



International Civil Aviation Organization

Aerodrome Safety & Planning Implementation Group

Third Meeting (ASPIG/3)
(Virtual, Egypt, 25 - 27 October 2021)

Agenda Item 3: Regional Performance Framework for Aerodrome Capacity and Efficiency

**AIR NAVIGATION DEFICIENCIES IN THE FIELD
OF AIRPORTS OPERATIONS (AND - AOP)**

(Presented by the Sudan)

SUMMARY

This working paper notes the challenge of low reporting of Air Navigation Deficiencies and proposes a MID Air Navigation Deficiency Management Process including an additional guidance for reporting of non-compliances.

Action by the meeting is at paragraph 3.

REFERENCES

- ASPIG/2 Report
- MIDANPIRG/18 & RASG-MID/8 Report
- MANDD (MID Air Navigation Deficiency Database)

1. INTRODUCTION

1.1 The definition of air navigation “deficiency” as approved by the ICAO Council is as follows:

“a deficiency is a situation where a facility, service or procedure does not comply with a regional air navigation plan approved by the Council, or with related ICAO Standards and Recommended Practices, and which situation has a negative impact on the safety, regularity and/or efficiency of international civil aviation”

1.2 The ICAO Planning and Implementation Regional Groups (PIRGs), have adopted the Council approved uniform methodology for the identification, reporting and assessment of regional Air Navigation Deficiencies against the ICAO Standards and Recommended Practices (SARPs) and Regional Air Navigation Plan (ANP) requirements.

1.3 To support the implementation of the Uniform Methodology, every PIRG has developed its own unique deficiency database as a means of sharing safety information related to Air Navigation systems and viewed/used by that respective region(s) only.

1.4 Under the Terms of Reference of MIDANPIRG, one of the primary objectives is to identify and address specific Deficiencies in the Air Navigation field. In order to facilitate the development and implementation of action plans by States to resolve identified Deficiencies. Consequently, the MIDANPIRG and its Sub-bodies regularly review Deficiencies in their respective fields and develop recommendations for remedial actions.

2. DISCUSSION

MID Air Navigation Deficiency Database (MANDD)

2.1 The meeting may wish to review the AND-AOP currently listed in the MID Air Navigation Deficiency Database (MANDD) as at <https://mandd.icao.int> and update the list based on recent action, if any, taken by States.

2.2 The meeting may wish to reiterate that a deficiency would be eliminated only when a State submit a formal Letter to the ICAO MID Office containing the evidence(s) that mitigation measures have been implemented for the elimination of this deficiency as part of their Corrective Action Plan (CAP). The meeting may wish to note with concern that the majority of deficiencies, listed in the MANDD, have no specific CAP. In addition, the meeting may wish to highlight that there is a need to include some improvement to the MANDD to enable States' Focal points to upload evidences for the closure of the identified deficiencies.

AOP Minimum Reporting Areas: Additional tool related to the AND

2.3 The meeting may wish to recall that the ASPIG/2 Meeting agreed on a Template of the minimum reporting areas for Airport Operations (AOP), as available at **Attachment A of the Appendix A** to this paper, concerned by the fundamental infrastructure and core services to be implemented by Aerodromes in line with the Global Air Navigation Plan Frameworks. The ASPIG/2 meeting agreed that this tool can be used, as deemed necessary, by States as a reference to monitor the implementation of the ICAO Standards and Recommended Practices (SARPs) and Regional Air Navigation Plan (ANP) requirements. The meeting also agreed that the Template will be presented to upcoming MIDANPIRG/19 RASG-MID/9 meeting for its endorsement.

2.4 The meeting may wish to note with concern the level of efficiency related to the management and resolution of the Air Navigation Deficiencies. The meeting may wish to agree that, in order to encourage reporting by all concerned parties and to enable efficient follow-up, particularly by the ICAO MID Office, the above-mentioned tool can be used in addition to the MANDD to report non-compliances without prejudice to the definition of 'a deficiency' as approved by the Council.

2.5 In this regard, the meeting may wish to note and reiterate that the intent of the list of Minimum Reporting Area, defined by the above mentioned tool, is **NOT** to replace reporting based on the Council policy, but to encourage consistent reporting, noting on one hand the current critically low level of reporting, and on the other hand the expanse of SARPs and requirements on which reporting may be effected.

2.6 Accordingly, the meeting may wish to invite States, users, and International Organizations to report on non-compliances in the subareas listed at the **Attachment A of the Appendix A** to this paper (in addition to reporting of any other deficiencies as defined by the Council).

2.7 The meeting may wish to recognize that the envisaged benefits of this approach include the following:

- a. Consistency in reporting across all MID States with respect to the listed AOP subareas;
- b. Ability to derive trends and propose common solutions;
- c. Facilitation of reporting by States and Organizations.
- d. Consistency in follow-up actions by ICAO MID Regional Office and other concerned parties.

