (ICAO Doc 10004, Appendix 2)	Safety Impact	Changeability	Indicator	Priority	Time Frame
MID-RAST/RGS/1	Specific training for pilots and air traffic controllers to avoid unstabilized approaches and promotion of pilot adherence to Standard Operating Procedures for approaches including go-around decision making	**Safety Management Standardisation:** Consistent Implementation of Safety Management Systems Implementation of Risk Based Standardisation Initiatives **Safety Oversight Standardisation:** Compliance with National Regulations and Adoption of Industry Best Practices	BP GEN 1 BP GEN 2 BP GEN 4 BP STD 1 1 BP STD 1 4	High	Moderate	P2	1	Short Term

Safety Enhancement Action (expanded)	Promote specific training for pilots and air traffic controllers to avoid unstabilized approaches and pilot adherence to Standard Operating Procedures for approaches including go-around decision making through ICAO guidance, States' oversight and guidance, Operators' SMS and industry lead awareness and training initiatives. The initiatives seeks to leverage existing regulatory framework and industry events.
Statement of Work	IATA under took to coordinate with CANSO in order to provide the DIP milestones taking into consideration the following: 1. During the PBN/SG/1 meeting PBN Sub-Group meeting (Cairo, Egypt, 13 April 2014), it was decided that States would provide information on runway ends that have reported Un-Stabilized approaches as to determine causal factors and trend. IATA will distribute an information request to Airlines as to identify specific Aerodrome runway ends with Un-Stabilized approaches. 2. Data received from the States and IATA will be reviewed by the RGS Working Group as to align with Aerodrome Technical visits to address Un-Stable approaches.
Champion Organization	IATA
Human Resources	• ICAO - International Civil Aviation Organisation (MID and HQ) • IATA - International Air Transport Association (MENA and HQ) • IFALPA - International Federation of Airline Pilot's Association • CANSO - Civil Air Navigation Services Organisation • States • Aircraft Operators
Financial Resources	
Relation with Current Aviation Community Initiative	ICAO Runway Safety Program ICAO/IATA Runway Excursion Risk Reduction Toolkit FSF Approach and Landing Accident Reduction (ALAR) Toolkit (version June 2010) FSF Runway Safety Initiative (RSI) - "Reducing the Risk of Runway Excursions" FSF Operators Guide to Human Factors in Aviation (FSF European Advisory Committee) FSF Annual Flight Safety Conference (most recent in September 2012) France Directorate General of Civil Aviation - Unstabilized Approaches France Directorate General of Civil Aviation - Stabilised Approaches Good Practice Guide France Directorate General of Civil Aviation - Synthesis on Unstable Approaches EWGRS - European Action Plan for the Prevention of Runway Excursions Airbus - Safety Library - Flight Operations Briefing Notes - Approach Techniques
Performance Goal	Reduce relative number of runway excursions. MID Regional Safety Strategy: Reduce Runway Excursions related accidents by 50% by the end of 2017.
Indicators	Reduction of runway excursions resulting from unstable approaches, as a percentage of total movements, for 2013 and 2014.
Key Milestones (Deliverables)	a) training of operators (pilots, air traffic controllers/air navigation service providers, and aerodrome operators). b) development of relevant Guidance materials. c) encouraging the reporting of un-stabilized approaches, assessment and mitigation of the associated risk and conduct of necessary safety oversight, as part of SMS implementation. d) review of Standards Operation Procedures.
Potential Blockers	Availability of required human resources from identified organisations Availability of financial resources
Responsible	• ICAO - International Civil Aviation Organisation (MID and HQ) • IATA - International Air Transport Association (MENA and HQ) • IFALPA - International Federation of Airline Pilot's Association • CANSO - Civil Air Navigation Services Organisation • Mid Region States • Mid Region Aircraft Operators
DIP Notes	Pilot training is top priority of RAST PA and RAST AP. DIP may be coordinated on global level - or benchmarked against other regions. ASR V1 Comment: 4.1.3.2.1 - RE Accidents - 83% occur during landing and 67% during daytime - 'Flight Crew Procedures" meaning non-compliance with SOPS was present in 59 accidents. - See 4.1.2.4.1 and 2 - Top Common incidents/occurrences from MID reports - "Unstable Approach" with Root Cause airport/airline of SOP Compliance and Training.

Refer to RAST-MID/CFIT/1

Refer to RAST-MID/CFIT/1

Detailed Implementation Plan Template

Rast No	Safety Enhancement Action	GASP Safety Initiative (ICAO Doc 10004)	Best Practices Supporting GASP Safety Initiative (ICAO Doc 10004, Appendix 2)	Safety Impact	Changeability	Indicator	Priority	Time Frame
MID-RAST/RGS/2	Develop guidance material and training programs to support creation of action plans by local aerodrome runway safety teams.	**Safety Management Collaboration:** Promotion of a Multi-Disciplinary Risk Management Approach **Safety Information Exchange:** Support of Safety Management Implementation	BP-GEN-1 BP-GEN-2 BP-GEN-4 BP-GEN-6 BP-STD-I-4 BP-SIE-I-3	High	Easy	P1	2	Mid-Term

Safety Enhancement Action (expanded)	Develop guidance material and training programs to support creation of action plans by local aerodrome runway safety teams with immediate emphasis on - identification and publication of aerodrome Hot Spots and timely; and - accurate notification regarding runway conditions and weather by AIS and ATS units.
Statement of Work	1. Establishment of Regional RST Go-Teams 2. Conduct regional Runway Safety Seminars/Workshops 3. Promote Establishment of Local Runway Safety Teams 4. Publish supporting guidance materials for LRSTs
Champion Organization	UAE
Human Resources	ICAO - International Civil Aviation Organisation (MID) UAE General Civil Aviation Authority UAE National Runway Safety Team
Financial Resources	
Relation with Current Aviation Community Initiative	ICAO Runway Safety Program and RST Handbook ICAO/IATA Runway Excursion Risk Reduction Toolkit FSF Approach and Landing Accident Reduction (ALAR) Toolkit (version June 2010) FSF Runway Safety Initiative (RSI) - "Reducing the Risk of Runway Excursions" FSF Operators Guide to Human Factors in Aviation (FSF European Advisory Committee) FSF Annual Flight Safety Conference (most recent in September 2012) European Action Plan for the Prevention of Runway Excursions European Action Plan for the Prevention of Runway Incursions Airbus - Safety Library - Flight Operations Briefing Notes - Approach Techniques
Performance Goal	Reduce relative number of runway excursions. MID-Regional Safety Strategy: Reduce Runway Excursions related accidents by 50% by the end of 2017. MID-Regional Safety Strategy: Reduce Runway Incursions related accidents by 50% by the end of 2017.
Indicators	See above/below
Key Milestones (Deliverables)	1. Arrange a Workshop for Regional RST Go-Teams - June 2014 (Completed) 2. Develop and issue regulatory framework supporting establishment of LRSTs - September 2014 (Ongoing) 3. Develop and issue Stop Bar guidance documentation for consideration of LRSTs - April 2014 (Completed) 4. Develop and issue a model checklist for LRSTs - December 2014
Potential Blockers	Availability of required human resources from identified organisations
Responsible	• UAE • ICAO - International Civil Aviation Organisation (MID)
DIP Notes	Noting SEIs from other regions it is worthwhile RSTs consider the following: - Air traffic Control Training - general and scenario based - Review of Aerodrome and ATC Standard Operating Procedures including RT Phraseology and Clearance Procedures - Pilot Training - general and scenario based - Scenario Based Training for Tower Controller - Scenario Based Training for Pilots - Note the various ICAO Global and Regional Runway Safety Initiatives related to Runway Safety and RSTs. IFALPA and CANSO may be training resources (see AP SEIs).

