



*International Civil Aviation Organization*

**Second Meeting of the RASG-MID Steering Committee  
(RSC-MID/2)**

*(Amman, Jordan, 28 – 30 October 2013)*

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**Agenda Item 3: Regional Performance Framework for Safety**

**UPDATE ON DEVELOPMENT AND IMPLEMENTATION  
OF SEIS & DIPS RELATED TO RGS**

*(Presented by RGS Coordinator)*

**SUMMARY**

The paper provides an update of initiatives made by MID-RAST in the area of Runway and Ground Safety (RGS) including updated drafts of the Safety Enhancement Initiatives (SEIs) and Detailed Implementation Plans (DIPs).

Action by the meeting is at paragraph 3.

**1. INTRODUCTION**

1.1 Runway and Ground Safety (RGS) was been identified by the MID Region Annual Safety Report Team (ASRT) as one of three main risk areas (Focus Areas) to be addressed under the RASG-MID framework.

1.2 According to the 2012 Regional Annual Safety Report, Global Runway Safety accidents represented 59% of all accidents accounting for 29% of all fatal accidents and 19% of all related fatalities reported between 2006 and 2010. In the MID Region, Runway Safety accidents represented 63% of all accidents accounting for 50% of all fatal accidents and 18% of all related fatalities reported and runway excursions represent 43% of the Runways Safety related accidents.

**2. DISCUSSION**

2.1 Further to the Runway Ground Safety update provided to RASG-MID/2 held in Abu Dhabi, UAE, 12 - 14 November 2012 (WP/9); the RGS SEIs and DIPs have been updated as detailed in the following paragraphs.

2.2 The initial eight SEIs have been consolidated into three and the two supporting DIPs were combined in to a single DIP in support of MID-RAST/RGS/01. The details of consolidated SEIs were worked into the supporting DIPs. See **Appendices A and B** for full details of the SEIs and DIPs respectively. The SEIs were consolidated according to the following table:

Current		RASG-MID/2-WP/9	
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	MID- RAST/ RGS/1	Specific training for pilots and air traffic controllers to avoid unstabilized approaches
		MID- RAST/ RGS/2	Promote pilot adherence to Standard Operating Procedures for approaches including go-around decision making
MID- RAST/ RGS/2	Develop guidance material and training programs to support creation of action plans by local aerodrome runway safety teams.	MID- RAST/ RGS/3	Develop guidance material and training programs to support creation of action plans by local aerodrome runway safety teams.
		MID- RAST/ RGS/5	Timely and accurate notification regarding runway conditions and weather by AIS and ATS units
		RAST- MID/R GS/08	Identification of aerodrome Hot Spots and publish Hot Spot data in AIP if necessary. Development of Hot Spot charts will depend on aerodrome complexity and incident data/analysis. Each aerodrome should positively respond that analysis has been undertaken at a minimum.
MID- RAST/ RGS/3	Focus on Aerodrome Infrastructure and Maintenance Management	MID- RAST/ RGS/4	Promote /monitor Implementation RESA including other means such as arresting systems
		MID- RAST/ RGS/6	Regulation, guidance and specific training in relation to maintaining aerodrome runway/taxiway related markings
		MID- RAST/ RGS/7	Regulation, guidance and specific training in relation to maintaining runways in accordance with Annex 14

2.3 Further to the update of Global Aviation Safety Plan (GASP) and its approval by the Air Navigation Commission (AN-WP/8726, 28 February 2013), the three SEIs were reviewed and re-aligned to the GASP as follows:

SEI	GASP Reference and Description	
MID- RAST/RGS/1	<b>ESO-S-F</b>	Effective Safety Oversight – Standardisation - Promotion of Compliance with National Regulations and Adoption of Industry Best Practices
MID- RAST/RGS/2	<b>SM-COL-B</b>	Safety Management – Collaboration - Promotion of a Multi-Disciplinary Risk Management Approach
MID- RAST/RGS/3	<b>ESO-S-F</b>	See above for ESO-S-F

