# **RASG-MID SAFETY ADVISORY – 03**



(RSA-03)

## **March 2015**

## **Model Checklist for RSTs**

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These guidelines are developed by RASG-MID, as part of MID-RAST/RGS/2 DIP deliverables, based on the work developed by the UAE General Civil Aviation Authority in collaboration with the ICAO MID Regional Office and the Regional Aviation Safety Group - Middle East (RASG-MID).

### **Disclaimer**

This document is intended to provide guidance for civil aviation regulators, aerodrome operators, air traffic service providers and aircraft operators regarding establishment of Runway Safety Teams.

This document has been compiled by members of aviation industry to enhance runway safety. It is not intended to supersede or replace existing materials produced by the National Regulator or in ICAO SARPs. The distribution or publication of this document does not prejudice the National Regulator's ability to enforce existing National regulations. To the extent of any inconsistency between this document and the National/International regulations, standards, recommendations or advisory publications, the content of the National/International regulations, standards, recommendations and advisory publications shall prevail.

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#### INTRODUCTION

#### **BACKGROUND**

Runway Safety (RS) has been identified by the MID Region Annual Safety Report Team (ASRT) as one of three main focus areas or risks to be addressed under the MID Region Aviation Safety Group (RASG-MID) framework.

The RASG-MID's Regional Aviation Safety Team's Runway and Ground Safety Working Group (RGS WG) has undertaken a Safety Enhancement Initiative (SEI) to develop guidance material and training programs to support creation of action plans by aerodrome Runway Safety Teams. This SEI was reviewed and endorsed during RASG-MID/3 to include the Detailed Implementation Plan (DIP) which included the action to develop and issue a model checklist for Runway Safety Teams.

In January 2015 the RASG-MID produced the second Safety Advisory (RSA–02) with Guidance on Regulatory Framework Supporting Establishment of Runway Safety Team, which including model regulation which is reflected in the contents of the checklists in this Safety Advisory.

These guidelines are developed based on the work of the United Arab Emirates (UAE) as integral part of its National Runway Safety Team commitment to enhance runway safety through the creation of materials to support the development and success of Runway Safety Teams. Reference has been made to the ICAO Runway Safety Team Handbook, First Edition, January 2014, and the European Action Plan for the Prevention of Runway Incursions, Issue 2, Appendix B, Guidelines for Runway Safety Teams.

#### **PURPOSE**

The purpose of this Safety Advisory is to propose model checklist elements for Runway Safety Teams to support their creation and success. The Safety Advisory consists of the following elements:

- 1. Model Checklists for Runway Safety Team to be included as part of guidance material in support the national regulation or initiatives to establish runway safety teams. The checklists are separated to support various themes in this Safety Advisory, but may be merged into a single listing or restructured with elements added, removed or rephrased based on the prevailing national regulations and the needs of the audience aviation stakeholders. (Chapter 1)
- 2. **Model Agenda Elements for Runway Safety Teams** to be considered for inclusion in guidance material in support the national regulation or initiatives to establish runway safety teams. *(Chapter 2)*
- 3. **References** are included to acknowledge the sources of information included in this Safety Advisory and to provide additional information to states and organisations promoting the development of Runway Safety Teams. *(Chapter 3)*

- 4. **Appendix A Sample Terms of Reference** including the model elements included in Chapter 2
- 5. **Appendix B Sample Agenda** including the model element included in Chapter 1, Model Checklist for Elements for Runway Safety Team Terms of Reference (1.2)

In doing so, there is one single concern: safety.

This Safety Advisory serves to further empower national authorities in their efforts to support Runway Safety Teams through the creation and distribution of practical guidance materials and tools.

#### **USING THIS SAFETY ADVISORY**

The Table of Contents provides an overview of the materials which may be used to support Runway Safety Teams.

Each chapter of this Safety Advisory includes proposed application of the model elements for the consideration, adaptation and adoption of national authorities. The Safety Advisory does not have to be read in order from beginning to end; particular paragraphs may be consulted as required.

The reader will choose the depth at which the Safety Advisory will be used at any given time. Reading may range from using the Table of Contents or elements of the model materials as a benchmark for gap analysis – to adopting and/or adapting the content of the proposed materials as guidance.

#### Chapter 1

#### MODEL CHECKLISTS FOR RUNWAY SAFETY TEAM

#### 1.1 Application

Further to proposed model framework to support and ensure the establishment of Runway Safety Teams, this Safety Advisory serves to focus on checklist elements to assist Runway Safety Teams. The checklists may be used as a guide in establishing Runway Safety Teams or as a self-assessment tool for Teams that are in existence.