Detailed Implementation Plan Template

Rast No	Safety Enhancement Action	GASP Safety Initiative (ICAO Doc 10004)	Best Practices Supporting GASP Safety Initiative (ICAO Doc 10004, Appendix 2)	Safety Impact	Changeability	Indicator	Priority	Time Frame
MID-RAST/RGS/3	Focus on Aerodrome Infrastructure and Maintenance Management with priority given to the following: - Promote /monitor Implementation RESA including other means such as arresting systems; - Regulation, guidance and specific training in relation to maintaining aerodrome runway/taxiway related markings; and - Regulation, guidance and specific training in relation to maintaining runways in accordance with Annex 14	**Safety Management Standardisation:** Consistent Implementation of Safety Management Systems **Safety Oversight Standardisation:** Consistent Implementation of International Standards Compliance with National Regulations and Adoption of Industry Best Practices	BP-STD-S-11 BP-STD-I-2 BP-STD-I-4	High	Easy	P3	3	Long Term

Safety Enhancement Action (expanded)	Focus on Aerodrome Infrastructure and Maintenance Management with priority given to the following: - Promote /monitor Implementation RESA including other means such as arresting systems; - Regulation, guidance and specific training in relation to maintaining aerodrome runway/taxiway related markings; and - Regulation, guidance and specific training in relation to maintaining runways in accordance with Annex 14
Statement of Work	1. Conduct a MID-Regional Runway Safety Seminar 2. Support aerodrome certification in the MID-Region 3. Develop and issue guidance material on relevant oversight activities
Champion Organization	UAE
Human Resources	ICAO - International Civil Aviation Organisation (MID) UAE General Civil Aviation Authority
Financial Resources	
Relation with Current Aviation Community Initiative	To be completed
Performance Goal	To be completed
Indicators	See above/below
Key Milestones (Deliverables)	1. Conduct a MID-Regional Runway Safety Seminar - June 2014 (Completed) 2. Arrange a regional aerodrome certification workshop - June 2014 (Completed) 3. Develop MID-Region aerodrome certification toolkit for States including core items of Certification Documentation, Safety Management Systems, Physical Characteristics, Runway Surface Friction, Wildlife Hazard Control & Habitat Management, Apron Management, Aerodrome Ground Lighting, Aerodrome Safeguarding, Runway/Taxiway Incursion Prevention, Aerodrome Infrastructure Projects and Runway & Movement Areas - January 2015 4. Develop and issue guidance material on periodic surveillance audits of aerodrome infrastructure and maintenance - April 2015 5. Develop and issue guidance material on proactive oversight of aerodrome infrastructure development - June 2015
Potential Blockers	Availability of required human resources from identified organisations
Responsible	• UAE • ICAO - International Civil Aviation Organisation (MID)
DIP Notes	DIP will include establishment of supporting regulation and guidance material. Note this will include assessment of physical space as well as technologies adopted into Annex 14 in November 2012 proposed amendment (arresting systems). This SEI will not prevent runway excursions but reduce the consequences of such events. Note process of assessing surface condition and reporting through ATS to flight crew. Adhere to ICAO standard phraseology regarding condition (updated in proposed November 2012 amendments). Ensure reports vetted through ATC based on Aerodrome reporting information and meteorological analysis - and not only repetition of report from previous aircraft. Note EASA maybe working with APAC to develop of supporting survey format. DIP will include development of national regulation, guidance materials and training/awareness initiatives. Note additional SARPs in the recently proposed amendment to Annex 14 (November 2012). May include development of necessary publications including national regulation based on ICAO SARPS and guidance material regarding inspection regimes and surface assessments (i.e. friction) - as well as national or local training and safety awareness initiatives.

APPENDIX 3F

Detailed Implementation Plan Template

No	Safety Enhancement Action	GASP Safety Initiative (ICAO Doc 10004)	Best Practices Supporting GASP Safety Initiative (ICAO Doc 10004, Appendix 2)	Safety Impact	Changeability	Indicator	Priority	Time Frame
RAST-MID/LOC-I/1	Airplane State awareness (ASA)- Low airspeed alerting	Safety Management Standarzation: Implementation of risk-based standarization Safety Oversight Standarization: Promotion of Compliance with National Regulations and Adoption of Industry Best Practices	BP-GEN-1 BP-GEN-2 BP-GEN-4 BP-STD-S-12 BP-STD-S-13	High	Moderate	P2	1	Medium term

Safety Enhancement Action (expanded)	Air carriers implement low airspeed alerting on existing transport category airplane (TCA) type designs as practical and feasible.
Statement of Work	A CAST study of 18 loss-of-control accidents and incidents determined that low energy state and stall, resulting from flight crew loss of airplane state awareness (ASA), played a role in 8 events. To further improve early flight crew awareness of a decreasing energy state throughout the MID region fleet, air carriers should implement existing manufacturer service bulletins to provide low airspeed alerting on existing transport category type designs as applicable.
Champion Organization	IATA

Human Resources	IATA, Pilot Associations, Safety, Flight Operations and Training managers, aircraft manufacturers.
Financial Resources	
Relation with Current Aviation Community Initiative	□ Federal Aviation Administration (FAA) Title 14, Code of Federal Regulations (14 CFR) § 25.1322, Amendment 25-131 □ FAA Advisory Circular (AC) 25.1322-1, Flight Crew Alerting □ FAA 14 CFR § 25.1322, Amendment 25-119 □ FAA AC 25.1329-1B, Approval of Flight Guidance Systems
Performance Goal	Estimated Risk Reduction The estimated risk reduction will assume that 50% of MID States-registered airplanes used in part commercial operations and not currently equipped with low airspeed alerting would be modified to include low airspeed alerting by this safety enhancement (SE). Implementation Implementation will be assessed through MID/RAST Tracking Process Effectiveness Effectiveness will be assessed by monitoring the following metrics: □ Flight Operational Quality Assurance (FOQA) metrics show a reduction in incidents of stall warnings resulting from speed decays
Indicators	Reduce LOC-I related accidents by 50% by the end of 2017
Key Milestones (Deliverables)	Flow time (mo) Start Date End Date Output 1: 24 9/30/2014 9/29/2016 Completion:
Potential Blockers	Financial

DIP Notes	Supporting CAST Intervention Strategies IS 1233 – To improve flight crew awareness of low airspeed, manufacturers should develop and regulators should ensure implementation of systems that alert flight crews when the airplane reaches its minimum maneuvering speed (i.e., "top of amber band") on airplanes with no (or with overrideable) flight envelope protection, iaw 25.1322 at amdt 25-131. In order to improve early flight crew awareness of a decreasing energy state, manufacturers should develop and implement multisensory low airspeed alerting at the caution level (see 14 CFR § 25.1322, amdt 25-131) in existing airplanes, as practical and feasible. The intent of this SE is for operators to incorporate existing service bulletins from manufacturers that provide this functionality.
Output	Air carriers implement existing and available manufacturer service bulletins to install low airspeed alerting functionality in their existing airplanes, as applicable.
Actions	1.IATA will consult with all RASG-MID-represented manufacturers to determine what service bulletins are currently approved and available to install low airspeed alerting functionality in existing type designs, 2. IATA will communicate with their air carrier members, explaining the Airplane State Awareness (ASA) analysis and the role of low energy state and stall in contributing to the accidents, and encourage them to install existing service bulletins from manufacturers that address this issue in their airplanes at their earliest convenience. 3. Air operators will review the available service bulletins, determine applicability of the available bulletins to their specific fleets, and develop an implementation plan for prioritizing incorporation of these bulletins at their earliest convenience. 4. Air carrier actions are considered when all applicable airplanes in their fleet have the available service bulletins installed. 5. IATA will track implementation of their member carriers and report progress to MID/RAST.
Output notes	Applicability Air carriers that operate airplanes for which multisensory low airspeed alerting is available for incorporation via service bulletin. The Joint Safety Implementation Team (JSIT) estimates at least 1000 airplanes in the current U.S. fleet meet this criterion. Most production airplanes already incorporate some form of multisensory low airspeed alerting. The specific reduction in risk from this output assumes about 1000 additional airplanes install the feature. ▯ 6 months for IATA to consult with manufacturers ▯ 6 months after receiving available service bulletins from theManufacturers for IATA to communicate with their air carrier members ▯ 12 months from receiving list of available service bulletins from industry associations for air carriers to implement service bulletins
Target completion date	9/29/2016