2.4 The MID-Region Safety Strategy was endorsed by the DGCA-MID/2 meeting in Saudi Arabia, 20 - 22 May 2013. The meeting is invited to review the mapping of the Action Plan associated with the Runway and Ground Safety Metric to the MID-RAST RGS SEIs in the below table:

Safety Indicator	Safety Target	Action Plan	Link to RGS SEI/DIP
Number of Runway excursion related accidents as a percentage of all accidents	Reduce Runway Excursions related accidents by 50% by the end of 2017	Establishment and support of local Runway Safety Teams.	MID-RAST/RGS/2
		Establishment of Regional RST GO-Team.	MID-RAST/RGS/2
		Effective reporting system to exchange and analyse safety information.	MID-RAST/RGS/2
		Runway Safety Seminar/Workshop.	MID-RAST/RGS/2
Number of Runway incursion related accidents as a percentage of all accidents	Reduce Runway Incursions related accidents by 50% by the end of 2017	Adopt specific regulations related to runway safety.	MID-RAST/RGS/1 MID-RAST/RGS/3
		Identify hazards and mitigation measures on runway excursions/incursions and unstabilized approach, and develop guidance material and specific training.	MID-RAST/RGS/1 MID-RAST/RGS/3

2.5 The DIP in support of Local Runway Safety Teams (MID-RAST/RGS/2) has been progressed further to the following activities:

- 2.5.1 development of ICAO Runway Safety Team Handbook;
- 2.5.2 incorporation of RGS initiatives in the MID-RASG Work Programme; and
- 2.5.3 the RGS SEIs and DIPs will be reviewed and updated further to endorsement of the Second Annual Safety Report (RSC-MID/2-WP/6).

### 3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the initiatives undertaken by ICAO and other organizations; and
- b) review and endorse SEIs and DIPs related to Runway and Ground Safety (RGS) as in **Appendices A and B** to this working paper.

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APPENDIX A

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

DIP	Safety Enhancement Action	Reference	GSI	Safety Impact	Changeability	IC Indicator	Priority	Possible Champion	Time Frame	Notes
X	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	MID-RAST/RGS/1		High	Moderate	P2	1	ICAO, IATA, CANSO, IFALPA, States and Operators	Short Term	<p>Pilot training is top priority of RAST-PA and RAST-AP. DIP may be coordinated on global level - or benchmarked against other regions.</p> <p>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.</p>
X	Develop guidance material and training programs to support creation of action plans by local aerodrome runway safety teams.	MID-RAST/RGS/2		High	Easy	P1	2	ICAO-MID - Nominated State Champion - ACI - COSCAP	Mid-Term	<p>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 windshear)</p> <p>Runway Incursion data not included in RASG-MID ASR - First Edition - however acknowledged by RSC/01 Agenda Item 2 paragraph 2.14</p>
	<p>Focus on Aerodrome Infrastructure and Maintenance Management with priority given to the following:</p> <ul style="list-style-type: none"> <li>- Promote /monitor Implementation RESA including other means such as arresting systems;</li> <li>- Regulation, guidance and specific training in relation to maintaining aerodrome runway/taxiway related markings; and</li> <li>- Regulation, guidance and specific training in relation to maintaining runways in accordance with Annex 14</li> </ul>	MID-RAST/RGS/3		High	Difficult	P3	3	ICAO-MID - Nominated State Champion	Long Term	<p>ASR Comments: 4.1.3.2.1 - Ground damage in 33% of accidents related to inadequate markings or signage or inadequate RESA.</p> <p>4.1.3.2.1 - bar chart of contributing factors</p>

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APPENDIX B

## Detailed Implementation Plan Template

Rast No	Safety Enhancement Action	Reference	GSI	Safety Impact	Changeability	Indicator	Priority	Time Frame
MID-RAST/RGS/01	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		9	High	Moderate	P2	1	Short Term

