



**Regional Aviation Safety Group-Middle East
(RASG-MID)**

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**GUIDANCE ON
REGULATORY FRAMEWORK SUPPORTING
ESTABLISHMENT OF RUNWAY SAFETY TEAMS**

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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 and Ground Safety (RGS) has 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 MID Region Aviation Safety Group (RASG-MID) framework.

The MID-RAST RGS has undertaken as one of the Safety Enhancement Initiatives (SEIs) to develop guidance material and training programs to support creation of action plans by local aerodrome runway safety teams.

The Detailed Implementation Plan (DIP) for the SEI included the action to develop and issue regulatory framework supporting establishment of runway safety teams.

PURPOSE

The purpose of this RSA seeks to propose a regulatory framework to support the creation and success of runway safety teams consisting of the following elements:

1. **Primary Regulation** to be included in the national regulation relevant to the runway safety stakeholder who holds primary responsibility for runway safety. In the model framework this has been identified as the Aerodrome Operator.
(Chapter 1)
2. **Supporting Regulation** to be included in the national regulation relevant to runway safety stakeholders who have not been identified as primarily responsible for runway safety.
(Chapter 2)
3. **Guidance Material** to be developed in support of the regulation and to provide details regarding the conduct of the local runway safety teams. This is to be considered in conjunction with the ICAO Runway Safety Team Handbook.
(Chapter 3)
4. **Oversight Material** to be developed and incorporated in existing safety oversight processes of national regulators. This material can also be used by the runway safety stakeholders as part of their internal safety assurance processes.
(Chapter 4)

This RSA serves to further empower national authorities in their efforts to support runway safety programmes through model national regulation, guidance materials and safety oversight practices.

USING THIS RSA

The Table of Contents provides key points of the regulatory framework supporting the creation of local runway safety teams.

Each chapter of this RSA includes proposed application of the framework elements and model regulation or guidance material for the consideration, adaptation and adoption of national authorities. The RSA 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 RSA will be used at any given time. Reading may range from using the Table of Contents or elements of the model regulation as a benchmark for gap analysis – to adopting and/or adapting the content of the proposed model regulation and guidance/oversight materials as part of a national regulatory framework.

Chapter 1

PRIMARY REGULATION

1.1 Application

It is recommended the below model regulation be included in the national regulation relevant to the stakeholder primarily responsible for runway safety in order to support the development of a runway safety team. In this example that stakeholder is the Aerodrome Operator.

The regulation is high level, noting it is aligned with safety management system principles which may cover a number of safety critical forums including the runway safety team. The regulation also provides a positive requirement for the operator to ensure participation of relevant stakeholders.

1.2 Model Regulation

Aerodrome Management - Safety Programmes

The Aerodrome Operator shall:

- 1. Establish, lead and implement safety programmes to promote safety and the exchange of safety-relevant information; and*
- 2. Require the organisations operating or providing services at the aerodrome to be involved in such programmes.*

Note: Provide reference to guidance material regarding Aerodrome Management - Safety Programmes.

Chapter 2

SUPPORTING REGULATION

2.1 Application

It is recommended the following model regulation be included in the national regulation relevant to the stakeholder who are critical to the success of the runway safety team, but are not primarily responsible for the establishment of the team.

The model regulation is included as part of the supporting stakeholder's safety management system requirements. It is preferable to implement any safety initiative under the framework of the safety management system.

It is recommended that this regulation is included in the national regulations for the following runway safety stakeholders:

- Flight Operators;
- Air Navigation Service Providers;
- Rescue Fire Fighting – Aerodrome Emergency Services; and
- Other Regulated Runway Safety Stakeholders.

2.2 Model Regulation

Safety Management System (SMS) Requirements (Excerpt in Support of Local Runway Safety Teams)

The [certificate holder] shall establish a safety management system acceptable to the [national regulator] that, as a minimum complies with the requirements of [national SMS regulation] and includes the requirement to participate in relevant Aerodrome - Safety Management Programmes such as:

- i. Runway safety teams;*
- ii. Apron safety;*
- iii. FOD prevention; and*
- iv. Low visibility operations programmes.*

Chapter 3

GUIDANCE MATERIAL

3.1 Application

It is recommended the following guidance be adopted to support the model regulation for the primary runway safety stakeholder. In this example that stakeholder is the Aerodrome Operator. The guidance includes various safety critical programmes – specifically including local runway safety teams - and is included in its entirety in order to comprehensively support the model regulation.

