



**INTERNATIONAL CIVIL AVIATION ORGANIZATION**

**REPORT OF THE THIRD MEETING OF  
THE AERODROME OPERATIONAL PLANNING  
SUB-GROUP**

**AOP SG/3**

***(Cairo, 16 - 19 September 2002)***

The views expressed in this Report should be taken as those of the MIDANPIRG Aerodrome Operational Planning Sub-Group and not of the Organization. This Report will, however, be submitted to the MIDANPIRG and any formal action taken will be included in the Report of the MIDANPIRG.

Approved by the Meeting

The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of ICAO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontier or boundaries.

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## **PART I - HISTORY OF THE MEETING**

### **1. PLACE AND DURATION**

1.1 The Third Meeting of the MIDANPIRG Aerodrome Operational Planning Sub-Group (AOP SG/3), was held at ICAO Middle East Regional Office, Cairo from 16-19 September 2002.

### **2. OPENING**

2.1 Mr. A. Zerhouni, ICAO Regional Director, welcomed all the delegates to Cairo and, gave a brief information on the importance of aerodromes to support air transport activities. He further highlighted tasks assigned to AOP Sub-Group and brought to the attention of the meeting issues to be addressed by the Sub-Group. Mr. Zerhouni wished the meeting every success in its deliberations.

2.2 The meeting was informed that previously elected Chairperson of AOP Sub-Group (from Iran), will not be able to act any more as the Chairperson due to other commitment in his State, accordingly, the third AOP SG meeting was chaired by the Sub-Group vice chairperson, Mr. Mohamed Ali Salem (Manager Security, Safety and Fire Civil Aviation Affairs in Bahrain), and next AOP SG/4 would be entitled to proceed for election of a new chairperson. Mr. Mohamed Ali Salem delivered a brief address drawing the attention on the integrated objectives of air navigation activities aiming to safety and efficiency of civil aviation.

### **3. ATTENDANCE**

3.1 The meeting was attended by a total of thirty seven participants, which included delegates from eight States and one International Organization. The list of participants is at page 3 – 10.

### **4. OFFICERS AND SECRETARIAT**

4.1 Mrs. Nawal A. HADY, Regional Officer, Aerodromes and Ground Aids from the ICAO Middle East Cairo Office, was Secretary of the meeting. She was assisted by Mr. M.Traore, Regional Officer (CNS) and Mr. M Smaoui, Regional Officer (AIS) from the ICAO Middle East Office.

4.2 Mr M. Khonji ICAO MID Deputy Regional Director also supported the meeting.

### **5. LANGUAGE**

5.1 The discussions were conducted in English. Documentation was issued in English.

### **6. AGENDA**

6.1 The following Agenda was adopted:

Agenda Item 1: Adoption of the Provisional Agenda and update TOR and Work Programme of AOP Sub Group

Agenda Item 2: Follow up Decisions and Conclusions of MIDANPIRG/7 in AOP field

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Agenda Item 3:	Review and update Tables AOP and CNS3 of MID FASID in relation to aerodromes
Agenda Item 4:	Follow up Latest Developments in Aerodromes and Ground Aids field
Agenda Item 5:	Follow up Deficiencies in relation to MID aerodromes
Agenda Item 6:	Future Works Programme
Agenda Item 7:	Any other business

## 7. CONCLUSIONS AND DECISIONS – DEFINITION

7.1 The Sub-Group records its actions in the form of Draft Conclusions and Draft Decisions for further action and adoption by the MIDANPIRG as its Conclusions and Decisions with the following significance:

- a) **Conclusions** deal with matters which, in accordance with the Group's terms of reference, merit directly the attention of States on which further action will be initiated by ICAO in accordance with established procedures; and
- b) **Decisions** deal with matters of concern only to the MIDANPIRG and its contributory bodies.

7.2 In the same context, the Sub-Group can record its actions in the form of Conclusions and Decisions where no further action is required by the MIDANPIRG or already authorized by MIDANPIRG.

## 8. LIST OF DRAFT CONCLUSIONS AND DECISIONS

DRAFT DECISION 3/1	REVISED AOP SG/ TOR AND WORK PROGRAM
DRAFT CONCLUSION 3/2	REVIEWED AND UPDATED TABLES AOP 1 AND CNS 3 OF MID FASID
DRAFT CONCLUSION 3/3	CERTIFICATION OF AERODROMES IMPLEMENTATION PLAN TIMELINES FOLLOW UP
DRAFT CONCLUSION 3/4	CERTIFICATION OF AERODROMES MANDATES
DRAFT CONCLUSION 3/5	ASSESSMENT STUDY ON BIRD STRIKE HAZARD TO AIRCRAFT OPERATION SAFETY ON OR IN THE VICINITY OF MID AIRPORTS
DRAFT CONCLUSION 3/6	IMPACT OF NEW LARGE AIRCRAFT OPERATIONS ON AERODROME PHYSICAL CHARACTERISTICS, FACILITIES AND SERVICES
DRAFT CONCLUSION 3/7	UPDATED LIST OF DEFICIENCIES IN AOP FIELD IN THE MID REGION
DRAFT CONCLUSION 3/8	WORKSHOP ON "SAFETY OF AIRCRAFT OPERATIONS ON THE MOVEMENT AREA"

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AOP SG/3  
Report on Agenda Item 1

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## **PART II - REPORT ON AGENDA ITEMS**

**REPORT ON AGENDA ITEM 1:           ADOPTION OF THE PROVISIONAL AGENDA AND UPDATE REVISION OF THE TOR AND WORKING PROGRAMME OF AOP SUB-GROUP**

1.1           The Secretariat presented the provisional Agenda items, for the Third Meeting of the Sub-Group that was discussed and adopted by the meeting as shown in paragraph 6 of the History of the Meeting.

1.2           The meeting noted the Terms of Reference and work programme adopted by MIDANPIRG/7 (Decision 7/3) which had made some changes to the Terms of Reference and work programme of the Sub-Group related to the new single definition of "Deficiency".

1.3           The meeting was in view of the following:

- i)           Adding one area for "Runway incursion" to Paragraph c) of the Sub-Group Terms of Reference,
- ii)          Prioritising Item No. 3 in the Work Programme of AOP SG related to "Aerodrome Operational Safety issues" to be of Priority "A",
- iii)         The meeting proposed individual priorities for each deliverables related to Item No.4 "Latest Developments" of the Sub-Group Work Programme as indicated in **Appendix 1A** to the Report on Agenda Item 1.

1.4           The Terms of Reference and Work Programme of the Sub-Group were accordingly modified, adopted by the meeting for presentation to and approval by MIDANPIRG/8. The Revised Terms of Reference and work programme is at **Appendix 1A** to the Report on Agenda Item 1. The following draft decision was developed:

**DRAFT DECISION 3/1-                   REVISED AOP SG/TOR AND WORK PROGRAMME**

The Terms of References and work program of the AOP Sub-Group are revised as indicated in **Appendix 1A** to the Report on Agenda Item 1.

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No.	Task Description	Deliverables	Priority	Target Date
		<ul style="list-style-type: none"> <li>- Identify deficiencies relevant to required facilities and services at international aerodromes in accordance with uniform methodology for identification, assessment and reporting of air navigation deficiencies and single definition of a "Deficiency", approved by ICAO Council on 30 November 2001.</li> </ul>		
2	Aerodrome Emergency Plan	<ul style="list-style-type: none"> <li>- Analysis of implementation of relevant ICAO provisions in the region, and proposal of local and/or regional remedial action</li> </ul>	A	Continuous
3	<p>Aerodrome Operational Safety issues in particular critical areas with priority to:</p> <ol style="list-style-type: none"> <li>1) Aerodrome navigation facilities</li> <li>2) Obstacles at/around aerodromes (*)</li> <li>3) Pavement Surface Conditions</li> <li>4) Safety of aircraft operation on the movement area</li> <li>5) Runway incursion</li> <li>6) Aerodrome maintenance</li> <li>7) Bird Hazard Reduction and control</li> <li>8) Secondary Power Supply</li> <li>9) Rescue and Fire Fighting Services</li> <li>10) Alternate Aerodromes, in particular for En-Route</li> <li>11) Removal of disabled aircraft</li> </ol>	<ul style="list-style-type: none"> <li>- Based on outcome of priority A Tasks, Identify from the above list those items which merit further consideration within MID Region and propose action plan including target dates.</li> </ul>	A	Continuous
4	Latest Developments	<ul style="list-style-type: none"> <li>- The introduction of New Large type Aircraft</li> <li>- Advanced Surface Movement Guidance and Control Systems (ASMGCS)</li> <li>- CNS/ATM systems and its impact on aerodrome facilities and services</li> <li>- Other technological developments related to aerodrome; suggest appropriate steps to be taken by States to keep up with these developments</li> </ul>	<p>A</p> <p>B</p> <p>B</p> <p>B</p>	Continuous



**Note: Priority**

- A** *High Priority tasks, on which work should be speeded up*
- B** *Less Priority tasks, on which work should be undertaken as time and resources permit, but without detriment to priority A tasks*
- (\*) Since non-precision approach based on GNSS will be in use in the near future in the MID Region, AOP SG has to stress on the importance of identifying obstacles at and around Aerodrome.

**COMPOSITION**

Provider States and International Organizations concerned. ~~Iran (Chairperson), Bahrain (Vice Chairperson). Chairperson and Vice chairperson of AOP Sub-Group are designated by MIDANPIRG.~~

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AOP SG/3  
Report on Agenda Item 2

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**REPORT ON AGENDA ITEM 2: FOLLOW UP DECISIONS AND CONCLUSIONS OF  
MIDANPIRG/7 IN AOP FIELD**

2.1 The meeting was presented, for information, list of draft Conclusions and Decisions that were agreed on the second meeting of Aerodrome Operational Planning Sub-Group (AOP SG/2) as contained in **Appendix 2A** to the Report on Agenda Item 2.

2.2 The meeting was also presented with actions taken during the Seventh Meeting of the Middle East Air Navigation Planning and Implementation Regional Group (MIDANPIRG/7) related to the Report of the Second Meeting of AOP SG held in Cairo, Egypt, from 30 July to 02 August 2001. The meeting noted the specific actions taken by MIDANPIRG/7 and the follow-up by the States and Secretariat on Conclusions and Decisions of the meeting as contained in **Appendix 2B** to the Report on Agenda Item 2.

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**List of Draft Conclusions and Decisions agreed on AOP SG/2 meeting  
Cairo, 30 July – 2 August 2001**

**DRAFT DECISION 2/1- REVISED TOR AND WORK PROGRAM**

That, the Terms of References and Work Program of the AOP Sub-Group are revised as given in **Appendix 1A** to the Report.

**DRAFT CONCLUSION 2/2- REVISED BORPC**

That, the revised BORPC in **Appendix 2A** to the Report is updated and no further additions / modifications are required at this stage.

**DRAFT CONCLUSION 2/3- REVISED BASIC ANP AND FASID TABLES AOP-1**

That, the Tables AOP 1 of MID Basic ANP and FASID in **Appendices 2B & 2C** to the Report are revised and updated.

**DRAFT CONCLUSION 2/4- REVIEW OF TABLES CNS 3 OF FASID**

That, the Tables CNS 3 of FASID in relation to aerodrome facilities and services in Appendix 2D to the Report are revised and updated.