<b>Safety Enhancement Action (expanded)</b>	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.
<b>Statement of Work</b>	<p><b>ICAO Actions</b></p> <ol style="list-style-type: none"> <li>1. Publish circular requiring States to provide increased oversight Audits using risk based approach and the necessary guidance on pilot adherence to SOPs.</li> <li>2. Publish circular requiring States to implement safety promotion and associated training programmes including strategies to avoid unstabilized approaches for Pilots and Air Traffic Controllers.</li> <li>3. Review ICAO work programme and consider including the subject as part of relevant regional workshops and existing symposiums where deemed applicable.</li> <li>4. Ensure SEI is added to the MID-Region Strategic Plan.</li> </ol>
<b>Champion Organization</b>	ICAO, IATA, FSF, IFALPA, IFATCA and CANSO
<b>Human Resources</b>	<ul style="list-style-type: none"> <li>• ICAO - International Civil Aviation Organisation (MID and HQ)</li> <li>• IATA - International Air Transport Association (MENA and HQ)</li> <li>• IFALPA - International Federation of Airline Pilot's Association</li> <li>• CANSO - Civil Air Navigation Services Organisation</li> <li>• States</li> <li>• Aircraft Operators</li> </ul>
<b>Financial Resources</b>	
<b>Relation with Current Aviation Community Initiative</b>	<p>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</p>

<b>Performance Goal</b>	Reduce relative number of runway excursions. MID-Regional Safety Strategy: Reduce Runway Excursions related accidents by 50% by the end of 2017.
<b>Indicators</b>	Reduction of runway excursions resulting from unstable approaches, as a percentage of total movements, for 2013 and 2014.
<b>Key Milestones</b>	<p><b>To be completed by year end 2015</b></p> <p><b>ICAO</b></p> <ol style="list-style-type: none"> <li>1. Publish circular requiring States to provide increased oversight Audits regarding pilot adherence to SOPs.</li> <li>2. Publish circular requiring states to implement strategies to avoid unstabilized approaches for Pilots and Air Traffic Controllers.</li> <li>3. Confirm Review of ICAO program and inclusion of SEI in regional workshops and existing symposiums</li> <li>4. Ensure SEI is added to the MID Region Strategic plan.</li> </ol> <p><b>States</b></p> <ol style="list-style-type: none"> <li>1. Review of regulation and guidance material - as per timing in ICAO Circular</li> <li>2. Ensure that safety oversight activities include SEI specific items - as per timing in ICAO Circular</li> <li>3. Ensure Operators' SMS include a link to and participation in the local aerodrome runway safety programs - 12 month check</li> <li>4. Ensure the Operators are capturing unstabilized approach through SMS - 12 month check</li> <li>5. Items 4 and 5 maybe support by State bulletin to Operators</li> </ol> <p><b>Operator</b></p> <ol style="list-style-type: none"> <li>1. Review and ensure that induction, training and awareness initiatives - 12 month check</li> <li>2. Ensure SMS includes a link/actions to and participation in the local aerodrome runway safety programs - 12 month check</li> <li>3. Ensure SMS process has identified these the above risks as part the formal Safety Risk Management process - 12 month check</li> </ol> <p><b>IATA - IFALPA - CANSO</b></p> <ol style="list-style-type: none"> <li>1. Review and ensure that regional strategy and awareness initiatives specifically address the SEI</li> </ol>
<b>Potential Blockers</b>	Availability of required human resources from identified organisations Availability of financial resources
<b>Responsible</b>	<ul style="list-style-type: none"> <li>• ICAO - International Civil Aviation Organisation (MID and HQ)</li> <li>• IATA - International Air Transport Association (MENA and HQ)</li> <li>• IFALPA - International Federation of Airline Pilot's Association</li> <li>• CANSO - Civil Air Navigation Services Organisation</li> <li>• Mid-Region States</li> <li>• Mid-Region Aircraft Operators</li> </ul>
<b>DIP Notes</b>	<p>Pilot training is top priority of RAST-PA and RAST-AP. DIP may be coordinated on global level - or benchmarked against other regions.</p> <p>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.</p>