This Safety Advisory is intended for the use of the aerodrome safety stakeholder who will ultimately hold the responsibility for the establishment, management, administration and outcomes of the Runway Safety Team.

It may be more practical for small aerodromes to conduct their Runway Safety Team as part another safety group meeting. This may be acceptable as long as the safety group meeting includes the applicable recommended elements of the Runway Safety Team checklists.

Runway Safety Teams are also encouraged to review the content of the Model Oversight Checklist Elements – Primary Runway Safety Stakeholder, which is included in the RASG-MID Safety Advisory – Guidance on Regulatory Framework Supporting Establishment of Runway Safety Team as part of the quality assurance and compliance reviews if applicable.

It is recommended that the below model checklists be issued as part of national guidance material in support of published regulation related to Runway Safety Teams.

#### 1.2 Model Checklist Elements for Runway Safety Team Terms of Reference

The purpose of the Runway Safety Team should be to develop an action plan for runway safety, advise management as appropriate on potential runway safety issues and to recommend strategies for hazard removal and mitigation of residual risk. The Terms of Reference serve to govern the activities of the team and provide a framework for the required works. It is noted that a Memorandum of Understanding may be substituted for the Terms of Reference if appropriate. Refer to **Appendix A** for a sample Terms of Reference format. The following checklist elements may be used for dedicated runway or combined safety meetings:

Terms of Reference (ToR)			
Is there a ToR agreement in place? See <b>Appendix A</b> for TOR sample template.	□ yes		
Does the ToR define the scope of work of the RST? See Runway Safety Team Scope of Works Checklist 1.4 for more details.	□ yes □ no		

Does the ToR define the roles for members of the RST? See Runway Safety Team Composition Checklist 1.3 for more details.	□ yes	
Does the ToR define a process for handling data/reports received from the participating organizations?	□ yes	
Does the ToR describe the decision-making process to be used by the RST?	□ yes	
Does the ToR define a process for resolving disagreements between RST members?	□ yes	

### 1.3 Model Checklist Elements for Runway Safety Team Composition

In order for Runway Safety Teams to function successfully, the key runway stakeholders operating on or near the runway must be included on the Team:

Composition			
Aerodrome Operator*	□ yes		
Air Navigation Service Provider*	□ yes		
Aircraft Operators that operate on the aerodrome*	□ yes		
Support Services Representatives with drivers having access on the manoeuvring area	□ yes □ no □ n/a		
Aerodrome Engineering and Maintenance*	□ yes □ no □ n/a		
Rescue Fire Fighting – Aerodrome Emergency Services*	<ul><li> yes</li><li> no</li><li> n/a</li></ul>		
Military Representatives	□ yes □ no □ n/a		
Other Guests as appropriate	<ul><li> yes</li><li> no</li><li> n/a</li></ul>		

<sup>\*</sup> mandatory attendees

### 1.4 Model Checklist for Runway Safety Team Scope of Works

In addition to and whilst applying Safety Management principles, the Runway Safety Team should specifically focus on runway related issues as part of their scope of works:

Scope of Works			
Does the RST identify potential runway safety issues, including the need for the establishment of hot spots or other problem areas at the aerodrome and the review of the relevant entries of the AIP?  See Runway Safety Hot Spot Checklist 1.5 for more details.	□ yes		
Does the RST develop and run local awareness campaigns that focus on local issues, for example, producing and distributing local hot spot maps, or other guidance material such as FOD control as considered necessary?	□ yes □ no		
Does the RST assist in verifying that communications between air traffic controllers, pilots and vehicle drivers are satisfactory and recommend educational training or procedural initiatives as required?	□ yes		
Does the RST make observations on a regular basis in different weather and light conditions to assess whether all visual aids are adequate and understandable by all parties concerned, or identify potential aerodrome design issues?	□ yes		
Does the RST understand the operating difficulties of personnel working in other areas, and recommending areas for improvement?	□ yes		
Does the RST develop of joint training programmes on runway incursion prevention?	□ yes		
Does the RST provide advice prior to the implementation of changes to the aerodrome to identify potential for runway incursion?	□ yes		
Does the RST review and implement recommendations as appropriate from both the European Action Plans for the Prevention of Runway Incursions/Excursions documents?	□ yes		

Does the RST monitor the number, type and severity of runway safety events including incursions and excursions?	□ yes	
Does the RST periodically review compliance related safety cases, aerodrome certificate alternative means of compliance and deviations?	□ yes	

