INTERNATIONAL CIVIL AVIATION ORGANIZATION

REPORT OF THE SEVENTH MEETING OF THE MIDANPIRG STEERING GROUP (Virtual)

MSG/7 Virtual Meeting

(1 - 3 September 2020)

The views expressed in this Report should be taken as those of the MIDANPIRG Steering Group and not of the Organization. This Report will, however, be submitted to the MIDANPIRG and any formal action taken will be published in due course as a Supplement to the Report

Approved by the Meeting
and published by authority of the Secretary General

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PART I - HISTORY OF THE MEETING

1. DURATION

1.1 The Seventh Meeting of the MIDANPIRG Steering Group (MSG/7) was successfully held virtually from 1 to 3 September 2020 from 10:00 to 12:00 UTC, using MS Teams.

2. OPENING

2.1 The meeting was opened by Mr. Adel Boresli, Chairman of MIDANPIRG, Director of Meteorology Department, Kuwait, who welcomed the participants and wished them a successful and fruitful meeting.

2.2 Mr. Smaoui welcomed all participants to the MSG/7 meeting and highlighted that the rapidly evolving COVID-19 crisis heavily affected all aspects of civil aviation, including the ICAO activities. He further noted that since March 2020, date of the activation of the ICAO MID Office Business Continuity Plan, the MID Office Work Programme has been under continuous review; and based on the prioritization process, many events have been postponed; however, thanks to the use of technology, many meetings and webinars have been successfully conducted virtually, to provide the necessary support to States and coordinate all efforts to reduce the risks of the spread of COVID-19 by air transport and to protect the health of air travellers and aviation personnel, while maintaining essential aviation transport operations and ensuring an orderly return to normal operations in due course. Mr. Smaoui recalled that the coordination with the Regional Groups (MIDANPIRG, RASG-MID and MID-RASFG) was an important part of the coordination process and few virtual meetings were held with the Chairpersons of the Groups and their subsidiary bodies.

2.3 Considering the necessary changes which were introduced to the ICAO MID Office Work Programme; and taking into consideration the global developments related to PIRGs and RASGs; Mr. Smaoui underlined the importance of the MSG/7 meeting, since it is expected to advance the work, on behalf of MIDANPIRG, on some specific and urgent subjects.

2.4 Finally, Mr. Smaoui thanked all participants for their attendance wishing them successful and productive meeting.

2.5 Mr. Ahmed Jallaf, First Vice Chairman of MIDANPIRG, Assistant Director General ANS, UAE, thanked all participants for their attendance and wished them all the success.

3. ATTENDANCE

3.1 The meeting was attended by a total of ninety-seven (97) participants from thirteen (13) States (Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Oman, Qatar, Saudi Arabia, Syria, UAE, USA and Yemen) and six (6) Organizations (ACAO, ACI, IATA, IFALPA, MIDRMA and ICAO). The list of participants is at **Attachment A.**

3.2 Libya confirmed participation, however, due to internet problems; the participants were not able to join the meeting.

4. OFFICERS AND SECRETARIAT

4.1 Mr. Adel Boresli, Chairman of MIDANPIRG, chaired the meeting.

4.2 Mr. Mohamed Smaoui, the ICAO Acting Regional Director, Middle East Office was the Secretary of the Meeting, assisted by:

Ms. Muna Al-Naddaf	-	Regional Officer, Communications, Navigation and Surveillance (CNS)
Mr. Mohamed Iheb Hamdi		-Regional Officer, Aerodrome and Ground Aids (AGA)
Mr. Radhouan Aissaoui	-	Regional Officer, Information Management (IM)
Mr. Ahmad Amireh	-	Regional Officer, Air Traffic Management and Search and Rescue (ATM/SAR)
Mr. Ahmad Kaveh	-	Regional Officer, Air Traffic Management and Search and Rescue (ATM/SAR)
Mr. Christopher Keohan	-	Regional Officer, Meteorology Paris Office (MET)

4.3 Mr. Stephen Patrick Creamer, Director Air Navigation Bureau, ICAO HQ, and Mr. Chris Dalton, Chief, Airspace Management and Optimization (AMO) Section-ANB, ICAO HQ joined the meeting also on the third day.

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

Agenda Item 2: Follow-up on the outcome of MIDANPIRG/17

Agenda Item 3: Global and Regional Developments

Agenda Item 4: Air Navigation Safety Matters

Agenda Item 5: Air Navigation Planning and Implementation

- 5.1 MID Region Air Navigation priorities and targets
- 5.2 Specific Air Navigation issues

Agenda Item 6: Air Navigation Deficiencies

Agenda Item 7: MIDANPIRG Working Arrangements and Future Work Programme

Agenda Item 8: Any other Business

CONCLUSIONS AND DECISIONS – DEFINITION

6.2 The MIDANPIRG records its actions in the form of Conclusions and Decisions with the following significance:

a) **Conclusions** deal with matters that, according to the Group's terms of reference, merit directly the attention of States, or on which further action will be initiated by the Secretary in accordance with established procedures; and

b) **Decisions** relate solely to matters dealing with the internal working arrangements of the Group and its Sub-Groups

7. LIST OF CONCLUSIONS AND DECISIONS

MSG CONCLUSION 7/1:	*REGIONAL CART IMPLEMENTATION*
MSG CONCLUSION 7/2:	*MIDANPIRG CART IMPLEMENTATION "PLAN OF ACTIONS"*
MSG CONCLUSION 7/3:	*MID RVSM SAFETY MONITORING REPORT (SMR- 2018)*
MSG CONCLUSION 7/4:	*RVSM DATA PROVISION TO THE MIDRMA*
MSG CONCLUSION 7/5:	*TRAINING/AWARENESS ON RVSM LHD REPORTING*
MSG CONCLUSION 7/6:	*UPDATE OF MID REGION AIR NAVIGATION STRATEGY*
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MSG DECISION 7/9:	*DIGITAL DATASETS IMPLEMENTATION AD-HOC WORDING GROUP (DDI AD-HOC WG)*
MSG DECISION 7/10:	*REVISED ATFM TF TERMS OF REFERENCE*
MSG CONCLUSION 7/11:	*FREQUENCY COORDINATION PROCESS IN THE MID REGION*
MSG DECISION 7/12:	*LONG-TERM FREQUENCY ASSIGNMENT PLAN IN THE MID REGION*
MSG CONCLUSION 7/13:	*FREQUENCY MANAGEMENT WEBINAR*
DRAFT CONCLUSION 7/1:	*AIR NAVIGATION DEFICIENCY RELATED TO NON-IMPLEMENTATION OF TOD AREA 2A*
DRAFT DECISION 7/2:	*FREQUENCY OF MIDANPIRG MEETINGS AND DISSOLUTION OF THE MIDANPIRG STEERING GROUP (MSG)*
MSG DECISION 7/14:	*NEW EDITION OF THE MIDANPIRG PROCEDURAL HANDBOOK*

PART II: REPORT ON AGENDA ITEMS

REPORT ON AGENDA ITEM 1: ADOPTION OF THE PROVISIONAL AGENDA

1.1 The meeting reviewed the Provisional Agenda, and adopted it as at Para 6 of the History of the Meeting.

REPORT ON AGENDA ITEM 2: FOLLOW-UP ON THE OUTCOME OF MIDANPIRG/17

2.1 The meeting reviewed the progress made on the implementation of MIDANPIRG/17 Conclusions and Decisions. The actions taken by States and the Secretariat on the above-mentioned Conclusions and Decisions were reviewed and the updated list is provided at **Appendix 2A**.

REPORT ON AGENDA ITEM 3: GLOBAL AND REGIONAL DEVELOPMENTS RELATED TO COVID-19 RECOVERY

3.1 Global developments related to COVID-19 Recovery

3.1.1 The subject was addressed in PPT/3A presented by the Secretariat.

3.1.2 The meeting noted was apprised of the global developments related to COVID-19, in particular the key principles, recommendations and guidance contained in the Council Aviation Recovery Taskforce (CART) Report and Take-off Document; and the ICAO COVID-19 Response and Recovery Platform (https://www.icao.int/covid/Pages/default.aspx).

3.1.3 The meeting noted that the CART recommendations and guidelines will be continuously reviewed and updated based on the latest medical and operational advice. It was highlighted that, although there was no recommendation explicitly linked to Air Navigation Services, recommendations 1, 2, 3 and 10 and 11 on safety, financial viability and information-sharing and exchange, respectively; as well as the key principles contained in the CART Report apply to the ANS field.

3.1.4 The meeting noted that the Global Implementation Roadmap (GIR) identifies a series of ICAO's priority activities and initiatives aiming at supporting, coordinating and monitoring the implementation of CART recommendations and guidance by States and industry.

3.1.5 The meeting was also briefed on the implementation support tools, in particular, the COVID-19 Response and Recovery Implementation Centre (CRRIC), iPACKs and Air Transport Dashboard.

3.1.6 The meeting noted that the information collected in the CRRIC will be used to report on the effectiveness and completeness of implementation support activities and feed the relevant groups within the Secretariat responsible for the development of specific implementation packages as well as the Council. The CRRIC would enable ICAO to support States in their implementation efforts and facilitate monitoring and reporting of States' levels of implementation as well as challenges faced.

3.1.7 The meeting was informed that as part of the ICAO Implementation Support activities, the COVID-19 Implementation Packages (I-Packs), which ICAO is making available on a cost-recovery basis, bundle together specific guidance materials, training, tools and expert assistance. The iPacks are developed and implemented in full alignment with the measures and recommendations contained in the CART Report. It was highlighted that three packages are currently available for deployment, the first one is pertaining to Aviation Safety Risk Management related to COVID-19 for CAAs, the second one concerns Strengthening National Air Transport Facilitation Committees for the Restart and the Resilience of Civil Aviation and the last one on Strengthening Aviation Security during the COVID-19 Pandemic to support ICAO Member States that are in need of assistance to build and strengthen their ability to meet obligations for civil aviation security during the COVID-19 pandemic. The meeting noted also that two (2) additional I-Packs are in the pipeline related to Aerodromes Restart and Public Health Corridors (PHCs). The meeting encouraged States to coordinate with the ICAO MID Office for the deployment of the I-Packs for the benefit of their CAA and service provider's personnel.

3.1.8 The meeting was advised that ICAO is monitoring and assessing the economic impact of COVID-19 on air transport, and making available various dashboards and reports to monitor the global implementation status and to assess the ongoing impact of COVID-19 on air transport. In addition, an analysis is available presenting the estimates of the current state of the industry, as well as providing forward-looking scenarios, and is being regularly updated and published on the ICAO public website https://www.icao.int/sustainability/Pages/Economic-Impacts-of-COVID-19.aspx .

Changes to applicability dates of SARPs and PANS related to GRF due to the COVID-19

3.1.9 The meeting noted that to alleviate the burden on Member States during, the COVID-19 pandemic, the ICAO Council adopted amendments on the postponement of the applicability date, from 5 November 2020 to 4 November 2021, for provisions related to an enhanced global reporting format for assessing and reporting runway surface conditions (GRF) as contained in the Annex 3 — Meteorological Service; Annex 6 — Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes and Part II — International General Aviation — Aeroplanes; Annex 8 — Airworthiness of Aircraft; Annex 14 — Aerodromes, Volume I — Aerodrome Design and Operations; and Annex 15 — Aeronautical Information Services. The Council also approved the postponement of the applicability date for the consequential GRF-related provisions contained in the Procedures for Air Navigation Services (PANS), which included amendments to the: PANS-ATM, Doc 4444; PANS-Aerodromes, Doc 9981; and PANS-AIM, Doc 10066.

3.2 Regional developments related to COVID-19 Recovery

3.2.1 The subject was addressed in PPT/3B presented by the Secretariat.

3.2.2 The meeting was apprised of the activities carried out at regional level related to the COVID-19 crisis management and recovery, which includes, inter-alia:

- Establishment of the COVID-19 webpage under the ICAO MID website (https://www.icao.int/MID/Pages/COVID19/COVID19.aspx).

- Establishment of the MID RPTF to monitor global restart and recovery developments and ensure the harmonization, and where necessary regional customization, of the implementation of these global developments at the Regional level. In addition, the RPTF plays an advisory role to the MID States, assisting in the formulation of regional restart and recovery plans, and implementing regional activities in support of its objectives, taking into consideration the work done at the global level in order to ensure alignment and avoid duplication of efforts. The meeting recalled that the RPTF established 4 technical work streams namely: Public Health Requirements, Operational Safety Measures, Airport & Passengers Facilitation, and Air Navigation Services/Air Traffic Management.

- CART MID Webinar (18 June 2020).

- Development of the MID Regional Implementation Roadmap that shows the progress and support the implementation of the recommendations in the region.

- ICAO CRRIC webinar (14 July 2020).
- One-to-one video teleconferences/calls with the 15 MID States to provide necessary assistance for the implementation of CRRIC.

- MID CART Implementation Plan is being developed according to the specific needs and priorities of the Region, including the Roadmap and the Plan of Actions related to MIDANPIRG.

3.2.3 Based on all the forgoing, the meeting agreed to the following MSG Conclusion, to foster the implementation of CART report and Take-off document in the Region:

MSG CONCLUSION 7/1: REGIONAL CART IMPLEMENTATION

That, in order to support States in their implementation efforts of the CART Report and Take-off guidance, amid COVID-19 and during the recovery phase, States that have not yet done so:

a) are urged to nominate CRRIC State Focal points and upload/populate the data in the CRRIC (Gap analysis and Public Health Measure Risk Mitigation Measures); and

b) are encouraged to coordinate with the ICAO MID Office for the deployment of the I-Packs for the benefit of their CAA and service providers personnel.