**DRAFT CONCLUSION 2/5- UPDATED LIST OF SHORTCOMINGS AND DEFICIENCIES IN AOP FIELD**

That,

- i) The list of shortcomings and deficiencies in the AOP field in Appendix 3A to the Report be adopted. The Secretariat is requested to monitor the progress in their resolution and report to the Sub-Group/MIDANPIRG.
- ii) States in the region are requested to provide information to the ICAO MID Regional Office on the actions taken by them to resolve or remove any shortcomings and deficiencies noted by them and/or users in their own air navigation facilities and services in particular critical area to aerodrome operational safety issues.
- iii) IATA and IFALPA, as users of the air navigation facilities and services in the region, are requested to inform, the States concerned and the ICAO Regional Office of any shortcomings and deficiencies noted by them, so that suitable actions can be taken to resolve them.

**DRAFT CONCLUSION 2/6- CERTIFICATION OF AERODROMES**

That, States in the region are,

- i) Urged to establish the necessary legislation and regulatory procedures needed for the certification of aerodromes with a view to enhance aerodrome operational safety and efficiency.

- ii) Reply to ICAO HQ state letter ref. AN 4/1.2.18-01/36 dated 6 April 2001, before 1 October 2001

**CONCLUSION 2/7- POSSIBLE IMPROVMENTS TO CAPACITY MANAGEMENT OF AIRPORT S AND AIRSPACE SHOULD NOT DEGRAD AVIATION SAFETY REQUIRMENTS**

That,

- i) States should consider and maintain safety requirements - as per relevant ICAO SARPS and PANS when implementing possible improvements to capacity management for airports and airspace; and
- ii) In order to maintain aerodrome operational regularity, Airports improving capacity measures verses safety requirements should be monitored.

**CONCLUSION 2/8- AVIATION SECURITY ISSUES TO BE CONSIDERED AND MONITORED SPECIFICALLY IN THE AREA OF AERODROME PLANNING, DESIGN AND OPERATION**

That, aviation security requirements should be considered, specifically in the area of aerodrome planning, design and operation, maintained and monitored.

**CONCLUSION 2/9- SAFETY ASPECTS TO BE CONSIDERED AND MONITORED WITH PRIORITY IN MID REGION AOP**

That, following Aerodrome Operational Safety Aspects according to their priorities should be considered and monitored.

- i) Aerodrome Emergency Planning
- ii) Rescue and Fire Fighting Services
- iii) Obstacle limitations around aerodromes
- iv) Implementation of guidelines and procedures for surface movement guidance and control systems (SMGCS) at main International Airport

**DRAFT CONCLUSION 2/10- SEMINAR/WORKSHOP ON "AERODROME CERTIFICATION"**

That, ICAO is requested to plan a Seminar or workshop on "Aerodrome Certification", mid 2002. States in the region are urged to actively participate in the seminar/workshop by sharing their experience, presenting case studies and /or current practices.

**DRAFT Conclusion 2/11- LASER EMITTERS AND FLIGHT OPERATIONS SAFETY**

That, MID states are encouraged to respond to ICAO HQ State Letter (ref. AN 5/19.3-01/56 dated 15 June 2001) for protection of flight operations against the threat of laser emitters used for commercial promotion before, 30 September 2001.

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 Appendix 2B to the Report on Agenda Item 2

**FOLLOW-UP ON MIDANPIRG/7 CONCLUSIONS AND DECISIONS IN RESPECT OF AOP FIELD**

<b>CONC./DEC.</b>	<b>TITLE</b>	<b>FOLLOW-UP</b>	<b>REMARKS</b>
Dec. 7/3	Revised Terms Of Reference and Work Programme for the AOP Sub-Group	Actioned	Approved
Con. 7/4	Aerodrome Certification	Actioned – Ongoing.	<p>The MIDANPIRG requested the ANC and the council to urge States to establish the necessary legislations and regulatory procedures needed for the certification of aerodromes with a view to ensure aerodrome operational safety, regularity and efficiency.</p> <p>A workshop on “Certification of Aerodromes” was conducted in the MID Region by ICAO on 17-20 June 2002 in Cairo.</p>
Con. 7/44	Revised uniform methodology, including new definition of deficiency, in addressing the deficiencies of MID region	Actioned	<p>MIDANPIRG invited States to:</p> <p>a) Note the introduction of the new single definition of ‘<i>deficiency</i>’ replacing “<i>shortcoming and deficiency</i>”; and</p> <p>b) Adopt the revised uniform methodology in addressing the deficiencies of MID Region.</p>
Con. 7/45	Monitoring and follow up of corrective actions to alleviate deficiencies in AOP field	Ongoing	MIDANPIRG urged States to provide the ICAO MID Regional Office with the information related to current and planned corrective actions, which are necessary for the Regional Office and MIDANPIRG to carry out their monitoring and follow up responsibilities.

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**REPORT ON AGENDA ITEM 3:                    REVIEW AND UPDATE TABLES AOP 1 AND CNS 3 OF  
MID FASID IN RELATION TO AERODROMES**

3.1            The meeting was reminded that the Air Navigation Plan (ANP), which will now contain in two parts, namely, Basic ANP and FASID is a planning document and need not necessarily reflect the existing facilities and services. The facilities and services shown in the documents represent those, which will be needed for a reasonable period in future planning, say, approximately 5 years. Therefore these documents are not meant for operational use. The existing facilities and services should be shown in the AIPs published by States, which should be used for operational purposes.

3.2            The Basic ANP Table AOP gives the list of Aerodromes as agreed and published by the States for International Scheduled Air Transport, Regular Use (RS), International Non-scheduled Air Transport, Regular Use (RNS).

3.3            The FASID Tables AOP1 gives the Facilities and Services to be provided at these aerodromes and International Scheduled Air Transport, Alternate Use (AS) and International Non-schedule Air Transport, Alternate Use (ANS). The Physical Characteristics of the Runway, Taxiway and Apron are decided based on the Traffic Forecasts and the largest airplane normally expected to use the aerodrome, and Facilities and Services should conform to the BORPC and the ICAO SARPs included in the Annexes and supported by other related documents such as ICAO Manuals, etc. It was also be noted that these drafts do not contain the charts which will appear in the final document, that will be produced by the ICAO AIS/MAP section in Montreal on the basis of the information in the corresponding tables.

3.4            It was noted that the FASID Table AOP 1 listed the requirements of Radio Navigational Aids for Precision Approach, Non Precision Approach and Terminal Aids; the details of such facilities were shown in FASID Table CNS 3. The requirements of collocation/aligning the DME with VOR/ILS are given in FASID Table CNS3

3.5            In accordance with the TOR of the Sub-Group, the meeting is to identify anticipated capacity and implementation of shortfalls at international aerodromes in the MID Region and their causes through the continuous review of "Basic requirements for facilities and services at international aerodromes".

3.6            Those States, which have not finalized updating their AOP-1 and CNS3 tables in MID FASID, were requested to send their revision to MID Office as soon as possible but not later than **26 September 2002**.

3.7            The meeting noted the last updated tables that was based on additional information from States and, as decided by the MIDANPIRG/7, were contained in the two documents (ANP an FASID) as a whole including all parts were processed for approval by the competent authority following the ICAO established procedure.

3.8            The meeting reviewed the Draft Tables AOP-1 and CNS3 of MID FASID presented by the Secretariat and made changes/corrections as required. The meeting agreed on the revised Tables in **Appendices 3A & 3B** to the Report on Agenda Item 3.

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3.9 Accordingly, the meeting formulated the following draft conclusions:

**DRAFT CONCLUSION 3/2- REVIEWED AND UPDATED TABLES AOP 1 AND CNS 3 IN MID FASID**

That, the Tables AOP 1 and CNS 3 of MID FASID in **Appendices 3A & 3B** to the Report on Agenda Item 3 are reviewed and updated.

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**TABLE FASID AOP 1 C PHYSICAL CHARACTERISTICS, RADIO AND  
VISUAL AIDS AT AERODROMES**

Note - The names of aerodromes listed in column 1 of the following table derive from the list of international aerodromes required in the AOP Part of the Basic MID ANP.

*EXPLANATION OF THE TABLE*

*General*

Table AOP 1 shows the operational requirements for air traffic services, physical characteristics, radio navigation aids, visual aids and runway visual range (RVR) at each aerodrome.

Columns 6 to 9 show physical characteristics related to taxiways and runways. The physical characteristics of taxiways should be appropriate for the runways with which they are related.

Columns 5 and 10 to 13 show the requirements for air traffic services, radio and visual aids and RVR for the runway with which the entry is associated. These aids are generally indicated by AX@ and the AX@ indicates that the aid should be in accordance with the type of runway (column 7). If the aid is different from the type of runway, then a A1@, A2@ or A3@ is entered to indicate Category I, II or III, respectively.

*Column*

- 1 Name of the city and aerodrome, preceded by the location indicator.

*Note. C* When the aerodrome is located on an island and no particular city or town is served by the aerodrome, the name of the island is included instead of the name of a city.

Designation of the aerodrome as:

RS C international scheduled air transport, regular use  
RNS C international non-scheduled air transport, regular use  
AS C international scheduled air transport, alternate use  
ANS C international non-scheduled air transport, alternate use

When an aerodrome is needed for more than one type of use, normally only the use highest on the above list is shown. An exception is that AS aerodromes are identified even when they are required for regular use by international non-scheduled air transport.

- 2 Alternate aerodromes for the regular aerodromes listed in column 1, or if the aerodrome listed in column 1 serves only as an alternate, the regular aerodromes for which it is an alternate. The aerodrome is shown by listing the name of the city, preceded by the location indicator.

- 3 Aerodrome reference code (RC) for aerodrome characteristics expressed in accordance with Annex 14, Volume I, Chapter 1.

- 4 Required rescue and fire fighting service (RFF). The required level of protection is expressed by means of an aerodrome RFF category number, in accordance with Annex 14, Volume I, Chapter 9, Section 9.2.

- 5 Air traffic services:

APP C Approach control service. An AR@ is shown it indicates that the service should be provided with radar.  
TWR C Aerodrome control tower. An AR@ is shown it indicates that the service should be provided with an aerodrome surface movement radar.  
ATIS C Automatic Terminal Information Service.  
AFIS C Aerodrome Flight Information Service.



- 6 Runway designation numbers.
- 7 Type of each of the runways to be provided. The types of runways, as defined in Annex 14, Volume I, Chapter 1 are:

NINST C non-instrument runway  
 NPA C non-precision approach runway  
 PA1 C precision approach runway Category I  
 PA2 C precision approach runway Category II  
 PA3 C precision approach runway Category III

- 8 Taxiway (TWY) to be provided to threshold of associated runway.
- 9 Required runway length expressed in terms of a balanced field length. In planning, account is taken of local conditions. If the requirement for alternate use is more critical, the aircraft type and runway length required are also indicated below the abbreviation AAS@

Critical aircraft for pavement strength and required pavement strength expressed as the all-up mass in thousands of kilograms. The operational mass of an aircraft, such as B747 and DC10, which may have a bearing on the design of culverts, cable ducts, bridge overpasses, etc., is also shown. If the aircraft requiring the aerodrome for alternate use is more critical, the aircraft type and pavement strength required are also indicated below the abbreviation AAS@

*Note 1.C A specific aircraft model based on the best available sources of information should be selected for planning runway length as this requirement is particularly affected by aircraft model differences. Aircraft models should thus be reviewed carefully to see that the correct one is used in determining the aerodrome characteristics. ICAO's Air Navigation Commission has directed that RAN meetings provide in the plan as realistic figures as possible on runway length and pavement strength requirements at individual aerodromes.*

*Note 2.C For international general aviation aerodromes, when there is no requirement for the runway to be paved, the pavement strength may be shown as "UNPAV".*

*Note 3.C Should a requirement for more than one runway be indicated for an aerodrome, the lengths of the secondary runways. A specification concerning the lengths of such runways can be found in Annex 14, Volume I, Chapter 3, Section 3.1.7.*

*Note 4.C When the length or pavement strength is not a current requirement, the year in which it will be required is entered.*

*Radio navigation aids (approach and landing)*

- 10 PA-Precision Approach Aid, shown against the runway to be served and indicated by an AX@.

