



International Civil Aviation Organization

RASG-MID Steering Committee

Sixth Meeting (RSC/6)
(Cairo, Egypt, 25-27 June 2018)

Agenda Item 3: Regional Performance Framework for Safety

REVIEW OF THE OUTCOME OF THE RGS WG/4

(Presented by the Secretariat)

SUMMARY

This paper presents the outcome of the RGS WG/4 meeting.

Action by the meeting is at paragraph 3.

REFERENCES

- RGS WG/4 Report

1. INTRODUCTION

1.1 The Fourth meeting of the Runway and Ground Safety Working Group (RGS WG/4) was held at the ICAO Middle East Regional Office in Cairo, Egypt, from 5 to 7 November 2017.

1.2 The meeting was attended by a total of thirty five (35) participants from nine (9) States (Bahrain, Egypt, Iran, Kuwait, Lebanon, Saudi Arabia, Sudan, UAE and USA).

2. DISCUSSION

Aerodrome Safeguarding

2.1 The meeting may wish to note that the RASG-MID Safety Advisory on Aerodrome Safeguarding (RSA-11) was endorsed by the RSC/5 meeting in January 2017 and was published in March 2017.

2.2 The RGS WG/4 meeting agreed that the Aerodrome Safeguarding Toolkit at **Appendix A**, be circulated to All MID States as an attachment to the RSA-11.

2.3 As part of the RGS/4 DIP, the Aerodrome Safeguarding Workshop graciously hosted by the Egyptian Civil Aviation Authority, was successfully held in Cairo, Egypt, from 4 to 6 December 2017. The Workshop highlighted the need to identify the OLSs related to Aerodromes with more than one runway having different elevations more than 10 meters between the thresholds. The Summary of Discussion of the Workshop at **Appendix B**, is available on the ICAO MID website: <https://www.icao.int/MID/Pages/Meetings/meetings2017.aspx>

ARFF and Emergency Planning

2.4 The RGS WG/4 meeting recognized that ARFF and Emergency Planning at Aerodromes is considered part of the major challenges faced during certification of aerodromes. The meeting agreed that a questionnaire on the level of implementation of ARFF in the MID aerodromes should be developed. Accordingly, the meeting agreed to the following Draft Conclusion:

DRAFT CONCLUSION 4/1: SURVEY ON ARFF/AEP LEVEL OF IMPLEMENTATION

That,

- a) a survey on ARFF/AEP level of implementation be carried; and*
- b) the results of the survey be presented to the RGS WG/5 meeting for further course of actions.*

2.5 Work is in progress for the development of the Questionnaire; and it is expected that the results of the survey will be presented to the RGS/5 meeting for further considerations.

Wildlife Hazard Management and Controls (WHMC)

2.6 The meeting may wish to note that the RASG-MID Safety Advisory (RSA) on Wildlife Hazards Management and Control was endorsed by the RASG-MID/6 meeting in September 2017 and was published on 23 October 2017.

2.7 Further details on the subject are contained in WP/11.

Apron Management and Ground Handling

2.8 In support of the RASG-MID/6 Conclusion 6/7 on Expansion of the Runway Safety Programme Scope to include Apron; the meeting was of the view to develop a draft DIP as at **Appendix C** with the following implementation actions:

- Prepare an Advisory Circular on Apron Management, UAE is the lead supported by Egypt and Saudi Arabia by Q3-2018.
- A Seminar/Workshop on “Ground Handling” to be hosted by UAE during the First Quarter of 2019 supported by ICAO, IATA and Ground Handlers.

Accordingly, the meeting agreed to the following Draft Conclusion:

DRAFT CONCLUSION 4/3: AERODROME APRON MANAGEMENT AND GROUND HANDLING SERVICES

That,

- a) an Advisory Circular be developed on Aerodrome Apron Management; and*
- b) a Seminar on Ground Handling be organized and hosted by UAE and supported by ICAO, IATA and Ground Handlers in the First Quarter of 2019.*

Aerodrome Safety Management System

2.9 The RGS WG/4 meeting recognized the challenges in monitoring implementation, compliance and effectiveness of aerodrome safety management system in the MID Region. The meeting agreed that an Aerodrome customized SMS Workshop should be conducted back-to-back with the next RGS WG/5 meeting with technical support provided by experts from Egypt and UAE. The meeting was of the view that developing an example of an aerodrome SMS toolkit would be an effective tool to be used by both aerodrome operators and aerodrome regulators for the implementation of SMS and monitoring of its effectiveness.