## 1.5 Model Checklist Elements for Runway Safety Hot Spots

Strategies to manage and mitigate the risk from hot spots may include, but are not limited to, the following items:

Runway Safety Hot Spots		
Does the RST conduct Runway Safety Hot Spot awareness campaigns?	□ yes □ no □ n/a	
Does the RST review or propose additional visual aids (signs, markings and lighting) to mitigate Runway Safety Hot Spots?	□ yes □ no □ n/a	
Does the RST review or propose establishment of alternative routings to mitigate Runway Safety Hot Spots?	□ yes □ no □ n/a	
Does the RST review or propose changes to the design of parts of the aerodrome to mitigate Runway Safety Hot Spots?	□ yes □ no □ n/a	
Does the RST identify and seek to mitigate blind spots in the aerodrome control tower?	□ yes □ no □ n/a	
Does the RST ensure that aerodrome charts showing hot spots are produced, checked regularly for accuracy, revised as needed, distributed locally and published in the AIP?	□ yes □ no □ n/a	

# 1.6 Model Checklist Elements for Safety Management System Elements within the Runway Safety Team

In addition to runway related scope of works, the Runway Safety Team should apply sound Safety Management principles:

Hazard Identification			
Does the RST have a formal safety data collection and processing system for documenting operational hazards?	□ yes		
Do all RST members contribute to the formal safety data collection and processing system by sharing identified operational hazards?	□ yes		
Does the RST define and document specific consequences for the operational hazards?	□ yes		
Safety Risk Management			
Does the RST have a formal process to manage the operational risk?	□ yes		
As part of the risk management process, are the consequences of the operational hazards assessed in terms of probability and severity?	□ yes		
Is there a formalized process to determine the level of risk the RST is willing to accept?			
Does the RST develop risk mitigation strategies to control the level of risk within the operational environment?	□ yes		
Is there a formalized process for the RST to make recommendations to applicable stakeholders?	□ yes		
Is there a formalized process to document the decisions made by the RST during the risk management process?	□ yes		
Are the decisions made by the RST periodically reviewed to determine if the desired effect was achieved by their mitigations/recommendations?	□ yes		
Communication			
Does the RST have a formal process to communicate with applicable stakeholders?	□ yes		

Does the RST periodically provide runway safety material to key frontline employees?	□ yes	
Does the RST participate in information sharing activities with other RSTs?	□ yes	
Does the RST solicit safety-related information from all airport users via common links embedded within websites of the RST participating organizations?	□ yes □ no	
Continuous Improvement		
Does the RST have a formal process to continuously improve their processes and products?	□ yes	
Does the RST engage in formal, periodic reviews of their programme to ensure they are improving runway safety?	□ yes	

#### Chapter 2

#### MODEL AGENDA ELEMENTS FOR RUNWAY SAFETY TEAMS

#### 2.1 Application

Meetings supporting the Runway Safety Team should be supported by an agenda and record of the meeting.

It is recommended the below model elements be issued as part of national guidance material in support of published regulation related to Runway Safety Teams. Please see **Appendix B** for a sample Agenda template format.

#### 2.2 Model Elements for Runway Safety Team Agenda

#### **Meeting Information**

Meeting date, start time, end time and location

#### **Members and Guests**

Name, title and organisation of RST Members

Refer to Runway Safety Team Composition Checklist 1.3 for more details

#### **Previous Business**

Review the status of previous action items and update the action log as appropriate.

#### **New Business**

Members present new projects, hazards, or events identified within their safety management systems. The Team then: (a) defines the hazards, (b) conducts safety risk assessments and (c) proposes recommendations for managing the safety risks.

#### **Action Log**

Document findings and action plan.

### **Next Meeting**

Agree to the date, time and location for the next meeting

#### Optional: Airport Inspections

If not otherwise confirmed through safety management system activities or as an additional oversight, an airport inspection may be carried out as part of the RST to identify existing and new hazards as well as to observe rectification measures that have been implemented based on previous findings. See ICAO Runway Safety Team Handbook for more details.