Detailed Implementation Plan Template

No	Safety Enhancement Action	GASP Safety Initiative (ICAO Doc 10004)	Best Practices Supporting GASP Safety Initiative (ICAO Doc 10004, Appendix 2)	Safety Impact	Changeability	Indicator	Priority	Time Frame
RAST-MID/LOC-I/2	Standard Operating Procedures Effectiveness and Adherence	Safety Management Standarzation: Implementation of risk-based standarization Safety Oversight Standarization: Promotion of Compliance with National Regulations and Adoption of Industry Best Practices	BP-GEN-1 BP-GEN-2 BP-GEN-4 BP-STD-S-12 BP-STD-S-13 CAST SEI 194	High	Moderate	P2	2	Long Term

Safety Enhancement Action (expanded)	Air carriers develop and implement improved standard operating procedures (SOPs) to reduce flight crew member loss of airplane state awareness.
Statement of Work	In a CAST study of 18 loss-of-control accidents and incidents, insufficient adherence to SOPs was a factor in 15 events. To improve flight crew adherence to SOPs and reduce the risk of lost awareness of airplane state, air carriers should: 1. Review, and update as needed, current SOPs for consistency with the CAST Plan, manufacturer recommendations, and air traffic control (ATC) procedures; 2. Assess level of adherence to current SOPs, identifying possible reasons for insufficient adherence to certain procedures; 3. Develop training programs to provide pilots with rationale for SOPs, focusing on those with lower adherence rates.
Champion Organization	IATA
Human Resources	IATA, Pilot Associations, Safety, Flight Operations and Training managers, aircraft manufacturers.
Financial Resources	

Relation with Current Aviation Community Initiative	□ Federal Aviation Administration (FAA) Advisory Circular (AC) 120-71A, Standard Operating Procedures for Flight Deck Crewmembers □ CAST Plan (located on Skybrary: http://www.skybrary.aero/index.php/Portal:CAST_SE_Plan) □ CAST Safety Enhancement (SE) 2 – CFIT – Standard Operating Procedures □ CAST SE 26 – LOC - Policies and Procedures - Standard Operating Procedures (SOP's) □ FAA Order 7110.65, Air Traffic Control
Performance Goal	Estimated Risk Reduction Implementation Implementation will be assessed through MID/RAST Tracking Process. Effectiveness Effectiveness will be assessed by monitoring the following: □ Narrative pilot reports (e.g.,Aviation Safety Reporting System (ASRS)) indicate a reduction in incidents that indicate flight crew confusion over – or intentional disregard of – operator SOPs.
Indicators	Reduce LOC-I related accidents by 50% by the end of 2017
Key Milestones (Deliverables)	Flow time (mo) Start Date End Date Output 1: 12 1/31/2015 1/31/2016 Output 2: 14 1/31/2016 (end OP1) 3/31/2017 Output 3: 20 3/31/2017 (end OP2) 11/30/2018 **Completion: 44 1/30/2015 11/30/2018**
Potential Blockers	Financial

DIP Notes	Supporting CAST Intervention Strategies IS 110 - Airlines/operators and regulators should ensure that their training/standardization and monitoring programs emphasize the importance of adherence to standard operating procedures and identify the rationale behind those procedures. IS 157 - Airlines/operators, regulators, air traffic service providers should establish policies or programs to address rushed approaches, including elimination of rushed approaches, recognition and rejection of rushed approaches and training for those encountered. IS 556 - To reduce pilot overload, airlines/operators should develop standard operating procedures to help standardize the use of the appropriate level of automation for the operation and the airplane design. IS 40 - Airlines/operators and air traffic service providers should ensure fluency/proficiency in the use of basic English language. IS 56 - Airlines/operators should implement Flight Operations Quality Assurance (FOQA) programs to identify systemic procedural deviations and unsafe trends
Output 1	Air carrier standard operating procedures (SOP) reviewed, and updated as needed, for consistency with the Commercial Aviation Safety Team (CAST) Plan, manufacturer recommendations, and air traffic control (ATC) procedures.
Champion Organization	IATA
Supporting Organizations	Air carriers Airbus Bombardier, Inc. Embraer National Air Carrier Association (NACA) Regional Airline Association (RAA) The Boeing Company

Actions	1. IATA will communicate with their air carrier members, explaining the analysis undertaken by CAST regarding loss of airplane state awareness, the role of that non-adherence to SOPs played in the accidents, and the purpose of the CAST safety enhancement (SE). 2. Air carriers will review SOPs for consistency with the CAST Plan, focusing on completeness for all phases of flight and improved awareness and response during operations that are more prone to reduced airplane state awareness (i.e., rushed and/or unstabilized approaches, go-arounds, transfer of control, automation interaction, and pilot flying/pilot monitoring duties). 3. Air carriers will consult with manufacturers to check that SOPs are consistent with current manufacturer recommendations. 4. Air carriers will review SOPs for compatibility with the most current ATC procedures, paying attention to airports where data show higher rates of unstabilized approach or excessive bank angles. 5. Air carriers will validate and update SOPs as needed based on above review, ensuring that procedures are clear, logical, prioritized, and incorporate human factors best practices. 6. Air carriers will prioritize SOPs for monitoring and evaluation based on relevance to the issues of airplane state awareness (ASA), as identified in the CAST report. 7. Air carrier actions are complete for this output when the following are accomplished: a) The air carrier has reviewed existing SOPs for consistency with the latest versions of the CAST plan, manufacturer recommendations, and ATC procedures b) The air carrier has updated SOPs as necessary 8. IATA will track implementation of their member carriers and report progress to MID/RAST.
Output notes	The CAST plan can be found on Skybrary at: http://www.skybrary.aero/index.php/Portal:CAST_SE_Plan) ATC procedures can be found in the most recent version of FAA Order 7110.65, Air Traffic Control.
Target completion date	1/31/2016
Output 2	Assessments by air carriers to determine the level of adherence to current standard operating procedures (SOP), identifying possible reasons for insufficient adherence.

Detailed Implementation Plan Template

No	Safety Enhancement Action	GASP Safety Initiative (ICAO Doc 10004)	Best Practices Supporting GASP Safety Initiative (ICAO Doc 10004, Appendix 2)	Safety Impact	Changeability	Indicator	Priority	Time Frame
RAST-MID/LOC-I/3	ASA – Training – Flight Crew Training Verification and Validation	Safety Management Standarzation: Implementation of risk-based standarization Safety Oversight Standarization: Promotion of Compliance with National Regulations and Adoption of Industry Best Practices	BP-GEN-1 BP-GEN-2 BP-GEN-4 BP-STD-S-12 BP-STD-S-13 CAST SEI 195	High	Moderate	P2	3	Long Term

Safety Enhancement Action (expanded)	Air carriers verify and validate the quality of training provided to aircrews, with emphasis on externally provided training.
Statement of Work	A CAST study of 18 loss-of-control accidents and incidents concluded that in several of the events the flight crew did not respond to situations in accordance with how they had been trained. In some of these events, a review of the accident report indicated proficiency issues with pilot even after checking and qualification, particularly when training had been provided by an external training organization. To improve flight crew proficiency in handling issues that can lead to loss of airplane state awareness, air carriers should verify and validate the quality and consistency of training, with emphasis on externally provided training. This should include examining both the content and conduct of training. Training verification and validation should include improving surveillance of and communication with third-party training providers.
Champion Organization	IATA
Human Resources	IATA, Pilot Associations, Safety, Flight Operations and Training managers, aircraft manufacturers.