MIDANPIRG CART Implementation Plan of Actions

3.2.4 The meeting reviewed the MID RPTF activities, in particular Work Stream 4 related to Air Navigation Services and Air Traffic Management RPTF WS4: ANS/ATM.

3.2.5 The meeting reviewed and endorsed the MIDANPIRG CART Implementation Plan of Actions as at **Appendix 3A**. Accordingly, the meeting agreed to the following MSG Conclusion:

MSG CONCLUSION 7/2: MIDANPIRG CART IMPLEMENTATION "PLAN OF ACTIONS"

That, in order to ensure States' ANS and related services provisions continuity, and the preparedness for the recovery phases:

*a) the MIDANPIRG CART Implementation "Plan of Actions" at **Appendix 3A** is endorsed; and*

*b) States, ANSPs, Airspace users, airport operators and all concerned stakeholders are urged to support the implementation of the Plan of Actions at **Appendix 3A**, and exchange relevant operational data.*

REPORT ON AGENDA ITEM 4: MID RVSM SMR 2018, 2019 AND 2020

4.1 The subject was addressed in PPT/4 presented by the secretariat.

SMR-2018

4.2 The meeting was apprised of the challenges related to the provision of the data necessary for the development of the RVSM SMRs by MID States. Nevertheless, the meeting noted that the conclusion of the SMR-2018 shows that the RVSM implementation in the MID Region continues to meet the RVSM safety objectives, with the concern raised regarding the representativeness of the data received in particular, the LHD Reports Categories A, B, C, D, J, H and K.

4.3 The meeting reviewed and endorsed the MID RVSM Safety Monitoring Report (SMR- 2018) at **Appendix 4A** and agreed to the following MSG Conclusion:

MSG CONCLUSION 7/3: MID RVSM SAFETY MONITORING REPORT (SMR- 2018)

*That, the MID RVSM Safety Monitoring Report (SMR – 2018) at **Appendix 4A** is endorsed.*

SMR 2019 and 2020

4.4 The meeting recalled the MIDANPIRG Conclusion 14/35 related to the provision of required data to the MIDRMA for the development of the Safety Monitoring Reports (SMRs) and the inclusion of the non-compliant States in the list of MIDANPIRG air navigation deficiencies.

4.5 The meeting noted with concern that, despite the follow-up by the MIDRMA and MID Office (State Letter Ref.: AN 6/5.10.15A – 20/137, dated 29 June 2020); urging States to provide the FPL/Traffic data and LHDs reports for the development of the SMR-2019 and SMR-2020, the level of provision of LHD Reports Categories A, B, C, D, J, H and K had been far below expectation.

4.6 The MIDRMA presented the progress made in the development of the SMR-2019, and highlighted serious concerns due to the lack of LHD Reports Categories A, B C, D, H, J and K, especially from the States/FIRs with high volume of Traffic. Therefore, the MIDRMA was unable to calculate the overall risk related to RVSM Safety Objective 2. Accordingly, the meeting urged States to provide the MIDRMA with the required LHD Reports before 15 October 2020, in order for the MIDRMA to finalize the SMR-2019 and present it to the ATM SG (Virtual Meeting) before presentation to MIDANPIRG/18 for endorsement.

4.7 The MIDRMA presented the progress made in the development of the SMR-2020. It was noted with appreciation that FPL/Traffic data was received from all MID States except Libya. However, the level of LHD reporting is still very low.

4.8 Based on the above, the meeting agreed to the following MSG Conclusion:

MSG CONCLUSION 7/4: RVSM DATA PROVISION TO THE MIDRMA

That, in order to allow the MIDRMA to finalize the development of the SMR-2019 & 2020:

a) States are urged to comply with the provisions of the MIDANPIRG Conclusion 14/35; and

*b) States with high volume of traffic be included in the list of air navigation deficiencies, if LHD reports are not provided before **15 October 2020**.*

4.9 The meeting recalled that the MIDRMA Board/16 meeting recognized the need to raise the awareness with respect to the importance of the LHD Reports and their impact on the assessment of the safe implementation of RVSM in the MID Region. Accordingly, the MIDRMA Board/16 meeting, through Draft Conclusion 16/2, agreed that the MIDRMA in coordination with the MIDRMA Board Members to carry out LHD Reporting Campaign that would include workshops and the development and distribution of leaflets, brochures, posters, etc. Considering the requests made by some States to the MIDRMA to organize such training for their Air Traffic Controllers and Safety personnel as soon as possible; and taking into account that face-to-face events could not be organized in 2020 due to the COVID-19, the meeting agreed that a Webinar on LHD Reporting be organized by the MIDRMA during the fourth Quarter of 2020. Accordingly, the meeting agreed to the following MSG Conclusion:

MSG CONCLUSION 7/5: TRAINING/AWARENESS ON RVSM LHD REPORTING

That,

a) the MIDRMA to organize, as soon as possible and in any case before December 2020, a Webinar on LHD reporting;

b) States are encouraged to participate actively in the Webinar on LHD Reporting; and coordinate with the MIDRMA for the provision of additional training/assistance on any RVSM safety assessment issues (including LHD reporting), as required; and

c) the MIDRMA to develop and distribute relevant training/awareness guidance on LHD reporting (leaflets, brochures, posters, etc.).

REPORT ON AGENDA ITEM 5: AIR NAVIGATION PLANNING AND IMPLEMENTATION

5.1 MID Region Air Navigation priorities and targets

5.1.1 The subject was addressed in PPT/5A presented by the Secretariat.

5.1.2 The meeting noted that the Global Air Navigation plan 6th edition endorsed by 40th session of the ICAO General assembly brought major changes, which need to be reflected in the next version/edition of the MID Region Air Navigation Strategy.

5.1.3 The meeting recalled that the 13th Air Navigation Conference, through recommendation 4.3/1, encouraged the PIRGs to embrace a performance-based approach for implementation and adopt the six-step performance management process, as described in the Manual on Global Performance of the Air Navigation System (Doc 9883), by reflecting the process in Volume III of all regional air navigation plans.

5.1.4 The meeting agreed that many of the ASBU Threads/Elements contained in the GANP are specialized packages that should be applied only where the specific operational requirement exists or corresponding benefits can be realistically projected.

5.1.5 The meeting reviewed the initial draft of the revised Strategy at **Appendix 5.1A** developed by the Secretariat, identifying the ASBU Threads/Elements that might be classified as priority 1; along with associated proposed monitoring elements (applicability area, performance indicators/supporting metric, and timeline). The meeting agreed that States should review the initial draft Strategy and provide their inputs/feedback to the MID Office by **15 October 2020**. The meeting agreed also that the MIDANPIRG Sub-Groups should conduct virtual meetings in the 4th quarter of 2020 to review the GANP 6th edition and identify ASBU priority 1 Threads/Elements and associated monitoring elements, considering the Secretariat proposal and States' and stakeholders' inputs. The meeting recalled that the Joint ACAO/ICAO ASBU Symposium initially scheduled to be held in March 2020 could not be conducted due to the COVID-19. The Symposium would be tentatively scheduled for January 2021.

5.1.6 Based on the above, the meeting agreed to the following Conclusion:

MSG CONCLUSION 7/6: UPDATE OF MID REGION AIR NAVIGATION STRATEGY

*That, in order to improve the Initial Draft of the revised MID Region Air Navigation Strategy at **Appendix 5.1A**, with States and stakeholders inputs:*

*a) States be invited to provide the MID Office by **15 October 2020** with their Air Navigation priorities and updated National Plan considering the provisions of the 6th Edition of the GANP endorsed by the 40th Session of the General Assembly (A40);*

*b) MIDANPIRG Sub-Groups provide proposals of amendment of the MID Region Air Navigation Strategy, considering the 6th Edition of the GANP, the inputs of States and Stakeholders, and agreed priorities, before **15 Dec 2020**; and*

c) the joint ACAO/ICAO ASBU Symposium review the inputs of States, Stakeholders and MIDANPIRG Sub-Groups for consolidation of the revised version of the MID Region Air Navigation Strategy to be presented to MIDANPIRG for endorsement.

MID Air Navigation Report - 2019

5.1.7 The subject was addressed in PPT/5B presented by the Secretariat.

5.1.8 The meeting recalled that MIDANPIRG/17 meeting, through Conclusion 17/10, urged States to provide the ICAO MID Office, with necessary data for the development of the Fourth Edition of the MID Region Air Navigation Report-2019. The meeting noted that further to the State Letter Ref.: AN 1/7 – 20/008 dated 9 January 2020, replies were received from 5 States (Bahrain, Egypt, Jordan, Qatar and Saudi Arabia).

5.1.9 The meeting reviewed and endorsed the MID Air Navigation Report-2019, pending the inclusion of the success stories to be provided by Saudi Arabia and UAE. Accordingly, the meeting agreed to the following MSG Conclusion:

MSG CONCLUSION 7/7: MID REGION AIR NAVIGATION REPORT - 2019

That, the MID Region Air Navigation Report – 2019 at **Appendix 5.1B** *is endorsed and be posted on the ICAO MID Website.*

MID Air Navigation Report-2020

5.1.10 The meeting urged States to provide the ICAO MID Office, with necessary data by **1 December 2020** for the development of the MID Region Air Navigation Report-2020. Accordingly, the meeting agreed to the following MSG Conclusion:

MSG CONCLUSION 7/8: MID REGION AIR NAVIGATION REPORT - 2020

That,

*a) States be urged to provide the ICAO MID Office, with relevant data necessary for the development of the MID Region Air Navigation Report - 2020, by **1 December 2020;** and*

b) the MID Region Air Navigation Report-2020 be presented to the MIDANPIRG/18 for endorsement.

5.2 Specific Air Navigation Issues

AIM

5.2.1 The meeting recalled the outcome of the AIM SG/6 meeting held in Cairo, Egypt, 21 – 23 January 2020.

5.2.2 The AIM SG/6 reviewed the outcomes/deliverables of the Digital Datasets Implementation Ad-hoc Working Group (DDI Ad-hoc WG) and agreed that the work of the Group has been completed in particular in addressing the challenges associated with the implementation of digital datasets and the development of Regional Implementation Plan for Digital Datasets. In addition, the AIM SG/6 meeting noted that there is a need for a detailed implementation plan for digital datasets outlining technical steps of the implementation, in line with the Global developments. The AIM SG/6 meeting agreed also to a revised composition of the DDI Ad-hoc WG to ensure active participation and contribution by all WG members.

5.2.3 Accordingly, the meeting agreed to the following MSG Decision to replace and supersede the MIDANPIRG Decision 17/17:

MSG DECISION 7/9: DIGITAL DATASETS IMPLEMENTATION AD-HOC WORKING GROUP (DDI AD-HOC WG)

That, the Digital Datasets Ad-hoc Working Group (DDI Ad-hoc WG):

a) is tasked to develop a detailed Regional Implementation Plan for Digital Datasets and update MID Doc 008; and

b) be composed of:
- *Abdulla Hasan AlQadhi (Bahrain)*
- *Moataz Abdel Aziz Ahmed (Egypt)*
- *Rouhalah Salehi (Iran)*
- *Mohammad Hussien Al Anezi (Kuwait)*
- *Bassem Ali Nasser (Lebanon)*
- *Faisal Al Busaidi (Oman)*
- *Pamela Erice (Qatar)*
- *Hind A. Almohaimeed (Saudi Arabia)*
- *Sorin Dan. Onitiu (UAE, Rapporteur) ; and*
- *ICAO MID Office*

ATM

Air Traffic Flow Management Task force

5.2.4 The meeting recalled the outcomes of ATFM TF/3 (Amman, Jordan, 12 – 14 January 2020) and reviewed in particular the ATFM TF Plan of Actions. The meeting reviewed the ATFM TF Terms of reference, and agreed to include few additional tasks related to COVID-19 and business continuity. Accordingly, the meeting agreed to the following MSG Decision:

MSG DECISION 7/10: REVISED ATFM TF TERMS OF REFERENCE

That, the ATFM TF Terms of Reference are amended as at ***Appendix 5.2A***.

5.2.5 The meeting noted the ongoing work related to the ATFM CONOPS and agreed that the upcoming ATFM TF/4 meeting (20-22 September 2020) address the challenges related to the lack of operational data related to Airspaces, Airports and Air operators' operational data, and the non-standardized publications related to ATFM measures, etc.; and finalize the work on the CONOPS for further review by the ATM SG/6 meeting before presentation to MIDANPIRG/18 for endorsement.

5.2.6 The meeting urged States to ensure ATFM Operational Flexibility during COVID-19 crisis, and to ensure Regional Network Operations Recovery preparedness, using standardized publications.

FIFA World Cup 2022 Task Force

5.2.7 The meeting recalled MIDANPIRG Conclusion 17/24: "*Assessment of the MID Region RVSM airspace structure based on the expected traffic movement from 1 November to 31 December 2022***",** to

identify the peak periods, hotspots, bottle-necks, etc. The meeting recalled also the outcomes of the FWC2022 TF/3 meeting, in particular the Action Plan items pertaining to the provision of data related to the forecasted traffic data during the event period (Nov – Dec 2022), and the required Roadmap and Operation Plan.

5.2.8 The meeting noted with concerns that the required data has not yet been provided, which is the foundation of the assessment of airspace structure, and urged Qatar to expedite the process and provide the required data to the MIDRMA to perform the assessment. Qatar was also urged to develop and share the Roadmap and Operation Plan (which covers all required procedures, action plan, contingency measures) in order to be reviewed and finalized by the FWC 2022 TF/4 meeting (22-23 September 2022).