2.8 The meeting may wish to highlight that the undesirable outcomes of the proposed approach, **which should be guarded against**, include the reporting only on the listed subareas, instead of all deficiencies covered by the Council Uniform Methodology.

2.9 The meeting may wish to agree to notify all MIDANPIRG Subgroups on the need to identify the Minimum Reporting Areas to cover, all domains in addition to **AOP**, notably **ATM, AIM, CNS, MET** and **SAR**.

2.10 In line with the above, the meeting may wish to note that a Middle East Air Navigation Deficiencies (MIDAND) Management Process (MIDAND-MP) is developed aiming to coordinate the collection and management of deficiencies, as per the **Appendix A**.

2.11 The meeting may wish to agree on the MIDAND-MP draft to be proposed to the MIDANPIG/19 meeting for its endorsement. Accordingly, the meeting may wish to note that MIDANPIRG Handbook should be updated to include a dedicated part on the ICAO Uniform Methodology for the Identification, Assessment and Reporting of Air Navigation Deficiencies as proposed at **Appendix B**.

2.12 Based on the above, the meeting may wish to propose the following Draft Conclusion for its endorsement by the MIDANPIRG/19 Meeting:

**DRAFT CONCLUSION 3/1: MID AIR NAVIGATION DEFICIENCIES
MANAGEMENT
PROCESS (MIDAND-MP)**

*That, in order to encourage consistent reporting of deficiencies, and efficient implementation of their resolutions, MID States and concerned Stakeholders are urged to endorse the MIDAND Management Process (MIDAND-MP), as at **Appendix A** including the list of Minimum Reporting Areas to be used as a guide to minimum reporting of non-compliances.*

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a. review the Deficiencies listed at <https://mandd.icao.int/> and update the list based on recent action taken by States if any;
- b. note the need to include some improvement to the MANDD platform in order to enable States Focal points to upload evidences for the closure of the identified deficiencies;
- c. identify additional Deficiencies, if any, and recommend actions for resolving the remaining ones;

- d. agree the reporting approach described in this working paper and notify all MIDANPIRG Subgroups to identify the Minimum Reporting Area to cover, in addition to **AOP**, all Air Navigation domains, notably **ATM, AIM, CNS, MET** and **SAR** as at **Attachment A of the Appendix A** to this paper ,
- e. propose to the MIDANPIRG/19 Meeting a dedicated part on the ICAO Uniform Methodology for the Identification, Assessment and Reporting of Air Navigation Deficiencies, as initially drafted at **Appendix B**, for its inclusion in the MIDANPIRG Handbook; and
- f. agree to the Draft Conclusion under paragraph 2.12 of this working paper.

APPENDIX A

THE MIDDLE EAST AIR NAVIGATION DEFICIENCIES MANAGEMENT PROCESS (MIDAND-MP)

1. Introduction

1.1 Based on the information resulting from the assessment carried out by ICAO on the input received from various regions regarding deficiencies in the air navigation field, it became evident that improvements were necessary in the following areas:

- a) collection of information;
- b) safety assessment of reported problems;
- c) identification of suitable corrective actions (technical/ operational/ financial/organizational), both short-term and long-term; and
- d) method of reporting in the reports of ICAO planning and implementation regional groups (PIRGs).

1.2 This methodology is therefore prepared with the assistance of ICAO PIRGs and is approved by the ICAO Council for the efficient identification, assessment and clear reporting of air navigation deficiencies. It may be further updated by the Air Navigation Commission in the light of the experience gained in its utilization.

1.3 For the purpose of this methodology, the definition of deficiency is as follows:

A deficiency is a situation where a facility, service or procedure does not comply with a regional air navigation plan approved by the Council, or with related ICAO Standards and Recommended Practices, and which situation has a negative impact on the safety, regularity and/or efficiency of international civil aviation.

2. Collection and inclusion of information in the Data Base

2.1 Collection of the information for all the sources (**Regional office, States, Users, Professional provider organizations' sources**): Refer to the **PART XX, Section 2 of the MIDANPIRG Procedural Handbook,**

2.2 MID Air Navigation Deficiencies Data Base (MANDD)

2.2.1 In order to support the implementation of the Uniform Methodology for the identification, assessment and reporting of deficiencies, the MID Air Navigation Deficiencies Data Base (MANDD) that is a web-based platform provides an online tool for States and relevant stakeholders to manage Air Navigation Deficiencies in the region. The application is available at <https://mandd.icao.int/>. **Reporting of information on Deficiencies actions taken by the MID Office**

3.1 In order to enable the MIDANPIRG to make consistent evaluation of deficiencies, States and concerned International organizations including IATA, IFALPA and IFATCA, are expected to provide the information they have to the ICAO MID Regional Office for action as appropriate, during MIDANPIRG meetings.

3.2 The information should at least include description of the deficiency, risk assessment, possible solution, deadlines, responsible entities, agreed new action to be taken to resolve identified Deficiencies.