#### Chapter 3

#### **REFERENCES**

#### **Related ICAO MID Publication**

Draft ICAO MID Safety Advisory – Guidance on Regulatory Framework Supporting Establishment of Runway Safety Team

#### **Publications**

- ACI Airside Safety Handbook and Wildlife Management Handbook
- CANSO Runway Safety Maturity Checklist
- CANSO Flyer Avoiding Unstable Approaches
- CANSO Flyer Runway Excursions
- European Action Plan for the Prevention of Runway Excursions
- European Action Plan for the Prevention of Runway Incursions
- FAA Runway Safety: A Best Practices Guide to Operations and Communications
- FAA Guide to Ground Vehicle Operations
- FAA Pilot's Guide to Airport Signs and Markings Drilled Card
- FAA Pilot and Flight Crew Taxi Procedures at Towered Airports Drilled Card
- FAA Runway Safety Programme (FAA Order 7050.1A)
- FSF Reducing the Risk of Runway Incursions (Flight Safety Foundation, May 2009)
- ICAO Safety Management Manual (ICAO Doc 9859, 3rd edition)
- IATA Pilot / ATC Phraseology Report
- IATA REER Toolkit
- IFALPA Runway Safety Manual
- ICAO Advanced Surface Movement Guidance and Control Systems (A-SMGCS)
   Manual (ICAO Doc 9830)
- ICAO Aerodrome Design Manual (ICAO Doc 9157)
- ICAO Airport Services Manual (ICAO Doc 9137)
- ICAO Annexes 6, 11, 14 and 19 to the Convention on International Civil Aviation
- ICAO Annex 19 to the Convention on International Civil Aviation, Safety Management
- ICAO Circular 329 AN191 Runway Surface Condition Assessment, Measurement and Reporting
- ICAO Global Air Navigation Plan (ICAO Doc 9750)
- ICAO Global Air Traffic Management Operational Concept (Doc 9854)
- ICAO Human Factors Guidelines for Air Traffic Management (ATM) Systems (ICAO Doc 9758)
- ICAO Hazardous to Civil Aircraft Operations (ICAO Doc 9554)
- ICAO Hazards at Aircraft Accident Sites (ICAO Cir 315)
- ICAO Human Factors Digest No. 17 Threat and Error Management (TEM) in Air Traffic Control (ICAO Cir 314)
- ICAO Runway Safety Team Handbook

- ICAO Manual of Aircraft Ground De-icing/Anti-icing Operations (ICAO Doc 9640)
- ICAO Manual of All-Weather Operations (ICAO Doc 9365)
- ICAO Manual on Airspace Planning Methodology for the Determination of Separation Minima (ICAO Doc 9689)
- ICAO Manual on Air Traffic Management System Requirements (ICAO Doc 9882)
- ICAO Manual on Certification of Aerodromes (ICAO Doc 9774)
- ICAO Manual on ICAO Bird Strike Information Systems (IBIS) (ICAO Doc 9332)
- ICAO Manual on the Prevention of Runway Incursions (ICAO Doc 9870)
- ICAO Manual on Required Communication Performance (RCP) (ICAO Doc 9869)
- ICAO Manual on Simultaneous Operations on Parallel or Near-Parallel Instrument Runways (SOIR) (ICAO Doc 9643)
- ICAO Manual of Surface Movement Guidance and Control Systems (SMGCS) (ICAO Doc 9476)
- ICAO Operation of New Larger Aeroplanes at Existing Aerodromes (ICAO Cir 305)

#### **Web Base Resource**

An ICAO information Toolkit (iKit) is available, containing available Runway Safety Products from various stakeholders is available through the ICAO Runway Safety Website at <a href="http://www.icao.int/safety/runwaysafety/Pages/default.aspx">http://www.icao.int/safety/runwaysafety/Pages/default.aspx</a>.

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# APPENDIX A SAMPLE TERMS OF REFERENCE

This material is offered as an example only and elements and order of the Agenda will be dependent on the needs, capabilities and complexities of the involved runway safety stakeholders.

Title RUNWAY SAFETY TEAM TERMS OF REFERENCE TOR Date: dd Month yyyy

Tor Review Date: dd Month yyyy

Purpose Scope of Oversight

To develop an action plan for runway safety, advise management as appropriate on potential runway Xxx safety issues and to recommend strategies for hazard removal and mitigation of residual risk.