NPA C Non Precision Approach Aid. An AX@ indicates that the aid should be provided.

T C Terminal Navigation Aid. An AX@ indicates that one of the aids should be provided.

*Note: Refer to Table CNS 3 for details. The appropriate radio navigation aid and the requirement of aligning DME with ILS/VOR are shown in this Table CNS 3.*

*Lighting aids*

- 11 PA C precision approach lighting system, Category I, II or III shown by an AX@ if the aid is the same category as the runway type (column 7) or, if it is different, by the numeral 1, 2 or 3 against the runway to be served, to indicate the type of system required.

SA C simple approach lighting system, shown by an AX@ against the runway to be served.

VA C visual approach slope indicator system, shown by an AL@ or an AS@ against the runway to be served. The letter AL@ indicates that the system should be PAPI or T-VASIS (AT-VASIS) and the letter AS@ indicates that the system should be PAPI/(APAPI).

RWY C runway edge, threshold and runway end lighting. An AX@ indicates that these aids should be provided.

CLL C runway centre line lighting, shown by an AX@against the runway to be served.

TDZ C runway touchdown zone lighting, shown by an AX@against the runway to be served.

TE C taxiway edge lighting. An AX@indicates that the aid should be provided. This requirement pertains to the entire aerodrome and only one entry is made when planning requirements for more than one runway are shown.

TC C taxiway centre line lighting. An AX@indicates that this should be provided for the particular runway with which the entry is associated.

STB C stop bars. An AX@indicates that stop bars should be provided for the runway with which the entry is associated.

B C aerodrome or identification beacon. An AX@indicates that the aid should be provided. This requirement pertains to the entire aerodrome and only one entry is made when planning requirements for more than one runway are shown.

*Marking aids*

12 DES C runway designation marking, shown by an AX@against the runway to be served.

CLM C runway centre line marking. An AX@indicates that the aid should be provided.

THR C runway threshold marking, shown by an AX@against the runway to be served.

TDZ C runway touchdown zone marking, shown by an AX@against the runway to be served.

SST C runway side stripe marking. An AX@indicates that the aid should be provided.

AMG C aiming point marking, shown by an AX@against the runway to be served.

TWY C taxiway centre line and, where required, edge marking. An AX@indicates that the aid should be provided.

HLD C taxiway holding position marking, shown by an AX@against the runway to be served. The pattern of the marking should conform to the provisions of Annex 14, Volume I, Section 5.2.9.

13 Runway visual range (RVR).

TDZ C observations should be provided representative of the touchdown zone.

MID C observations should be provided representative of the middle of the runway.

END C observations should be provided representative of the stop end portion of the runway.

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CITY/AERODROME/USE VILLE/AERODROME/EMPLOI CIUDAD/AERODROMO/USO	ALTERNATE AERODROMES AERODROMOS DE DEGAGEMENT AERODROMOS DE ALTERNATIVA	AERODROME AERODROME				PHYSICAL CHARACTERISTICS CARACTERISTIQUES PHYSIQUES CARACTERÍSTICAS FÍSICAS				RADIO AIDS AIDES RADIO RADIOAYUDAS			LIGHTING AIDS AIDES LUMINEUSES AYUDAS LUMINOSAS						MARKING AIDS MARQUES SEÑALAMIENTO				RVR								
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CITY/AERODROME/USE VILLE/AERODROME/EMPLOI CIUDAD/AERODROMO/USO	ALTERNATE AERODROMES AERODROMOS DE DEGAGEMENT AERODROMOS DE ALTERNATIVA		AERODROME AERODROME					PHYSICAL CHARACTERISTICS CARACTERISTIQUES PHYSIQUES CARACTERÍSTICAS FÍSICAS				RADIO AIDS AIDES RADIO RADIOAYUDAS			LIGHTING AIDS AIDES LUMINEUSES AYUDAS LUMINOSAS						MARKING AIDS MARQUES SEÑALAMIENTO				RVR																			
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AOP SG/3  
Appendix 3B to the Report on Agenda Item 3

**MID FASID – CNS-3**

**E 4-3-1**

**TABLE CNS 3 C RADIO NAVIGATION AIDS (MID REGION)**

**TABLA CNS 3 C AYUDAS PARA LA RADIONAVEGACIÓN (REGIÓN MID)**

*EXPLANATION OF THE TABLE*

*Column*

- 1 Name of the country, city and aerodrome and, for en-route aids, the location of the installation.
- 2 The designator number and runway type:  
  
NPA C non-precision approach  
PA-1 C precision approach runway, Category I  
PA-2 C precision approach runway, Category II  
PA-3 C precision approach runway, Category III
- 3 The functions carried out by the aids appear in columns 4 to 8 and 10 to 12:  
  
A/L C Approach and landing  
T C Terminal  
E C En-route
- 4 ILS C Instrument landing system. Roman numeral I and II indicate the acting category of the ILS, I, II or III. (I) indicates that the facility is implemented  
  
The letter “D” indicates a DME requirement to serve as a substitute for a marker beacon component of an ILS  
  
*Note. C Indication of category refers to the standard of facility performance to be achieved and maintained in accordance with pertinent specifications in ICAO Annex 10 and not to the specifications of the ILS equipment itself, which are not necessarily the same.*  
  
An asterisk (\*) indicates that the ILS requires a Category II signal quality, but without reliability and availability provided by redundant equipment and automatic changeover.
- 5 Radio beacon localizer, be it associated with an ILS or to be used as an approach aid to an aerodrome.
- 6 Radiotelemetrical equipment. When an “X” appears in column 6 in line with the VOR in column 7, this indicates the need that the DME be installed at a common site with the VOR.
- 7 VOR VHF omnidirectional radio range.
- 8 NDB – Non Directional Beacon
- 9 The distance and altitude to which signal protection of the VOR or VOR/DME are required, indicated in nautical miles (NM) and in thousands of feet.
- 10, 11 GNSS-global navigation satellite system (includes GBAS and SBAS).  
  
GBAS (ground-based augmentation system) implementation planned to be used in precision approach and landing CATI, CATII, CAT III.



SBAS (Satellite-based augmentation system) implementation planned to be used for route navigation, for terminal, for non precision approach and landing. An "X" indicates service availability,; exact location of installation will be determined.

*Note. - GPS receiver is under standard rules and ABAS (aircraft-based augmentation system)*

12

**Remarks**

*Note. - Columns 5 to 12 use the following symbols:*

X- Required but not implemented

XI- Required and implemented

***EXPLICATION DU TABLEAU***

(To be completed by HQ)

## EXPLICACIÓN DE LA TABLA

## Columna

- 1 Nombre del país, ciudad y aeródromo, y en el caso de las ayudas en ruta, el lugar de la instalación.
- 2 Tipo de pista:  
 NINST C pista de vuelo visual  
 INST C pista para aproximaciones por instrumentos  
 NPA C pista para aproximaciones que no son de precisión  
 PA-I C pista para aproximaciones de precisión, Categoría I  
 PA-II C pista para aproximaciones de precisión, Categoría II
- 3 La función de las ayudas figura en las columnas 4 a 8 y 10 a 12  
 A/L C aproximación y aterrizaje  
 T C terminal  
 E C en ruta
- 4 ILS C el número de designación de la pista con ILS aparece junto a los números romanos I o II, a fin de indicar la categoría de actuación del ILS de Categoría I o II respectivamente.  
*Nota. C La indicación de la categoría se refiere al nivel de actuación de la instalación que ha de lograrse y, de acuerdo con las disposiciones pertinentes del Anexo 10, no con las especificaciones del equipo ILS instalado, que no son necesariamente las mismas.*  
*\*Indica que el ILS requiere una calidad de señal de Categoría II, pero sin la fiabilidad y disponibilidad que proporcionan la redundancia de equipo y la transferencia automática.*
- 5 Radiofaro de localización, ya sea asociado con un ILS o como ayuda para la aproximación a un aeródromo.
- 6 Equipo radiotelemétrico. Alineado con el ILS según lo indicado en la columna 4 cuando el DME se necesita para sustituir a una radiobaliza del ILS. Cuando está alineado con el VOR en la columna 7, indica que es necesario que el DME esté instalado junto al VOR.
- 7 VOR recomendado.
- 8 NDB
- 8 La distancia y altitud necesarias para proteger la señal del VOR o VOR/DME, en millas marinas (NM) y en miles de pies.
- 9 .....
- 10,11 .....
- 12 ....

TABLE CNS 3

Station	RWY Type	Function	ILS	L	DME	VOR	NDB	Coverage	GNSS		REMARKS OBSERVACIONES
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
<b>AFGHANISTAN</b>											
GHAZNI		E				X		200/45			
KABUL/Kabul	11 NPA 29 PA 1	A/L A/L T E	I*	X	X X X X	X X X X		300/45			
KANDAHAR/Kandahar	05 NPA 23 NPA	A/L A/L T E				X X X X		300/45 300/45			
<b>BAHRAIN</b>											
BAHRAIN/Bahrain Intl	12R NPA 30L NPA				X I X I	X I X I					
	12L PA2 30R PA2	A/L A/L	II (I) II (I)	X	XI XI	XI XI		300/45			
<b>EGYPT</b>											
EL-ARISH/ El-Arish Int'l	16 NPA 34 NPA	A/L			XI	XI		150/45			
ASYUT/ Asyut Int'l	13 NPA 31 NPA	A/L E			XI	XI		200/45			
ALEXANDRIA/ Alexandria Intl	04 PA 1 22 NPA	A/L E	I*		XI XI	XI XI	XI	100/45 150/45			
CAIRO/ Almaza Int.	18 NPA 36 NPA	A/L					XI	25/45			
ALEXANDRIA/ Borg El Arab Int'l	05 NINST 23 NINST 32 PA 1 14 NPA	A/L T	I* (I) D	X	XI	XI	XI	100/45			

Station	RWY Type	Function	ILS	L	DME	VOR	NDB	Coverage	GNSS		REMARKS OBSERVACIONES
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
CAIRO/Cairo Intl	05R PA 2	A/L	II	X	XI	XI		150/45			
	23R PA 2	A/L	II(I)	X							
	23L PA 2	A/L	II (I)	X	XI	XI		200/45			
	05L PA 2	A/L	II (I)	X							
	16 NPA	T									
	34 NPA	E									
HURGHADA/ Hurghada Intl	16 NPA	A/L	I*(I)		XI	XI					
	34 PA 2	T			XI	XI		100/45			
		E									
LUXOR/ Luxor Intl	02 NPA	A/L	I* (I)		XI	XI					
	20 PA 1	T			XI	XI		150/45			
		E									
MARSA ALAM/ Marsa Alam Intl	15 NPA	A/L			XI	XI		150/45			
	33 NPA										
SHARK EL OWEINAT/ Shark El Oweinat Intl	01 NPA	L					XI	100/45			
	19 NPA										
PORT –SAID/ Port –Said Intl	10 NPA	L			XI	XI		200/45			
	28 NPA										
ST. CATHERINE/ St. Catherine Intl	17 NPA	L					XI	150/45			
	35 NINST										
SHARM EL SHEIKH/ Sharm El Sheikh Intl	04L PA1	A/L		X	XI	XI	XI	100/45			
	22R NPA	T	I (II)		XI	XI		200/50			
		E									
	04R NPA										
	22L NPA										
ASWAN/ Aswan Intl	17 PA1	A/L	II	X	XI	XI		150/45			
	35 PA1	T			XI	XI					
		E									
TABA/ Taba Intl	04 NPA	A/L			X	XI		150/45			
	22 NPA	T					XI	100/45			