2.10 The draft Tool-kit will be presented at the Aerodrome SMS Workshop planned to be held in Cairo, 28-29 November 2018. Accordingly; the meeting agreed to the following Draft Conclusion:

DRAFT CONCLUSION 4/4: AERODROME SMS COMPLIANCE AND EFFECTIVENESS TOOLKIT AND AERODROME SMS WORKSHOP

That,

- a) an aerodrome SMS Workshop be organized by ICAO back-to-back with the RGS WG/5 meeting with the technical support of Egypt and UAE; and*
- b) sample Aerodrome SMS Compliance and Effectiveness Tool-Kit be developed and presented at the Aerodrome SMS Workshop.*

Runway Surface Conditions

2.11 The RGS WG/4 meeting recognized that runway surface condition reporting system, in terms of quality and timing must be consistent with the aircraft operational performance. It was also highlighted that the provision of adequate visual reference during the final stage of approach, combined with low visibility operations are critical to reduce the risk of runway excursion.

2.12 The meeting highlighted the need for a RASG-MID Safety Advisory (RSA) on Monitoring and Reporting Runway Surface Conditions at aerodromes. FAA volunteered to be the Champion, supported by Egypt and UAE, for the development of the RSA. Accordingly, the meeting agreed to the following Draft Conclusion:

DRAFT CONCLUSION 4/5: FURTHER SAFETY ENHANCEMENTS RELATED TO RUNWAY EXCURSIONS

That:

- a) a RASG-MID Safety Advisory on Monitoring and Reporting of Runway Surface Condition, be developed; and*
- b) States be urged to report the related incidents on Annual Basis to the ICAO MID Office in conjunction with MID-ASRT.*

Airport Master Plan

2.13 The meeting recalled that Annex 14 Volume I, does not include specifications relating to the overall planning of aerodromes such as separation between adjacent aerodromes or capacity of individual aerodromes or to economic and other non-technical factors that need to be

considered in the development of an aerodrome, and that general information on those subjects is included in the 2nd Edition, 1987 of the Airport Planning Manual (Doc 9184), Part 1, and that the Manual on Certification of Aerodrome Doc 9774 required the aerodrome manual to include a plan of the aerodrome showing the main aerodrome facilities for the operation of the aerodrome. Accordingly, the meeting, through Draft Conclusion 4/6, highlighted the need for:

- additional guidance on airport master planning requirements for all aerodrome open for public use to support airport capacity enhancements; and
- monitoring the status of implementation of Airport Master Plan.

2.14 Considering that the above subject is not safety-related, the progress will be presented to MIDANPIRG for appropriate action.

Aerodrome Certification and establishment of Runway Safety Teams

2.15 The updated status of Aerodrome Certification in the MID Region is at **Appendix D**. It is to be highlighted that 34 out of 59 International Aerodromes (representing 58%) had been certified in the MID Region. More efforts are needed to meet the target of 75% for year 2017.

2.16 The status of implementation related to the establishment of Runway Safety Teams at International Aerodromes is presented at **Appendix E**. The Safety Target related to the establishment of RSTs is 50% by 2020, which is achieved, since the current status is 56 %.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) task the RGS WG to take necessary follow-up action on the Aerodrome Safeguarding Workshop Recommendations, in particular, the one related to OLSs;
- b) endorse, as appropriate, the Draft Conclusions 4/1, 4/3, 4/4 and 4/5; and
- c) agree on necessary follow-up actions.

APPENDIX A



Draft Circular

Safeguarding Regulatory System Toolkit

**GUIDANCE ON REGULATORY FRAMEWORK SUPPORTING ESTABLISHMENT
OF SAFEGUARDING SYSTEM**

TABLE OF CONTENTS

INTRODUCTION	3
National aviation law	5
1.1 Application	5
1.2 Model Regulation	5
SUPPORTING Ministerial decree(s).....	7
establishment of OLS Surfaces and	7
safeguarding committee	7
2.1 Application	7
2.2 Model Regulation	7
Primary regulation	8
3.1 Application	8
3.2 Model Guidance for Aerodrome Safeguarding Management	8
Supporting regulation.....	9
4.2 Model Regulation	9
GUIDANCE MATERIAL	10
5.1 Application	10
5.2. Model Guidance for Safeguarding System	10

INTRODUCTION

BACKGROUND

Safeguarding (SFg) had 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 a Safety Enhancement Initiative (SEI) to develop guidance material and training programs to support creation of action plans for Safeguarding.