## Detailed Implementation Plan Template

Rast No	Safety Enhancement Action	Reference	GSI	Safety Impact	Changeability	Indicator	Priority	Time Frame
RAST-MID/RGS/2	Develop guidance material and training programs to support creation of action plans by local aerodrome runway safety teams.		9	High	Easy	P1	2	Mid-Term

<b>Safety Enhancement Action (expanded)</b>	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.
<b>Statement of Work</b>	<ol style="list-style-type: none"> <li>1. Establishment of Regional RST Go-Teams</li> <li>2. Conduct regional Runway Safety Seminars/Workshops</li> <li>3. Establishment of Local Runway Safety Teams</li> <li>4. Enhance coordination with ICAO Runway Safety Programme including exchange of data</li> <li>5. Create supporting regulation and guidance including Runway Safety Team (RST) Handbook</li> </ol>
<b>Champion Organization</b>	ICAO, IATA, FSF, IFALPA, IFATCA, ACI and CANSO

<p><b>Human Resources</b></p>	<ul style="list-style-type: none"> <li>• ICAO - International Civil Aviation Organisation (MID and HQ)</li> <li>• IATA - International Air Transport Association (MENA and HQ)</li> <li>• IFALPA - International Federation of Airline Pilot's Association</li> <li>• CANSO - Civil Air Navigation Services Organisation</li> <li>• ACI - Airport Council International</li> <li>• States</li> <li>• Aircraft Operators</li> </ul>
<p><b>Financial Resources</b></p>	
<p><b>Relation with Current Aviation Community Initiative</b></p>	<p>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)  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</p>
<p><b>Performance Goal</b></p>	<p>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.</p>
<p><b>Indicators</b></p>	<p>See above/below</p>



<p><b>Key Milestones</b></p>	<p><b>ICAO Actions</b></p> <ol style="list-style-type: none"> <li>1. Publication of Runway Safety Team (RST) Handbook (currently in draft)</li> <li>2. Establishment of Regional RST Go-Teams</li> <li>3. Conduct regional Runway Safety Seminars/Workshops</li> <li>4. Coordinate with States to provide transparency to and harmonise initiatives of ICAO's Runway Safety Programme with Regional and State initiatives (i.e. information gathering, information sharing, surveys, RST hosting platform, etc.)</li> </ol> <p><b>States' Actions</b></p> <ol style="list-style-type: none"> <li>1. Conduct national Runway Safety Seminars/Workshops</li> <li>2. Promotion of RST Handbook</li> <li>3. Creating supporting regulation and guidance material at a State level</li> <li>4. Focus oversight on SMS Safety Risk Management as related to runway and ground safety</li> <li>5. Support Regional Go-Teams</li> </ol> <p><b>Operators' Actions</b></p> <ol style="list-style-type: none"> <li>1. Conduct local Runway Safety awareness campaigns</li> <li>2. Establish local runway safety teams (or equivalent)</li> <li>3. Participate in Regional Go-Teams</li> </ol> <p><b>Others' Actions</b></p> <ol style="list-style-type: none"> <li>1. Conduct local Runway Safety awareness campaigns</li> </ol>
<p><b>Potential Blockers</b></p>	<p>Availability of required human resources from identified organisations</p>
<p><b>Responsible</b></p>	<ul style="list-style-type: none"> <li>• ICAO - International Civil Aviation Organisation (MID and HQ)</li> <li>• IATA - International Air Transport Association (MENA and HQ)</li> <li>• IFALPA - International Federation of Airline Pilot's Association</li> <li>• CANSO - Civil Air Navigation Services Organisation</li> <li>• Mid-Region States</li> <li>• Mid-Region Aircraft Operators</li> </ul>

**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).

-END-