3.2 Model Guidance for Aerodrome Management – Safety Programmes

1. Safety Programmes

1.1 The Aerodrome Operator should:

1.1.1 *organise, coordinate and implement safety programmes to promote safety at the aerodrome. Such programmes include, but are not limited to:*

- i. runway safety;*
- ii. apron safety; and*
- iii. FOD prevention;*

1.1.2 *coordinate and promote the exchange of information and the joint investigation of occurrences, serious incidents and accidents, with organisations operating or providing services at the aerodrome;*

1.1.3 *establish, coordinate and lead local safety committees, including a Runway Safety Team, dealing in particular with runway safety, apron safety, and the safety of the operations at the aerodrome in general. All relevant organisations operating or providing services at the aerodrome should participate in such safety committees; and*

1.1.4 *ensure the local safety committees are supported by Terms of Reference and convene regularly, identify and review local safety issues, examine possible solutions and need for action. Minutes of such meetings should be kept. Details relevant to the composition, structure, function, purpose and output of local safety committees should be included in the Aerodrome Manual.*

1.2 The Aerodrome Operator should:

1.2.1 *Identify hot spots or potential hot spots at the aerodrome. A hot spot is defined as “a location on an aerodrome movement area with a history, or potential risk of collision, or runway incursion, and where heightened attention by pilots/drivers is necessary.”*

1.2.2 *Once hot spots have been identified at an aerodrome, suitable strategies should be implemented to remove the hazard or when this is not immediately possible, to manage and mitigate the risk, including the publication of hot spot charts in the Aeronautical Information Publication.*

1.3 Manoeuvring Area/Apron Safety Committee

The Aerodrome Operator should establish a Manoeuvring Area/Apron Safety Committee(s); and;

the Manoeuvring Area/Apron Safety Committee(s) should have an advisory role to the Aerodrome Operator.

1.3.1 Management of Manoeuvring Area/Apron Safety Committee(s):

1.3.1.1 *The Manoeuvring Area/Apron Safety Committee(s) should be chaired by an Aerodrome Operator's official, responsible for aerodrome operations; and*

1.3.1.2 *be attended by the aerodrome operator's Safety Manager.*

1.3.2 Composition of Manoeuvring Area/Apron Safety Committee(s)

Participation should include, but not limited to representatives of:

- i. aerodrome users active in flight operations;*
- ii. aircraft ground handling services providers;*
- iii. rescue fire fighting – aerodrome emergency services;*
- iv. aerodrome operations;*
- v. aerodrome wildlife management;*
- vi. aerodrome maintenance; and*
- vii. air navigation service provider(s).*

1.3.3 Tasks of Manoeuvring Area/Apron Safety Committee(s)

The tasks of the Manoeuvring Area /Apron Safety Committee(s) should be:

1.3.3.1 *to receive and evaluate reports on operational safety issues;*

1.3.3.2 *to receive reports and statistical information on accidents and incidents, and propose solutions; and*

1.3.3.3 *to advise on movement area/apron safety issues such as:*

- i. promotion of apron safety discipline;*
- ii. FOD prevention;*
- iii. developing measures for safety operations;*
- iv. considering actions to resolve movement area safety problems;*
- v. apron equipment issues;*
- vi. attention to vehicle traffic issues;*

- vii. *new and/or updated safety instructions;*
- viii. *personal protective clothing/equipment issues;*
- ix. *methods to develop and promote apron safety awareness initiatives;*
- x. *proposed aerodrome works;*
- xi. *proposed changes/developments to the movement area;*
- xii. *standard operating procedures; and*
- xiii. *heat, stress and fatigue, etc.*

1.4 Runway Safety Team

1.4.1 Context of Local Runway Safety Team

As part of its runway safety programme, the aerodrome operator should establish and lead a Runway Safety Team and act on runway safety issues, including runway excursion and incursion prevention with TOR based on ICAO RST Handbook..