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

PURPOSE

The purpose of this circular seeks to propose a regulatory framework to support the creation and success of national Safeguarding entity consisting of the following elements:

1. **National Law** to include articles related to Safeguarding that clarifies the establishment of entity, procedures and enforcement related to Safeguarding aerodromes with general responsibilities of CAA, Aerodrome Operator, and their relation with other national entities.

(Chapter 1)

2. **Supporting Ministerial Decree(s)** to reflect OLS approved and other surfaces related to Radar and Navigation Aids with ways of protection and as optional the establishment of a permanent Safeguarding committee in charge of the obstacle's assessment and implementation of new ICAO requirements.

(Chapter 2)

3. **Primary Regulation** to be included in the national regulation reflects Annex 14 items and relevant to Safeguarding stakeholder who holds primary responsibility for Safeguarding. In the model framework this has been identified as the joint responsibility between Authority and Aerodrome Operator.

(Chapter 3)

4. **Supporting Regulation** to be included in the national regulation relevant to other Authorities who have not been identified as primarily responsible for Safeguarding.

(Chapter 4)

5. **Guidance Material** to be developed in support of the regulation and to provide details regarding the conduct of the Safeguarding entity. This is to be considered in conjunction with the ICAO PANS Aerodrome.

(Chapter 5)

6. **Oversight Material** to be developed to be added to the existing safety oversight processes of national regulators. This material can also be used by the Safeguarding stakeholders' part of their internal safety assurance processes.

(Chapter 6)

These guidelines are based on the expertise and experience of the Egyptian Safeguarding Team and the Egyptian Civil Aviation Authority as an integral part of their joint commitment to enhancing safety through the creation of aerodrome Safeguarding complete system.

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

This circular as it serves to further empower national authorities in their efforts to support Safeguarding system through model national regulation, guidance materials.

USING THIS CIRCULAR

The Table of Contents provides key points of the regulatory framework supporting the creation of Safeguarding entity.

The reader will go through the steps of building its own safeguarding system and could make any changes to any part of it the way suite their needs and assure the implementation of min. level of safety

Chapter 1

NATIONAL AVIATION LAW

1.1 Application

It is recommended the below articles be included in the national aviation law relevant to the entities primarily responsible for Safeguarding in order to support the development of Safeguarding entity. In this example that stakeholder is the Aerodrome Operator.

1.2 Model Regulation

Aerodrome Safeguarding Management

National regulation and laws for aerodromes' safeguarding should be established that includes but not limited to the following articles:

1. *Safeguarding right shall be established for all aerodromes according to ICAO requirements and reflected into national regulation*
2. *Control of human activity within safeguarding area:*
 - a. *Description of the word human activities (construction; lights; material used; change of land use; laser;)*
 - b. *Clear statement about the mandatory of reporting any human activity within safeguarding area and other areas motioned into the national regulation to safeguarding entity for assessment*
3. *general description of aerodrome operator roles and duties for Safeguarding as followed but not limited to:*

The Aerodrome Operator shall:

- a) *Follow CAA National Regulations and related laws regarding Safeguarding*
 - b) *Establish, lead and implement Safeguarding requirement to promote safety and the exchange of safety-relevant information; and*
 - c) *Put in place Safeguarding monitoring system, and implement it*
 - d) *Require the organisations operating or providing services at the aerodrome to be involved in such programmes.*
4. *Clear statement of CAA duties of but limited to:*
 - a. *Review and approve Safeguarding area for each aerodrome and the protection system that been put in place by aerodromes' operators*
 - b. *Auditing aerodromes operators to ensure implementation of safeguarding system.*
 - c. *Carry out safeguarding regular inspection*
 - d. *Implement enforcement related to safeguarding.*

5. *Safeguarding enforcement:*

- a. *CAA safeguarding personnel has the judicial officers' right to protect safeguarding area and other areas listed in related national regulations.*
- b. *Criminalization of any human activities or change of existing activity within safeguarding area and other areas listed in national regulations; if done without approval of Safeguarding entity mentioned in this law.*
- c. *Optional: the right of auditing specific human activities within safeguarding area and other areas listed in national safeguarding regulation before operating to ensure compliance with CAA regulation.*
- d. *Ways and entities in charge of removing any safeguarding violation and any fines needed to be paid.*

CHAPTER 2
SUPPORTING MINISTERIAL DECREE(S)
ESTABLISHMENT OF OLS SURFACES AND
SAFEGUARDING COMMITTEE

2.1 Application

It is recommended that the following model ministerial decree(s) be included in the national regulation relevant to the Safeguarding stake holders, but are not primarily responsible for the establishment of the entity.