Station	RWY Type	Function	ILS	L	DME	VOR	NDB	Coverage	GNSS		REMARKS OBSERVACIONES
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
<b>IRAN, ISLAMIC REPUBLIC OF</b>											
ABADAN	32L PA 1	A/L E	I* (I)		XI	XI		200/45			
AHWAZ	30 PA 1	A/L E	I*		XI	XI		300/45			
ARDABIL	31 PA 1	A/L E	I* (I)		XI	XI		200/45			
ASALOYEH	30 PA 1	A/L E	I*		XI	XI		300/45			
BANDAR ABBAS/Intl	21L PA1	A/L E	I*		XI	XI		200/45			
BANDAR LENGEH	NPA	A/L E			XI	XI		200/45			
BANDAR MAHSHAHR / MAHSHAHR	NPA	A/L E			XI	XI		300/45			
BIRJAND		E			XI	XI		300/50			
BOJNORD	NINST	E			XI	XI		150/45			
BUSHEHR	NPA	A/L E			XI	XI		300/45			
CHAH BAHAR / KONARAK	NPA	A/L E			XI	XI		200/45			
DARBAND		E			XI	XI		300/45			
DEH-NAMAK		E			XI	XI		300/45			
ESFAHAN / Shahid Beheshti Intl	26R PA 1	A/L E	I*(I)		XI	XI		300/45			
HAMADAN	NPA	A/L E			XI	XI		200/45			
ILAM	NPA	A/L E			XI	XI		300/45			
IRAN-SHAHR	NPA	A/L E			X	X		300/45			

Station	RWY Type	Function	ILS	L	DME	VOR	NDB	Coverage	GNSS		REMARKS OBSERVACIONES
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
JAM/TOHID	NPA	A/L			XI	XI		300/45			
KARAJ / PAYAM	NPA	A/L			XI	XI		200/45			
KERMAN	NPA	A/L E			XI	XI		200/45			
KERMANSHAH / Shahid Ashrafi Esfahani	29 PA1	A/L E	I*		XI	XI		300/45			
KHARK ISLAND /Khark	NPA	A/L E			XI	XI		300/45			
KHORAM ABAD	29 PA 1	A/L E	I*		XI	XI		200/45			
KISH ISLAND	NPA	A/L E			XI	XI		200/45			
MALAYER		E			XI	XI		300/45			
MASHHAD / Shahid Hashemi Nejad Intl	31R PA1	A/L E	I* (I)		XI	XI		300/45			
NOSHAHR	NPA	A/L E			X	X		200/45			
OMIDIYEH	NPA	A/L			XI	XI		200/45			
RASHT	27 PA 1	A/L E	I*		XI	XI		300/45			
SABZEVAR	NPA	A/L E			XI	XI		300/45			
ANARAK		E			XI	XI		300/45			
SANANDAJ	NPA	A/L E			XI	XI		200/45			
SARI/Dashte-Naz	NPA	A/L E			XI	XI		300/45			
SAVEH		E			X	X		300/45			

Station	RWY Type	Function	ILS	L	DME	VOR	NDB	Coverage	GNSS		REMARKS OBSERVACIONES
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
SHIRAZ / Shahid Dastghaib Intl	29L PA 1	A/L E	I* (I)		XI	XI		300/45	X		
SIRJAN	NPA	A/L E			XI	XI		200/45			
TABRIZ Intl	30R PA 1	A/L E	I* (I)		XI	XI		200/45			
TEHRAN/Imam Khomani Intl	29R PA 2	A/L	II		XI	XI		300/45			
TEHRAN/Mehrabad Intl	29L PA 1	A/L E	I* (I)	XI	XI	XI		300/45	X		
UROMIYEH	NPA	A/L E			XI	XI		200/45			
YAZD / Shahid Sadooghi	NPA	A/L E			XI	XI		300/45			
ZAHEDAN	NPA	A/L E			XI	XI		200/45			
ZANJAN		E			XI	XI		200/45			
<b>IRAQ</b>											
AIN ZALAH		E			X	X		100/50			
BAGHDAD/Saddam Intl	15R PA 2 33L PA 2 15L PA 2 33R PA 2	A/L A/L A/L A/L E	II (I) II (I) II (I) II (I)	X X X X	X X X X X	X X X X		200/45			
BASRAH/Intl	14 PA 2 32 PA 2	A/L A/L E	II (I) II (I)	X X	X X	X X		300/45			
HASHIMIYA		E			X	X		200/45			

Station	RWY Type	Function	ILS	L	DME	VOR	NDB	Coverage	GNSS		REMARKS OBSERVACIONES
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
(HADITHA)		E			X	X		100/50			
MANDALY		E									
MOSUL	PA 2	A/L		X	X	X					
SAMARA		E			X	X		200/45			
HAWIJA		E			X	X		100/50			
SHATRA		E			X	X		100/50			
<b>ISRAEL</b>											
ELAT/Elat	03 NPA 21 NINST	A/L E			XI XI X	XI XI X		300/45			
HAIFA/Haifa	16 NINST 34 NINST										
JERUSALEM/Atarot	12 NINST 30 PA 1	A/L A/L	I*								
METZADA		E			X	X		150/45			
NATANIA		E			X	X		150/45			
OVDA/Intl	20R NPA  02L NINST	A/L	I		X	X		150/50			



Station	RWY Type	Function	ILS	L	DME	VOR	NDB	Coverage	GNSS		REMARKS OBSERVACIONES
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
TEL AVIV/Ben Gurion	03 NPA 21 NINST 08 NINST 26 PA 1 12 PA 1 30 NPA	A/L A/L A/L E E	I* (I) I* (I)	X X	XI XI XI XI XI	XI XI XI XI X X		150/50 200/50			
TEL AVIV/Sde-Dov	03 NINST 21 NINST	A/L A/L									
ZOFAR		E			X	X		150/45			
<b>JORDAN</b>											
AMMAN/MARKA	24 PA 1	A/L E	I (I)	XI	XI X	XI XI		150/50	X		
AMMAN/Queen Alia	08R NPA 26L PA 2 08L NPA 1 26R NPA	A/L A/L A/L A/L	I*	XI	XI XI XI XI	XI XI XI XI			X		
AQABA	02 PA 1	A/L E	I*	XI	XI X	XI X		200/50 200/50	X		
METSA		E			X	X		150/50			
QATRANEH		E			X	X		100/50			
<b>KUWAIT</b>											
KUWAIT/Intl	15R PA 2 33L PA 2 15L PA 2 33R PA 2	A/L A/L A/L A/L T E	II (I) II (I) II (I) II (I)	XI XI	XI XI XI XI XI XI	XI XI		300/50 300/50			

Station	RWY Type	Function	ILS	L	DME	VOR	NDB	Coverage	GNSS		REMARKS OBSERVACIONES
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
<b>LEBANON</b>											
BAYSUR		E				X		180/40			
BEIRUT/Beirut Intl	18 PA 1	A/L	I* (I) D	X	X I	X I		150/45			
	21 PA 1	A/L	I* (I) D		X I	X I					
	03 PA 1	A/L	I* (I) D		X I	X I					
		E			X I	X I					
CHEKKA		E			X	X		80/50			
SAIDA		E			X	X		150/50			
<b>OMAN</b>											
HAIMA		E			X I	X I		200/45			
IZKI		E			X I	X I		200/45			
MARMUL		E			X I	X I		200/45			
MUSCAT/Seeb Intl	08 PA 1	A/L	I* (I) D		X I			200/45			
	26 PA 1	A/L	I* (I) D		X I						
		E			X I	X I					
SALALAH/Salalah	07 NPA	A/L			X I	X I		200/45			
	25 PA 1	A/L	I* (I) D		X I	X I					
		E			X I	X I					
SUR		E			X I	X I		200/45			
<b>QATAR</b>											
DOHA/Doha Intl	16 NPA	A/L			X	X		300/45			
	34 PA 1	A/L	I* (I)	X	X	X					
		E			X	X					
<b>SAUDI ARABIA</b>											

Station	RWY Type	Function	ILS	L	DME	VOR	NDB	Coverage	GNSS		REMARKS OBSERVACIONES
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
AL JOUF	10 NPA 28 NPA 28 PA 1	A/L A/L A/L T	I*		XI XI XI X	XI XI XI X		300/50			
AL SHIGAR		E			XI	XI		300/50			
ARAR	10 NPA 28 NPA	A/L A/L T E			XI XI X XI	XI XI X XI		300/50			
BAHA	07 NPA 25 NPA 25 NPA 25 PA 1	A/L A/L A/L A/L T	I*	X	XI XI XI X	XI XI XI X		300/50			
BIR DURB		E			X	X		300/50			
BISHA	18 NPA 36 NPA 18 PA1	A/L A/L A/L T E	I*		XI XI X X X	XI XI X X X		300/50			
BOPAN		E			XI	XI		300/50			
DAFINAH		E			XI	XI		300/50			
DAMMAM (King Fahad Intl)	16L PA 1 34R PA 1 16R PA 1 34L PA 1	A/L A/L A/L A/L T E	I (I) I (I) I (I) I (I)		XI XI XI XI XI XI	XI XI XI XI XI XI		300/50			

Station	RWY Type	Function	ILS	L	DME	VOR	NDB	Coverage	GNSS		REMARKS OBSERVACIONES
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
GASSIM	15 NPA 33 NPA 15 PA 1	A/L A/L A/L T E	I*		XI X X X	XI X X		300/50			
GURIAT	10 NPA 28 NPA 28 NPA	A/L A/L A/L T E		X	XI X X	XI X X		300/50			
HAFR AL-BATIN	16 NPA 34 NPA	A/L A/L T E			XI X X	XI X X		300/50			
HAIL	18 NPA 36 NPA 18 PA 1	A/L A/L A/L T E	I*		XI X X	XI X X		300/50			
HALAIFA		E			XI	XI		300/50			
JEDDAH/King Abdul Aziz Intl	16R PA 2 34L PA 2 16L PA 1 34R PA 1 16C PA 2 34C PA2	A/L A/L A/L A/L A/L A/L T E	II (I) II (I) I* (I) I* (I) II (I) II (I)		XI X X X X X	XI X X X X X		300/50			
JUBAIL	17 NPA 35 NPA 35 PA 1	A/L A/L A/L T	I*		X X	X X		300/50			