3.3 Newly identified deficiencies shall be sent to MID Office by the State/Organization Focal Point through the MANDD. Evidences to support the information provided should be forwarded via email to the ICAO MID Regional Office (icaomid@icao.int) or attached in the MANDD (as potentially upgraded).

3.4 The newly added deficiency in the MANDD will always have an “N” status for New at the point of entering the details in the reporting form. Once approved by the concerned Regional Officer, the deficiency will appear in the database list highlighted in “Yellow” and will be available for MANDD users in the delete, update, search and print options.

3.5 Once received and updated in the MANDD system by the ICAO MID Office, the request is forwarded to the appropriate Regional Officer for review and analysis as per the paragraph 2.1.1 of the MIDANPIRG Procedural Handbook. The ICAO MID Office may contact the source of the information and the concerned State for more details when required. The result of the evaluation is submitted with all the evidences to a committee formed by the Regional Office subject matter Experts and the Deputy Regional Director for review.

3.6 If the deficiencies are confirmed, the State is informed by the ICAO MID Regional Office and given a time period to take appropriate actions. If actions are taken in time, the case is closed and captured in the MANDD as proposed for deletion and will appear highlighted in “Yellow” as a strike through then notified to the MIDANPIRG meeting.

3.7 Otherwise, the case is submitted to the MIDANPIRG Meeting for consideration and endorsement using the List of reported Deficiencies extracted from the MANDD system. The MIDANPIRG’ endorsed deficiencies are uploaded in the MANDD by the MID Office and the concerned State(s) are requested to submit a Corrective Action Plan within a given deadline.

3.8 The concerned State(s) shall follow-up the implementation of proposed mitigation actions, as established in the action plan and submit relevant evidences for consideration to the ICAO MID Office through the MANDD/by email.

3.9 In case of challenges with the implementation, the State Focal point should inform and coordinate with the Regional Officer managing the AND concerned Area (AOP, ATM, AIM, CNS, MET and SAR). Both, the State’s Focal Points and Regional Officer should ensure that the information provided in the MANDD is continuously updated.

3.10 The agenda of MIDANPIRG meeting should include an item on air navigation deficiencies, including information reported by States and other stakeholders in accordance with PART XX, Section 2 of the MIDANPIRG Procedural Handbook, The review of the deficiencies should be a top priority for each MIDANPIRG meeting which should make an assessment of the safety impact, of the reviewed lists of deficiencies, for subsequent review by the ICAO Air Navigation Commission.

3.11 In line with the above, and keeping in mind the need to eventually make use of this information in the planning and implementation process, it is necessary that once a deficiency has been identified and validated, defined fields of information should be provided in the reports on deficiencies in the air navigation systems. The Model reporting table for use in the MIDANPIRG report and Actions by the ICAO MID Office are stated in the Part XX, Sections 5 and 6 of the MIDANPIRG Procedural Handbook.

Additional Guidance for Minimum Reporting on non-compliances

3.12 In order to encourage reporting, the Group has adopted a list of minimum reporting areas which is reflected at **Attachment A** to this Process. The intent of the list is **NOT** to replace reporting based on ICAO Council policy, but to encourage reporting, in recognition of Assembly Resolution A37-15 Appendix L, and noting the historical critically low level of reporting, as well as the expense of SARPs and requirements on which reporting may be effected.

3.13 Without prejudice to the definition of “deficiency” as approved by the Council, States, Regulators and Air Navigation Service Providers (ANSPs), users, and professional organizations (IFALPA, IFATCA, IFATSEA, etc.) are encouraged to report on non-compliances in the areas listed in **Attachment A**, in addition to reporting any other deficiencies as defined by the Council.

4. Monitoring & Removal of MIDANPIRG endorsed Deficiencies from the Data base

4.1 The ICAO MID Office will monitor the implementation by the States of their corrective actions plans and report to MIDANPIRG. States shall implement their action plans and submit relevant evidences for consideration to the ICAO MID Regional Office by email to icaomid@icao.int .

4.2 The relevant Regional Officers should assess on the regular basis the implementation of the States action plans until their completion. Once the implementation completed, a documented report, comprising evidences should be submitted the ICAO MID Office for their review by the ICAO MID Regional Officers and the Deputy Regional Director. The review report is submitted to the MIDANPIRG meeting for appropriate action.

4.3 If deemed satisfactory, the deficiency is deleted from the MANDD at which point will appear as a strike though highlighted in “Yellow” and the information is provided to the State.

4.4 Once validated and confirmed by the MIDANPIRG meeting to be an existing deficiency based on provided evidences, a command is run in the system to remove the resolved (proposed for deletion) deficiencies from the Database by the Regional Office.

5. Assessment and prioritization

5.1 A general guideline would be to have three levels of priority organized on the basis of safety, regularity and efficiency assessment as follows:

“U” priority (Red) = Urgent requirements having a direct impact on safety and requiring immediate corrective actions. Urgent requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is urgently required for air navigation safety.

“A” priority (Orange) = Top priority requirements necessary for air navigation safety. Top priority requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is considered necessary for air navigation safety.