The model regulation is included as part of the supporting stakeholder's safety management system requirements.

2.2 Model Regulation

Safeguarding committee Requirements (Excerpt in Support of safeguarding entity):

Supporting decree(s) should include the following main elements:

- a) Definitions/ description and purpose of OLS and other protection surfaces which defines distances and slopes needed for Runway, Radar and Navigation Aids in addition to any restriction needed.
- b) Establishment of Safeguarding committee:
 - 1) Following is list of recommended member of Safeguarding Committee (but not limited to):
 - Authority
 - Aerodrome Operator;
 - Radar and Air Navigation Service Providers (ILS, VOR, , MICOWAVE....);
 - Operational representative; and
 - Other Stakeholders when needed.
 - 2) Roles of meeting including periodic meetings and clear delegation of duties and responsibilities of each member and committee outcome;

Chapter 3

PRIMARY REGULATION

3.1 Application

It is recommended the following guidance be adopted to support the model regulation for the primary Safeguarding stakeholder. In this example; stakeholder is the Aerodrome Operator. The guidance includes various

3.2 Model Guidance for Aerodrome Safeguarding Management

The Primary regulation should include (but not limited to)the following :

- 1.1 Definitions
- 1.2 Obstacle Limitation Surfaces
- 1.3 Obstacle Limitation Requirements
- 1.4 Terrain and Obstacle Data Collection
- 1.5 Obstacles Restriction and Removal
- 1.6 Inspection
- 1.7 Assessment
- 1.8 Exemption
- 1.9 Shielding Principle
- 1.10 Objects outside OLS
- 1.11 Other Objects
- 1.12 Land Use Hazard
- 1.13 Enforcement

Chapter 4

SUPPORTING REGULATION

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 Safeguarding Management system, but are not primarily responsible for the establishment of the system

The model regulation is included as part of the supporting stakeholder's safeguarding management system requirements.

It is recommended that this regulation is included in the national regulations for the following parties:

1. Aerodrome Operators
2. Local Planning Authority
3. Any land Owner (personnel or organization)
4. Communication and Advertising Companies

4.2 Model Regulation

1. CAA:

1.1. CAA shall establish national safeguarding management, assessment and regulatory system.

1.2. The Aerodrome operator shall establish safeguarding management system acceptable to the [national regulator] that, as a minimum complies with the requirements of [national safeguarding regulation] and includes requirements such as:

- i. Establishment of safeguarding team with clear structure;*
- ii. Establishment of obstacles' monitoring system*
- iii. Ways of Dealing with Obstacles*
- iv. Procedures and documentations needed to contact CAA for assessment of new development around aerodromes; and*
- v. Land use roles and restrictions.*

Chapter 5

GUIDANCE MATERIAL

5.1 Application

It is optional the following guidance be adopted to support the model regulation for the safeguarding stakeholder. In this example that stakeholder is the Aerodrome Operator.

5.2. Model Guidance for Safeguarding System

1. Safeguarding System

1.1. :CAA should:

1.1.1. *Establish and implement national safeguarding system to promote safety inside or outside all aerodromes; which include but not limited to:*

- i. Develop regulations and law of safeguarding roles and enforcement according to ICAO annex 14 and related documentations and state's roles.
- ii. Assign Safeguarding team/division in charge of state's aerodromes safeguarding assessment and auditing.
- iii. Support technically and audit operator's safeguarding team/departments
- iv. Review and approve aerodromes' OLS maps according national regulations
- v. Arrange with LPA, concerned ministries and all other parties about safeguarding protection area as followed:
 - a) formal notifications of safeguarding protection area attached to maps of protection surfaces for each aerodrome in the state to LPA
 - b) Urban future development within State level to assures it doesn't affect aerodrome's future development.
 - c) Approve of different land use locations (industrial, commercial in addition to any wind-farms, electricity poles, communication antennas and advertising high masts
 - d) New roads and bridges with its light poles in area tangent to aerodromes.
 - e) Other information as may be necessary, for example, landscaping details to enable the bird-strike potential to be assessed, or the types of cladding materials proposed so that the potential for radar reflection can be modelled.
 - f) As part of the Aerodrome Certificate, CAA has to review/ accept all Obstacles' data and its aeronautical studies and make sure it's published in AIP
 - g) Audit and support operator's safeguarding Monitoring system to take necessary actions when needed
 - h) Taking all measures to insure the removal; lower; mark or light obstacles.
 - i) Apply enforcement of any violation according to law.