Financial Resources	
Relation with Current Aviation Community Initiative	Related Federal Aviation Administration (FAA) Guidance and Policy □ FAA Information for Operators InFO 13003, Contract Instructor and Contract Check Airman Initial Training Program Records □ FAA Order 8900.1 Vol 3 Ch 54, Sec 5, para 3-4413A regarding part 142 training centers
Performance Goal	Estimated Risk Reduction Implementation Implementation will be assessed through MID/RAST Tracking Process Effectiveness Effectiveness will be assessed by monitoring the following metrics: □ Narrative pilot reports (e.g., Aviation Safety Action Program (ASAP) or Aviation Safety Reporting System (ASRS) show a reduction in incidents where training was not followed or understood during situations related to loss of airplane state awareness.
Indicators	Reduce LOC-I related accidents by 50% by the end of 2017
Key Milestones (Deliverables)	Flow time (mo) Start Date End Date Output 1: 42 1/31/2015 7/31/2018 Completion: 42 1/31/2015 7/31/2018
Potential Blockers	
DIP Notes	Supporting CAST Intervention Strategies IS 218 - To enhance contractor training, airlines/operators should conduct/improve surveillance of contractor training programs for adequacy of training. IS 1215 - To ensure aircrew proficiency, airlines/operators should ensure that their training/standardization programs include verification and validation (e.g., testing and check flights prior to first revenue flight) that the training was effective.
Output 1	Air carrier standard operating procedures (SOP) reviewed, and updated as needed, for consistency with the Commercial Aviation Safety Team (CAST) Plan, manufacturer recommendations, and air traffic control (ATC) procedures.
Champion Organization	IATA

Supporting Organizations	Air carriers
Actions	1. IATA will communicate with their air carrier members, explaining the analysis undertaken by CAST regarding loss of airplane state awareness, the role of ineffective training, and the purpose of the CAST safety enhancement (SE). 2. Air carriers will implement a process to ensure their aircrew training program, including any externally provided training, is consistent with current airline and manufacturer policy and procedures. 3. Air carriers will implement a process to validate the qualification and currency of trainers, including third-party training providers 4. Air carriers will validate contractor training by periodically observing training and/or checking events and auditing records to ensure consistency of aircrew training and pilot proficiency. 5. Air carrier actions are considered complete for this output when the following are accomplished: a) The air carrier has completed review of their training b) The air carrier has implemented processes to assess trainer currency and qualification c) The air carrier has made an initial observation / validation visit to any third-party training organizations they use, as applicable 6.IATA will track implementation of their member carriers, and report progress and completion to MID/RAST.
Output notes	
Target completion date	7/31/2018

APPENDIX 3G

CFIT Detailed Implementation Plan

April 2014

No	Safety Enhancement Action	GASP Safety Initiative (ICAO Doc 10004)	Best Practices Supporting GASP Safety Initiative (ICAO Doc 10004, Appendix 2)	Safety Impact	Changeability	Indicator	Priority	Time Frame
RAST-MID/CFIT/1	The implementation of PBN Approach procedures to all runways not currently served by precision approach procedures	Safety Management Standarzation: Implementation of risk-based standarization Safety Oversight Standarization: Promotion of Compliance with National Regulations and Adoption of Industry Best Practices	BP-GEN-1 BP-GEN-2 BP-GEN-4 BP-STD-S-12 BP-STD-S-13	High	Difficult	P3	1	Long-Term

Safety Enhancement Action (expanded)	Introduction of PBN approaches to ensure that the latest performance based navigation technology is utilized, at such airfields, to provide the highest level of safety during the conduct of an approach and landing towards the runway.
Statement of Work	In an attempt to mitigate the risks related to CFIT, States should ensure that approach procedures are adequate and provide sufficient altitude protection during the approach and landing phase especially at the identified Higher Risk Airports. Also ensure that pilots and controllers training and guidance in the use of PBN is adequate, current, uniformly conducted and supports the optimum utilization of automation resources so that individuals can take a monitoring role.
Champion Organization	IATA/CANSO
Human Resources	Regulators CAA Operational Support Service Procedure Designers Air Navigation Service Providers (ANSP)
Financial Resources	TBD

No	Safety Enhancement Action	GASP Safety Initiative (ICAO Doc 10004)	Best Practices Supporting GASP Safety Initiative (ICAO Doc 10004, Appendix 2)	Safety Impact	Changeability	Indicator	Priority	Time Frame
Relation with Current Aviation Community Initiative		IATA & ICAO are jointly developing a CFIT toolkit addressing the CFIT contributing AST safety enhancements addressing the CFIT contributing factors CAST safety enhancements addressing the CFIT contributing factors Partnership between airlines and Flight Procedures Design consulting firms such as Airbus (ProSky) & Etihad Airways for the creation of PBN approaches at specific airfields. These new technology approaches provide continuous descent operations and optimised trajectories. This will enhance flight safety which is at the heart of the PBN Implementation Plan effort.						
Performance Goal		In accordance with the MID Region Safety Strategy.						
Indicators		In accordance with the MID Region Safety Strategy.						
Key Milestones (Deliverables)		1. Identify and prioritize the airports/runways which require specific PBN approaches. *Aircraft Operators FOQA programmes to monitor data (consistency and accuracy of the Operator's fleet for each selected "high risk/special airport) and provide a summary of stable/unstable approaches to MID-RAST each quarter).* 2. Concerned States, CANSO, IATA and ICAO to establsh a Work Force to develop an appropriate detailed action plan for the implementation of PBN approaches at the identified airports/runways. 3. implementation of PBN approach procedures at the identified airports/runways in accordamce with their associated action plans.						
Potential Blockers								
Responsible		Core Team: IATA, CANSO, ICAO, States and Users						
DIP Notes								

APPENDIX 3H

Detailed Implementation Plan
DIP1

No	Safety Enhancement Action	GASP Safety Initiative (ICAO Doc 10004)	Best Practices Supporting GASP Safety Initiative (ICAO Doc 10004, Appendix 2)	Safety Impact	Changeability	Indicator	Priority	Time Frame
MID-SST/01	Improve status of implementation of State Safety Programs (SSPs) in the MID Region	Refer to the SEI	Refer to the SEI	High	Difficult	P3	1	Mid Term

Safety Enhancement Action (expanded)	ICAO safety management provisions require States to establish a State Safety Programme (SSP) in order to achieve an Acceptable Level of Safety (ALoS) in Civil Aviation.
Statement of Work	Establishment of an RSOO to support States in the implementation of SSP in an expeditious manner.
Champion Organization	ICAO
Human Resources	1. SST 2. ICAO 3. States 4. Industry 5. ACAC
Financial Resources	Options will be explored by SST as required (funds from States or other safety partners).
Relation with Current Aviation Community Initiative	