5.2.9 The meeting recalled that the MIDRMA is able to carry out the required assessment for the RVSM airspace (FL290-FL410) using the MID Risk Analysis Software (MIDRAS). However, to assess the airspace beyond RVSM airspace, changes should be introduced to the MIDRAS, which might require allocation of additional funds to cover the cost. The meeting noted that the MIDRMA Board/16 agreed that the MIDRMA to check with the supplier and provide feedback on the cost if the Software would be extended to cover the airspace from FL150 to FL490 to identify the peak periods, hotspots, bottle necks and count the traffic on Entry/Exist Points of each FIR in the MID Region. It was highlighted that the Software would provide a clear picture on the distribution of traffic flows across the Region, which would be used to support also the planning and implementation of ATM contingency and ATFM measures in a more effective manner. The meeting noted that the MIDRMA is currently negotiating with the software developers for the required modifications, and the related capabilities, costs and timelines. The meeting agreed that the subject be further discussed by the ATFM TF/4 and FWC 2022 TF/4 meetings.

5.2.10 The meeting encouraged States and all concerned stakeholders to actively participate in the ATFM TF/4 and FWC2022 TF/4 meetings.

Frequency Management

5.2.11 The meeting `recalled that MIDANPIRG/17 established the Frequency Management Ad-hoc Working Group (FM WG). The meeting was apprised of the outcome of the FM WG/1 meeting, held virtually on 28 and 29 July 2020.

5.2.12 The meeting noted that a new module on the Frequency Finder tool has been developed for VHF Navigation facilities frequency management. Accordingly, the meeting agreed to the following MSG Conclusion:

MSG CONCLUSION 7/11: FREQUENCY COORDINATION PROCESS IN THE MID REGION

That, in order to enhance the frequency coordination process in the MID Region, States be invited to:

a) use the latest version of the FF tool in frequency coordination process;

b) provide ICAO with updated frequency list for COM VHF and NAV (with accura te information);

c) provide feedback on the FF tool;

d) nominate Frequency Management Focal Points, if not yet done so; and

e) participate actively in the frequency management workshop planned for Q1-2021.

5.2.13 The meeting was apprised of the study performed to assess the spectrum availability for VHF NAV systems (ILS/DME and VOR/DME) operating in the frequency band 108– 117.975 MHz. The meeting noted that currently in some areas of the MID Region, the frequency band is heavily congested or saturated for ILS/DME and VOR/DME frequency assignments. Accordingly, the meeting agreed to the following MSG Decision:

MSG DECISION 7/12: LONG-TERM FREQUENCY ASSIGNMENT PLAN IN THE MID REGION

That, in order to secure adequate spectrum for VHF-COM, ILS, VOR, DME and GBAS/VDB facilities and meet the operational requirements up to 2030, the Frequency Management Ad-hoc Working Group (FM WG) is tasked with the development of a rolling frequency assignment plan in coordination with concerned parties.

5.2.14 The meeting noted that GCC States have requested ICAO to conduct a Frequency Management Workshop for the GCC States in UAE. The Workshop, which was initially planned for November 2020 was rescheduled to 2021 due the COVID-19. Alternatively, the meeting agreed that it would be beneficial if a Webinar could be organized during the fourth Quarter of 2020. Accordingly, the meeting agreed to the following MSG Conclusion:

MSG CONCLUSION 7/13: FREQUENCY MANAGEMENT WEBINAR

That, in order to raise awareness on ICAO frequency management principles and the functions of Frequency Finder (FF) tool, a Frequency Management Webinar be conducted in Q4-2020 with the support of experts from the MID Region and ICAO HQ.

IWXXM Implementation

5.2.15 The subject was addressed in PPT/5C, presented by the Secretariat.

5.2.16 The meeting noted ICAO provisions related to IWXXM implementation and associated advantages.

5.2.17 The meeting was apprised of the outcome of MET/MIDAMC virtual meeting on IWXXM implementation held on 9 June 2020, which aimed to follow-up on States' readiness to implement IWXXM at application and communication levels.

5.2.18 The meeting noted the IWXXM implementation achievements and challenges in the MID Region, as follows:

- IWXXM implementation achievements
  - ROC Jeddah expected to implement extended AMHS between MET-Switch/COM-Centre by the end of Q3-2020; and
  - Information exchange on IWXXM implementation between ROC Vienna and ROC Jeddah.

- IWXXM implementation challenges
  - Some States will implement extended AMHS only in 2021;
  - Some States still have to purchase/install MET-Switches with IWXXM capabilities;
  - Some States have basic infrastructure deficiencies; and
  - AMHS link between Nicosia/Jeddah & Bahrain (Q4-2020) is not yet ready.

5.2.19 The meeting encouraged States to continue efforts on implementing IWXXM noting available guidance:

a) MID Doc 12 – Guidance for the Implementation of OPMET Data Exchange using IWXXM.
b) ROC/IWXXM Implementation Workshop (Cairo, Egypt, 12-13 November 2017) (https://www.icao.int/MID/Pages/Meetings/meetings2017.aspx)
c) MID AMHS Plan

5.2.20 The meeting noted that if IWXXM is not implemented by 5 November 2020, a difference with Annex 3 needs to be filed by concerned States.

5.2.21 The meeting agreed that the MET SG/8 meeting be held virtually during the fourth quarter of 2020. The meeting will address, in particular, the possibility of IWXXM translation capabilities in the MID Region and the identification of MET priorities (ASBU) Thread Elements, applicability, indicators, targets and timelines), in accordance with the 6th Edition of the GANP.

REPORT ON AGENDA ITEM 6: AIR NAVIGATION DEFICIENCIES

Review of Air Navigation Deficiencies

6.1 The subject was addressed in PPT/6 presented by the Secretariat.

6.2 The meeting noted with concern that the majority of deficiencies listed in the MANDD have no specific Corrective Action Plan (CAP). The meeting urged States to implement the provisions of MIDANPIRG Conclusion 15/35 related to elimination of Air Navigation Deficiencies, in particular, the submission of a specific Corrective Action Plan (CAP) for each deficiency.

6.3 The meeting reviewed and updated the list of deficiencies in the AIM, AOP, ATM, CNS, SAR and MET fields as reflected in the MID Air Navigation Deficiency Database (MANDD) at: https://mandd.icao.int . The meeting noted that the total number of air navigation deficiencies recorded in MANDD is **107** deficiencies compared to **104** deficiencies approved by MIDANPIRG/17.

6.4 The meeting highlighted the following:

- In the AOP field: the total number of AOP deficiencies is nine (9) priority "A". Seven (7) deficiencies related to aerodrome certification; one (1) related to runway physical characteristics; and one (1) related to apron lighting. The lack of implementation of aerodromes' certification represents 80% of these deficiencies.

- In the ATM field: the total number of deficiencies is twenty-four (24); fifteen (15) priority "A" and nine (9) priority "B". Thirteen (13) related to the uncompleted signature of contingency agreements; Nine (9) related to the non-implementation of planned regional ATS Routes; and four (4) related to unsatisfactory reporting of large Height deviation (LHD) to the MIDRMA.

- In the CNS field: the total number of CNS deficiencies is five (5); two (2) priority "A" and three (3) priority "B". Three (3) deficiencies are related to ATS Direct speech circuits, one (1) related to Inter-Regional Communication link with ICAO EUR/NAT Region and one (1) for HF service.

- In the MET field: the total number of MET deficiencies is Thirteen (13) priority "A" deficiencies. Six (6) related to QMS; and four (4) related to METAR, TAF, SIGMET and WAFS. Three new deficiencies have been added : ORBM METAR and 24-hour TAF not available internationally (IRAQ), SADIS FTP not available (Libya) and OYAA METAR and 30-hour TAF; OYHD, OYRN, OYSN, OYTZ METAR and 24-hour TAF not available internationally (Yemen).

- In the SAR field: the total number of deficiencies is ten (10) priority "A". Five (5) related to the lack of SAR provisions; and five (5) related to non-compliance with the carriage of Emergency Locator Transmitter (ELT) requirements.

- In the AIM field: the total number of AIM deficiencies is forty-six (46); forty (40) priority "A" and six (6) priority "B". Seventeen (17) deficiencies related to eTOD Area 1; six (6) related to QMS; six (6) related to AIXM; six (6) related to WAC; three (3) related to pre-flight information services; three (3) related to AIP and aeronautical charts; three (3) related to AIRAC adherence; and two (2) related to WGS-84.

6.5 The meeting recalled that the provision of Terrain and Obstacle Data (TOD) for area 2a, the take-off flight path area and the area bounded by the lateral extent of the aerodrome obstacle limitation surfaces (OLS) at International Aerodromes, has been a standard in Annex 15 ("Shall" provision) since 12 November 2015; and agreed with the AIM SG/6 meeting to add deficiencies related to the non-implementation of this provision. Accordingly, the meeting agreed to the following Draft Conclusion, to be proposed to MIDANPIRG for endorsement:

DRAFT CONCUSION 7/1: AIR NAVIGATION DEFICIENCY RELATED TO NON-IMPLEMENTATION OF TOD AREA 2A

That, States that have not yet provided Terrain and Obstacle Data (TOD) for area 2a, the take-off flight path area and the area bounded by the lateral extent of the aerodrome obstacle limitation surfaces (OLS) at International Aerodromes, be included in the List of Air Navigation Deficiencies.

REPORT ON AGENDA ITEM 7: MIDANPIRG WORKING ARRANGEMENTS AND FUTURE WORK PROGRAMME

7.1 The subject was addressed in PPT/7, PPT/8 and WP/1 presented by the Secretariat, Qatar and Bahrain, respectively.

PIRGs and RASGs New Terms of Reference (TOR)

7.2 The meeting recalled that PIRGs and RASGs have been established by the ICAO Council, which considers an annual report by the ANC on their activities. The meeting was apprised of the Council Decisions related to the development of revised generic TOR for PIRGs and RASGs for improved efficiency and effectiveness.

7.3 The meeting noted with concern that, despite the Council Decision (C-DEC 208/14), which stated clearly that *the regional groups should have the flexibility to apply the most effective and efficient organizational structure and meeting modalities that best suit the characteristics of each region's implementation work programme, while maintaining alignment with the regional work programme, Global Plans and Council mandate given to the Group*; the new TOR for PIRGs and RASGs approved by the President of the Council on 7 August 2020 included the requirement for PIRGs and RASGs to meet on an annual basis.

7.4 The meeting recalled that Assembly Resolution A40-5, bullet 7 "*Instructs the Council to ensure that PIRGs and RASGs* ***report*** *on an annual basis implementation progress as well as challenges experienced*"; and does not require the PIRGs and RASGs to meet on an annual basis.

7.5 The First Vice-Chairperson of MIDANPIRG, who represented the Group when the subject was discussed during the Global Forum on PIRGs and RASGs, (Montreal, 13 December 2017), the ANConf/13 (Montreal, 9-19 October 2018) and A40 (Montreal, 24 September – 4 October 2019), made it very clear that considering the MID Region specificities and available resources and facilities in both the MID States and MID Regional Office, it would be impossible for MIDANPIRG to meet on an annual basis.

7.6 The meeting recalled also that, the DGCA-MID/5 meeting, through Conclusion 5/2 agreed that the MIDANPIRG and RASG-MID meetings be organized concurrently and on a **biennial** basis:

DGCA-MID/5 Conclusion 5/2 – Frequency of the MIDANPIRG and RASG-MID Meetings

That,

a) *the MIDANPIRG and RASG-MID meetings be organized concurrently and on a* ***biennial basis****; and*

b) *the outcomes of MIDANPIRG and RASG-MID (and their Steering Group/Committee) be reported to the Council on annual basis.*

7.7 Based on all the above, the meeting agreed that MIDANPIRG would meet on an

annual basis (one year face-to-face and one year virtually) pending final approval by MIDANPIRG. The meeting agreed also that, since MIDANPIRG would meet on an annual basis and considering that the membership/composition of MSG is identical to that of MIDANPIRG, MSG should be dissolved. Therefore, the meeting agreed to the following Draft Decision to be proposed to MIDANPIRG/18 for endorsement:

DRAFT DECISION 7/2: FREQUENCY OF MIDANPIRG MEETINGS AND DISSOLUTION OF THE MIDANPIRG STEERING GROUP (MSG)

That, considering the new generic Terms of Reference of PIRGs approved by the President of the Council on 7 August 2020 mandating the need for PIRGs to meet on annual basis:

a) the MIDANPIRG be organized on annual basis in an alternate manner between face-to-face and virtual meetings; and

b) the MSG is dissolved.

MIDANPIRG Procedural Handbook

7.8 The meeting recalled that MIDANPIRG/17, through Decision 17/46, tasked the Secretariat with the consolidation of a new Edition of the MIDANPIRG Procedural Handbook, for review by the MSG/7 meeting before the formal endorsement by the MIDANPIRG/18 meeting. Considering the latest developments related to PIRGs and RASGs, including the revised TOR, the scheduling (on annual basis), the proposed dissolution of MSG, the conduct of virtual meetings, etc), the meeting agreed that the Secretariat, in coordination with the Chairpersons of the Group and its Sub-Groups, develop a new Edition of the MIDANPIRG Procedural Handbook to be presented to MIDANPIRG/18 for endorsement. The meeting agreed also that the authority given to the MIDANPIRG Sub-Groups should be reconsidered (there might be a need to give authority to the Sub-Groups to endorse their own Conclusions and Decisions related to technical issues, which do not raise any concern/controversy). Accordingly, the meeting agreed to the following MSG Decision to replace and supersede the MIDANPIRG/17 Decision 17/46:

MSG DECISION 7/14: NEW EDITION OF THE MIDANPIRG PROCEDURAL HANDBOOK

That,

a) the Secretariat, in coordination with the Chairpersons of the Group and its Sub-Groups, develop a new Edition of the MIDANPIRG Procedural Handbook, to be presented to MIDANPIRG/18 for endorsement; and

b) the authority given to the MIDANPIRG Sub-Groups be reconsidered, especially with regard to the technical issues, which do not raise any concern/controversy.