1.2. The Aerodrome Operator should:

1.2.1. Establish and implement Safeguarding System to promote safety within and outside the aerodrome; which include but not limited to:

- i. Include safeguarding team / division into aerodrome's HR structure.*
- ii. Establish the OLS applicable to the aerodrome and implement it in a map after CAA review.*
- iii. Designate members of his staff as an official team / department to be responsible for aerodrome safeguarding supported by proper equipment and training to carry out their duties*

1.2.2. Monitor all human activities and developments within the OLS

1.2.3. Coordinate with Local Planning Authority and other authorities to improve safety outside aerodrome.

1.2.4. Have procedures for

- i. have procedures to insure aerodrome safeguarding*
- ii. have procedures for Obstacles Survey; and continues survey.*
- iii. Defining obstacles inside or outside aerodrome*
- iv. reporting defined obstacles*

1.3. Aerodromes' Safeguarding team / division should:

1.3.1. Have Specialized training to ensure:

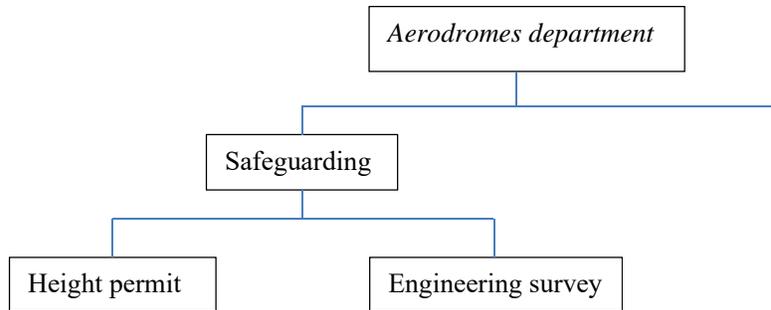
- i. Understanding safeguarding management and obstacles assessment.
 - ii. Familiarization of safeguarding duties; responsibilities and data collection.
 - iii. Good use of safeguarding tools.
 - iv. Accurate data collection and reporting system.
 - v. Put in place and implement continues monitoring plan in addition to any contingency monitor.
 - vi. Develop and implement safeguarding filling system.
 - vii. monitor the changes in the obstacle environment, marking and lighting and in human activities or land use on the aerodrome and the areas around the aerodrome, as defined in coordination with the competent authority
- (a) The procedure designer must be advised of any changes of the status of the existing critical obstacles and any proposed development that is likely to be higher than the critical obstacles within the area depicted by the procedure designer (details on process of monitoring; documentation and equipment in.
- (b) Immediate report to CAA of any violation or intended obstacle or new buildings, navigation aid equipment's or changes of use to any building within the aerodrome fence.

- (c) Ensure the conduct of an obstacle survey by a competent surveyor to establish the initial coordinates and details of obstacles and periodic survey thereafter.
- (d) Ensure that the runway and taxiway strip areas are free from obstacles or objects which are considered hazardous to aircraft operations unless required to be there for air navigation purposes.
- (e) Mitigate the risks associated with changes on aerodrome and its surroundings identified with the monitoring procedures.
- (f) Define the scope, limits, tasks and responsibilities for the monitoring in coordination with the relevant local authorities and air traffic services providers, and other relevant authorities
- (g) Assess and mitigate the risk caused by human activities and land use which should include but not limited to:
 - 1. Obstacles and the possibility of induced turbulence;
 - 2. The use of hazardous, confusing, and misleading lights;
 - 3. The dazzling caused by large and highly reflective surfaces;
 - 4. Sources of non-visible radiation, or the presence of moving, or fixed objects which may interfere with, or adversely affect, the performance of aeronautical communications, navigation and surveillance systems; and
 - 5. Non-aeronautical ground light near an aerodrome which may endanger the safety of aircraft and which should be extinguished, screened, or otherwise modified so as to eliminate the source of danger.
- (h) Protect area around aerodrome's visual aid outside aerodrome boundary by all means of land leasing or preventing new developments or extensions to existing structures from infringing the OLS.
- (i) Report to CAA any infringement or potential infringement of the OLS of nature and location of obstacles, and any subsequent addition, or removal of obstacles for action as necessary, including amendment of the AIS publications,
- (j) Take necessary measures to assess whether any infringement of these surfaces will require an assessment to identify whether or not the object creates an unacceptable risk, and take needed action to be removed or appropriate mitigating action shall be taken to protect aircraft using the aerodrome.
- (k) Publish and mark when needed and where necessary made visible by means of lights any remaining obstacles.
- (l) Provide electronic obstacle data for all obstacles in Area 2 (the part within the aerodrome boundary) that are assessed as being a hazard to air navigation.