Station	RWY Type	Function	ILS	L	DME	VOR	NDB	Coverage	GNSS		REMARKS OBSERVACIONES
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
MADINAH/Prince Mohammad Bin Abdulaziz	17 PA 1	A/L	I*		XI	XI					
	35 PA 1	A/L	I*	X	XI	XI					
	36 PA 1	A/L	I*	X	XI	XI					
	18 NPA	A/L			XI	XI					
		T			XI	XI					
	E				XI	XI		300/50			
MAGALA		E			XI	XI		300/50			
RABIGH		E			XI	XI		300/50			
RAFHA	11 NPA	A/L			XI	XI					
	29 NPA	A/L			XI	XI					
		T			X	X					
		E			XI	XI		300/50			
RAGHBA		E			XI	XI		300/50			
RIYADH/King Khalid Intl	15L PA 1	A/L	I* (I)		XI	XI					
	33R PA 1	A/L	I* (I)		XI	XI					
	15R PA 1	A/L	I* (I)		XI	XI					
	33L PA 1	A/L	I* (I)		XI	XI					
		T			XI	XI					
	E				XI	XI		300/50			
TURAIF	10 NPA	A/L			XI	XI					
	28 NPA	A/L			XI	XI					
		T			X	X					
		E			XI	XI		300/50			
WADI AL-DAWASIR	10 NPA	A/L			XI	XI					
	28 NPA	A/L			XI	XI					
	10 PA 1	A/L	I*		XI	XI					
		T			X	X					
		E			XI	XI		300/50			

Station	RWY Type	Function	ILS	L	DME	VOR	NDB	Coverage	GNSS		REMARKS OBSERVACIONES
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
WEDJH	15 NPA 33 NPA 33 NPA 33 PA 1	A/L A/L A/L A/L T E	I*	X	XI XI	XI XI		300/50			
YENBO	10 NPA 28 NPA 28 PA 1	A/L A/L A/L T E	I*		XI XI XI	XI XI XI		300/50			
<b>SYRIAN ARAB REPUBLIC</b>											
ALEPPO/Neirab	27 NPA	A/L E		X		X X		150/50			
DAMASCUS/Intl	05L NPA 23R PA 1 05R NPA	A/L A/L A/L E	I* (I)	X	X X X X	X X X X		150/50			
KARIATAIN		E			X	X		150/50			
LATAKIA/Bassel -Al- Assad	17 NPA	A/L		X	X	X					
TANF		E				X		160/40			
<b>UNITED ARAB EMIRATES</b>											
ABU DHABI/Abu Dhabi Intl	13 PA 1 31 PA 3	A/L A/L E	I* (I) III (I)		X I X I X I	X I X I X I		300/45			

Station	RWY Type	Function	ILS	L	DME	VOR	NDB	Coverage	GNSS		REMARKS OBSERVACIONES
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
AL AIN/AI Ain Intl	01 PA 1 19 NPA	A/L A/L E	I*		X I X I X I	X I X I X I		300/45			
DUBAI/Dubai Intl	12L PA 3 30R PA 3 12R PA 2 30L PA 2	A/L A/L A/L A/L E	III (I) III (I) II (I) II (I)		X I X I X I X I X I	X I X I X I X I X I		300/45			
FUJAIRAH/Fujairah Intl	11 NPA 29 PA 1	A/L A/L T	I* (I)		X I X I X I	X I X I X I		40/25			
RAS AL KHAIMAH/Ras al Khaimah Intl	16 NPA 34 PA 1	A/L A/L	I* (I)	X X	X I	X I					
SHARJAH/Sharjah Intl	12 NPA 30 PA 1	A/L A/L E	I* (I)	X I	X I X I	X X X I		300/45			
<b>YEMEN</b>											
ADEN/Intl	08 NPA 26 PA 1	A/L A/L E	I* (I)	X	X X X	X X X		300/50			
AL-GHAIDAH		E			X	X		300/50			
HODEIDAH	03 NPA 21 NPA	A/L A/L E		X X	X X X	X X X		200/45			
RIYAN/Intl	06 NPA 24 NPA	A/L A/L E			X X X	X X X		300/50			

Station	RWY Type	Function	ILS	L	DME	VOR	NDB	Coverage	GNSS		REMARKS OBSERVACIONES
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
SANA'A/Intl	18 PA 1 36 NPA	A/L	I* (I)	X	X	X I		200/45			
		A/L			X	X I					
		E			X	X I					
SIYUN		E			X	X		150/45			
TAIZ/Intl	01 NPA 19 NPA	A/L		X	X	X		200/45			
		A/L		X	X	X					
		E			X	X					



## **Appendix to Table CNS 3**

# **GEOGRAPHIC SEPARATION CRITERIA FOR VOR, VOR/DME AND ILS INSTALLATIONS**

### 1.1 *VHF omnidirectional radio range (VOR)/distance measuring equipment (DME)*

1.1.1 In the selection of frequencies for VOR and/or VOR/DME the following criteria are to be applied:

- a) for VORs required to serve en-route flight operations, geographic separations of:
  - 1) for co-channel, 1020 km (550 NM) between 200 NM/45K (facilities' service distance/ratio of facilities' ERPs) facilities and 1330 km (720 NM) between 300 NM/45K facilities;
  - 2) for adjacent channel, 410 km (220 NM);
- b) for VORs required for use in terminal areas (40 NM/25K), geographic separations of:
  - 1) for co-channel, 370 km (200 NM);
  - 2) for adjacent channel\*, 110 km (60 NM); and
- c) for VORs required for use in approach and landing operations (25 NM/10K), geographic separation of:
  - 1) for co-channel, 240 km (130 NM);
  - 2) for adjacent channel\*, 55 km (30 NM).

1.1.2 Detailed frequency assignment criteria for VOR are provided in Annex 10, Volume I, 3.3.2 and Attachment C to Part I, Sections 3.4. and 3.5, and Part II, Section 4.2 (see the note below).

1.1.3 Detailed frequency assignment criteria for DME are provided in Annex 10, Volume I, 3.5.3.3 and Attachment C to Part I, and Part II, Section 4.3 (see the note below).

### 1.2 *Instrument landing system (ILS)*

1.2.1 Considering the density of ILS installations in the MID Region, the 325 km (175 NM) geographic separation for co-channel operation is to be applied.

1.2.2 Detailed frequency assignment criteria for ILS are provided in Annex 10, Volume I, 3.1.3.2, Attachment C to Part I, Section 3.5 and Part II, Section 4.2 (see the note below).

*Note.C As a consequence of the restructuring of Annex 10 (see paragraph 6.50 of the report on Agenda Item 6) and following Amendment 71 to this Annex, Attachment C to Part I should be referred to as Attachment C to Volume I, and Part II of Volume I will constitute Volume V of Annex 10.*

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\* Based on 100 kHz channel spacing

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AOP SG/3  
Report on Agenda Item 4

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**REPORT ON AGENDA ITEM 4: FOLLOW UP LATEST DEVELOPMENTS IN THE FIELD OF AERODROMES**

**4.1 CERTIFICATION OF AERODROMES IMPLEMENTATION PLAN TIMELINES**

4.1.1 The meeting noted that the Standard concerning certification of aerodromes used for international operations will become applicable from 27 November 2003, and the Standard requiring a safety management system will become applicable on 24 November 2005 and that, since 1 November 2001, the requirements are already applicable as Recommended Practices according to Annex 14, Volume I – Chapter 1.3.

4.1.2 The meeting was also informed that the implementation of these requirements would be verified upon the expansion of the ICAO Universal Safety Oversight Audit Programme (IUSOAP) to cover Annex 14 (Aerodromes) and Annex 11 (Air Traffic Services) with effect from 2004.

4.1.3 The meeting was informed that, A State letter ref. AN 4/1.2.18, AN13/2.1- AN 13/13.1-02/4 dated 7 March 2002 was circulated to all States by ICAO HQ, urging them to implement the new requirements in due time.

4.1.4 For the purpose of facilitating monitoring, better, identifying areas anticipating difficulties and following up the proper implementation of ICAO SARPs, related to State's implementation plans on certification of aerodromes and safety management systems on Regional Prospective and on Global Prospective, Forms/Tables were developed and presented by the Secretariat and agreed by the meeting as contained in **Appendix 4A** and **Appendix 4B** to the Report on Agenda Item 4,

4.1.5 The meeting agreed that these tables of timelines should be viewed in general terms as they imply only a broad indication to follow up and define appropriate actions required if difficulties in one or more area were detected.

4.1.6 The meeting accordingly, formulated the following draft conclusion:

**DRAFT CONCLUSION 3/3- CERTIFICATION OF AERODROMES IMPLEMENTATION PLAN TIMELINES FOLLOW-UP**

That, the Secretariat

- a) circulates the draft table of Certification of Aerodromes implementation plan timelines as indicated at **Appendices 4A & 4B** to MIDANPIRG/8 for adoption and;
- b) starts an assessment study, by surveying the MID Region States for input on their implementation plan status on Certification of Aerodromes and actions taken .

4.1.7 The meeting thanked the ICAO Middle East Regional office for conducting a valuable workshop on "Certification of Aerodromes" Cairo, 17-20 June 2002, that, created awareness among MID States on aerodrome operations safety, ICAO Safety objectives and initiatives, and provided a forum for wide exchanging of views and sharing experience/information between States.

AOP SG/3  
Report on Agenda Item 4

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4.1.8 The meeting was briefed on the outcomes of Certification of Aerodromes workshop, accordingly, the meeting considered the following issues are of significant importance:

- a) That States should consider as urgent, ensuring the establishment of a regulatory regime so that compliance with the specifications in the Annex 14 Vol. I and related ICAO specifications as well as guidance material contained in the new manual on Certification of Aerodromes Doc. 9774, are effectively enforced, regardless methods of ownership, operation and surveillance of the aerodrome, considering appropriate actions on establishment of a well-defined safety oversight mechanism, supported by appropriate legislation, and a separate safety oversight entity within the Civil Aviation Authority, and approval of the aerodrome manual.
- b) States to consider co-operation on bilateral or sub-regional format in order to exchange experience on implementation process of certification of aerodromes.
- c) In relation with Annex 13, an Incident/Accident Prevention Programme document should be published as part of the Safety management system file in the Aerodrome Manual.
- d) That, ICAO's assistance is highly recommended regarding developing the human resources and safety audit guidance material for aerodrome inspection, training/license of State's aerodrome inspectors.

4.1.9 The meeting accordingly, formulated the following draft conclusion;

**DRAFT CONCLUSION 3/4- CERTIFICATION OF AERODROMES IMPLEMENTATION  
MANDATES**

That,

- a) States are invited to ensure establishment of the necessary regulatory regime to comply with Provisions of Annex 14 Volume I and guidance material contained in ICAO Manual Doc 9774
- b) States are invited to incorporate publication of an Incident/Accident Prevention Programme document as part of Safety Management System in the Aerodrome Manual
- c) ICAO to consider:
  - i) assisting in human resource development related to States' aerodrome inspectors; and
  - ii) development of guidance material and/or training on aerodrome safety audit programmes.

AOP SG/3  
Report on Agenda Item 4

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## 4.2 BIRD STRIKE HAZARD REDUCTION ON OR IN THE VICINITY OF AIRPORTS

4.2.1 The meeting was informed that an ICAO State letter dated 10 August 2001 (Ref. AN 4/1.1.47-01/82) was sent to states requesting comments on proposed amendment 5 to Annex 14 Volume I. These amendments are planned for applicability in 27 November 2003 and it includes: the upgrading of the existing Recommended Practices, relating to Bird Strike Hazard Reduction on, or in the vicinity of airports, contained in paragraphs 9.5.1 - 9.5.3 of Annex 14 Volume I, to Standards, and the addition of a new Recommended Practice.

4.2.2 The meeting noted that, in general estimation, more than 30,000 bird strikes occur to civil aviation aircraft each year. This is a result of many factors, including greater number of aircraft movements, new quitter aircraft and highly successful wildlife/bird conservation efforts, in many parts of the world.