Future Work Programme

7.9 Considering the latest developments associated with the COVID-19, the meeting agreed that all MIDANPIRG Sub-Groups should meet virtually before the end of 2020. The Secretariat will coordinate with all the Chairpersons the dates of their Sub Groups' meetings.

7.10 With regard to the date and eventual venue of the MIDANPIRG/18 meeting, Qatar, through PPT/8 requested the scheduling of a virtual MIDANPIRG meeting to address the Proposal for Amendment of the ICAO MID Air Navigation Plan (Doc 9708), Serial No.: MID ANP-I 20/01-

ATM/SAR, as soon as possible, and preferably by October 2020. Qatar highlighted in this respect, that the proposal for amendment has been submitted since August 2018.

7.11 The meeting noted the concerns of/objection raised by Bahrain in WP/1, which details the reasons for the objection and the request to stick to the original plan to organize MIDANPIRG/18 as a face-to-face meeting in February 2021. Bahrain does not consider it efficient or adequate to hold a virtual MIDANPIRG meeting on Qatar's proposal that is challenged by several Member States and does not require any immediate attention. Bahrain further highlighted that, considering the high complexity of the subject along with the serious safety consequences that will affect the technical and operational arrangements of air traffic services in the Region, it is fundamental that the subject be thoroughly debated during the MIDANPIRG/18 face-to-face meeting.

7.12 In connection with the above, the meeting noted that further to the Second Virtual Meeting of the MIDANPIRG Chairpersons (9 July 2020) and in accordance with the the MIDANPIRG Procedural Handbook, Part II, para. 4.1 stating that "*Based on the advice of the Members of the Group and of the Secretary, the Chairperson shall decide on the date and duration of meetings of the Group*"; State Letter, Ref.: AN 6/5A – 20/152 dated 5 August 2020 was issued requesting a preferred option for a MIDANPIRG meeting to include in its agenda discussion on the Proposal for Amendment, Serial No.: MID ANP-I 20/01-ATM/SAR. The meeting was informed that:

a) five (5) States chose option "a" (change the MSG/7 meeting (1-3 September 2020) to a MIDANPIRG meeting);

b) six (6) States chose option "c" (maintain the agreed MIDANPIRG work programme, i.e. MSG/7 to be conducted virtually beginning of September and MIDANPIRG/18 to be conducted concurrently with the RASG-MID/8 – planned as face-to-face meetings in February 2021;

c) one (1) State had no preferred option; and

d) three (3) States did not reply.

7.13 The meeting noted that during the First MIDANPIRG/RASG-MID Coordination Virtual Meeting (9 July 2020) Saudi Arabia proposed to host the MIDANPIRG/18 and RASG-MID/8 meetings in February 2021.

7.14 The meeting recognized that it might not be possible to conduct face-to-face meetings in February 2021 and subsequently, for some unknown period after, due to the COVID-19 pandemic and associated travel restrictions and border closures. The meeting noted also that, in accordance with the new PIRGs and RASGs TOR, *PIRG meetings will be convened in the Regional Offices, to the extent possible, to facilitate proper access by States. Approval to host PIRG meetings outside of the Regional Office must be obtained from the President of the Council.*

7.15 The Chief, Airspace Management and Optimization (AMO) Section, Air Navigation Bureau, noted that the request of Qatar proposing a more expeditious handling of the ANP amendment proposal, and the Secretariat's preference for a November date, could not have been suggested at the 9 July 2020 meeting, because, during that time frame preceding processes of consultation were still in play. It was only subsequently, that a reschedule could have been contemplated. In support of the subsequent steps, the Session timetables of the ICAO Council and the Air Navigation Commission, and bearing in mind the need for MIDANPIRG to continue to conduct its activities in the most efficient manner possible, an earlier date should be considered. In answer to a question on the extent the matter should be considered a priority or with urgency,

C/AMO clarified that making a request for the meeting in November was not related to urgency; but to normal, efficient running of the Organization, and heeding the procedure that a PIRG meeting invitation would normally be issued 90 days prior to the meeting in order to allow a sufficient period for preparation.

7.16 In response to intimations of any single party not being disposed to attending an MIDANPIRG meeting earlier than February, or that the subject could not be discussed in a "virtual" setting, the Director, ANB, recalled that the ICAO Council, its Committees and the Air Navigation Commission have continued to meet their obligations through the holding of virtual meetings in response to COVID-19-related restrictions. Any unnecessary delays can mistakenly infer the imposition of unnecessary roadblocks. Therefore, it was critically important that any decision should provide no inference that the process was impacted by any form of obstruction.

7.17 After a lengthy discussion, no consensus was reached to organize a virtual MIDANPIRG meeting in 2020 to include in its agenda discussion on the Proposal for Amendment, Serial No.: MID ANP-I 20/01-ATM/SAR.

7.18 The meeting agreed that the MIDANPIRG/18 meeting be held during the week of 15 February 2021. The meeting is initially planned to be face-to-face and hosted by Saudi Arabia, pending final approval by the President of the Council. A further determination would be made by 15 December 2020, on convening the meeting face-to-face or virtually, based on an assessment of developments pertaining to the COVID-19 pandemic and associated travel restrictions and border closures. In case the President of the Council would not approve the convening of the MIDANPIRG/18 in Saudi Arabia, the meeting would be hosted by the MID Office; and in case the meeting could not be conducted as a face-to-face meeting, it would be conducted virtually on the same dates. Qatar underlined that discussion on the Proposal for Amendment, Serial No.: MID ANP-I 20/01-ATM/SAR must be included in the MIDANPIRG/18 agenda whether the meeting is conducted face-to-face or virtual.

7.19 The Representative of Iran raised a concern regarding the venue of MIDANPIRG/18 meeting since it would not be possible for some States, including Iran, to attend the meeting for visa/political issues.

REPORT ON AGENDA ITEM 8: ANY OTHER BUSINESS

8.1 Nothing has been discussed under this agenda item.

APPENDICES

APPENDIX 2A

FOLLOW-UP ACTION PLAN ON MIDANPIRG/17 CONCLUSIONS & DECISIONS

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
C. 17/ 1	**MID REGION AIM DATABASE (MIDAD)** That: a) the status of individual migration by MID States to EAD (MIDAD Project Phase A) be monitored by the AIM Sub-Group; and b) the development of a detailed action plan for the implementation of the MIDAD Project Phase B (set-up of MIDAD Manager) be initiated when at least 7 States complete their migration to EAD.	Stepwise approach for the implementation of Regional/Sub-Regional AIM Database	Status of migration to EAD Action Plan for set-up of MIDAD Manager	AIM SG MIDAD TF	Continuous TBD	**Ongoing** Jordan migrated to EAD and Iraq, Kuwait, Lebanon, Oman, Qatar and UAE have plan to migrate to EAD.
C. 17/2	**ANALYSIS OF LHDS** That, as part of the MIDRMA Scrutiny Group activities, the MIDRMA conduct bilateral teleconferences with the MIDRMA ATC focal points to analyze the relevant LHDs and present a consolidated report to the MIDRMA Board or the ATM SG meetings for validation in order to finalize the SMR for endorsement by MIDANPIRG.	To Facilitate the analysis and validation of LHDs	New means to analysis LHDs	MIDANPIRG/17	Apr. 2019	**Completed**
C.17/3	**PROCEDURE FOR THE FOLLOW-UP WITH STATES AND THE ISSUANCE OF WARNING RELATED TO RVSM APPROVED AIRCRAFT WITHOUT VALID HEIGHT-KEEPING PERFORMANCE MONITORING RESULTS** That, the Procedure at **Appendix 4C** for the follow-up with States and the issuance of warning related to RVSM approved aircraft without valid height-keeping performance monitoring results, is endorsed composed of members designated by Bahrain, Iran, Oman, Saudi Arabia, UAE, IATA and ICAO.	Aircraft without valid height-keeping performance monitoring results	Procedure for follow-up on issuance of warning	MIDANPIRG/17	Apr. 2019	**Completed**

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
C. 17/4	**MID RVSM SAFETY MONITORING REPORT CYCLE** That, starting from 2018, the MID RVSM Safety Monitoring Report should be issued on annual basis (12 months) to facilitate tracking the risk trend of RVSM implementation in the MID Region.	Change the SMR Cycle	Change the SMR Cycle to one year	MIDANPIRG	Apr. 2019	**Completed**
C. 17/5	**MID RVSM SMR 2019** That, a) the FPL/traffic data for the period **1 – 31 August 2019** be used for the development of the MID RVSM Safety Monitoring Report (SMR 2019); b) only the appropriate Flight Data form available on the MIDRMA website (www.midrma.com) should be used for the provision of FPL/traffic data to the MIDRMA; and c) the final version of the MID RVSM SMR 2019 be ready for presentation to and endorsement by MIDANPIRG/18 or ATM SG/6 meetings.	To develop the MID SMR 2019	State Letter Traffic Data MID SMR 2019	ICAO States MIDRMA	Aug 2019 30 Sep. 2019 Feb 2021	**Actioned (To be Closed)** SL AN 6/5.10.15A-19/230 dated 25 July 2019 Replies (Egypt, Jordan and UAE) (Replaced and superseded by MSG Conclusion 7/4)
C. 17/6	**RVSM MINIMUM MONITORING REQUIREMENTS AND CONDITIONS** That, the MIDRMA Member States be urged to: a) take necessary measures to ensure their aircraft operators fully comply with ICAO Annex 6 provisions related to long-term height monitoring requirements, based on the MMR Tables; b) comply with the MID RVSM MMR Conditions published in the MIDRMA website; and c) withdraw the RVSM Approvals of aircraft not complying with the State MMR before 1 July 2019.	States to comply with Anne 6 6 provisions related to long-term height monitoring requirements	State Letter	ICAO	Jul. 2019	**Actioned** SL AN 6/5.10.15A-19/199 dated 1 July 2019 (Bahrain)

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
C. 17/7	**MIDRMA BULLETIN OF NON-RVSM APPROVED AIRCRAFT** That, a) the MIDRMA post on the MIDRMA website and share with the MIDRMA Board Members and focal points the Bulletin of non-RVSM approved aircraft on monthly basis; and b) States be encouraged to: i. develop a mechanism to identify the non-RVSM approved aircraft operating in the RVSM Airspace without compliance with Annex 6 provisions; ii. submit their RVSM traffic data including aircraft registrations to be used for the RVSM risk analysis; and iii. coordinate with the MIDRMA in case they are able to provide their RVSM traffic data on a monthly basis.	To identify the non-RVSM approved aircraft operating in the RVSM Airspace without compliance with Annex 6 provisions and that the MIDRMA to share the Bulletin of non-RVSM approved aircraft on monthly basis	State Letter	ICAO	Jul 2019	**Actioned** SL AN 6/5.10.15A-19/199 dated 1 July 2019 (Bahrain)
C. 17/8	**MID RVSM SAFETY MONITORING REPORT (SMR) 2017** That, the MID RVSM Safety Monitoring Report (SMR) 2017 is endorsed.	MID SMR 2017	Endorsement of MID SMR 2017	MIDANPIRG	Apr. 2019	**Completed**
C. 17/9	**THIRD EDITION OF THE MID REGION AIR NAVIGATION REPORT (2018)** That, the Third Edition of the MID Region Air Navigation Report (2018) is endorsed and be posted by the ICAO MID Office on the website.	Monitoring and Reporting of ASBU implementation in the MID Region	MID AN Report	MIDANPIRG/17	Apr. 2018	**Completed**

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
C. 17/10	**MID REGION AIR NAVIGATION REPORT (2019)** That, a) States be urged to provide the ICAO MID Office, with relevant data necessary for the development of the Fourth Edition of the MID Region Air Navigation Report (2019), by 1 December 2019; and b) the MID Region Air Navigation Report (2019) be presented to the MSG/7 for endorsement.	Monitoring and Reporting of ASBU implementation in the MID Region	State Letter Data for AN Report 2017 Air Navigation Report (2019)	ICAO States MSG/7	Dec. 2019 Apr. 2019	**Completed** SL AN 1/7 – 20/008 dated 9 January 2020 (Bahrain, Egypt, Jordan Qatar, Saudi Arabia) AN Report 2019 endorsed by MSG/7 Conclusion 7/7
C. 17/11	**JOINT ACAO/ICAO ASBU SYMPOSIUM** That, a Joint ACAO/ICAO ASBU Symposium be organized beginning of 2020.	Raise awareness about the 6th Edition of the GANP and align the MID AN Strategy	Draft Revised MID AN Strategy	ICAO/ACAO	~~Mar. 2020~~ Q1 2021	**Ongoing** Postponed to beginning of 2021 due to COVID-19
C. 17/12	**PUBLICATION OF FIR BOUNDARY POINTS** That, States be urged to: a) take into consideration the Guidelines at **Appendix 6.2B** for the description of their FIR boundaries; b) review the Table ATM I-1 MID Region Flight Information Regions (FIRs)/Upper Information Regions (UIRs) at **Appendix 6.2C** and coordinate with neighboring States, as appropriate, the definition of common boundaries; and c) provide the ICAO MID Regional Office with their updates and comments before **15 August 2019.**	To populate the MID ANP Table ATM I-1	State Letter Feedback from States	ICAO States	Jul 2019 Aug 2019	**Actioned** SL AN 6/10-19/206 dated 2 July 2019 (Bahrain, Egypt)