Frequency		Ob	jectives
Monthly		1.	Identify potential runway safety issues, including the need for the establishment of hot spots or other problem areas at the aerodrome and the review of the relevant entries of the AIP;
Members		2.	Develop and run local awareness campaigns that focus on local issues, for example, producing and distributing local hot spot maps, or other guidance material such as FOD control as considered necessary;
<ul> <li>Aerodrome Operator</li> </ul>	Rescue Fire     Fighting –     Aerodrome	3.	Assist in verifying that communications between air traffic controllers, pilots and vehicle drivers are satisfactory and recommend educational training or procedural initiatives as required;
<ul> <li>Air Navigation Service Provider</li> </ul>	Emergency Services	4.	Make observations on a regular basis in different weather and light conditions to assess whether all visual aids are adequate and understandable by all parties concerned, or identify potential aerodrome design issues;
<ul> <li>Support Services Representatives</li> </ul>	Military     Representatives	5.	Understand the operating difficulties of personnel working in other areas, and recommending areas for improvement;
A = == = d == == =	representatives	6.	Develop of joint training programmes on runway incursion prevention;
<ul> <li>Aerodrome         Engineering and     </li> </ul>	Other Guests	7.	Provide advice prior to the implementation of changes to the aerodrome to identify potential for runway incursion;
Maintenance		8.	Review and implement recommendations as appropriate from both the European Action Plans for the Prevention of Runway Incursions/Excursions documents;
		9.	Monitor the number, type and severity of runway safety events including incursions and excursions; and
		10.	Periodically review compliance related safety cases, aerodrome certificate alternative means of compliance and deviations.

# APPENDIX A SAMPLE TERMS OF REFERENCE

Sta	Standing Agenda Items		Inputs			Outputs	
1. 2. 3. 4. 5. 6. 7.	Welcome Minutes of Previous Meeting Data Sharing Previous Business New Business Action Log Any Other Business Date for next meeting Airport Tour	1. 2. 3. 4. 5. 6. 7.	Minutes from previous meetings Safety Data Action Plans and Updates Aerodrome Input, Experiences and Ini Air Operators Input, Experiences and Regulatory and guidance documentati Best practise documentation	Initiatives	1. 2. 3.	Minutes Recommendations Date, time and venue for next meeting	
	Ground Rules						
1. 2. 3.	All actions to be completed on time and in ful Minutes of the meetings to be completed and Agenda items to be submitted at least 10 day	l dis	_	Any relevant paperwork on rethe meeting  Meetings to start and finish of	•	or topics circulated at least 10 working days before schedule	
	Role of Chairman		Role of Members			Membership Selection Process	
	<ul> <li>Meeting Planning – agenda, venue, etc</li> <li>Meeting Facilitation</li> <li>Maintaining Safety Library</li> <li>Coordinating with External Agencies</li> </ul>		<ul> <li>Meeting Planning – submit it presentations, etc</li> <li>Meeting Participation</li> <li>Contributing to Safety Library</li> <li>Coordinating with Participating 0</li> </ul>		XX	XX	

# APPENDIX A SAMPLE TERMS OF REFERENCE

Consultation, Decision Making and Conflict Resolution Process	Governance and Protection of Safety Data, Safety Reports and Safety Information	Documentation and Reporting Requirements						
• XXX	<ul> <li>List of signed Non-Disclosure Agreements (NDAs)         <ul> <li>XXX</li> <li>XXX</li> <li>XXX</li> </ul> </li> <li>House Rule: Anyone who comes to the meeting is free to use information from the discussion, but is not allowed to reveal who made any comment. It is designed to increase openness of discussion.</li> </ul>	Updates on the following occurrence categories at each meeting by xxx:  Abnormal Runway Contact Bird Strike Ground Collision Ground Handling Runway Excursion Runway Excursion Runway Incursion Collision with Obstacles Undershoot/Overshot, aerodrome  xxx						
TOR Approval								
Name: Title:	Signature:	Date:						

# APPENDIX B SAMPLE AGENDA

#### RUNWAY SAFETY TEAM (NRST) AGENDA

Date: dd Month YYYY
Time: hhmm to hhmm

Venue: Xxx

Agenda Item x Introduction – Welcome – Apologies

[Name, Title, Organisation]

**Previous Business** 

Agenda Item x Items arising from Previous Meeting

[Name, Title, Organisation]

Agenda Item x Items arising from Previous Meeting

[Name, Title, Organisation]

**Action Log** 

Agenda Item x Update on Initiative xxx

[Name, Title, Organisation]

Agenda Item x Update on Initiative xxx

[Name, Title, Organisation]

**New Business** 

Agenda Item x Update –Safety Data and Events

[Name, Title, Organisation]

Agenda Item x New Business Items as proposed by Members

[Name, Title, Organisation]

Agenda Item x Data Sharing and Upcoming Events

[Name, Title, Organisation]

Agenda Item x Any Other Business

Agenda Item x Closing Remarks

[Name, Title, Organisation]