“B” priority (Green) = Intermediate requirements necessary for air navigation regularity and efficiency. Intermediate priority requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is considered necessary for air navigation regularity and efficiency.

5.2 In addition, the MIDANPIRG’s Sub-Groups including the ASPIG (Aerodromes Safety Planning and Implementation Group) should assess, as deemed necessary, the endorsed Deficiencies based on SMS principles. As practical as it can be, the assessment and prioritization of Deficiencies is based on the safety risk matrix contained in the Safety Management Manual (SMM), Doc 9859:

DRAFT

Table 1. Safety risk probability table

Likelihood	Meaning	Value
Frequent	Likely to occur many times (has occurred frequently)	5
Occasional	Likely to occur sometimes (has occurred infrequently)	4
Remote	Unlikely to occur, but possible (has occurred rarely)	3
Improbable	Very unlikely to occur (not known to have occurred)	2
Extremely improbable	Almost inconceivable that the event will occur	1

Note.— This is an example only. The level of detail and complexity of tables and matrices should be adapted to the particular needs and complexities of each organization. It should also be noted that organizations might include both qualitative and quantitative criteria.

Table 2. Example safety risk severity table

Severity	Meaning	Value
Catastrophic	<ul style="list-style-type: none"> • Aircraft / equipment destroyed • Multiple deaths 	A
Hazardous	<ul style="list-style-type: none"> • A large reduction in safety margins, physical distress or a workload such that operational personnel cannot be relied upon to perform their tasks accurately or completely • Serious injury • Major equipment damage 	B
Major	<ul style="list-style-type: none"> • A significant reduction in safety margins, a reduction in the ability of operational personnel to cope with adverse operating conditions as a result of an increase in workload or as a result of conditions impairing their efficiency • Serious incident • Injury to persons 	C
Minor	<ul style="list-style-type: none"> • Nuisance • Operating limitations • Use of emergency procedures • Minor incident 	D
Negligible	<ul style="list-style-type: none"> • Few consequences 	E

Table 3. Example safety risk matrix

Safety Risk		Severity				
Probability		Catastrophic A	Hazardous B	Major C	Minor D	Negligible E
Frequent	5	5A	5B	5C	5D	5E
Occasional	4	4A	4B	4C	4D	4E
Remote	3	3A	3B	3C	3D	3E
Improbable	2	2A	2B	2C	2D	2E
Extremely improbable	1	1A	1B	1C	1D	1E

Note.— In determining the safety risk tolerability, the quality and reliability of the data used for the hazard identification and safety risk probability should be taken into consideration.

Table 4. Example of safety risk tolerability

Safety Risk Index Range	Safety Risk Descriptio	Recommended Action
5A, 5B, 5C, 4A, 4B, 3A	INTOLERABLE	Take immediate action to mitigate the risk or stop the activity. Perform priority safety risk mitigation to ensure additional or enhanced preventative controls are in place to bring down the safety risk index to tolerable.
5D, 5E, 4C, 4D, 4E, 3B, 3C, 3D, 2A, 2B, 2C, 1A	TOLERABLE	Can be tolerated based on the safety risk mitigation. It may require management decision to accept the risk.
3E, 2D, 2E, 1B, 1C, 1D, 1E	ACCEPTABLE	Acceptable as is. No further safety risk mitigation required.

ATTACHMENT A

AOP MINIMUM REPORTING AREAS

AERODROMES OPERATIONS (AOP)								
	ICAO Reference Document	Description	Date first reported	Remarks/ Impact of non-implementation	Action by States	Corrective Action Plan planned by the State (including timelines/target dates)	Identified implementation impediment and action thereon	Status
AERODROME DESIGN								
1.	Annex 14 - Vol 1, Chapter 1 PANS- Aerodromes, Part 1, 2	Aerodrome Master Plan		The lack of airports master plans affect their short to medium term capacity enhancement projects; restricting their ability to fulfil capacity needs.				
2.	Annex 14 - Vol 1, Chapter 2, 3 PANS- Aerodromes, Part 1, 2 MID ANP, Vol II - AOP	Runways		In view of the vital function of runways in providing for safe and efficient aircraft landings and take-offs, it is imperative that their design take into account the operational and physical characteristics of the aeroplanes expected to use the runway, as well as engineering considerations.				

MINIMUM REPORTING AREAS

AERODROMES OPERATIONS (AOP)								
	ICAO Reference Document	Description	Date first reported	Remarks/ Impact of non-implementation	Action by States	Corrective Action Plan planned by the State (including timelines/target dates)	Identified implementation impediment and action thereon	Status
3.	Annex 14 - Vol 1, Chapter 2, 3 PANS- Aerodromes, Part 1, 2	Taxiways		A properly designed taxiway system ensures a smooth, continuous flow of aircraft ground traffic, operating at the highest level of safety and efficiency and contributes to optimum aerodrome utilization				
4.	Annex 14 - Vol 1, Chapter 2, 3 PANS- Aerodromes, Part 1, 2	Aprons		Apron design should take into account safety procedures for aircraft manoeuvring and contribute to a high degree of efficiency for aircraft movements and dispensing apron services.				
5.	Annex 14 - Vol 1, Chapter 2, 5, 6, 7 PANS- Aerodromes, Part 1 MID ANP, Vol II - AOP	Visual Aids		Visual aids contribute to the safety and operational efficiency of aircraft and vehicle movements. Design and Good maintenance of these aids is essential to ensure that the cues that they provide are available in all circumstances.				