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
C. 17/13	**AMENDMENT TO THE MID eANP VOLUME III** That, the amendment to the MID eANP Volume III at **Appendix 6.2D** is approved.	To amend/update the MID eANP Vol III	Amendment	MIDANPIRG/17	Apr. 2019	**Completed**
C. 17/14	**INTERREGIONAL WORKSHOP/SEMINAR ON AIM/SWIM** That, an Interregional Workshop/Seminar on AIM/SWIM be organized in 2020-2021.	To review the latest developments related to AIM/SWIM	Workshop/ Seminar		2020-2021	**Ongoing** Planned for 2021
C. 17/15	**ICAO ROADMAP FOR THE TRANSITION FROM AIS TO AIM** That, ICAO consider the review/reshuffling of the Roadmap for the transition from AIS to AIM to keep pace with the developments.	Roadmap outdated	New Roadmap	ICAO HQ	TBD	**Ongoing**
C. 17/16	**MID REGION AIM IMPLEMENTATION ROADMAP** That, the MID Region AIM Implementation Roadmap at **Appendix 6.2E** is endorsed.	Planning for AIM implementation in the MID Region	MID Region AIM Implementation Roadmap	MIDANPIRG/17	Apr. 2020	**Completed**
D. 17/17	**ESTABLISHMENT OF THE DIGITAL DATASETS IMPLEMENTATION AD-HOC WORKING GROUP (DDI AD-HOC WG)** That, the Digital Datasets Ad-hoc Working Group be: a) established to: - address the challenges associated with the implementation of digital datasets; - propose Regional Implementation Plan for Digital Datasets; and - review/update the MID Doc 008; and	Development of a Regional Implementation Plan for Digital Datasets	Regional Digital Datasets Implementation Plan	MIDANPIRG/17	Apr. 2020	**Actioned** Outcome of the DDI Ad-hoc WG was presented to the AIM SG/6 (Replaced and superseded by MSG Decision 7/9)

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
	b) composed of: - Abdulla Hasan AlQadhi (Bahrain) - Moataz Abdel Aziz Ahmed (Egypt) - Rouhalah Salehi (Iran) - Mohammad Hussien Al Anezi (Kuwait) - Bassem Ali Nasser (Lebanon) - Mazen Mohammed Alshihri (Saudi Arabia) - Sorin Dan. Onitiu (UAE, Rapporteur) - Marek Franko (NG Aviation): and - ICAO MID Office					
C. 17/18	**MID RDWG AND MID REGION ATS ROUTE CATALOGUE** That, States be urged to: a) use the MID Route Development Working Group (MID RDWG) as the main platform to facilitate bilateral and multilateral coordination related to the improvement of the ATS Route Network and airspace management in the MID Region; and b) review the MID Region ATS Route Catalogue and take actions related to the implementation of the ATS proposals relevant to their FIRs.	To use the RDWG as a platform for ATS route improvements	State Letter	ICAO	Jul 2019	**Actioned** SL AN 6/5.8-19/205 dated 2 July 2019 Replies: None
C. 17/19	**SAFETY ASSESSMENTS DUE TO CONTINGENCY WITH IMPACT ON ATS ROUTE NETWORK** That**,** a) Bahrain, Iran, Oman, Qatar and UAE be urged to provide the outcomes of their safety assessment of the contingency routes and/or changes to the ATS Routes Network to the ICAO MID Office by **15 June 2019**, as well as the relevant data for the analysis of the disruption and its impact to the network;		State Letter	ICAO	Jul 2019	**Actioned/ongoing** SL AN 6/1.2.1-19/200 dated 2 Jul 2019 (Bahrain)

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
	b) the ATM SG/5, with the MIDRMA support, carry out analyses of the data/inputs received form States to identify the challenges and agree on necessary measures to mitigate any safety risk; and c) conduct a lessons-learned session during the ATM SG/5 meeting with the participation of affected stakeholders reviewing the impact of the disruption to the network, allowing all stakeholders to present their views and feedback.					
C. 17/20	**ENHANCED FRAMEWORK FOR THE MID CCT** That, a) States intending to restrict traffic or close all or part of their airspace be urged to consider adequate time before affecting the required change to minimize traffic disruption; b) States, under the framework of the CCT, in coordination with airspace users, agree on interim guidance with a progressive set of flow measures to address the current Air Traffic Flow disruption caused by the closure of Pakistan airspace; and c) the ATM SG/5: i. develop guidelines on how extended disruptions in the network are to be managed in a balanced manner; and ii. enhance the notification and coordination process of contingency operations in the frame of the MID CCT, particularly for: - consistency of interrelated contingency information promulgated by more than one State; and - agreement on recovery plan for each contingency situation.	To enhance the CCT framework	Interim guidance	ATM SG	Dec 2019	**Ongoing** This will be part of the work of the MID ATM Contingency Plan Action Group

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
C. 17/21	**MID REGION GUIDANCE MATERIAL ON CIVIL/MILITARY COOPERATION AND IMPLEMENTATION OF FUA CONCEPT** That, the ATM SG/5 develop draft guidance material related to Civil/Military Cooperation and implementation of FUA Concept, including State aircraft operations under Due Regard in particular over the high seas, to be coordinated with States before presentation to MIDANPIRG for endorsement.	Guidance material for CIV/MIL Cooperation, FUA and due regard over high seas	Guidance material	ATM SG/5	Dec 2019	**Ongoing** An Action Group composed of experts from Bahrain, Egypt, Iraq, Jordan, Oman, Qatar, Saudi Arabia, UAE and ICAO was established by the ATM SG/5 meeting through Decision 5/3 to draft the guidance material
C. 17/22	**MULTI-NODAL ATFM SOLUTION FOR THE MID REGION** That, a) the Multi-Nodal Concept be implemented in the MID Region, as a first phase, which would be evolved to a centralized ATFM system in the future; and b) the ATFM Task Force develop the ATFM Concept of Operations for MID Region, accordingly, including the minimum flight data that should be exchanged by ATFM Units.	ATFM Multi-Nodal Concept	ATFM Multi-Nodal Concept	MIDANPIRG	Apr. 2019	**Actioned** Completed Ongoing
C. 17/23	**ACTION PLAN FOR THE IMPLEMENTATION OF ATFM IN THE MID REGION** That, a) the Action Plan for the implementation of ATFM in the MID Region at Appendix 6.2J is endorsed; and b) States and Stakeholders to support the work of the ATFM Task Force and implement the actions relevant to them.	The Action Plan for the implementation of ATFM	the Action Plan for the implementation of ATFM	MIDANPIRG	Apr. 2019	**Completed**

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
C. 17/24	**ASSESSMENT OF THE MID REGION RVSM AIRSPACE STRUCTURE BASED ON THE EXPECTED TRAFFIC MOVEMENT FROM 1 NOVEMBER TO 31 DECEMBER 2022** That, the MIDRMA assess the MID Region RVSM airspace structure based on the expected traffic movement during FWC2022 to identify peak periods, Hotspots, Bottlenecks, etc. based on the FPL/traffic data provided by Qatar.	To assess the impact of the forecast increase of traffic due to FWC2022	Assessment	Qatar MIDRMA	May 2019 Aug 2019	**Ongoing (To be closed)** (Outcome of the MIDRMA Board/16 and FWC2022 TF/4 meetings, refer)
C. 17/25	**AMENDMENT OF THE MID REGION HIGH LEVEL AIRSPACE CONCEPT (MID DOC 004)** That, the ATM SG/5 review and prepare a revised version of the MID Region High level Airspace Concept (MID Doc 004) taking into consideration the latest developments, in particular the outcome of MSG/6 and MIDANPIRG/16 and 17 meetings, for presentation to MIDANPIRG/18.	Revised version of the MID Region High level Airspace Concept	Draft Revised version of the MID Region High level Airspace Concept	ATM SG/5	Dec 2019	**Ongoing**
C. 17/26	**SITA INTEGRATION IN THE MID REGION** That, in order ensure seamless and efficient messages exchange within the MID Region and with other ICAO Regions, States are urged to complete SITA Type X Integration by **25 April 2019.**	To ensure seamless messages flow between AMHS and SITA Networks	Implement necessary network settings to integrate SITA gateway	States	25 April 2019	**Completed**
C. 17/27	**KHARTOUM COM CENTRE** That, in order to establish a third Gateway to the AFI Region, Khartoum COM Centre be changed to a main Centre.	To Improve the inter-regional ATS Messages flow	Khartoum COM Centre be changed to a main centre	Sudan	2020	**Ongoing**

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
C. 17/28	**PFA TO THE MID ANP VOLUME II-CNS** That, a Proposal for Amendment to the MID ANP Volume II – Table CNS II-1 related to the Aeronautical Fixed Telecommunication Network Plan as at **Appendix 6.2R** be processed in accordance with the standard procedure, by **1 July 2019**	To Improve the availability and reliability of the ATS Messages networks	AMHS Mandated in the MID Region		Sep. 2020	**Ongoing**
C. 17/29	**AFTN/CIDIN/AMHS ROUTING TABLES** That, in order to eliminate the messages loop problem within the MID Region: a) States be urged to keep the AFTN/CIDIN/AMHS Routing Tables; and b) ICAO publish the updated version of the Routing Table for AFTN/CIDIN/AMHS in the MID Region by 1 July 2019.	To improve ATS messages routing mechanism in the MID Region	Updated version of the routing tables	MIDAMC	Sept 2020	**Ongoing**
C. 17/30	**UPDATE OF THE GUIDANCE FOR AIDC/OLDI IMPLEMENTATION IN THE MID REGION (MID DOC 006)** That, the ICAO MID Doc 006 - Guidance for AIDC/OLDI Implementation in the MID Region, Edition April 2019 is endorsed and be posted by the ICAO MID Office on the website.	To provide updated guidance material to States on AIDC/OLDI implementation	Updated MID Doc 006 and post it on the ICAO MID website	MIDANPIRG/17	May 2019	**Completed** Endorsed by the MIDANPIRG/17 meeting and posted on the ICAO MID website.
D. 17/31	**TERMS OF REFERENCE OF THE CNS SG** That, the Terms of Reference of the CNS SG be updated as at **Appendix 6.2S.**			MIDANPIRG/17	Apr. 2019	**Completed**
D. 17/32	**TERMS OF REFERENCE OF THE MIDAMC STG** That, the Terms of Reference and Work Programme of the MIDAMC STG be updated as at Appendix 6.2T.			MIDANPIRG/17	Apr. 2019	**Completed**

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
D. 17/33	**FREQUENCY MANAGEMENT AD-HOC WORKING GROUP** That, the Frequency Management Ad-hoc Working Group be established with Terms of Reference as at Appendix 6.2U.			MIDANPIRG/17	Apr. 2019	**Completed**
C. 17/34	**PFA TO THE MID ANP VOLUME II- CNS SPECIFIC REGIONAL REQUIREMENTS** That, a Proposal for Amendment to the MID ANP Volume II – CNS Specific Regional Requirements be processed in accordance with the standard procedure to add the following requirement: "States should ensure that all Mode S Radars support SI/II code operation".	To eliminate IC code conflicts in the MID Region	PfA to MID ANP VOL II	CNS SG	2020	**Ongoing**
C. 17/35	**MID REGION PROCESS FOR MODE S IC CODES ALLOCATION** That, the Eurocontrol Document "Requirements process for the coordinated allocation and use of Mode S Interrogator Codes in the ICAO Middle East Region" (Edition 1.03 dated March 2019) is endorsed and be posted on the ICAO MID website, in order to be used for the allocation of Mode S IC Codes in the MID Region.			MIDANPIRG/17	Apr. 2019	**Completed** Endorsed by the MIDANPIRG/17 meeting and posted on the ICAO MID website.
C. 17/36	**THE MID REGION SURVEILLANCE PLAN** That the MID Region Surveillance Plan is endorsed and be published as MID Doc 013.		MID Region Surveillance Plan (MID Doc 013)	MIDANPIRG/17	Apr. 2019	**Completed** Endorsed by the MIDANPIRG/17 meeting and posted on the ICAO MID website.
C. 17/37	**MONITORING THE SURVEILLANCE IMPLEMENTATION** That, the Table at **Appendix 6.2W** be added to the MID eANP Vol III for the monitoring of Surveillance implementation in the MID Region.		SUR Monitoring table included in the VOL III		June 2020	**Actioned**

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
D. 17/38	**ANS CYBER SECURITY WORKING GROUP** That, the ATM Data Security Action Group be renamed ANS Cyber Security Working Group (ACS WG) with Terms of Reference as at **Appendix 6.2X.**			MIDANPIRG/17	Apr. 2019	**Completed**
C. 17/39	**ATM DATA CYBER SECURITY (ADCS) PORTAL** That, a) the ADCS Portal be used as a prototype platform for ATM cyber security; and b) States be encouraged to: i. assign ADCS focal point(s) to register on the ADCS Portal; ii. provide feedback to the ADCS Admin by 1 November 2019 for further enhancements; and iii. share their experience related to cyber security, through the ADCS Portal.	To				**Actioned (To be closed)** SL AN 7/36 – 19/244 dated 6 Aug. 2019 (Replies: Egypt)