No	Safety Enhancement Action	GASP Safety Initiative (ICAO Doc 10004)	Best Practices Supporting GASP Safety Initiative (ICAO Doc 10004, Appendix 2)	Safety Impact	Changeability	Indicator	Priority	Time Frame
Performance Goal		1. Achieve acceptable level of safety in Civil Aviation. 2. Achieve MID- Region saftey strategy targets.						
Indicators		In accordance with the MID Region Safety Strategy.						
Key Milestones (Deliverables)		1- Promote the establishment of an RSOO-SSP during the Second MID Safety Summit (Oman, 27-29 April 2014, particularly through the high-level briefing/meeting (DGs and CEOs)). 2- Send out a questionnaire to the MID States in order to get the States' interest and commitment to the establishment of an RSOO-SSP to support States in the implementation of SSP. 3- Analyze the States' replies and develop a summary report. 4- Coordinate with ICAO MID Regional Office and ACAC in order to consider the proposal of establishment of an RSOO-SSP in the Study on the establishment of RSOO(s) for ACAC and MID Region States, which will start early 2015.						
Potential Blockers		1. Lack of necessary expertise Subject to the course of action that will be take: 1. Regional Cooperation 2. Institutional issues 3. Financial constraints						
Responsible		Core Team: ICAO, IATA,Region states,operators,Boeing,Airbus & COSCAP-GS.						
DIP Notes								

APPENDIX 3I

SSP QUESTIONNAIRE

1- SSP Questionnaire has been developed to collect information related to the status of the SSP implementation in the MID Region, as well as, States' views regarding the establishment of an RSOO-SSP.

2- ICAO MID Regional Office sent out State Letter on 6 July 2014, requesting States to complete the SSP Questionnaire.

3- 11 States replied to the SSP Questionnaire: Bahrain, Egypt, Jordan, Iran, Iraq, Kuwait, Lebanon, Qatar, Saudi Arabia, UAE and Yemen.

4- The following table summarize the replies:

SSP Questionnaire		
No.	**Questions**	**Answers**
1	Has the State completed An SSP Gap Analysis on iSTARS? Please indicate the date/estimated date for the completion of the SSP Gap Analysis on iSTARS.	Yes: 2 No: 3 In Progress: 6
2	Has the State developed an SSP implementation plan? Please indicate the date/estimated date for the development of an SSP implementation plan.	Yes: 6 No: 3 In Progress: 2
3	Has the State fully/partially completed implementation of SSP Phase 1? Please specify the elements of Phase 1 that have been implemented as outlined in ICAO Doc 9859 Safety Management Manual (SMM).	Fully: 2 Partially: 7 No: 2
4	Has the State fully/partially completed implementation of SSP Phase 2? Please specify the elements of Phase 2 that have been implemented as outlined in ICAO Doc 9859 Safety Management Manual (SMM).	Fully: 1 Partially: 10 No:
5	Has the State fully/partially completed implementation of SSP Phase 3? Please specify the elements of Phase 3 that have been implemented as outlined in ICAO Doc 9859 Safety Management Manual (SMM).	Fully: Partially: 9 No: 2

SSP Questionnaire		
No.	**Questions**	**Answers**
6	Has the State fully/partially developed/ implemented the elements of Internal/External training, communication and dissemination of safety information? *developed and implemented through all of the implementation phases, as detailed in ICAO Doc 9859 Safety Management Manual (SMM).*	Fully: 1 In Progress: 8 No: 2
7	Has the State established a process for acceptance of individual service providers' SMS? Please provide details of the established process.	Yes:7 No:3 In Progress: 1
8	What are the major challenges faced in implementing SSP phases/elements?	1- Recourses (financial and manpower) 2- Legislation and enforcement 3- Reporting culture 4- Database 5- Training Level of reporting is still low.
9	Would the State be interested in joining a Regional Safety Oversight Organization for SSP (RSOO-SSP) in order to support the implementation of SSP in an expeditious manner?	Yes: 8 No: 2 No reply: 1

APPENDIX 3J

Detailed Implementation Plan
DIP2

No	Safety Enhancement Action	GASP Safety Initiative (ICAO Doc 10004)	Best Practices Supporting GASP Safety Initiative (ICAO Doc 10004, Appendix 2)	Safety Impact	Changeability	Indicator	Priority
MID-SST/02	Establish and Implement an SSP action plan in the MID - Region States	Refer to the SEI	Refer to the SEI	High	Difficult	P3	1

Safety Enhancement Action (expanded)	The States are required, under the Action Plan for the SSP establishment and implementation,to provide a Regulatory Framework as well as to provide Guidance Materials for its personnel (Procedures check-lists).
Statement of Work	Development of a set of Generic Regulation on SSP and associated guidance materials
Champion Organization	COSCAP-GS
Human Resources	1. SST 2. ICAO/ COSCAP-GS 3. States
Financial Resources	No special finance needed.
Relation with Current Aviation Community Initiative	
Performance Goal	Support the achievement of MID Region Safety Strategy Targets related to SSP.

No	Safety Enhancement Action	GASP Safety Initiative (ICAO Doc 10004)	Best Practices Supporting GASP Safety Initiative (ICAO Doc 10004, Appendix 2)	Safety Impact	Changeability	Indicator	Priority
Indicators		In accordance with the MID Region Safety Strategy.					
Key Milestones (Deliverables)		1- Develop SSPGeneric Regulations-Model; and 2- Develop associated guidance materials (CAA procedures for the assessment of the industry towards the SMS implementation) Note: 1- The whole set of Generic Regulation and procedures are uploaded on COSCAP-GS website and can be downloaded easily by the States for customization.					
Potential Blockers		No special finance needed.					
Responsible		Core Team: ICAO, COSCAP-GS and MID Region States.					
DIP Notes							

APPENDIX 3K

Detailed Implementation Plan
DIP3

No	Safety Enhancement Action	GASP Safety Initiative (ICAO Doc 10004)	Best Practices Supporting GASP Safety Initiative (ICAO Doc 10004, Appendix 2)	Safety Impact	Changeability	Indicator	Priority
MID-SST/03	Establish and Implement an SSP action plan in the MID - Region States	Refer to the SEI	Refer to the SEI	High	Difficult	P3	1

Safety Enhancement Action (expanded)	SSP and SMS Worshops for managers/decision makers and technical staff.
Statement of Work	Provide SSP/SMS Workshops
Champion Organization	COSCAP-GS with the support of ICAO.
Human Resources	1. ICAO/ COSCAP-GS 2. Short term experts/trainers to be hired by the COSCAP-GS for the purpose of the training missions.
Financial Resources	Under the approval of member States, COSCAP-GS budget will be used. Sponsoring will also be needed.
Relation with Current Aviation Community Initiative	

No	Safety Enhancement Action	GASP Safety Initiative (ICAO Doc 10004)	Best Practices Supporting GASP Safety Initiative (ICAO Doc 10004, Appendix 2)	Safety Impact	Changeability	Indicator	Priority
Performance Goal		1. Awareness raising of CAAs' managers, decision makers and technical personnel. 3. Achieve the MID Region Safety Strategy Targets.					
Indicators		Support the achievement of MID Region Safety Strategy Targets related to SSP.					
Key Milestones (Deliverables)		A joint ICAO/COSCAP-GS Safety Management Workshop (Kuwait, 26-28 May 2015); and 2 day Workshop on Annex 19 and SMM to be conducted on request by the MID States (2 Workshops are already planned in Kuwait and Bahrain, beginning of 2015)					
Potential Blockers		1. Shortage in Human resources (inspectors) to be trained. 2.Security and political issues in some States that could jorpardise the travel missions.					
Responsible		Core Team: ICAO, COSCAP-GS, Safety Partners and MID Region States.					
DIP Notes							

APPENDIX 3L

The Second MID Region Safety Summit

27-29 April 2014
Muscat, Oman








Public Authority for Civil Aviation

OMAN AIR الطيران العُماني

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Second MID Region Safety Summit
Summary of Discussions

I. GENERAL

1.1 Place and Duration

1.1.1 The Second MID Region Safety Summit was successfully held at the Golden Tulip Hotel, Muscat, Oman from 27 to 29 April 2014. The third day of the Summit (29 April 2014) was reserved to provide a High-Level Briefing to the Top Management (DGCAs and CEOs) about the safety management accountability and responsibility.