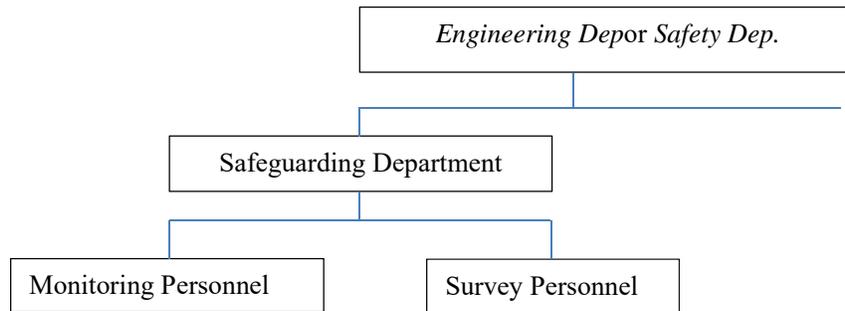
Note: Aerodrome operators need to liaise with appropriate planning authorities and companies that erect tall structures, to determine potential infringements. Every effort should be made to implement the OLS standards and limit the introduction of new obstacles.

- When a new obstacle is detected, the aerodrome operator must ensure that the information is passed on to pilots, through NOTAM, in accordance with the standards for aerodrome reporting procedures set out in

Examples



CAA Safeguarding Structure



Operator's Safeguarding Structure

APPENDIX B



INTERNATIONAL CIVIL AVIATION ORGANIZATION

MIDDLE EAST REGIONAL OFFICE

AERODROME SAFEGUARDING WORKSHOP

(Cairo, Egypt, 4 - 6 December 2017)

SUMMARY OF DISCUSSIONS

I. GENERAL

1.1 Place and Duration

1.1.1 The Aerodrome Safeguarding Workshop graciously hosted by the Egyptian Civil Aviation Authority, was successfully held in Cairo, Egypt, from 4 to 6 December 2017.

1.2 Opening

1.2.1 The Workshop was opened by Mr. Hany El-Adawy, President of the Egyptian Civil Aviation Authority and Mr. Mohamed Khalifa Rahma, Regional Director, ICAO Middle East Office.

1.3 Attendance

1.3.1 The Workshop was attended by a total of forty-five (45) participants from seven (7) States (Egypt, Lebanon, Saudi Arabia, Sudan, Togo, United Arab Emirates and Yemen) and one International Organization (IFATCA). The list of participants is at **Attachment A**.

1.4 Work Programme

1.4.1 The Work Programme was developed around the main following topics:

- Safeguarding Aerodromes: Requirements, Regulations and Implementation;
- Obstacle Identification, Assessment and Mitigation; and
- Managing Aerodrome Safeguarding Data activities.

1.4.2 The Work Programme and the presentations delivered during the Workshop are available at the ICAO MID Regional Office website:

<https://www.icao.int/MID/Pages/Meetings/meetings2017.aspx>

1.5 Objective

1.5.1 The Workshop was organized in support of the MID Regional Aviation Safety Team (MID-RAST) Safety Enhancement Initiative (MID-RAST/RGS/4) under the RASG-MID framework. The main objective of the Workshop was to exchange information, experience and best practices, related to aerodrome safeguarding processes, including analysis of obstacles, assessment, mitigations, data management and quality control for sustainability. The Workshop also provided the aerodrome operators and authorities with necessary skills on land use development, whilst ensuring the ongoing safety of aircraft operations.

1.5.2 The Seminar/Workshop provided an opportunity to:

- present and share experience/best practices of Egypt, UAE and Lebanon on Aerodrome Safeguarding process, case studies and challenges for effective implementation of ICAO SARPs and national regulations relevant to aerodrome safeguarding;
- review methodologies for obstacles safety assessments and different mitigation measures; and
- share experience/best practices for managing aerodrome safeguarding data and quality management control requirements.