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
C. 17/40	**BASELINE SECURITY GUIDELINES FOR THE MID REGION** That, the Minimum Security Baselines (MSBs) is endorsed as the baseline security guidelines for the MID Region.	To assist States protecting ANS Systems	Cyber Security guidelines for the MID Region	MIDANPIRG/17	April 2019	**Completed**
C. 17/41	**GUIDELINES FOR THE IMPLEMENTATION OF OPMET DATA EXCHANGE USING IWXXM** That, the Guidance for Implementation of OPMET data exchange using IWXXM at **Appendix 6.2Y** is endorsed as MID Doc 012.	To assist States in the implementation of IWXXM	Published on ICAO Website	MIDANPIRG/17	Apr. 2019	**Completed**
D. 17/42	**UPDATE THE BMG TERMS OF REFERENCE** That, the Terms of Reference (TORs) of the Bulletin Management Group (BMG) be amended as at **Appendix 6.2Z.**	To keep pace with developments	BMG TORs	MIDANPIRG/17	Apr. 2019	**Completed**
C. 17/43	**FAST TRACK/APPROVAL BY PASSING PROCEDURE** That, States be invited to provide the ICAO MID Office, not later than **15 August 2019**, with their views and proposals related to Fast Track/Approval by Passing Procedure, for presentation to the MSG/7 meeting, for appropriate action.	To study the need for and feasibility of the implementation of a Fast Track/Approval by Passing Procedure	State Letter	ICAO	Aug. 2019	**Actioned (To be closed)** SL ME 3 – 19/273 dated 11 Sept. 2019 (Bahrain, Qatar, Saudi Arabia, UAE)
D. 17/44	**DISSOLUTION OF ANSIG** That, a) the Air Navigation Systems Implementation Group (ANSIG) is dissolved, and the Terms of Reference of the MSG be updated, accordingly; and b) the revised MIDANPIRG Organizational Structure at Appendix 6.4A is endorsed.	Revised ORG Structure of MIDANPIRG to increase efficiency	Dissolution of ANSIG	MIDANPIRG/17	Apr. 2019	**Completed**

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
D. 17/45	**CHAIRMANSHIP OF MIDANPIRG AND SUBSIDIARY BODIES** That, the MIDANPIRG Procedural Handbook be amended to reflect the following: "In case of absence of the Chairperson for two consecutive meetings, unless otherwise determined by special circumstances, the election of Chairperson should be included in the agenda of the second meeting for the election of a new Chairperson, unless otherwise decided by the meeting."	To ensure continuity of chairmanship in an efficient manner.	Insertion of a new para. In the MIDANPIRG Handbook	ICAO	Apr. 2020	**Ongoing**
D. 17/46	**NEW EDITION OF THE MIDANPIRG PROCEDURAL HANDBOOK** That, the Secretariat consolidate a new Edition of the MIDANPIRG Procedural Handbook, for review by the MSG/7 meeting before the formal endorsement by the MIDANPIRG/18 meeting.	To reflect the agreed changes in the new Edition of the Handbook	New Edition	MIDANPIRG	MIDANPIRG/18	**Ongoing (To be closed)** (Replaced and superseded by MSG Decision 7/14)

APPENDIX 3A

MIDANPIRG COVID-19 PLAN OF ACTIONS

Updated: 29/8/2020

Key activity	Action	Pillars	Priority	Champion	Indicators If applicable	Timelines Target	Status
Air Navigation Services Business Continuity & Recovery	Provide the necessary support and assistance to concerned States (AIM, ATM, CNS, MET and SAR) to ensure the continuity of service during COVID-19 crisis and recovery phases.	Implementation Support	High	AIM SG ATM SG MET SG CNS SG	Percentage of continued provision of ANS services within the MID region	Continuous	Survey circulated to States to monitor the BCPs and continuous availability of ANS services.
ATFM Operational Flexibility	Coordinate with States to alleviate non-required ATFM restrictions during COVID-19 restart and recovery phases.	Communication and Implementation Support	High	ATFM TF ATM SG	Number of States that apply ATFM restrictions alleviations	September 2020	IATA to collect implemented ATFM measures related that have the impact on operations
Aeronautical Information Management	Monitor the implementation of the standardized COVD-19 related NOTAM templates and related aeronautical information publications.	Monitoring and Reporting	High	AIM SG	Number of States implemented the NOTAM template	Continuous	On daily basis, monitor and updated summaries on ICAO MID webpage with the measures and publications by all MID States.
Regional Network Operations Recovery	Coordinate with States to provide support to ensure measures are in place to handle the growth of traffic during the recovery phase. Exchange information about intention to operate and Airspaces/Aerodromes operational status, between Air Operators and States/ANSPs up to normal situation.	Communication	High	ATFM TF ATM SG	Platform of sharing/exchange of the operational data	Continuous	IATA is collecting data for the intention to operate from airspace users, to support the task of examining available basic solutions to exchange the related data.
Overflight Permissions	Monitor the regional implementation of the relief and facilitation of overflight permissions for non-scheduled flights in response to the SL: AN 8/0 & ME 6-20/144 (12 July 2020).	Monitoring and Reporting	Medium	ACAO	Percentage of timely issuance of OVFC permissions	Continuous	VTCs were held with States to encourage States adopt standardized process to facilitate the OVFPs for non-scheduled flights

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APPENDIX 4A

MID RVSM SAFETY MONITORING REPORT 2018 (SMR 2018)

Prepared by the Middle East Regional Monitoring Agency (MIDRMA)

SUMMARY

The aim of the MID RVSM Safety Monitoring Report 2018 is to provide airspace safety review of the MID RVSM airspace and to highlight by means of arguments and supporting evidence that the implementation of RVSM in the Middle East is acceptably safe.

1. Introduction:

1.1 Executive Summary

The MID RVSM Safety Monitoring Report is issued by the Middle East Regional Monitoring Agency (MIDRMA) for endorsement by the Middle East Air Navigation Planning and Implementation Regional Group (MIDANPIRG).

The report presents evidence that according to the data and methods used, all safety objectives set out in the MID RVSM Safety Policy in accordance with ICAO Doc 9574 (2nd Edition) continue to be met in operational services within the Middle East RVSM airspace, however there are some remarks concerning Safety Objective No. 2 which are addressed in the recommendations section of this objective.

To conclude on the current safety of RVSM operations, the three key safety objectives endorsed by MIDANPIRG have to be met:

Objective 1 The risk of collision in MID RVSM airspace due solely to technical height-keeping performance meets the ICAO target level of safety (TLS) of **2.5×10^{-9}** fatal accidents per flight hour.

The value computed for technical height risk is estimated **1.562×10^{-11}** this meets RVSM Safety Objective 1.

Objective 2 The overall risk of collision due to all causes which includes the technical risk and all risk due to operational errors and in-flight contingencies in the MID RVSM airspace meets the ICAO overall TLS of **5×10^{-9}** fatal accidents per flight hour.

The value computed for the overall risk is estimated **9.845×10^{-11}** this meets RVSM Safety Objective 2.

This Report provides recommendations concerning the lack of LHD reports from FIRs with high volume of traffic, this issue does not support high confidence in the final result.

Objective 3 Address any safety-related issues raised in the SMR by recommending improved procedures and practices; and propose safety level improvements to ensure that any identified serious or risk-bearing situations do not increase and, where possible, that they decrease. This should set the basis for a continuous assurance that the operation of RVSM will not adversely affect the risk of en-route mid-air collision over the years.

1.2 Conclusions:

(i) The estimated risk of collision associated with aircraft height- keeping performance is **1.562×10^{-11}** and meets the ICAO TLS of **2.5×10^{-9}** fatal accidents per flight hour (RVSM Safety Objective1).

(ii) The estimated overall risk of collision due to all causes which includes the technical risk and all risk due to operational errors and in-flight contingencies is 9.845×10^{-11} meets the ICAO overall TLS of 5×10^{-9} fatal accidents per flight hour (RVSM Safety Objective 2)

(iii) Based on currently-available information (Except for Tripoli, Damascus and Beirut FIRs), there is no evidence available to the MIDRMA (other than (ii) above) that the continued operations of RVSM adversely affects the overall vertical risk of collision. Nevertheless, concern is raised regarding representativeness of the data received with regard to the LHD reports Categories A, B, C, D, J and K from FIRs with high volume of traffic.

1.3 Considerations on the RVSM Safety Objectives for MID RVSM SMRs

When considering the three safety objectives for RVSM, the following considerations should be borne in mind:

1. The assessment of risk against the TLS, both for technical and overall risk estimates, relies on height keeping performance data to assess the risk in the vertical plane and studies of traffic density to calculate the risk in the horizontal plane. There are numbers of assumptions that must be verified to satisfy the reliability of the risk assessment, the verification of these assumptions deals primarily with monitoring of aircraft performance issues.
2. The Aircraft performance is assessed by individual airframe and by monitoring group. A monitoring group consists of aircraft that are nominally of the same type with identical performance characteristics that are made technically RVSM compliant using a common compliance method. Monitoring group analysis is necessary to verify that the Minimum Aviation System Performance Standards (MASPS) for that group is valid. Aircraft that are made RVSM compliant on an individual basis are termed non-group.
3. The RVSM Safety Objective 2, dealing with overall risk, takes into account the technical risk together with the risk from all other causes. In practice, this relates to the human influence and assessment of this parameter relies on adequate reporting of Large Height Deviation (LHD) Reports, and the correct interpretation of events for input to the CRM.
4. RVSM Safety Objective 3 requires the RMA to monitor long-term trends and to identify potential future safety issues, this compare the level of risk bearing incidents for the current reporting period. It also highlights if there are issues that should be carried forward as recommendations to be adopted for future reports.

2.1 Discussion

Scope:

The geographic scope of the MID RVSM Safety Monitoring Report covers the MID RVSM airspace, which comprises the following FIRs/UIRs:

Amman	Bahrain	Beirut*	Baghdad	Cairo	Damascus*	Emirates
Jeddah	Kuwait	Khartoum	Muscat	Sana'a	Tehran	Tripoli*

T-1: FIRs/UIRs of the Middle East RVSM Airspace

*Note: Beirut, Damascus and Tripoli FIRs were excluded from the safety analysis due to lack of data.

The Data Sampling periods covered by SMR 2018 are as displayed in the below table

Report Elements	Time Period
Traffic Data Sample	01/08/2018 - 31/08/2018
Operational & Technical Errors	01/08/2018 - 31/07/2019

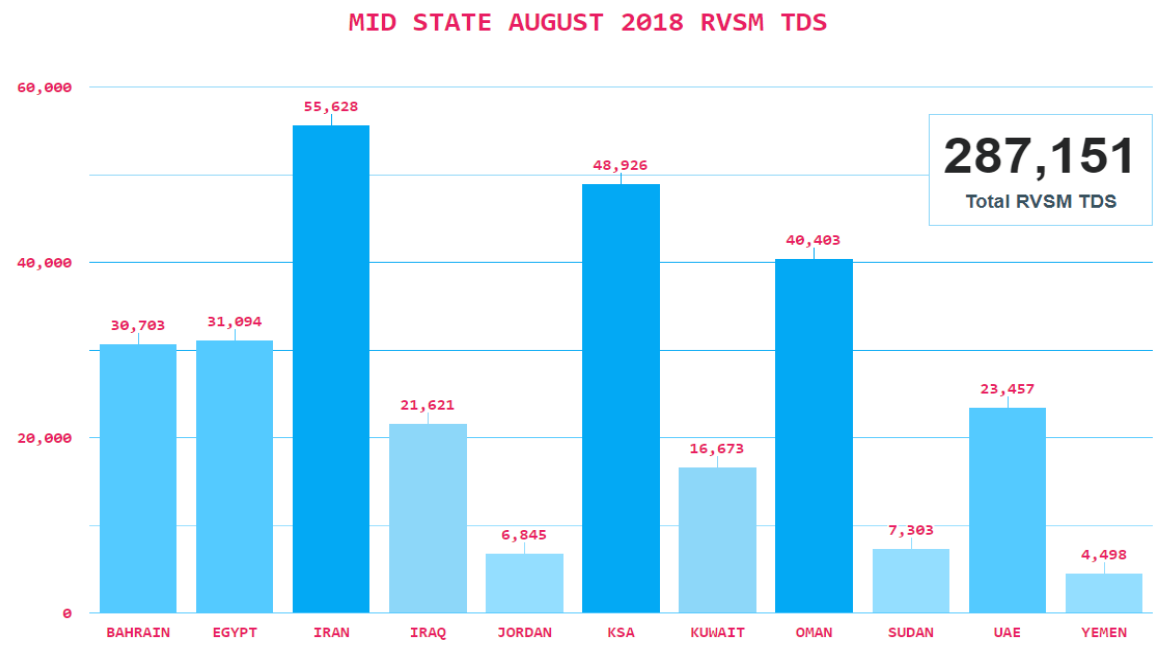
T-2: Time Period for the Reported Elements