4.2.3 The meeting was informed that, guidance material on effective measures for establishing whether or not birds on, or near an aerodrome, constitute a potential hazard to aircraft operations and on methods for discouraging their presence, are given in the ICAO Airport Service Manual Doc 9137 – Part 3 “Bird control and reduction”.

4.2.4 The meeting was informed that the ICAO Bird Strike Information System “IBIS” is an important element in accident prevention and is highly supported by airlines, airport operators and experts working to reduce the threat of bird strikes to aircraft. The meeting also noted the interesting information on the analyses of bird strike reports for the year 2000 that were circulated to all States for their information, (ICAO State letter AN 4/9.1.1-02/69).

4.2.5 The meeting noted that many States do not report bird strikes to ICAO and, as a result, the true extent of the bird strike hazard and of States’ efforts to combat bird strikes is not fully known.

4.2.6 The meeting was of the opinion of conducting a regional risk assessment study, by States experts and the assistance of ICAO, for better insight into the extent of the bird hazard phenomenon on the safety of aircraft operations on, or in the vicinity of airports operations in the MID region, the Study is to be discussed by the next AOP SG/4 meeting. The meeting accordingly formulated the following draft conclusion:

**DRAFT CONCLUSION 3/5-                   ASSESSMENT STUDY ON BIRD STRIKE HAZARD TO AIRCRAFT OPERATIONS SAFETY ON OR IN THE VICINITY OF MID AIRPORTS**

That,

- a) the meeting agree on conducting a regional risk assessment study to be carried out on Bird Strike Hazard to safety of aircraft operations on, or in the vicinity of airports in the MID region, based on State answers to the questionnaire on Bird strike to aircraft contained in **Appendix 4C** and guidance material of ICAO – IBIS 2000 Bird Strike Analysis.
- b) the study is to be discussed in next AOP SG/4 meeting.

### **4.3 IMPACT OF NEW LARGE AIRCRAFT OPERATIONS ON AERODROME PHYSICAL CHARACTERISTICS, FACILITIES AND SERVICES**

4.3.1 The meeting was informed that, Aerodrome Reference "Code F" was incorporated in Annex 14 Volume I since November 1999, which in effect, it covers airplanes with wing spans from 65m to 80m and an outer main gear wheel span from 14m to 16m.

4.3.2 The meeting noted ICAO 33<sup>rd</sup> Assembly Resolution A33-14 App Q for "The Provision of adequate aerodromes", resolves that: "The technical requirements for aerodromes shall be kept under review by the organization", and that, "There is a need for future generations of aircraft to be designed so that they are capable of being operated efficiently, and with the least possible environmental disturbance, from aerodromes used for the operation of present-day aircraft".

4.3.3 The meeting was in the opinion that overall dimensions of NLA aircraft will be needed to determine whether or not existing airport operational areas, ground service vehicles, and maintenance and repair facilities and equipment can accommodate NLA. Establishing minimum and maximum NLA dimensions will also assist engineers, analysts, designers, and policy decision makers in determining the low and high range of required, airport and procedure changes, as well as any costs associated with these changes.

4.3.4 The meeting noted the information on the impact of the overall dimensions of NLA and its operations on airport and airfield design and on the facilities and services at aerodromes. The meeting also noted, the information on requirements of Runway Obstacle Free Zone, airport emergency rescue and fire fighting (ARFF) vehicles, equipment, personnel training and procedures, Impact of NLA operations on capacity of passenger terminal area and environmental issues.

4.3.5 The meeting was on the view that up-to-date information on New Larger Aircraft operational requirements at Aerodromes, are to be considered by next AOP SG/4 meeting for further course of actions.

4.3.6 The meeting considered that, information presented and discussed on New Large Aircraft impact on aerodrome physical characteristics, facilities and services, are of great interest, and thanked ICAO MID Regional office for their initiative in this concern, the meeting formulated the following Draft Conclusion:

**DRAFT CONCLUSION 3/6-                    IMPACT OF NEW LARGE AIRCRAFT OPERATIONS ON AERODROME PHYSICAL CHARACTERISTICS, FACILITIES AND SERVICES**

That, States in the MID Region are invited to consider appropriate actions to comply with Annex 14, Volume I - Code F - specifications and measures related to planning the NLA operational requirements at intended aerodromes.

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**MIDDLE EAST - CERTIFICATION OF AERODROMES IMPLEMENTATION PLAN  
UPDATED TIMELINE (REGIONAL PERSPECTIVE)**

Certification of Aerodromes Implementation							
			2001	2002	2003	2004	2005
Certification of Aerodromes	Development of SARPS	Requirement for Certification of Aerodromes					
Safety Management System (SMS)	Development of SARPS	Requirement for a Safety Management system at Certified Aerodromes					
Universal Safety Oversight Audit Programme (USOAP)	Development of SARPS	Expansion of ICAO Safety Oversight Audit to cover Annex 14					
Certification of Aerodromes	Legislations						
	Formation of Separate Regulatory Entity						
	Preparation of the Aerodrome Manual						
	Aerodrome Operational Performance Assessment						
	Issue of an Aerodrome Certificate for Int'l Airports						
	Maintaining An Aerodrome Certification						
Safety Management System							

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Universal Safety Oversight Audit Programme								

<b>CERTIFICATION OF AERODROMES</b>							
		2001	2002	2003	2004	2005	
Global	<b>Legislation</b>						
MID Region							
States	Afghanistan						
	Bahrain						
	Cyprus						
	Egypt						
	Iran, Islamic Rep. of						
	Iraq						
	Israel						
	Jordan						
	Kuwait						
	Lebanon						
	Libya						
	Oman						
	Qatar						
	Pakistan						
	Saudi Arabia						
	Sudan						
	Syrian						
	United Arab Emirates						
	Yemen						
Global	<b>Formation of Separate Regulatory Entity</b>						
MID Region							
States	Afghanistan						
	Bahrain						
	Cyprus						



	Egypt						
	Iran, Islamic Rep. of						
	Iraq						
	Israel						
	Jordan						
	Kuwait						
	Lebanon						
	Libya						
	Oman						
	Qatar						
	Pakistan						
	Saudi Arabia						
	Sudan						
	Syrian						
	United Arab Emirates						
	Yemen						
		2001	2002	2003	2004	2005	
Global	<b>Preparation of the Aerodrome Manual</b>						
MID Region							
States	Afghanistan						
	Bahrain						
	Cyprus						
	Egypt						
	Iran, Islamic Rep. of						
	Iraq						
	Israel						
	Jordan						
	Kuwait						
	Lebanon						

	Libya						
	Oman						
	Qatar						
	Pakistan						
	Saudi Arabia						
	Sudan						
	Syrian						
	United Arab Emirates						
	Yemen						
		2001	2002	2003	2004	2005	
Global	<b>Aerodrome Operational Performance Assessment</b>						
MID Region							
States	Afghanistan						
	Bahrain						
	Cyprus						
	Egypt						
	Iran, Islamic Rep. of						
	Iraq						
	Israel						
	Jordan						
	Kuwait						
	Lebanon						
	Libya						
	Oman						
	Qatar						
	Pakistan						
	Saudi Arabia						
	Sudan						
	Syrian						

	United Arab Emirates						
	Yemen						
		2001	2002	2003	2004	2005	
Global	<b>Issue of an Aerodrome Certificate for Int'l Airports</b>						
MID Region							
States	Afghanistan						
	Bahrain						
	Cyprus						
	Egypt						
	Iran, Islamic Rep. of						
	Iraq						
	Israel						
	Jordan						
	Kuwait						
	Lebanon						
	Libya						
	Oman						
	Qatar						
	Pakistan						
	Saudi Arabia						
	Sudan						
	Syrian						
	United Arab Emirates						
	Yemen						
		2001	2002	2003	2004	2005	
Global	<b>Maintaining An Aerodrome Certification</b>						
MID Region							
States	Afghanistan						
	Bahrain						

	Cyprus						
	Egypt						
	Iran, Islamic Rep. of						
	Iraq						
	Israel						
	Jordan						
	Kuwait						
	Lebanon						
	Libya						
	Oman						
	Qatar						
	Pakistan						
	Saudi Arabia						
	Sudan						
	Syrian						
	United Arab Emirates						
	Yemen						

**SAFETY MANAGEMENT SYSTEM**

		2001	2002	2003	2004	2005	
Global	Safety Management System						
MID Region							
States	Afghanistan						
	Bahrain						
	Cyprus						
	Egypt						
	Iran, Islamic Rep. of						
	Iraq						
	Israel						
	Jordan						

	Kuwait						
	Lebanon						
	Libya						
	Oman						
	Qatar						
	Pakistan						
	Saudi Arabia						
	Sudan						
	Syrian						
	United Arab Emirates						
	Yemen						
<b>UNIVERSAL SAFETY OVERSIGHT AUDIT PROGRAMME</b>							
		2001	2002	2003	2004	2005	
Global	Universal Safety Oversight Audit Programme						
MID Region							
States	Afghanistan						
	Bahrain						
	Cyprus						
	Egypt						
	Iran, Islamic Rep. of						
	Iraq						
	Israel						
	Jordan						
	Kuwait						
	Lebanon						
	Libya						
	Oman						
	Qatar						
	Pakistan						

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	Saudi Arabia						
	Sudan						
	Syrian						
	United Arab Emirates						
	Yemen						

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AOP SG/3  
Appendix 4B to the Report on Agenda Item 4

**CERTIFICATION OF AERODROMES IMPLEMENTATION PLAN  
UPDATED TIMELINES (GLOBAL PERSPECTIVE)**

Certification of Aerodromes Implementation							
			2001	2002	2003	2004	2005
Certification of Aerodromes	Development of SARPS	Requirement for Certification of Aerodromes					
Safety Management System (SMS)	Development of SARPS	Requirement for a Safety Management system at Certified Aerodromes					
Universal Safety Oversight Audit Programme (USOAP)	Development of SARPS	Expansion of ICAO Safety Oversight Audit to cover Annex 14					
Certification of Aerodromes	Legislations						
	Formation of Separate Regulatory Entity						
	Preparation of the Aerodrome Manual						
	Aerodrome Operational Performance Assessment						
	Issue of an Aerodrome Certificate for Int'l Airports						
	Maintaining An Aerodrome Certification						
Safety Management System							

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Universal Safety Oversight Audit Programme								



<b>CERTIFICATION OF AERODROMES</b>							
		2001	2002	2003	2004	2005	
Global	<b>Legislation</b>						
Regions	AFI						
	ASIA/PAC						
	CAR/SAM						
	EUR						
	MID						
	NAM						
	NAT						
		2001	2002	2003	2004	2005	
Global	<b>Establishment of Separate Regulatory Entity</b>						
Regions	AFI						
	ASIA/PAC						
	CAR/SAM						
	EUR						
	MID						
	NAM						
	NAT						
		2001	2002	2003	2004	2005	
Global	<b>Preparation of the Aerodrome Manual</b>						
Regions	AFI						
	ASIA/PAC						
	CAR/SAM						
	EUR						
	MID						
	NAM						
	NAT						

		2001	2002	2003	2004	2005	
Global	<b>Assessment of a formal application to grant an aerodrome Certification</b>						
Regions	AFI						
	ASIA/PAC						
	CAR/SAM						
	EUR						
	MID						
	NAM						
	NAT						
		2001	2002	2003	2004	2005	
Global	<b>Issue of an Aerodrome Certificate for Int'l Airports</b>						
Regions	AFI						
	ASIA/PAC						
	CAR/SAM						
	EUR						
	MID						
	NAM						
	NAT						
		2001	2002	2003	2004	2005	
Global	<b>Maintaining An Aerodrome Certification</b>						
Regions	AFI						
	ASIA/PAC						
	CAR/SAM						
	EUR						
	MID						
	NAM						
	NAT						

<b>SAFETY MANAGEMENT SYSTEM</b>							
		2001	2002	2003	2004	2005	
Global	<b>Safety Management System</b>						
Regions	AFI						
	ASIA/PAC						
	CAR/SAM						
	EUR						
	MID						
	NAM						
	NAT						
<b>UNIVERSAL SAFETY OVERSIGHT AUDIT PROGRAMME</b>							
		2001	2002	2003	2004	2005	
Global	<b>Universal Safety Oversight Audit Programme</b>						
Regions	AFI						
	ASIA/PAC						
	CAR/SAM						
	EUR						
	MID						
	NAM						
	NAT						

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ATTACHMENT D to State letter AN 4/1.1.47-01/82

QUESTIONNAIRE ON BIRD STRIKES TO AIRCRAFT

GENERAL COMMENTS

In an effort to better understand the severity and extent of the bird hazard phenomenon, the ICAO Bird Strike Information System (IBIS) was established in 1980. Since that time, IBIS has been used to collect and disseminate information on bird strikes to aircraft, through annual State letters and through analyses which are conducted for States upon request. At the present time, the IBIS database contains information on more than ninety thousand bird strikes which have occurred in more than 190 States and territories throughout the world.