1.4.2 Runway Safety Team Composition

Participation should include representatives from all interested parties with direct involvement in runway operations at the aerodrome, including, but is not limited, to:

- i. *aerodrome operations;*
- ii. *aerodrome engineering and maintenance;*
- iii. *air navigation service providers;*
- iv. *aircraft operators that operate on the aerodrome;*
- v. *rescue fire fighting – aerodrome emergency services; and*
- vi. *drivers having access on the manoeuvring area.*

1.4.3 Role of Runway Safety Team

The role of the Runway Safety Team should be to advise the appropriate management on potential runway safety issues and to recommend mitigating measures according to ICAO RST handbook.

1.4.4 Runway Safety Team Tasks

1.4.4.1 *The Runway Safety Team may have the following tasks:*

- i. *identification of 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. This may be undertaken through the assessment of hazards and past events;

- ii. developing and running local awareness campaigns that focus on local issues, for example, producing and distributing local hot spot maps, or other guidance material considered as necessary;*
- iii. assisting in verifying that communications between air traffic controllers, pilots and vehicle drivers are satisfactory and recommend educational training or procedural initiatives as required;*
- iv. making 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;*
- v. understanding the operating difficulties of personnel working in other areas, and recommending areas for improvement;*
- vi. development of joint training programmes on runway incursion prevention;*
- vii. provide advice prior to the implementation of changes to the aerodrome to identify potential for runway incursion;*
- viii. review and implement recommendations as appropriate from both the European Action Plans for the Prevention of Runway Incursions/Excursions documents;*
- ix. monitor the number, type and severity of runway safety events including incursions and excursions; and*
- x. periodically review airfield compliance issues, alternative means of compliance or deviations related to the runway.*

1.4.4.2 Strategies to manage and mitigate the risk from hot spots, depending on the case, may include, but are not limited to:

- i. awareness campaigns;*
- ii. additional visual aids (signs, markings, and lighting);*
- iii. establishment of alternative routings;*
- iv. introducing changes to the design of parts of the aerodrome; and*
- v. the mitigation of blind spots in the aerodrome control tower.*

1.4.4.3 Aerodrome charts showing hot spots should be produced locally, checked regularly for accuracy, revised as needed, distributed locally, and published in the AIP.

Note 1: The criteria used to establish and chart a hot spot are contained in the ICAO PANS-ATM (Chapter 7) and ICAO Annex 4 — Aeronautical Charts.

Note 2: Guidance material related to hot spots is also contained in the ICAO Manual on the Prevention of Runway Incursions (Doc 9870).

Chapter 4

OVERSIGHT MATERIAL

4.1 Application

It is recommended the below questions are incorporated in existing safety oversight processes of national regulators in order to oversight the implementation and effectiveness of the model primary and supporting regulations.

The materials in section 4.2 may also be used by the runway safety stakeholder who holds primary responsibility for runway safety as part of their internal safety assurance audit processes.

The below checklists elements are written specifically for runway safety activities, but may be adapted as necessary to oversight any aerodrome management – safety programme. Particularly for small operators, runway safety teams may operate as part of existing programmes such as a safety action groups or safety review boards. Oversight focuses on the existence of the runway safety activities and not on the existence of a specific team.

Checklist items regarding the effective implementation of runway safety programmes are included as examples and should not be confused with the elements that must exist to demonstrate strict regulatory compliance.

4.2 Model Oversight Checklist Elements – Primary Runway Safety Stakeholder

	<i>Oversight Question (Primary)</i>	<i>Purpose</i>	<i>Reference</i>
	<i>Has the operator established a programme to promote runway safety, including the exchange of runway safety information?</i>	<i>Compliance</i>	<i>Primary Regulation – Chapter 1 – 1.2 – Model Regulation - 1</i>
	<i>Has the operator imposed a positive obligation on organisations operating or providing services at the aerodrome to be involved in such runway safety programmes?</i>	<i>Compliance</i>	<i>Primary Regulation – Chapter 1 – 1.2 – Model Regulation - 2</i>
	<i>Does the evidence (meeting records) confirm the participation of relevant runway safety stakeholders in the runway safety programme?</i>	<i>Effectiveness</i>	<i>Primary Regulation – Chapter 1 – 1.2 – Model Regulation</i>
	<i>Is there evidence of information exchange and joint investigation of runway safety events?</i>	<i>Effectiveness</i>	<i>Guidance Material – Safety Programmes – 1.1.2</i>