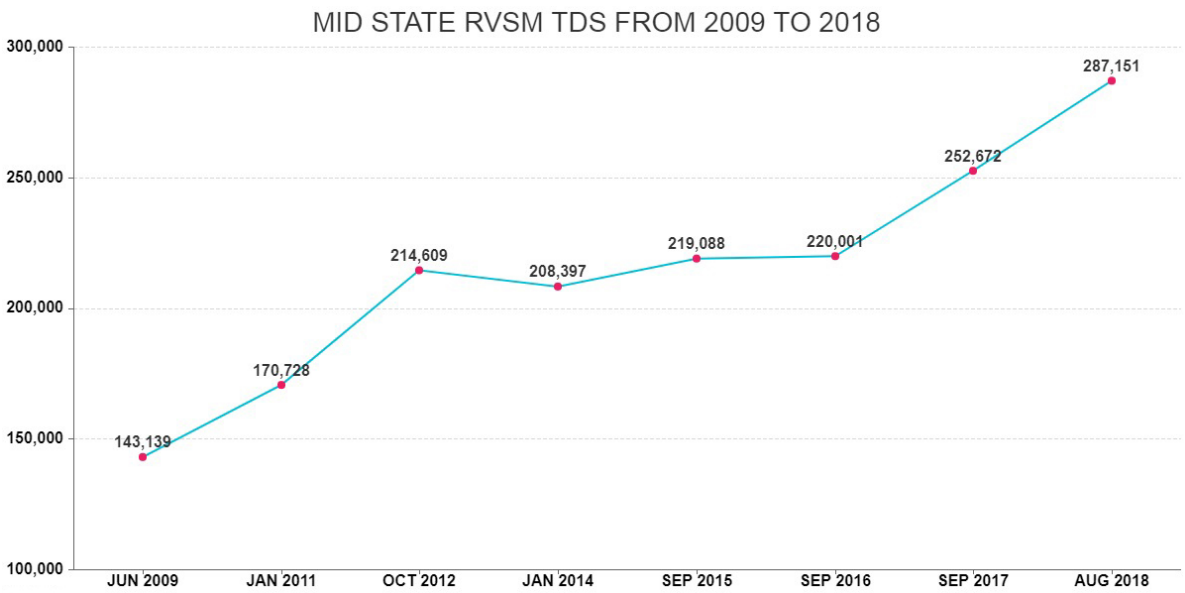
MID States	**Status**	**Remarks**
Bahrain FIR	Accepted	Received on time (Corrupted)
Cairo FIR	Accepted	Received on time (Corrupted)
Amman FIR	Accepted	Received on time
Muscat FIR	Accepted	Received on time
Tehran FIR	Accepted	Received late (Corrupted)
Khartoum FIR	Accepted	Received on time
Emirates FIR	Accepted	Received on time
Damascus FIR	No TDS Submitted	Excluded
Sana'a FIR	Accepted	Received on time
Jeddah FIR	Accepted	Received late (Corrupted)
Beirut FIR	No TDS Submitted	Excluded
Baghdad FIR	Accepted	Received late (Corrupted)
Kuwait FIR	Accepted	Received late (Corrupted)
Tripoli FIR	No TDS Submitted	Excluded
Total	11 FIRs	

Table 1; Status of the MID States RVSM Traffic Data Sample (TDS) for August 2018

2.1.1 The description of the traffic data processed for each MIDRMA member State by the MID Risk Analysis Software (MIDRAS) is depicted in the graph below, a total of **287,151** flights were processed for the 11 FIRs, these flights were evaluated and processed very carefully to ensure

accurate results according to the data submitted.





SN	MID FIRs	No of TDS Sep 2017	No of TDS Aug 2018	Sep 2017 vs Aug 2018 (%)
1	Bahrain FIR	27736	30703	**10.7**
2	Cairo FIR	28225	31094	**10.16**
3	Amman FIR	6477	6845	**5.68**
4	Muscat FIR	40563	40403	**-0.39**
5	Tehran FIR	58331	55628	**-4.63**
6	Khartoum FIR	6717	7303	**8.72**
7	Emirates FIR	22125	23457	**6.02**
8	Damascus FIR	1671	No TDS	-
9	Sana'a FIR	4163	4498	**8.05**
10	Jeddah/Riyadh FIR	42378	48926	**15.45**
11	Beirut FIR	66	No TDS	-
12	Baghdad FIR	9732	21621	**122.16**
13	Kuwait FIR	4488	16673	**271.5**
14	Tripoli FIR	No TDS	No TDS	-
	Total	**252,672**	**287,151**	**+13.65%**

MID States RVSM TDS 2017 VS 2018

SN	Reporting Point	FIRs	No of Flights
1	**TASMI**	BAGHDAD / KUWAIT	**8841**
2	**SIDAD**	BAGHDAD / KUWAIT	**8666**
3	**NINVA**	BAGHDAD / ANKARA	**8332**
4	**RATVO**	BAGHDAD / ANKARA	**7754**
5	**DAVUS**	BAHRAIN / KUWAIT	**7537**
6	**TUMAK**	BAHRAIN / EMIRATES	**6314**
7	**MIDSI**	BAHRAIN / TEHRAN	**6265**
8	**GABKO**	EMIRATES / TEHRAN	**6215**
9	**BONAM**	TEHRAN / ANKARA	**5995**
10	**ORSAR**	EMIRATES / TEHRAN	**5370**
11	**ULADA**	BAHRAIN / JEDDAH	**4984**
12	**PASAM**	CAIRO / JEDDAH	**4883**
13	**TESVA**	TEHRAN / ANKARA	**4738**
14	**ALPOB**	EMIRATES / BAHRAIN	**4671**
15	**LONOS**	BAHRAIN / KUWAIT	**4594**
16	**ULINA**	CAIRO / AMMAN	**4500**
17	**ROTOX**	BAHRAIN / TEHRAN	4430
19	**PASOV**	EMIRATES / MUSCAT	4104
20	**DASIS**	TEHRAN / ANKARA	4097

TDS 2018 Top 20 Busiest FIR Entry / Exit Points

2.1.2 as a follow up to the to MIDRMA Board DRAFT CONCLUSION 15/6, the MIDRMA circulated a reminder email to all the focal points responsible for submitting the TDS on 29th July 2018 to ensure the provision of required TDS for the period 1 - 31 Aug 2018 in a timely manner.,

Unfortunately, the same problems of corrupted data and late data submission occurred for this report.

2.1.3 For the fourth consecutive Safety Monitoring Report, Tripoli FIR was excluded from the RVSM safety analysis due to lack of TDS and LHD reports., This issue requires MIDANPIRG attention and decision.

2.1.4 Similarly, Damascus and Beirut FIRs were excluded from this risk analysis due to the non-provision of traffic data.

2.2 The Collision Risk Model (CRM)

2.2.1 The risk of collision to be modelled is that due to the loss of procedural vertical separation between aircraft flying between FL290 and FL410 in a given portion of an airspace. One collision between two aircraft is counted as the occurrence of two accidents. The risk of collision depends both on the total number and types of aircraft flying in the system and the system characteristics.

2.2.2 The CRM provides an estimate of the number of accidents within an airspace system that might occur per aircraft flight hour due to aircraft collisions resulting from the loss of procedural vertical separation in an RVSM environment analysis, is expressed in terms of quantifiable parameters. In the vertical dimension the CRM can be broken down in order to separately model a single route on which aircraft are flying in the same or opposite directions at adjacent flight levels, pairs of crossing routes and combinations of individual and intersecting routes, this model is applied equivalently to vertical, lateral and longitudinal separation.

2.2.3 Three parameters used within the CRM:

a. The Vertical Overlap Probability, denoted as Pz(1 000).

b. The Lateral Overlap Probability, denoted as Py(0).

c. The aircraft Passing Frequency are the most important quantities in determining the vertical collision risk. Of these, the vertical overlap probability is also an important parameter to calculate.

2.3 TECHNICAL HEIGHT KEEPING PERFORMANCE RISK ASSESSMENT

RVSM Safety Objective 1

The risk of collision in MID RVSM airspace due solely to technical height-keeping performance meets the ICAO target level of safety (TLS) of **2.5×10^{-9}** fatal accidents per flight hour.

2.3.1. Direct evidence of compliance with TLS for Technical Height-Keeping Error

The result shows the risk of collision due to technical height-keeping performance is estimated to be **1.562×10^{-11}** fatal accidents per flight hour, which is less than the ICAO TLS **2.5×10^{-9}**.

2.3.2 Supporting evidence of compliance with TLS for technical height-keeping performance

To demonstrate that the result is reliable, it is necessary to demonstrate that the following assumptions are true:

a. The estimated value of the frequency of horizontal overlap, used in the computations of vertical-collision risk, is valid;

b. Pz(1000) – the probability of vertical overlap due to technical height-keeping performance, between aircraft flying 1000 ft. separation in MID RVSM airspace is estimated **1.95×10^{-10}** valid and is less than the ICAO requirement of **1.7×10^{-8}**.

c. All aircraft flying with 1000ft vertical separation in MID RVSM airspace meet the ICAO Global Height Keeping Performance specifications for RVSM;

d. All aircraft flying 1000ft separation in MID RVSM airspace meet the individual ICAO performance specification for the components of total vertical error (TVE).

e. The monitoring target for the MID RVSM height-monitoring programme is an on-going process.

f. The input data used by the CRM is valid.

g. An adequate process is in place to investigate and correct problems in aircraft technical height-keeping performance.

2.3.3 Calculating the Probability of Lateral Overlap (P_y (0))

The probability of lateral overlap $P_y(0)$ is the probability of two aircraft being in lateral overlap which are nominally flying on (adjacent flight levels of) the same route. The calculation of the Py (0) for the SMR 2018 has the following to consider:

a. The MIDRMA continued to calculate the probability of lateral overlap $\boldsymbol{P_y(0)}$ for all the MID RVSM airspace as per the ICAO methodology developed for this purpose and derived by the MID Risk Analysis Software (MIDRAS).

b. The MIDRMA calculated the average of the probability of lateral overlap $\boldsymbol{P_y(0)}$ for the whole MID RVSM airspace is estimated to be **1.229×10^{-11}**

c. Overall, the results are considered to be valid.

2.3.4 Pz(1000) Compliance

The Pz(1000) is the probability that two aircraft at adjacent RVSM flight levels will lose vertical separation due to technical height keeping errors. The value of the probability of vertical overlap Pz(1000), based on the actual observed ASE and typical AAD data is estimated to be of **1.95×10^{-10}** . This value meets the Global System Performance Specification that the probability that two aircraft will lose procedural vertical separation of 1000ft should be no greater than **1.7×10^{-8}**.

The MIDRMA continue to issue the minimum monitoring requirements (MMRs) through the automated MMR software which is programmed to address the MIDRMA member States with their updated requirements according to the latest RVSM approvals received, the MMR table valid for SMR 2018 is available in **Appendix B**.

Note: All member States are required to check and comply with their MMR through the MIDRMA website (www.midrma.com).

Technical Risk Values				
Year 2006	**Year 2008**	**Year 2010**	**Year 2011**	**Year 2012/13**
$2.17x10^{-14}$	**$1.93x10^{-13}$**	**$3.96x10^{-15}$**	**$5.08x10^{-14}$**	**$6.37x10^{-12}$**
Year 2014	**Year 2015**	**Year 2016**	**Year 2017**	**Year 2018**
$3.18x10^{-12}$	**3.056×10^{-10}**	**$6.347x10^{-11}$**	**$4.966x10^{-11}$**	**$1.562x10^{-11}$**

According to the technical risk values as shown in the above graph the TLS values still, meet the ICAO TLS.

2.3.5 Conclusions on Technical Vertical Collision Risk:

a. The current computed vertical-collision risk due to technical height-keeping performance meets the ICAO TLS.

b. The probability of vertical-overlap estimate, Pz(1000), satisfies the global system performance specification.

c. Most monitoring groups are complying with ICAO TVE component requirements (also known as technical height-keeping group requirements).

2.3.6 Recommendations for Safety Objective 1:

a. The MIDRMA shall continue to review the content and structure of its aircraft monitoring groups.

b. The MIDRMA shall keep the methods of calculating the technical CRM parameters and the risk due to technical height keeping errors under review and explore more options to enhance the MID Risk Analysis Software (MIDRAS).

c. The MIDRMA shall carry out continuous survey and investigation on the number and causes of non-approved aircraft operating in RVSM airspace.

2.4 ASSESSMENT OF OVERALL RISK DUE TO ALL CAUSES AGAINST THE TLS OF 5 X 10^{-9} FATAL ACCIDENTS PER FLIGHT HOUR

RVSM Safety Objective 2

The overall risk of collision due to all causes which includes the technical risk and all risk due to operational errors and in-flight contingencies in the MID RVSM airspace meets the ICAO overall TLS of **5×10^{-9}** fatal accidents per flight hour.

The computed value for the overall risk is **9.845×10^{-11}** this meets RVSM Safety Objective 2.

Overall Risk Values				
Year 2006	**Year 2008**	**Year 2010**	**Year 2011**	**Year 2012/13**
Not calculated	**$4.19x10^{-13}$**	**$6.92x10^{-12}$**	**$1.04x10^{-11}$**	**$3.63x10^{-11}$**
Year 2014	**Year 2015**	**Year 2016**	**Year 2017**	**Year 2018**
$4.91x10^{-11}$	**$7.351x10^{-10}$**	**$5.691x10^{-10}$**	**4.518×10^{-11}**	**9.845×10^{-11}**

2.4.1 The vertical risk estimation due to atypical errors has been demonstrated to be the major contributor in the overall vertical-risk estimation for the MID RVSM airspace. Although The estimated overall risk of collision due to all causes is 9.845 $x10^{-11}$, the conclusion to confirm that results are meeting the ICAO TLS is significantly influenced by either NIL reporting and no reports of Large Height Deviations (LHDs) of categories A, B, C, D, J and K (especially from FIRs with high volume of traffic).