The questionnaire is divided into three parts which cover different aspects of bird strike data collection and dissemination, and States' practices with respect to airport wildlife control.

Please answer the questionnaire as completely as possible.

Any additional input or comments you may wish to provide may be written on the questionnaire or supplied on a separate sheet of paper.

QUESTIONNAIRE

**PART 1: Bird strike data collection**

1. Does your State have in place a national procedure for recording and reporting bird strikes to aircraft, as currently recommended in Annex 14, Volume I, paragraph 9.5.1 a)?

YES  NO

If NO, are there plans to establish such a procedure?

2. Does your State collect data on known bird strikes to aircraft, as recommended in Annex 14, Volume I, paragraph 9.5.1 b)? (Please see Part 4 to this questionnaire)

YES  NO

If NO, are you planning to collect them?

3. Does your State utilize a standardized bird strike reporting format, such as the IBIS bird strike reporting form?

YES  NO

If NO, how is bird strike data collected?

4. Does your State supply information on known bird strikes to ICAO?

YES  NO

If NO, why not?

5. Does your State have a national bird strike committee?

YES  NO

If NO, do you plan to establish a national bird strike committee?

**PART 2: Bird strike data dissemination**

The IBIS World Bird Strike Statistics, sent annually by State letter, are issued to provide States with an overview of the bird strike situation as reported by ICAO Contracting States for the year under review and to remind States of the importance of bird control on, or in the vicinity of, airports.

6. Do you believe that the IBIS World Bird Strike Statistics adequately meet the goals stated above?

YES  NO

If NO, what steps do you believe ICAO should take to better achieve the goals stated above?

7. To your knowledge, are the bird strike statistics distributed within your State to those responsible for airport bird control?

YES  NO

8. Do you believe that the data reported in the analyses are useful to the end users?

YES  NO

If NO, what changes should be made to improve their usefulness?

9. Were you aware that ICAO provides special bird strike analyses to States upon request?

YES  NO

Has your State used this resource?

YES  NO

10. If you have requested a special analysis, has the material received met your needs?

YES  NO

If NO, why not?

**PART 3: States' practices**

11. Does your State have a national policy aimed at reducing bird strikes to aircraft?

YES  NO

12. Does your State have in place a national database on bird strikes to aircraft?

YES     NO

13. If you answered YES to Question 12, what is the primary use of this database?

policy formulation     education  
 analysis and research     management  
 legislation     background information  
 other (please specify).....

14. Does your State share bird strike data with other States collecting similar data?

YES     NO

If NO, why not?

15. Does your State collect data on other forms of wildlife which collide with aircraft on the airport?

YES     NO

16. Should the IBIS data collection be expanded to include other wildlife?

YES     NO

AOP SG/3  
Report on Agenda Item 5

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**REPORT ON AGENDA ITEM 5: FOLLOW UP DEFICIENCIES IN RELATION TO MID AERODROMES**

5.1 The meeting was presented with the revised methodology for the identification, assessment and reporting of air navigation deficiencies approved by the ICAO Council on 30 November 2001 for use in ICAO regions which included single definition of "Deficiency". The meeting was also informed that this methodology has been adopted by MIDANPIRG/7 for use in MID region.

5.2 The meeting was informed that MIDANPIRG/7 urged States in the MID region to provide information concerning AOP facilities and services at their International Airports including information on deficiencies, their current and planned corrective actions as per the revised methodology for the identification, assessment and reporting of air navigation deficiencies.

5.3 In studying means to resolve the air navigation deficiencies and to intensify efforts in raising States awareness of deficiencies identified by Planning and Implementation Regional Groups (PIRGs), that are having a negative effect on safety, the meeting was informed that, the Secretary General is in process of sending a State letter M 6/1-02/79 on 27 September 2002 to the Ministers of Civil Aviation inviting their attention to resolving the deficiencies through the allocation of appropriate resources.

5.4 The list of deficiencies had been circulated to States for their input and updating, however, no information was received from some States. Some information was also available from the Users. Accordingly, a list of deficiencies in the AOP field was prepared and presented. The meeting while reviewing/updating the list, urged the States concerned to take appropriate action to resolve their listed deficiencies.

5.5 The meeting emphasized the need of all concerned, the States and the users, to extend their cooperation in this exercise so that effective solutions can be suggested for the resolution of the deficiencies in the region. In this regard the meeting Adopted the list of deficiencies in the AOP field given in the **Appendix 5A** to the Report on Agenda Item 5, and formulated the following draft conclusion:

**DRAFT CONCLUSION 3/7- UPDATED LIST OF DEFICIENCIES IN AOP FIELD IN THE MID REGION**

That,

- a) The list of deficiencies in the AOP field in **Appendix 5A** to the Report on Agenda Item 5 is adopted. The Secretariat is requested to monitor the progress and report to the MIDANPIRG.
- b) MID Region States are requested to provide information to the ICAO MID Regional Office on the actions taken to resolve any deficiencies. In particular critical area related to aerodrome operational safety issues as per revised methodology of identification, assessment and reporting of air navigation deficiencies.

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**States Deficiencies  
by Field: AOP**

5A-1

Identification		Deficiencies			Corrective Action			
Requirement	Facilities / Services	Description	Date first reported	Remarks	Description	Executing body	Date of complete	Priority for action*
1	2	3	4	5	6	7	8	9
<b>AOP</b>								
<b>AFGHANISTAN</b>								
MID/3 RAN Rec. 1/3 ASIA/PAC 3 RAN, Rec.3/1	<b>Kabul Intl. Airport</b>	No VASIs on RWY 11/29 No ILS RWY 11/29;  Other "Deficiencies" detected by UN mission to Afghanistan	April 2000  May 2002	Operations should be restricted to daylight VMC only	Updated information is unavailable	DGCA  ICAO	TBD  TBD	U  U

Identification		Deficiencies			Corrective Action			
Requirement	Facilities/ Services	Description	Date first reported	Remarks	Description	Executing body	Date of complete	Priority for action*
1	2	3	4	5	6	7	8	9
AOP								
BAHRAIN								
<b>No deficiencies reported in this field.</b>								

5A-3

Identification		Deficiencies			Corrective Action			
Requirement	Facilities/ Services	Description	Date first reported	Remarks	Description	Executing body	Date of complete	Priority for action*
1	2	3	4	5	6	7	8	9
AOP								
CYPRUS	<b>No deficiencies reported in this field.</b>							

Identification		Deficiencies			Corrective Action			
Requirement	Facilities/ Services	Description	Date first reported	Remarks	Description	Executing body	Date of complete	Priority for action*
1	2	3	4	5	6	7	8	9
<b>AOP</b>								
<b>EGYPT</b>								
	<b>Sharm El Sheikh Int. Airport</b>	RWY 04 surface rough and undulating	1999		RWY 04 to be refurbished	EAC	End 2003	B
	<b>Cairo Int. Airport</b>	Taxiway markings to stands confusing as old markings are not removed. Stop markings at new Terminal 2 are difficult to interpret	1999	Problem exacerbated at night and when wet	Remove old markings	CAC	March 2003	A
					Stop markings are to be improved		March 2003	
		Due to poor quality of the ILS signal at RWY 05R, it is downgraded to CAT I	Sep. 2002	The LLZ and GS signals are very unstable and fluctuating	Rectify through tech. procedures	NANSC	January 2003	A
		RWY 05R/23L surface is severely coated with rubber deposits, in particular TDZ	Sep 2002		Rubber deposits are to be removed	CAC	TBD	A

Identification		Deficiencies			Corrective Action			
Requirement	Facilities/ Services	Description	Date first reported	Remarks	Description	Executing body	Date of complete	Priority for action*
	<b>Hurghada Int. Airport</b>	Apron lighting inadequate	1999		Lighting needs improvement	EAC	End 2002	A
	<b>Alexandria Int'l airport</b>	There is an obstacle on RWY 22 causes aircraft weight limitation during take off in particular on MD-90 aircraft	Sep. 2002		Difficulties to remove Declared and noted in AIP	EAC	Declared and noted in AIP	A

Identification		Deficiencies			Corrective Action			
Requirement	Facilities/ Services	Description	Date first reported	Remarks	Description	Executing body	Date of complete	Priority for action*
1	2	3	4	5	6	7	8	9
<b>AOP</b>								
<b>IRAN</b>								
ASIA/PAC/3, Rec. 4/10 MID/3, Conc.1/6, Rec. 1/3	<b>Mehrabad Int'l Airport</b>	Precision approach lighting of RWY29L has decreased to 600m due to highway interference	July 2001	Required VIS for ILS APP has increased to 1200m	Lighting needs to be reinstalled on supports	CAO	Mid 2003	A
	<b>Mehrabad Int'l Airport</b>	Precision approach terrain chart of RWY29L must be renewed/revised	July 2001		Chart needs to be renewed/ revised	CAO	Mid 2003	A
	<b>Mehrabad Int'l Airport</b>	Aerodrome Obstacle chart type A not provided	July 2001		Chart must be examined and provided	CAO	End 2003	A
	<b>Mehrabad Int'l Airport</b>	Apron flood lighting is not adequate	Sep.2002		Number of flood light must be increased	CAO	Mid 2003	B
	<b>Esfahan Shahid Beheshti Int'l Airport</b>	Airport fence is not complete	Sep.2002		Fence is to be completed	CAO	End 2002	B

5A-7

Identification		Deficiencies			Corrective Action			
Requirement	Facilities/ Services	Description	Date first reported	Remarks	Description	Executing body	Date of complete	Priority for action*
1	2	3	4	5	6	7	8	9
AOP								
IRAQ	<b>No deficiencies reported in this field.</b>							