	Oversight Question (Primary)	Purpose	Reference
	<i>Is the runway safety programme supported by terms of reference, meeting records and documented/tangible outputs?</i>	<i>Effectiveness</i>	<i>Guidance Material – Safety Programmes – 1.1.3</i>
	<i>Have runway Hot Spots been identified and communicated as part of the runway safety programme and then mitigated or published (as appropriate)?</i>	<i>Effectiveness</i>	<i>Guidance Material – Safety Programmes – 1.2 Guidance Material – Safety Programmes – 1.4 – Tasks – 1.4.4.2 Guidance Material – Safety Programmes – 1.4 – Tasks – 1.4.4.3</i>
	<i>Does the runway safety programme include a specific focus on runway incursion prevention?</i>	<i>Effectiveness</i>	<i>Guidance Material – Safety Programmes – 1.4 – Context - 1.4.1</i>
	<i>Is there evidence that the outputs of the runway safety programme, including recommended mitigation, are communicated to appropriate management?</i>	<i>Effectiveness</i>	<i>Guidance Material – Safety Programmes – 1.4 – Role – 1.4.3</i>
	<i>Are potential runway safety issues identified and are relevant entries included in the AIP?</i>	<i>Effectiveness</i>	<i>Guidance Material – Safety Programmes – 1.4 – Tasks – 1.4.4.i</i>
	<i>Has there been a local runway safety awareness campaign?</i>	<i>Effectiveness</i>	<i>Guidance Material – Safety Programmes – 1.4 – Tasks – 1.4.4.ii</i>
	<i>Have communications between ATC and pilots and drivers been reviewed and if issues were identified was training or procedural enhancements undertaken?</i>	<i>Effectiveness</i>	<i>Guidance Material – Safety Programmes – 1.4 – Tasks – 1.4.4.iii</i>

	Oversight Question (Primary)	Purpose	Reference
	<i>Have observations of visual aids been undertaken from the perspective of all runway stakeholders and considering different visibility conditions?</i>	Effectiveness	Guidance Material – Safety Programmes – 1.4 – Tasks – 1.4.4.iv
	<i>Have operating difficulties of personnel working in various areas been identified and have areas for improvement been identified through the runway safety programme?</i>	Effectiveness	Guidance Material – Safety Programmes – 1.4 – Tasks – v
	<i>Is there evidence of a joint training programmes focussing on runway incursions?</i>	Effectiveness	Guidance Material – Safety Programmes – 1.4 – Tasks – 1.4.4.vi
	<i>Are the members of the runway safety programme included as part of relevant change management activities in order to have the opportunity to identifying potentials for runway incursions or other runway safety impacts?</i>	Effectiveness	Guidance Material – Safety Programmes – 1.4 – Tasks – 1.4.4.vii
	<i>Have best practices regarding runway safety, for the Prevention of Runway Incursions/Excursions, been reviewed through the runway safety programme and implemented when appropriate?</i>	Effectiveness	Guidance Material – Safety Programmes – 1.4 – Tasks – 1.4.4.viii
	<i>Is there evidence that the runway safety programme monitors the number, type and severity of runway safety events?</i>	Effectiveness	Guidance Material – Safety Programmes – 1.4 – Tasks – 1.4.4.ix
	<i>Is there evidence that the runway safety programme periodically review airfield compliance issues, alternative means of compliances and deviations related to the runway?</i>	Effectiveness	Guidance Material – Safety Programmes – 1.4 – Tasks – 1.4.4.x

4.3 Model Oversight Checklist Elements – Supporting Runway Safety Stakeholder

	Oversight Question (Supporting)	Purpose	Reference
	<i>Does the [certificate holder] have a safety management system acceptable to the national regulator?</i>	Compliance (General)	Supporting Regulation – Chapter 2 – 1.2 – Model Regulation

	Oversight Question (Supporting)	Purpose	Reference
	<i>Does the [certificate holder] have a requirement to participate in Aerodrome Safety - Management Programmes relevant to runway safety?</i>	<i>Compliance</i>	<i>Supporting Regulation – Chapter 2 – 1.2 – Model Regulation</i>
	<i>Does the evidence (meeting records) confirm the participation of the [certificate holder] in relevant runway safety programmes such as the Runway Safety Team (or equivalent)?</i>	<i>Effectiveness</i>	<i>Supporting Regulation – Chapter 2 – 1.2 – Model Regulation</i>

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