1.2 Attendance

1.2.1 The Summit was attended by a total of one hundred forty three (143) participants from ten (10) States (Egypt, Iran, Jordan, Kuwait, Morocco, Oman, Qatar, Sudan, United Arab Emirates and United States - FAA) and nine (9) Organizations/Industries (AACO, ACAC, ACI, Boeing, CANSO, COSCAP-GS, EMBRAER, IATA and IFATCA). The list of participants of the Second MID Region Safety Summit is at **Attachment A** to this Summary.

1.2.2 The High-Level Briefing/Meeting was attended by a total of forty seven participants (47) from nine (9) States (Egypt, Iran, Jordan, Kuwait, Morocco, Oman, Qatar, Sudan and United Arab Emirates) and eight (8) Organizations/Industries (AACO, ACAC, ACI, Boeing, CANSO, COSCAP-GS, IATA and IFATCA). The list of participants of the High-Level Briefing/Meeting is at **Attachment B** to this Summary.

1.3 Agenda

1.3.1 The agenda was developed around the main following topics:

a) Global & Regional Aviation Safety
b) RASG-MID Activities & Engagement Strategy
c) Runway and Ground Safety (RGS)
d) Loss of Control In Flight (LOC-I)
e) Controlled Flight Into Terrain (CFIT)
f) SSP/SMS Implementation
g) Revised version of the MID Region Safety Strategy

1.3.2 A copy of the detailed Agenda/Work Programme is available at the ICAO MID Regional Office Website:
http://www.icao.int/MID/Pages/2014/Second%20MID%20Region%20Safety%20Summit.aspx
From extensive feedback it was confirmed that the Agenda was well balanced, informative and interesting and that it met the expectations of the safety stakeholders.

1.4 Objective

1.4.1 The Summit aimed to present the status of aviation safety in the MID Region, the progress made in attaining the aviation safety targets outlined in the MID Region Safety Strategy, as well as to discuss challenges and opportunities for the way forward.

II. SUMMARY AND OUTCOME OF DISCUSSIONS

2.1 General

2.1.1 The Summit provided a balance between concepts, strategies and operational experiences.

2.1.2 The Summit provided valuable panel Sessions and opportunities for networking, collaboration and coordination, as well as sharing of experiences. A revised version of the MID Region Safety Strategy has been consolidated based on the outcome of the different sessions. This version of the Strategy has been endorsed by the DGCAs and CEOs meeting during the third day of the Summit.

2.1.3 All the presentations are available at the ICAO MID Regional Website: http://www.icao.int/MID/Pages/2014/Second%20MID%20Region%20Safety%20Summit.aspx

2.2 Global & Regional Aviation Safety

2.2.1 This Session provided an overview of the revised Global Aviation Safety Plan (GASP) and the global priorities. It clarified the link between global and regional safety plans as outlined in the MID Region Safety Strategy. The Session also provided an overview of the Regional Aviation Safety Group – Middle East (RASG-MID) working arrangements and activities.

2.3 RASG-MID Activities & Engagement Strategy

2.3.1 This Session provided an updated overview of the activities of the different RASG-MID subsidiary bodies, i.e.: MID Annual Safety Report Team (MID-ASRT), MID Regional Aviation Safety Team (MID-RAST) and MID Safety Support Team (MID-SST), including the challenges faced and the support required to achieve their objectives.

2.3.2 It was highlighted that the First and Second Editions of the MID Region Annual Safety Report used the IATA data. However, for humanization purpose, starting with the Third Edition, ICAO data (Scheduled Commercial Departures) will be used for the reactive part of the Report.

2.3.3 The Session highlighted the need for support, commitment/engagement, participation and contributions of all States and Stakeholders in the MID Region to the RASG-MID activities to achieve the agreed objectives.

2.4 Runway and Ground Safety (RGS)

2.4.1 This Session provided participants with an overview of the status of the RGS related accidents (Globally and Regionally), as well as, the RGS activities under the RASG-MID and the progress related to the development and implementation of Safety Enhancement Initiatives (SEIs) and Detailed Implementation Plans (DIPs).

2.4.2 The outcome of the First Meeting of the RGS Working Group was highlighted including the updated Safety Indicators and Targets related to Runway Safety.

2.4.3 The Session also provided an update on the status of Aerodrome Certification in the MID Region.

2.5 Loss of Control In Flight (LOC-I)

2.5.1 This Session provided an overview of the status of the LOC-I related accidents (Globally and Regionally), as well as, the LOC-I activities under the RASG-MID and the progress related to the development and implementation of SEIs and DIPs. In addition, the Safety Indicators and Targets were presented as outlined in the revised version of the MID Region Safety Strategy.

2.5.2 It was highlighted that the DIP needs to be further reviewed and finalized taking into consideration the outcome of the LOC-I Symposium (ICAO-HQ, Montreal, 20- 22 May 2014), and the Guidance Material contained in the Manual on Aeroplane Upset Prevention and Recovery (ICAO Doc 10011).

2.5.3 Participants were briefed about the recently completed work of the US Commercial Aviation

Safety Team (CAST) dealing with Aircraft State Awareness.

2.6 Controlled Flight Into Terrain (CFIT)

2.6.1 This Session provided an overview of the status of the CFIT related accidents (Globally and Regionally). It was highlighted that according to ICAO data, no CFIT related accident occurred in the MID Region since 2006. However, the CFIT will continue to be addressed since it is a global priority and one of the three main killers globally.

2.6.2 Safety Indicators and Targets were reviewed and updated as outlined in the revised version of the MID Region Safety Strategy.

2.6.3 Participants were briefed about the draft DIP, which is currently coordinated between RASG-MID and MIDANPIRG (PBN Sub Group).

2.7 SSP/SMS Implementation

2.7.1 Participants were apprised of operational experiences related to SSP & SMS implementation in the MID Region.

2.7.2 This Session provided an overview of the development and implementation of SEIs and DIPs to support the SSP Implementation in the MID Region as part of the RASG-MID activities.

2.7.3 The discussion covered the Safety Indicators and Targets related to the SSP/SMS Implementation. Some updates to these Indicators and Targets were agreed upon as outlined in the revised version of the MID Region Safety Strategy.

2.8 Revised version of the MID Region Safety Strategy

2.8.1 During this Session a revised version of the MID Region Safety Strategy was consolidated based on the outcome of the different sessions related to the Safety Indicators and Targets.

2.9 High-Level Briefing to the Top Management (DGCAs and CEOs)

2.9.1 The meeting was apprised of the outcome of the first two days of the Summit, particularly; the revised version of the MID Region Safety Strategy, which has been endorsed by the meeting as at **Appendix A**.

2.9.2 The meeting was briefed about the RASG-MID working arrangements, activities and deliverables, as well as, the necessary support and commitment/engagement to achieve the RASG-MID's objectives.

2.9.3 A briefing was also provided about the Regional Cooperation including COSCAP-GS and the initiative to conduct a study related to the establishment of a Regional Safety Oversight Organization(s) for ACAC and MID States.

2.10 Third MID Region Safety Summit

2.10.1 Based on a proposal by Qatar, it was agreed that the Third MID Region Safety Summit will be held in 2016 in Doha, Qatar.