II. SUMMARY AND OUTCOME OF DISCUSSIONS

2.1 The Workshop discussed and acknowledged the following:

- High-level commitment and collaboration from all parties are essential for effective aerodrome safeguarding and land use development without compromising safety of aircraft and aerodrome operations.
- ICAO SARPs, guidance material relevant to Aerodrome Safeguarding were highlighted. Information was shared on UAE and Egypt regulations and implementation by Aerodrome Operators.
- Sharing of best practices and experiences on Aerodrome Safeguarding processes, OLS Modeling, Obstacle types and impact, Data Collection, Obstacle spot checking supported by a visit to the Egyptian Safeguarding Laboratory, Aeronautical studies and Safety Assessment and mitigation measures.
- Competencies of Surveyors were highlighted.
- Contribution of Academic Institutions (Aeronautics/GIS) to aerodrome safeguarding on Integrating Terrain and Objects Data with OLSs was presented as a best practice from a State (Lebanon).

- Topics on aerodrome data reported to AIM, aerodrome mapping data, database management and quality control requirements were overviewed. Land use hazards' case studies were also presented considering both aerodrome regulators' and aerodrome operators' perspectives.
- The Workshop ended by a full session discussion panel, the MID Regional Officer AIM contributed to the answers to queries on Digitizing Aerodrome Mapping Data, Data Management and QMS requirements.

2.2 Based on the above, the Workshop developed the following recommendations:

- a) Information sharing, and exchange of experience should be continued through workshops/trainings on aerodrome safeguarding procedures, data quality requirements and data management, safety assessment and mitigation measures.
- b) ICAO to consider development of guidance material on:
 - aerodrome data quality specifications and quality management system requirements;
 - identification of OLSs related to Aerodromes with more than one runway having different elevations of their thresholds of more than 10 meters; and
 - digitalization of aerodrome mapping data and terrain and obstacle data requirements.
- c) Information on eTOD implementation in the MID Region and development of national eTOD policy was requested.

II. CLOSING

3.1 In closing, Mr. Hany Al-Adawy thanked ICAO MID Regional Office and the honorable speakers from ICAO, Egypt, Lebanon and UAE for their contributions to the success of the Workshop. The ICAO AGA Expert thanked the participants for their presence and expressed her gratitude to Egypt for hosting the Workshop and for Eng. Angie Ahmed Abd Allah, Egypt, Ms. Michelle Helen Soliman, UAE and Dr. Oussama Jadayel, Director, Balamand Institute of Aeronautics, University of Balamand, Lebanon for their excellent technical support provided to the Workshop.

3.2 The participants recognized the usefulness of the event and expressed their thanks to ICAO for organizing such a fruitful and very successful Workshop.

LIST OF PARTICIPANTS

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APPENDIX C

DIP Tracking for MID-RAST/RGS/7

Safety Topics Related to Ground Handling Services at the Aerodromes

RGS/7 DIP Deliverable	Target Date	Status	Comments
Advisory Circular on Apron Management Safety	Third Quarter of 2018	In Progress	Development of an Advisory Circular on Apron Management Safety, UAE is the lead supported by Egypt and Saudi Arabia.
<i>Seminar on Ground Handling Safety be organized and hosted by UAE</i>	First Quarter of 2019	Not started	A Seminar/Training on “Ground Handling Safety” to be hosted by UAE supported by ICAO, IATA and Ground Handlers.

APPENDIX D

STATUS OF AERODROME CERTIFICATION IMPLEMENTATION IN MID REGION						
	State	Number of Intl Aerodromes (AOP Table 1-1 -MID ANP)	Number of Certified Intl Aerodromes	Percentage Certified	List of Intl Aerodromes having Certificates	Remarks
1	Bahrain	1	1	100%	BAHRAIN/Bahrain Intl (OBBI)	
2	Egypt	7	5	71%	- CAIRO/Cairo Intl (HECA) - SHARM EL-SHEIKH/Sharm El Sheikh Intl (HESH) - HURGADA/Hurghada Intl (HEGN) - MARSA ALAM /Marsa Alam Intl (HEMA) - ASWAN/Aswan Intl (HESN)	Certification Status for LUXER/Luxor Intl Airport (HELX) is to be verified
3	Iran	9	4	44%	- TEHRAN/Mehrabad Intl (OIII) - ZAHEDAN/Zahedan Intl (OIZH) - YAZD /Yazd Intl (OIYY) - ISFAHAN/Isfahan Int'l (OIFM)	Certification Status for: - TEHRAN/ IKIA Intl (OIIE) - BANDAR Abbas /Bandar Abbas Intl (OIKB) are to be verified
4	Iraq	6	2	33%	- BAGHDAD/Baghdad Intl (ORBI) - ERBIL/Erbil Intl (ORER)	Information to be verified