Identification		Deficiencies			Corrective Action			
Requirement	Facilities/ Services	Description	Date first reported	Remarks	Description	Executing body	Date of complete	Priority for action*
1	2	3	4	5	6	7	8	9
<b>AOP</b>								
<b>ISRAEL</b>								
ASIA/PAC/3, Rec. 4/10	<b>Tel Aviv/Ben Gurion Int. Airport</b>	No high speed turn off end of RWYs: 21/03 and RWY 26  No taxiways to RWYs 26 and 21, and from 08 and 03	1999	For RWYs 26 and 21, taxing is on active RWYS		EDF  EDF	TBD  TBD	A  U

Identification		Deficiencies			Corrective Action			
Requirement	Facilities/ Services	Description	Date first reported	Remarks	Description	Executing body	Date of complete	Priority for action*
	<b>Elat Int. Airport</b>	Single runway usede as taxiway, two turn-offs at south end (other turn-off is restricted) , Runway width is 30 meters	1999	Loop available at end of RWY 03		EDF	TBD	A
		No approach lighting		PAPI ( RWY 03) and APAPI ( RWY 21)		EDF	TBD	A
		No taxiway				EDF	TBD	
		Aprons – limited space that is too close to runway				EDF	TBD	
		Localizer (LOC) App. and DME plus PAPIS		VOR/DME ( LOT) available		EDF	TBD	B
				<u>Note:</u> Not recommended for use by big jets (wide-body/4 engines)				



Identification		Deficiencies			Corrective Action			
Requirement	Facilities/ Services	Description	Date first reported	Remarks	Description	Executing body	Date of complete	Priority for action*
1	2	3	4	5	6	7	8	9
<b>AOP</b>								
<b>JORDAN</b>								
<b>MID/3, Conc.1/6</b>	Amman Int'l Airport	Difficulty parking B747- 400 B777 at gate 12 due to presence of a light pole on the left side	Sep. 2002	The lighting pole is too close to the tip of left wing and not safe for taxi in and push back	Remove the pole or, a State NOTAM should be issued to identify parking positions and capacity status for each aircraft type	CAA	TBD	A

Identification		Deficiencies			Corrective Action			
Requirement	Facilities/ Services	Description	Date first reported	Remarks	Description	Executing body	Date of complete	Priority for action*
1	2	3	4	5	6	7	8	9
AOP								
KUWAIT	<b>No deficiencies reported in this field.</b>							

Identification		Deficiencies			Corrective Action			
Requirement	Facilities/ Services	Description	Date first reported	Remarks	Description	Executing body	Date of complete	Priority for action*
1	2	3	4	5	6	7	8	9
<b>AOP</b>								
<b>LEBANON</b>								
ASIA/PAC/3 RAN Rec. 4/4 Aerodrome Emergency Planning	<b>Beirut Intl. Airport</b>	Full-scale exercise not executed yet.	Oct. 2000	No schedule given	A full- scale emergency exercise, in accordance with Amex 14 Volume I, Ch. 9 should be planned and carried out soon. The State may take ICAO assistance, if required for updating the Emergency Plan and to plan and conduct the full- scale exercise.	DGCA	End 2001	A

Identification		Deficiencies			Corrective Action			
Requirement	Facilities/ Services	Description	Date first reported	Remarks	Description	Executing body	Date of complete	Priority for action*
1	2	3	4	5	6	7	8	9
<b>AOP</b>								
<b>LIBYA</b>								
ASIA/PAC/3, Rec. 4/10	<b>Benghazi Int. Airport</b>	Runway markings are unclear  Animal and human hazard on airside  Unserviceable NAVAIDS are not published by NOTAM	Jan 2002		Lightings are to be rectified  Airport fencing is to be reviewed and strengthened	DGCA	TBD	A
	<b>Tripoli Int. Airport</b>	Runway rough and markings unclear	Jan 2002		Surface is to be refurbished and markings are to be rectified	DGCA		A

5A-15

Identification		Deficiencies			Corrective Action			
Requirement	Facilities/ Services	Description	Date first reported	Remarks	Description	Executing body	Date of complete	Priority for action*
1	2	3	4	5	6	7	8	9
AOP								
OMAN	<b>No deficiencies reported in this field.</b>							



AOP SG/3-REPORT  
**APPENDIX 5A**

5A-16

Requirement	Facilities/ Services	Description	Date first reported	Remarks	Description	Executing body	Date of complete	Priority for action*
1	2	3	4	5	6	7	8	9
<b>AOP</b>								
<b>PAKISTAN</b>								
ASIA/PAC/3, Rec. 4/10	<b>Karachi Int. Airport</b>	RWY and Taxiway markings inadequate and are not clearly visible at night	Oct 2001		Markings are to be rectified	DGCA	TBD	A

5A-17

Identification		Deficiencies			Corrective Action			
Requirement	Facilities/ Services	Description	Date first reported	Remarks	Description	Executing body	Date of complete	Priority for action*
1	2	3	4	5	6	7	8	9
AOP								
QATAR	<b>No deficiencies reported in this field.</b>							

Identification		Deficiencies			Corrective Action			
Requirement	Facilities/ Services	Description	Date first reported	Remarks	Description	Executing body	Date of complete	Priority for action*
1	2	3	4	5	6	7	8	9
AOP								
SAUDI ARABIA	<b>No deficiencies reported in this field.</b>							

Requirement	Facilities/ Services	Description	Date first reported	Remarks	Description	Executing body	Date of complete	Priority for action*
1	2	3	4	5	6	7	8	9
<b>AOP</b>								
<b>SUDAN</b>								
MID/3 RAN Rec. 1/3 ASIA/PAC 3 RAN, Rec.3/1	<b>Khartoum Int. Airport</b>	RWY 18/36 rough. Inadequate approach lights.	July 2000		Runway to be resurfaced. App. Lights need attention.	DGCA	End 2001	A

AOP SG/3-REPORT  
**APPENDIX 5A**

5A-20

Requirement	Facilities/ Services	Description	Date first reported	Remarks	Description	Executing body	Date of complete	Priority for action*
1	2	3	4	5	6	7	8	9
<b>AOP</b>								
<b>SYRIA</b>								
MID/3 RAN Rec. 1/3 ASIA/PAC 3 RAN, Rec.3/1	<b>Damascus</b>	RWY surface rough and damaged.	July 2000		RWY to be resurfaced	DGCA	End 2001	A
		Runway markings are unsatisfactory	Jan 2002		Markings are to be rectified	DGCA	TBD	A
		Apron lighting are inadequate	Jan 2002		Lighting are to be improved	DGCA	TBD	A
		Difficulty parking B747- 400 and B777 at Stands A10 and A11	Sep. 2002		A NOTAM should be issued to identify parking positions and capacity status for each aircraft type	DGCA	TBD	A

Identification		Deficiencies			Corrective Action			
Requirement	Facilities/ Services	Description	Date first reported	Remarks	Description	Executing body	Date of complete	Priority for action*
1	2	3	4	5	6	7	8	9
<b>AOP</b>								
<b>UAE</b>								
ASIA/PAC/3, Rec. 4/10 MID/3, Conc. 1/4	Dubai Int'l Airport	Cat III instrument landing system provided for RWY 12L & 30R is down graded to CAT I	Sep. 2002	The deficiency is due to localizer signal interference	Eliminate and solve problem of frequencies interference	CAA	TBD	A

Identification		Deficiencies			Corrective Action			
Requirement	Facilities/ Services	Description	Date first reported	Remarks	Description	Executing body	Date of complete	Priority for action*
1	2	3	4	5	6	7	8	9
AOP								
YEMEN								
<b>No deficiencies reported in this field.</b>								

Note:

\* Priority for action to remedy a deficiency is based on the following safety assessments:

AU@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.

AA@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.

AB@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.

Definition:

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.

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AOP SG/3  
Report on Agenda Item 6

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**REPORT ON AGENDA ITEM 6: FUTURE WORK PROGRAM**

**HUMAN RESOURCES DEVELOPMENT (HRD)**

6.1 The meeting was informed that the ICAO timelines for implementation of Aerodromes Certification and Safety Management system requirements, which includes aerodrome safety and efficiency depends on mainly two areas, namely, the adequacy and efficacy of the services, facilities and procedures, and the operational capability of the aerodrome operators. The second factor heavily depends on the necessary human resources development, which includes training, dissemination and exchange of information, and development of expertise. While sufficient information is available on the modern equipment and technology from various sources, the HRD is a matter, which the individual States have to address. ICAO has also given high priority to this subject.

6.2 While States may have their own programs for the human resources development, the ICAO Secretariat can assist the States by way of conducting workshops and seminars and extending assistance under the ICAO Technical Cooperation Program.

6.3 The meeting considered the various areas where such seminars/workshops would be useful for the region to enhance aerodrome operational safety and efficiency. After considerable discussion, the meeting agreed that "Safety of aircraft operations on the movement area" would be the suitable topic for a workshop in the near future. Other topics such as, "Human factors issues in the implementation of Safety Management System at aerodromes" and "Control of obstacles", could be considered at a later stage.

6.4 The meeting also, agreed that since the requirement of avoiding and eliminating existing Runway surface deficiencies which are generic and common at airports in the MID region, ICAO would be requested to plan a workshop on "Runway Surface Conditions" in future depending on MID office workload.

6.5 States are requested to actively participate in such workshops by presenting case studies and/or their practical experiences. The meeting formulated the following draft conclusion:

**DRAFT CONCLUSION 3/8- WORKSHOP ON "SAFETY OF AIRCRAFT OPERATIONS ON THE MOVEMENT AREA"**

That, ICAO is to consider planning for a workshop on "Safety Aircraft Operations on the Movement Area", tentatively in early year 2004. States in the region are requested to actively participate in the workshop by sharing their experience, presenting case studies and /or current practices.

**DATE AND VENUE OF THE AOP SG/4 MEETING AND ITS PROVISIONAL AGENDA**

6.6 A tentative date of 08 - 11 December 2003 was proposed by secretariat for the AOP SG/4 meeting. The meeting had no objection to the dates, and was of the opinion that the venue would be ICAO Regional Office in Cairo unless a MID State wished to host the meeting.

6.7 The meeting was also presented with a Provisional Agenda for the AOP SG/4, as in **Appendix 6A** to the Report on Agenda Item 6.

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AOP SG/3  
Appendix 6A to the Report on Agenda Item 6

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**Provisional Agenda Items for**

**AOP SG/4 Meeting**

- |                |   |
|----------------|---|
| Agenda Item 1  | Adoption of the Provisional Agenda and election of AOP SG Chairperson                                     |
| Agenda Item 2  | Review MIDANPIRG/8 Actions on the AOP SG/3 Report   |
| Agenda Item 3  | Review and update Tables AOP1 and CNS 3 of MID FASID  |
| Agenda Item 4  | Monitoring and Follow up Deficiencies in the AOP field in the MID region                                  |
| Agenda Item 5  | Certification of Aerodromes implementation follow up in the MID region                                    |
| Agenda Item 6  | Result of assessment study on Bird Strike Hazard to on or in the vicinity of Aerodromes in the MID region |
| Agenda Item 7  | Follow up latest development in the AOP field (NLA)   |
| Agenda Item 8  | Aerodrome Safety Aspects  |
| Agenda Item 9  | Future Work Programme   |
| Agenda Item 10 | Any other business  |

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AOP SG/3  
Report on Agenda Item 7

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**REPORT ON AGENDA ITEM 7:**

**ANY OTHER BUSINESS**

7.1 The meeting noted the content of the proposed amendment No. 5 to Annex 14 Volume I, related to protection of flight operations against the hazardous of laser emitters that are envisaged for applicability in 27 November 2003, and was informed that this amendment will be supported by a new manual on laser emitters and flight safety which is scheduled for distribution in 2002.

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