APPENDIX 3M

STATUS OF THE MID REGION SAFETY INDICATORS vs. THE SAFETY TARGETS

Reactive Safety Information							
Theme	**Safety Indicator**	**MID Region Current Status**		**Safety Target**	**Global**		**Remark**
		Average Rate (2009-2013)	**Rate for 2013**		**Average Rate (2009-2013)**	**Rate for 2013**	
Accidents	Number of accidents per million departures	**7.28**	**3.7**	Reduce the accident rate to be in line with the global average by the end of 2016.	**3.72**	**2.9**	Target not yet achieved
	Number of fatal accidents per million departures	**1.69**	**0**	Reduce the rate of fatal accident to be in line with the global average by the end of 2016.	**0.53**	**0.29**	Target not yet achieved
Runway Safety (RS)	Number of Runway Safety related accidents per million departures	**3.98**	**1.8**	Reduce the Runway Safety related accidents to be below the global rate by end of 2016.	**1.98**	**1.8**	Target achieved
				Reduce the Runway Safety related accidents to be **less than 1 accident** per million departures by end of 2016.	N/A		Target not yet achieved
Loss of Control In-Flight (LOC-I)	Number of LOC-I related accidents per million departures	**0.61**	**0**	Reduce the LOC-I related accidents to be below the global rate by end of 2016.	**0.08**	**0.1**	Target achieved
Controlled Flight Into Terrain (CFIT)	Number of CFIT related accidents per million departures	**0.42**	**0**	Maintain the CFIT related accidents below the global rate by end of 2016.	**0.12**	**0.1**	Target achieved

Proactive Safety Information				
Theme	**Safety Indicator**	**Safety Target**	**MID**	**Remark**
Safety oversight capabilities (USOAP-CMA, IOSA and ISAGO)	USOAP-CMA Effective Implementation (EI) results: (a) Number of MID States with an overall EI over 60% (b) Number of MID States with an EI score less than 60% for more than 2 areas (LEG, ORG, PEL, OPS, AIR, AIG, ANS and AGA)	Progressively increase the USOAP-CMA EI scores/results: a. 11 MID States to have at least 60% EI by the end of 2015. b. all the 15 MID States to have at least 60% EI by the end of 2017. c. Max 3 MID States with an EI score less than 60% for more than 2 areas by the end of 2015.	Currently 9 States out of 13 audited States are with EI>60%. 6 States with an EI score less than 60% for more than 2 areas.	
	Number of Significant Safety Concerns	a. MID States resolve identified Significant Safety Concerns as a matter of urgency and in any case within 12 months from their identification. b. No significant Safety Concern by end of 2016.	1 SSC	
	Use of the IATA Operational Safety Audit (IOSA), to complement safety oversight activities	a. Maintain at least 60% of eligible MID airlines to be certified IATA-IOSA by the end of 2015 at all times. b. All MID States with an EI of at least 60% accept the IATA Operational Safety Audit (IOSA) as an acceptable Means of Compliance (AMC) by 2015 to complement their safety oversight activities.	a. 69% b. 2 States	a. This is as of 30 Sep 2014
	Number of Ground Handling service providers in the MID Region having the IATA Safety Audit for Ground Operations (ISAGO) certification, as a percentage of all Ground Handling service providers	a. 75% of the Ground Handling service providers to be certified IATA-ISAGO by the end of 2017. b. The IATA Ground Handling Manual (IGOM) endorsed as a reference for ground handling safety standards by all MID States with an EI above 60% by end of 2017.	a. TBD b.	
Aerodrome Certification	Number of certified international aerodrome as a percentage of all international aerodromes in the MID Region	a. 50% of the international aerodromes certified by the end of 2015. b. 75% of the international aerodromes certified by the end of 2017.	28 out of 71 **39%**	

Predictive Safety Information				
Theme	**Safety Indicator**	**Safety Target**	**MID**	**Remark**
SSP/SMS Implementation	Number of MID States with EI>60%, having completed the SSP gap analysis on iSTARS	All MID States with EI>60% by the end of 2014.	2 States out of 9 completed the SSP gap analysis on iSTARS 5 States out of 9 Started the SSP gap analysis on iSTARS 2 States in progress	Currently 9 States of 13 audited States are with EI>60% Information is based on: 1- data available on iSTARS and collected from States; and 2- Data collected from States' replies to an SSP Questionnaire (11 States replied so far, 7 of them are with EI>60%. A follow up is in progress to monitor the achievement.
	Number of MID States with **EI>60%,** that have developed an SSP implementation plan	All MID States with **EI>60%** by end of **2014**	5 out of 9 States developed an SSP implementation plan 4 States in progress	
	Number of MID States with **EI>60%**, having completed implementation of SSP **Phase 1**.	All MID States with **EI>60%** to complete phase 1 by the end of **2015**.	2 out of 9 States completed implementation of SSP **Phase 1** 5 States partially completed implementation of SSP **Phase 1**	
	Number of MID States with **EI>60%**, having completed implementation of SSP **Phase 2**.	All MID States with EI>60% to complete phase 2 by the end of 2016.	1 State completed implementation of SSP **Phase 2** 7 States partially completed implementation of SSP **Phase 2**	
	Number of MID States with **EI>60%**, having completed implementation of SSP **Phase 3**.	All MID States with **EI>60%** to complete phase 3 by the end of **2017**.	1 State partially completed implementation of SSP **Phase 3**	
	Number of MID States with **EI>60%** that have established a process for acceptance of individual service providers' SMS	a. 30% of MID States with **EI>60%**by the end of 2015 b. 70% of MID States with **EI>60%**by the end of 2016 c. 100% of MID States with **EI>60%**by the end of 2017	6 (67%) States established a process for acceptance of individual service providers' SMS	

RASG-MID

Engagement Strategy

1 EXECUTIVE SUMMARY

In the context of renewed growth of air traffic and in light of anticipated increases in air travel, it is imperative to maintain a very strong focus on initiatives that will further improve safety outcomes.

The Regional Aviation Safety Group - Middle East (RASG-MID) has been established with the main objective of supporting the establishment and operation of a performance-based safety system in the MID Region and the implementation of the Global Aviation Safety Plan (GASP). Its mission is to enhance civil aviation safety in the MID Region by ensuring effective coordination and cooperation between all aviation stakeholders and monitoring progress in the implementation of the GASP and the MID Region Safety Strategy.

The success of RASG-MID is dependent on the commitment, participation and contribution of its members and partners from States, industry and Regional and Sub-regional Organizations through financial and in-kind support.

The objective of this document is to outline a strategy and plan for engagement and communication with safety stakeholders and partners in the MID Region to enhance the level of participation in and support to RASG-MID and its subsidiary bodies, in order to achieve RASG-MID's objectives.

2 STAKEHOLDER ENGAGEMENT

The RASG-MID objectives cannot be achieved without support and commitment from all Stakeholders in the MID Region. This section of the document outlines the strategy and plan for the engagement of safety stakeholders in the MID Region.

2.1 Why do we need engagement?

The need for enhanced safety stakeholders' engagement is three-fold;

- Benefits for Stakeholders

    1. They will contribute as experts in their field to the activities of RASG-MID.
    2. They will have a platform to voice their issues and concerns.
    3. They will take part in the decision making process.

- Benefits for RASG-MID

    1. Enhanced quality decision making.
    2. Streamlined program/work development process.
    3. Enhanced collaboration and capacity for innovation.
    4. Effective implementation of action plans to achieve agreed safety targets.

- Benefits for the Region

    1. More transparent communication.
    2. More synergies.
    3. Avoidance of duplication of efforts.
    4. Improved awareness, buy-in and commitment.