MINIMUM REPORTING AREAS

AERODROMES OPERATIONS (AOP)								
	ICAO Reference Document	Description	Date first reported	Remarks/ Impact of non-implementation	Action by States	Corrective Action Plan planned by the State (including timelines/target dates)	Identified implementation impediment and action thereon	Status
6.	Annex 10 - Vol 1, Chapter 3	Radio Navigation Aids		Radio Navigation Aids contribute to the safety and operational efficiency of aircrafts. Good maintenance of these aids is essential to ensure that the cues that they provide are available in all				
7.	Annex 14 - Vol 1, Chapter 8 PANS- Aerodromes, Part 1 MID ANP, Vol II - AOP	Electrical Systems		Electrical systems contribute to the safety and operational efficiency of aircraft and vehicle movements. Their design and good maintenance of these aids is essential to ensure that the cues that they provide are available in all circumstances				
8.	Annex 14 - Vol 1, Chapter 1	Terminals		Architectural and infrastructure-related requirements for the optimum implementation of international civil aviation security measures shall be integrated into the design and construction of new facilities and alterations to existing facilities at an aerodrome.				

MINIMUM REPORTING AREAS

AERODROMES OPERATIONS (AOP)								
	ICAO Reference Document	Description	Date first reported	Remarks/ Impact of non-implementation	Action by States	Corrective Action Plan planned by the State (including timelines/target dates)	Identified implementation impediment and action thereon	Status
9.	Annex 14 - Vol 1, Chapter 9 PANS- Aerodromes, Part 1	Fencing		Lack of fences on an aerodrome could lead to the entrance to the movement area of animals large enough to be a hazard to aircraft.				
AERODROME OPERATIONS								
10.	Annex 14 - Vol 1, Chapter 2 PANS- Aerodromes, Part 1, 2 MID ANP, Vol II - AOP	Aerodrome Data		Determination and reporting of aerodrome-related aeronautical data shall be in accordance with the accuracy and integrity classification required to meet the needs of the end-users of aeronautical data				
11.	Annex 14 - Vol 1, Chapter 9 PANS- Aerodromes, Part 1	Emergency planning		Lack of adequately effective emergency planning can seriously affect the effects of an emergency, particularly in respect of saving lives and maintaining aircraft operations.				

MINIMUM REPORTING AREAS

AERODROMES OPERATIONS (AOP)								
	ICAO Reference Document	Description	Date first reported	Remarks/ Impact of non-implementation	Action by States	Corrective Action Plan planned by the State (including timelines/target dates)	Identified implementation impediment and action thereon	Status
12.	Annex 14 - Vol 1, Chapter 2, 9 PANS- Aerodromes, Part 1 MID ANP, Vol II – AOP	Rescue and Firefighting		Lack of adequately effective rescue and firefighting service can affect capabilities to save lives in the event of an aircraft accident or incident occurring at, or in the immediate vicinity				
13.	Annex 14 - Vol 1, Chapter 2, 9 PANS- Aerodromes, Part 1	Disable Aircraft Removal		Disabled aircraft can interfere with normal activity of an aerodrome. In addition, runway and taxiway closures can substantially reduce the number of arrivals and departures and restrict movement around the aerodrome, resulting in the reduction of the aerodrome capacity.				

MINIMUM REPORTING AREAS

AERODROMES OPERATIONS (AOP)								
	ICAO Reference Document	Description	Date first reported	Remarks/ Impact of non-implementation	Action by States	Corrective Action Plan planned by the State (including timelines/target dates)	Identified implementation impediment and action thereon	Status
14.	Annex 14 - Vol 1, Chapter 9 PANS- Aerodromes, Part 1	Wildlife Strike Hazard Reduction		Lack of measures (successful bird/wildlife control programme) on an airport and in its vicinity to minimize the likelihood of collisions between wildlife and aircraft will increase the risk to aircraft operations				
15.	Annex 14 - Vol 1, Chapter 2, 9 PANS- Aerodromes, Part 1	Operational Area Management		Lack of appropriate airport operational services will affect the safety and efficiency of aircrafts operations.				
16.	Annex 14 - Vol 1, Chapter 9	Ground Servicing of Aircraft		Lack of appropriate Ground Servicing of Aircraft will affect the safety and efficiency of aircrafts operations.				