5	Jordan	3	2	67%	- AMMAN/Queen Alia Intl (OJAI) - AQABA/ King Hussein Intl (OJAQ)	
6	Kuwait	1	1	100%	KUWAIT/Kuwait Intl (OKBK)	
7	Lebanon	1	0	0%		
8	Libya	3	0	0%		
9	Oman	2	2	100%	- MUSCAT/Muscat Intl (OOMS) - SALALAH/Salalah (OOSA)	
10	Qatar	2	2	100%	- DOHA/Doha Intl (OTBD) - DOHA/Hamad Intl (OTHH)	
11	Saudi Arabia	4	4	100%	- DAMMAM/Kind Fahid Intl (OEDF) - JEDDAH/King Abdulaziz Intl (OEJN) - MADINAH/Prince Mohammad Bin Abdulaziz Intl (OEMA) - RIYADH/King Khalid Intl (OERK)	
12	Sudan	4	3	75%	- KHARTOUM/Khartoum (HSSS) - EL OBEID/EI Obeid (HSOB) - PORT SUDAN/Port Sudan	Certification Status for: NYALA/Nyala (HSNN) to be verified

					(HSPN)	
13	Syria	3	0	0%		
14	UAE	8	8	100%	<ul style="list-style-type: none"> - ABU DHABI/Abu -Dhabi Intl (OMAA) - ABU DHABI/AI Bateen Intl (OMAD) - DUBAI/Dubai Intl (OMDB) - DUBAi/AI Maktoum Intl (OMDW) - AL AIN/AI Ain Intl (OMAL) - FUJAIRAH/Fujairah Intl (OMFJ) - RAS AL KHAIMAH/Ras Al Khaimah Intl (OMRK) - SHARJAH/Sharjah Intl (OMSJ) 	
15	Yemen	5	0	0%		
	Total Certified	59	34	58%		MID Region Safety Target 75% by end of 2017

APPENDIX E

**Establishment of Runway Safety Teams (RSTs)
at international Aerodromes in the MID Region**

(Updated September 2017)

	State	Number of Int'l Aerodromes	Number of established Runway Safety Teams	List of Aerodromes having established Runway Safety Team
1	BAHRAIN	1	1	Bahrain/Bahrain Intl (OBBI)
2	EGYPT	7	4	- Cairo/Cairo Intl (HECA) - Sharm El Sheikh Intl (HESH) - Hurghada Int'l (HEGN) - Marsa Alam Intl (HEMA)
3	IRAN	9	6	- Tehran/Mehrabad Intl (OIII) - Tehran/ IKIA Intl (OIIE) - Zahedan/Zahedan Intl (OIZH) - Yazd /Yazd Intl (OIYY) - Isfahan/Isfahan Int'l (OIFM) - Bandar Abbas /Bandar Abbas Intl (OIKB)
4	IRAQ	6		
5	JORDAN	3	1	- Aqaba/King Hussein Intl (OJAQ)
6	KUWAIT	1	1	Kuwait/Kuwait Intl (OKBK)
7	LEBANON	1		
8	LIBYA	3		
9	OMAN	2	2	- Muscat/Muscat Intl (OOMS) - Salalah/Salalah (OOSA)
10	QATAR	2	2	- Doha/Doha Intl (OTBD) - Doha/Hamad Intl (OTHH)

	State	Number of Int'l Aerodromes	Number of established Runway Safety Teams	List of Aerodromes having established Runway Safety Team
11	SAUDI ARABIA	4	4	- Dammam/King Fahad Intl (OEDF) - Jeddah/King Abdulaziz Intl (OEJN) - Riyadh/King Khalid Intl (OERK) - Madinah/Prince Mohammad Bin Abdulaziz Intl (OEMA)
12	SUDAN	4	4	- Khartoum/Khartoum (HSSS) - El Obeid/El Obeid (HSOB) - Port Sudan/Port Sudan (HSPN) - Nyala/Nyala (HSNN)
13	SYRIA	3		
14	UNITED ARAB EMIRATES- UAE	8	8	- Abu Dhabi/Abu -Dhabi Intl (OMAA) - Abu Dhabi/Al Bateen Intl (OMAD) - Dubai/Dubai Intl (OMDB) - Dubai/Al Maktoum Intl (OMDW) - Al Ain/Al Ain Intl (OMAL) - Fujairah/Fujairah Intl (OMFJ) - Ras Al Khaimah/Ras Al Khaimah Intl (OMRK) - Sharjah/Sharjah Intl (OMSJ)
15	YEMEN	5		
Total Percentage		59	33 56%	