2.2 Who are our safety stakeholders?

Safety is everyone's concern, and within that context the following are the RASG-MID's safety stakeholders:

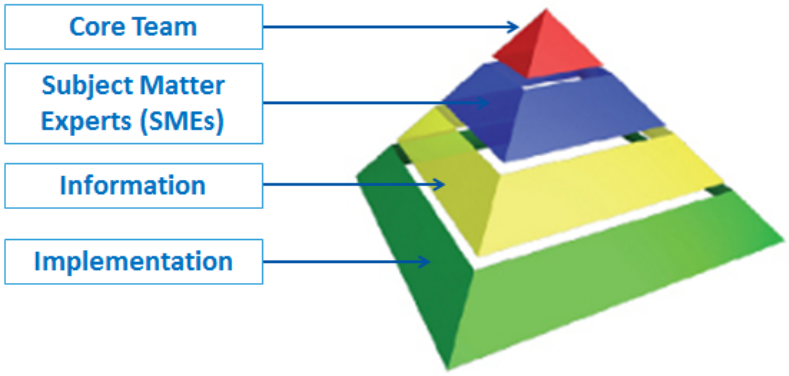
- States
- Airlines
- Airports
- Air Navigation Service Providers
- International Organizations
- Regional and Sub-regional Organizations
- Maintenance and Repair Organizations
- Training Organizations
- Aircraft Manufacturers

2.3 What is the desired outcome from engagement?

RASG-MID wishes to achieve the following through enhanced engagement with safety stakeholders:

- Regional, national, and local knowledge and awareness.
- Buy-in.
- Commitment.
- Effective contribution to the work under RASG-MID.
- Active participation to meetings, events, and forums.
- Harmonization of efforts.

2.4 RASG-MID Working Arrangements and Engagement Strategy & Tools



2.4.1 Core Team:

The Core Team of the RASG-MID is composed of the following:

1. RASG-MID Chairpersons and RSC Co-Chairs
2. MID Annual Safety Report Team (MID-ASRT), MID Regional Aviation Safety Team (MID-RAST) and MID Safety Support Team (MID-SST) Rapporteurs
3. Risk Areas Coordinators (Runway Safety, LOC-I, CFIT, Emerging Risks, etc.)
4. ICAO Secretariat

The roles and responsibilities of the different RASG-MID stakeholders are defined in the RASG-MID Procedural Handbook. According to the Handbook, the States should ensure necessary co-ordination and follow-up of the Group's activities within their Administrations.

In addition, roles and responsibilities of each of the Safety Teams (MID-ASRT, MID-RAST and MID-SST) including Rapporteurs and Coordinators are explained in the related Terms of References (TORs).

Commitment of the Core Team is vital for the success of RASG-MID.

2.4.2 Subject Matter Experts

The Safety Teams were established to support the development, implementation and prioritization of RASG-MID Safety Initiatives. These Teams are charged with preparatory work on specific subjects requiring expert advice for their resolution. They should accomplish their tasks by developing mitigation strategies based on gathering and processing safety data and information.

Participation in Safety Teams should be by specialists in the subjects under consideration. Such specialists should have relevant experience in the field concerned. Accordingly, all stakeholders should support the work of the Safety Teams by providing the expertise to be active contributors to the work (voluntary basis), including the review of the RASG-MID deliverables.

2.4.3 Information:

The main purpose of the RASG-MID is to develop an integrated, data-driven strategy and implement a work programme that supports a regional performance framework for the management of safety.

For the development of the MID Annual Safety Report (MID-ASR), there's a need for 3 categories of safety information: Reactive, Proactive and Predictive. States and Stakeholders should provide/share information about the safety occurrences (unidentified). An open and transparent communication channel/mechanism is needed to support data collection.

RASG-MID shares information with all safety partners and stakeholders, in order to keep them aware of the different activities and deliverables of RASG-MID. Such information sharing is ensured through:

1. RASG-MID meetings Reports.
2. MID Region Safety Summits.
3. RASG-MID Newsletters, if deemed necessary (To be developed).
4. Bulletins and circulars.
5. RASG-MID Webpage.

2.4.4 Implementation:

The RASG-MID has started to produce deliverables. Stakeholders are encouraged to use the RASG-MID deliverables to enhance safety. Feedback on the use/implementation of these deliverables is very important for continuous improvement. In addition, difficulties for implementation should be claimed for identification of possible assistance.

2.4.5 Buy-in and Commitment:

To ensure the continued commitment and contribution of safety partners in the MID Region to various RASG-MID activities, the following will be used as a means to achieve engagement and commitment:

1. High-level engagement and commitment of CEOs/DGs:

   Half a day of each MID Safety Summit would be dedicated to a briefing to the CEOs/DGs of regulators, airlines, ANSPs, and airports from the Region. Such briefing will be focusing on:

a) the engagement and commitment of CEOs/DGs to RASG-MID activities;
b) the commitment of availing the right expertise at RASG-MID and its subsidiary bodies meetings and forums;
c) the continuity of participation of representatives in RASG-MID meetings; and
d) the commitment for global and regional safety measures such as SSP and SMS implementation.

2. Commitment and contribution of States, airlines, airports, ANSPs, manufacturers and organizations:

Following the high-level engagement and commitment of CEOs/DGACs, RASG-MID will, through the ICAO MID Regional Office, IATA, CANSO, and ACI Offices, approach all their members to:

a) identify a Main Focal point for RASG-MID to ensure receiving of correspondence in timely manner;
b) identify focal points for all RASG-MID subsidiary bodies; and
c) identify volunteers to contribute to the work of RASG-MID; and
d) establish an Internal Safety Support Action Group to assist the RASG-MID Core Team, as required.

3. Sharing and exchange of safety data and information:

Without proper and accurate safety data and information sharing, RASG-MID will not be able to continue its work and achieve its goals. Within that context, RASG-MID will use the following to expand the safety data sharing and exchange platform:

a) States to enhance internal mechanism for receiving/replying to State Letters;
b) make use of IATA safety data sharing tool such as STEADES, and FDX;
c) expand the use of the ICAO tools and databases such as iSTARS, ECCAIRS, etc;
d) launch a campaign to promote safety culture and safety data sharing among safety partners in the MID Region, through;
    i. Presentations at regional fora and events; and
    ii. Circulars and Bulletins
e) the continuity of participation of representatives in RASG-MID meetings; and
f) the agreement on a mechanism to improve the sharing of safety data at regional level, including the possibility of establishment of Regional/Sub-Regional safety database(s).

2.4.6 Travel budget and financial support:

Travel budget remains one of the main challenges for safety partners in the Region to continuously attend and take part in RASG-MID activities. RASG-MID will explore means to assist and support partners in meeting this challenge.

Where possible, meetings, events, and forums will be held in connection with other events already planned so as to avoid extensive travel and costs.

Virtual meetings will be used to compensate for face-to-face meetings where possible.

3 MONITORING OF EFFECTIVENESS

3.1 How to assess engagement and effective communication?

RASG-MID should monitor the implementation of the engagement strategy and assess its effectiveness based on the following:

- level of participation in RASG-MID activities;
- effective implementation of safety action plans and mitigation measures;
- achievement of safety targets within set timelines;
- streamlining of efforts and avoidance of duplication of efforts;
- level of communication with stakeholders as per set plans; and
- feedback questionnaire (customers satisfaction surveys) from RASG-MID stakeholders and partners.

APPENDIX 5A

FOURTH MEETING OF THE REGIONAL AVIATION SAFETY GROUP - MIDDLE EAST

(RASG-MID/4)

PROVISIONAL AGENDA

Agenda Item 1:	Adoption of the Provisional Agenda
Agenda Item 2:	Global and Regional developments related to Aviation Safety
Agenda Item 3:	Regional Performance Framework for Safety
Agenda Item 4:	Coordination between RASG-MID and MIDANPIRG
Agenda Item 5:	Future Work Programme
Agenda Item 6:	Any other business

APPENDIX 6A

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