MINIMUM REPORTING AREAS

AERODROMES OPERATIONS (AOP)								
	ICAO Reference Document	Description	Date first reported	Remarks/ Impact of non-implementation	Action by States	Corrective Action Plan planned by the State (including timelines/target dates)	Identified implementation impediment and action thereon	Status
17.	Annex 14 - Vol 1, Chapter 4, 6 PANS- Aerodromes, Part 1	Control of obstacles		The airspace around aerodromes shall be maintained free from obstacles so as to permit the intended aeroplane operations at the aerodromes to be conducted safely and to prevent the aerodromes from becoming unusable by the growth of obstacles around the aerodromes				
18.	Annex 14 - Vol 1, Chapter 10 PANS- Aerodromes, Part 1	Aerodrome Maintenance		A maintenance programme, shall be established at an aerodrome to maintain facilities in a condition which does not impair the safety, regularity or efficiency of air navigation				

MINIMUM REPORTING AREAS

AERODROMES OPERATIONS (AOP)								
	ICAO Reference Document	Description	Date first reported	Remarks/ Impact of non-implementation	Action by States	Corrective Action Plan planned by the State (including timelines/target dates)	Identified implementation impediment and action thereon	Status
19.	Annex 14 _ Vol1, Chapter 2 PANS- Aerodromes, Part 2	Global Reporting Format		Assessing and reporting the condition of the movement area and related facilities is necessary in order to provide the flight crew with the information needed for safe operation of the aeroplane. The runway condition report (RCR) is used for reporting assessed information.				
20.	Annex 14 - Vol 1, Chapter 1 PANS- Aerodromes, Part 1	Safety Management		Implementation of SMS seeks to proactively mitigate safety risks before they result in aviation accidents/ incidents and improve operational efficiencies.				
AERODROME CERTIFICATION								
21.	Annex 14 - Vol 1, Chapter 1 to 10 PANS- Aerodromes, Part 1, 2	Aerodrome Certification		Lack of certification of an aerodrome means that aerodrome does not meet the specifications regarding the facility and its operation				

MINIMUM REPORTING AREAS

AERODROMES OPERATIONS (AOP)								
	ICAO Reference Document	Description	Date first reported	Remarks/ Impact of non-implementation	Action by States	Corrective Action Plan planned by the State (including timelines/target dates)	Identified implementation impediment and action thereon	Status
22.	PANS-Aerodromes, Part 1	Safety assessments and Aerodrome Compatibility		The compatibility between aeroplane operations and aerodrome infrastructure and operations when an aerodrome accommodates an aeroplane that exceeds the certificated characteristics of the aerodrome should be assessed				
AOP ASBU MODULES								
23.	MIDANPIRG CONCLUSION 18/27 MID eANP	ACDM-B0/1		To generate common situational awareness, which will foster improved decision making within aerodromes, by sharing relevant surface operations data among the local stakeholders involved in aerodrome operations.				
24.	[MIDANPIRG Conc.] MID eANP	SURF-B0/1		To improve safety and efficiency during ground operations by providing proper indications to pilots and vehicle drivers				

MINIMUM REPORTING AREAS

AERODROMES OPERATIONS (AOP)								
	ICAO Reference Document	Description	Date first reported	Remarks/ Impact of non-implementation	Action by States	Corrective Action Plan planned by the State (including timelines/target dates)	Identified implementation impediment and action thereon	Status
25.	[MIDANPIRG Conc.] MID eANP	SURF-B0/1		To better maintain ATCO awareness of ground operations.				
26.	[MIDANPIRG Conc.] MID eANP	SURF-B0/1		Detection by the ATCO of potentially unsafe situations with regard to runway operations.				

MINIMUM REPORTING AREAS

Important Note:

All MIDANPIRG Subgroups should identify the Minimum Reporting Areas to cover, all domains in addition to AOP, notably ATM, AIM, CNS, MET and SAR.

APPENDIX B

POPOSAL FOR INCLUSION IN MIDANPIRG PROCEDURAL HANDBOOK - PART xx

PART XX - UNIFORM METHODOLOGY FOR THE IDENTIFICATION, ASSESSMENT AND REPORTING OF AIR NAVIGATION DEFICIENCIES

(Approved by the Council on 30 November 2001)

1. Introduction

1.1 Based on the information resulting from the assessment carried out by ICAO on the input received from various regions regarding deficiencies in the air navigation field, it became evident that improvements were necessary in the following areas:

- a) collection of information;
- b) safety assessment of reported problems;
- c) identification of suitable corrective actions (technical/operational/financial/organizational), both short-term and long-term; and
- d) method of reporting in the reports of ICAO planning and implementation regional groups (PIRGs).

1.2 This methodology is therefore prepared with the assistance of ICAO PIRGs and is approved by the ICAO Council for the efficient identification, assessment and clear reporting of air navigation deficiencies. It may be further updated by the Air Navigation Commission in the light of the experience gained in its utilization.

1.3 For the purpose of this methodology, the definition of deficiency is as follows:

A *deficiency* is a situation where a facility, service or procedure does not comply with a regional air navigation plan approved by the Council, or with related ICAO Standards and Recommended Practices, and which situation has a negative impact on the safety, regularity and/or efficiency of international civil aviation.

2. Collection of information

2.1 Regional office sources

2.1.1 As a routine function, the Regional Offices should maintain a list of specific deficiencies, if any, in their regions. To ensure that this list is as clear and as complete as possible, it is understood that the Regional Offices take the following steps:

- a) compare the status of implementation of the air navigation facilities and services with the regional air navigation plan documents and identify facilities, services and procedures not implemented;
- b) review mission reports with a view to detecting deficiencies that affect safety, regularity and efficiency of international civil aviation;
- c) make a systematic analysis of the differences with ICAO Standards and Recommended Practices filed by States to determine the reason for their existence and their impact, if any, on safety, regularity and efficiency of international civil aviation;

APPENDIX B

- d) review aircraft accident and incident reports with a view to detect possible systems or procedures deficiencies;
- e) review inputs, provided to the Regional Offices by the users of air navigation services on the basis of Assembly Resolution A37-15, Appendix L;
- f) assess and prioritize the result of a) to e) according to **paragraph 4 (Assessment and Prioritization)**;
- g) report the outcome to the State(s) concerned for resolution; and
- h) report the result of g) above to MIDANPIRG for further examination, advice and report to the ICAO Council, as appropriate through MIDNPIRG report.

2.2 States' sources

2.2.1 To collect information from all sources, States (regulatory bodies and air navigation service providers (ANSPs)) should, in addition to complying with the Assembly Resolution A36-10, establish reporting systems in accordance with the requirements in Annex 13, Chapter 8.

2.3 Users' sources

2.3.1 Appropriate international organizations, including the International Air Transport Association (IATA), the International Federation of Air Line Pilots' Associations (IFALPA) are valuable sources of information on deficiencies, especially those that are safety related. In their capacity as users of air navigation facilities they should identify facilities, services and procedures that are not implemented or are unserviceable for prolonged periods or are not fully operational. In this context, it should be noted that Assembly Resolution A37- 15, Appendix L and several decisions of the Council obligate users of air navigation facilities and services to report any serious problems encountered due to the lack of implementation of air navigation facilities or services required by regional plans. It is emphasized that this procedure, together with the terms of reference of the PIRGs should form a solid basis for the identification, reporting and assisting in the resolution of non-implementation matters.

2.4 Professional provider organizations' sources

2.4.1 Appropriate international professional organizations, including the International Federation of Air Traffic Controllers' Association (IFATCA) and the International Federation of Air Traffic Safety Electronics Associations (IFATSEA) also valuable sources of information on deficiencies. In their capacity as air navigation services professional bodies, they should identify facilities, services and procedures that are not implemented or are unserviceable for prolonged periods or are not fully operational.

Note:-

Guidance related to both mandatory and voluntary incident reporting systems is contained in the Safety Management Manual (SMM) (Doc 9859).

3. Reporting of information on deficiencies

3.1 In order to enable the ICAO PIRGs to make detailed assessments of deficiencies, States and appropriate International organizations including IATA, IFALPA and IFATCA, are expected to provide the information they have to the ICAO regional office for action as appropriate, including action at PIRG meetings.

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3.2 The information should at least include: description of the deficiency, risk assessment, possible solution, time-lines, responsible party, agreed action to be taken and action already taken.

3.3 The agenda of MIDANPIRG meeting should include an item on air navigation deficiencies, including information reported by States and other stakeholders reflected in paragraph 2.4 and 2.5 above, in addition to those identified by the Regional Office according to paragraph 2.1 above. Review of the deficiencies should be a top priority for each meeting. MIDANPIRG, in reviewing lists of deficiencies, should make an assessment of the safety impact for subsequent review by the ICAO Air Navigation Commission.

3.4 In line with the above, and keeping in mind the need to eventually make use of this information in the planning and implementation process, it is necessary that once a deficiency has been identified and validated, the following fields of information should be provided in the reports on deficiencies in the air navigation systems in line with the Model reporting table for use in the reports of the MIDANPIRG, **as at paragraph 5 (Model reporting table for use in the reports of the MIDANPIRG):**

a) Identification of the requirements

As per ICAO procedures, Regional Air Navigation Plans detail, *inter alia*, air navigation requirements including facilities, services and procedures required to support international civil aviation operations in a given region. Therefore, deficiencies would relate to a requirement identified in the regional air navigation plan documents. As a first item in the deficiency list, the requirements along with their references (name of the meeting and the related recommendation number should be included - e.g. SP AFI/08 RAN Rec. xx). In addition, the name of the State or States involved and/or the name of the facilities such as name of airport, FIR, ACC, TWR, etc. should be included.

b) Identification of the deficiency

This item identifies the deficiency and would be composed of the following elements:

- i) a brief description of the deficiency;
- ii) date deficiency was first reported;
- iii) appropriate important references (meetings, reports, missions, etc)

c) Identification of the corrective actions

In the identification of the corrective actions, this item would be composed of:

- i) a brief description of the corrective actions to be undertaken;
- ii) identification of the executing body;
- iii) expected completion date of the corrective action; and
- iv) when appropriate or available, an indication of the cost involved.

4. Assessment and prioritization

4.1 A general guideline would be to have three levels of priority organized on the basis of safety, regularity and efficiency assessment as follows:

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- **“U” priority** = Urgent requirements having a direct impact on safety and requiring immediate corrective actions.

Urgent requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is urgently required for air navigation safety.

- **“A” priority** = Top priority requirements necessary for air navigation safety.

Top priority requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is considered necessary for air navigation safety.

- **“B” priority** = Intermediate requirements necessary for air navigation regularity and efficiency.

Intermediate priority requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is considered necessary for air navigation regularity and efficiency.

4.2 In addition, the MIDANPIRG’s Sub-Groups including the ASPIG (Aerodromes Safety Planning and Implementation Group) should assess, as deemed necessary, the endorsed Deficiencies based on SMS principles. As practical as it can be, the assessment and prioritization of Deficiencies is based on the safety risk matrix contained in the Safety Management Manual (SMM), Doc 9859

5. Model reporting table for use in the reports of the MIDANPIRG

MID Air Navigation Deficiencies Data Base (MANDD)

5.1 The MID Air Navigation Deficiencies Data Base (MANDD) is available at <https://mandd.icao.int/>. It provides an online tool for States and relevant stakeholders to report Air Navigation Deficiencies in the MID Region in order to be used by the MIDANPIRG for the identification, assessment, prioritization of deficiencies,

5.2 The MANDD Reporting system is based on the following model table as presented at **Appendix XX**.

Additional guidance on reporting

5.3 In order to encourage reporting, the Group has adopted a list of minimum reporting areas covering the following Air Navigation domains, **AOP, ATM, AIM, CNS, MET** and **SAR**. The intent of the list is **NOT** to replace reporting based on ICAO Council policy, but to encourage reporting, in recognition of Assembly Resolution A37-15 Appendix L, and noting the historical critically low level of reporting.

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5.4 In addition to reporting any other deficiencies as defined by the Council. And without prejudice to the definition of “deficiency” as approved by the Council, States, Regulators and Air Navigation Service Providers (ANSPs), users (IATA, AFRAA, etc.) and professional organizations (IFALPA, IFATCA, IFATSEA, etc.), are encouraged to report on non-compliances, referring to the minimum reporting guidance as agreed by the States and reflected on The Middle East Air Navigation Deficiencies Management Process (MIDAND-MP).

6. Action by the MID Office

6.1 Before each meeting of MIDANPIRG, the Regional Office will provide advance documentation concerning the latest status of deficiencies.

6.2 It is noted that the ICAO MID Office should document serious cases of deficiencies to the Air Navigation Commission (through ICAO Headquarters) as a matter of priority, rather than waiting to report the matter to the next MIDANPIRG meeting, and that the Air Navigation Commission will report to the Council.

Appendix XX

Model table to Report Deficiencies

Identification			Deficiencies				Action Plan			
ID	Requirements	State/ Facilities and Services	Description	Reporting Date	Remarks	Priority	Description	Executing Body	Target Date	Remarks
1	2	3	4	5	6	7	8	9	10	11
AGA XX	Annex 14, Vol I, Chap. 3	XXX Intl. Airport	Depression between threshold and threshold lights in both thresholds	DD/MM/YYYY	Identified during surveillance activity XXXX	A	<i>Include Action Plan coordinated with State</i>	XXXX	<i>Include as initial date that appearing in the Action Plan</i>	xxxx meeting recommended that Refer to details in the meeting report.

Explanation for the filling of the Form

Identification of Requirements

- Column 1: ID – Deficiency number (area-sequential numbering): Example AGA ##
- Column 2: Requirements – Element from the Air Navigation Plan/Associated SARPs
- Column 3: State/Facilities and Services such as: airport, navigation aid, FIR, ACC, TWR, etc

Identification of Deficiency

- Column 4: Clear and concise description of the deficiency
- Column 5: Reporting date of deficiency (month/year)
- Column 6: Important references, such as meetings, missions, reports, etc. *Other areas being affected by this deficiency should be indicated here.*
- Column 7: Identified Priority (U, A, B)

Action Plan

- Column 8: Clear and concise description of the Action Plan coordinated with the State. It should indicate how and when the deficiency will be resolved.
- Column 9: Identification of the body/institution responsible for Action Plan implementation.
- Column 10: Target date (month/year). The date in the Action Plan coordinated with the State will be inserted here. The Action Plan may need to be periodically updated; therefore, the corresponding target date will be amended accordingly.
- Column 11: Important references such as actions recommended by MIDANPIG to promote Action Plan implementation, progress with deficiency elimination, delays with Action Plan execution missing information, etc.