2.4.1 The MIDRMA highlighted the limited numbers of LHD reports in all previous SMRs. Although the online LHD reporting system was developed and the reminders to all member States sent on a monthly basis with the monthly statistics distributed to all focal points concerned, required reports were not received from the majority of MIDRMA Member States.

2.4.2 Out of 14 member States required to submit their operational error reports on a monthly basis, only Bahrain and UAE continued to send their LHD reports of all categories as they always used to do for all the previous SMRs, while only few member States sent NIL LHD reports or LHD reports category E which have no influence on the processing of the overall vertical collision risk within the Middle East RVSM airspace.

2.4.3 The following table reflects the number/category of LHD reports received from each of the MIDRMA member State:

MID FIRs	No. of Reported LHDs - CAT "A, B, C, D & J" and "K"
Bahrain	**9**
Baghdad	**0**
Amman	**0**
Tehran	**0**
Cairo	**0**
Damascus	**0**
Khartoum	**0**
Kuwait	**0**
Muscat	**0**
Jeddah	**0**
Riyadh	**0**
Tripoli	**0**
Emirates	**2**
Sanaa	**0**

MID FIRs	No. of Reported LHDs - CAT "E"	No. of Related LHDs - CAT "E"
Bahrain	**54**	**9**
Baghdad	**12**	**18**
Amman	**5**	**0**
Tehran	**63**	**4**
Cairo	**5**	**35**
Damascus	**0**	**0**
Khartoum	**1**	**1**
Kuwait	**0**	**69**
Muscat	**44**	**91**
Jeddah	**52**	**991**
Riyadh	**19**	**16**
Tripoli	**0**	**0**
Emirates	**5**	**7**
Sanaa	**2181**	**1**

MID States LHD Reports Received for SMR 2018 Reporting Period

2.4.4 The MIDRMA continued to monitor the LHD reports at the eastern FIR boundary of Muscat FIR filed by Mumbai. The MIDRMA indicated in SMR 2017 that the level of LHD reports filed by Muscat, Mumbai and Karachi ATCUs related to each other at their transfer of control points reached a dangerous level and started to effect the ICAO TLS of RVSM implementation in the MID and APAC regions. accordingly MIDRMA Board/15 meeting (Muscat – Oman 29 – 31 January 2018) agreed to open a Safety Protocol for the purpose of resolving this issue.

2.4.5 It is noted with concern that no considerable improvement occurred during the reporting

period of SMR 2018 and the level of reporting LHDs between Mumbai and Muscat remains high and the safety concern still exists at the common FIR boundary between the two FIRs, while the level of reporting of LHDs between Karachi and Muscat was reduced.

Note: A Safety Protocol is a critical safety issue effecting the implementation of RVSM operations which require the concerned authority an immediate action to rectify/resolve the problem in a certain period of time under the supervision of MIDRMA and ICAO MID Office.

2.4.6 The MIDRMA Board/15 meeting agreed that a Special Coordination Meeting between Iran, India, Oman and Pakistan with the presence of MAAR, MIDRMA and ICAO APAC and MID Regional Offices, to meet during the ATM SG/4 on 02nd May 2018 to agree on clear action plan to mitigate the risk associated with the high level of coordination failures at the interfaces between the above mentioned States.

2.4.7 The special coordination meeting successfully held in Amman – Jordan during the ATM SG/4 but without the presence of Pakistan, the meeting adopted fruitful and effective short and long term solutions to be implemented by the concerned authorities to close the Safety Protocol.

2.4.8 The Safety Protocol is under continuous review by MIDRMA and MAAR and the LHD reports filed by all concerned ATC Units are investigated and evaluated through the MIDRMA online LHD system and further update will be addressed to the next MIDRMA Board meeting.

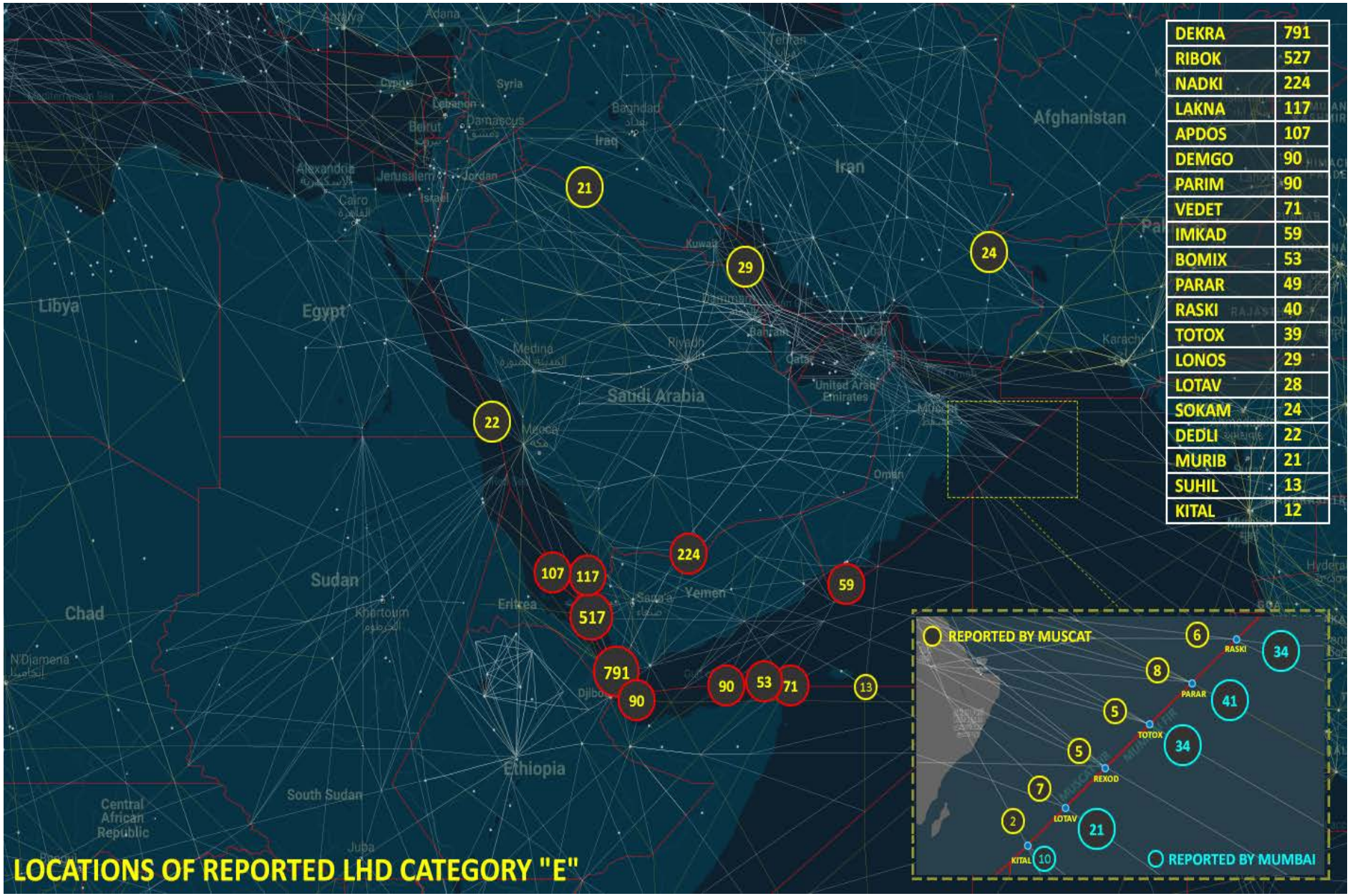
2.4.9 Table A below presents a summary of operational risk associated with Large Height Deviation (LHD) reports by LHD categories. it reflects all the LHD categories received for SMR 2018 reporting period which represents nearly 3.5 million RVSM movements in one year.

Code	Large Height Deviation (LHD) Category	No. of LHDs	Duration (Sec.)
A	Flight crew fails to climb or descend the aircraft as cleared	**8**	**215**
B	Flight crew climbing or descending without ATC clearance	**2**	**141**
C	Incorrect operation or interpretation of airborne equipment	**0**	**0**
D	ATC system loop error	**0**	**0**
E	ATC transfer of control coordination errors due to human factors	**2437**	**0**
F	ATC transfer of control coordination errors due to technical issues	**0**	**0**
G	Aircraft contingency leading to sudden inability to maintain level	**0**	**0**
H	Airborne equip. failure and unintentional or undetected FL change	**1**	**60**
I	Turbulence or other weather related cause	**0**	**0**
J	TCAS resolution advisory and flight crew correctly responds	**0**	**0**
K	TCAS resolution advisory and flight crew incorrectly responds	**0**	**0**
L	An aircraft being provided with RVSM separation is not RVSM approved	**0**	**0**
M	Other	**0**	**0**
	Total	**2441**	**416**

Table A: Summary of Operational Risk associated with Large Height Deviation

2.4.11 The Map in the next page shows the approximate locations of the top 20 positions of reported LHD events categories “E” received by the MIDRMA for SMR2018 reporting period.

APPENDIX 4A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RASKI 40
TOTOX 39
LONOS 29
LOTAV 28
SOKAM 24
DEDLI 22
MURIB 21
SUHIL 13
KITAL 12
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29
24
22
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107
117
517
59
791
90
90
53
71
13
Libya
Egypt
Saudi Arabia
Sudan
Chad
Eritrea
Yemen
Ethiopia
South Sudan
Central African Republic
Afghanistan
Iran
Iraq
Syria
Kuwait
Qatar
United Arab Emirates
Oman
Pakistan
Karachi
Riyadh
Medina
Mecca
Khartoum
N'Djamena
Juba
Djibouti
Cairo
Jerusalem
Beirut
Damascus
Baghdad
Tehran
REPORTED BY MUSCAT
RASKI
PARAR
TOTOX
REXOD
LOTAV
KITAL
REPORTED BY MUMBAI
LOCATIONS OF REPORTED LHD CATEGORY "E"

APPENDIX 4A

2.4.11 Effects of Future Traffic Growth

The effect of future traffic growth on the vertical collision risk can be evaluated on the assumption of a linear relationship between traffic growth and frequency of horizontal overlap, which will directly affect the two components of the risk: the risk due to technical height-keeping performance and due to atypical operational errors.

It is clear that even for the most optimistic forecast range of 13%, the overall risk of collision will continue to meet the TLS at least until 2022. With the current uncertainty over traffic growth this issue will be revisited..

2.4.12 Conclusions on the overall vertical risk:

a. The overall risk of collision due to all causes which includes the technical risk and all risk due to operational errors and in-flight contingencies in the MID RVSM airspace, estimated from the operational and technical vertical risks, With the concern raised regarding representativeness of the data received in particular with regard to the LHD reports Categories A, B, C, D, J and K from FIRs with high volume of traffic.

b. Even for the most optimistic forecast of 13% traffic growth, the overall risk of collision will continue to meet the TLS at least until 2022.

2.4.13 Recommendations Applicable to Safety Objective 2:

a. MIDRMA to present the issue of lack of LHD reports other than category E to the next MIDANPIRG meeting and MIDRMA board meetings. An Air Navigation deficiency related to the lack of provision of required data to the MIDRMA would be filed against the member States not submitting the LHD reports (categories A, B, C, D, J and K) on regular basis to the MIDRMA.

b. The MIDRMA shall continue to encourage States to provide Large Height Deviation Reports (LHD) of all categories and not only related to handover issues.

c. The MIDRMA shall follow up with concerned States to ensure reporting of incidents and violations which have direct impact on the implementation of RVSM within the MID Region.

2.5 ASSESSMENT OF SAFETY-RELATED ISSUES RAISED IN THIS REPORT

RVSM Safety Objective 3

Address any safety-related issues raised in the SMR by recommending improved procedures and practices; and propose safety level improvements to ensure that any identified serious or risk-bearing situations do not increase and, where possible, that they decrease. This should set the basis for a continuous assurance that the operation of RVSM will not adversely affect the risk of en-route mid-air collision over the years.

2.5.1 The identified safety-related issues are:

a. Confirmation of the approval status of aircraft filling RVSM flight plan (W in field 10), this is done through Bahrain and Emirates TDS received on a monthly basis.

b. Identification of operators requiring monitoring and address the minimum monitoring requirements to all MIDRMA member States.

2.5.2 Conclusions for Safety Objective 3

a. The MIDRMA improved its monitoring capabilities with the new Enhanced GMUs which gave the ability to respond for more height monitoring requests even from outside the Middle East Region.

b. The MIDRMA started to conduct studies and researches for implementing height monitoring using ADS-B data.

c. The MIDRMA address the Hot Spots of each MID FIR generated by the (MIDRAS) Software (for information only).

d. Current risk-bearing situations have been identified by using the MIDRAS and the MID Visualization and Simulation of Air Traffic and actions will be taken to ensure resolving all violations to RVSM airspace by non-approved aircraft.

2.5.3 Recommendations for Safety Objective 3

a. The MIDRMA to start coordinating with Member States, which have ADS-B to provide the ADS-B archived data for RVSM height monitoring.

b. MIDRMA to continue the enhancement of the (MIDRAS) Software and to include new features to overcome the issue of corrupted TDS (Traffic Data Sample).

c. The MIDRMA to coordinate with the ICAO MID Office the planning to deliver awareness courses concerning RVSM risk analysis. These courses would be delivered as necessary or when requested by any MIDRMA Member State.

d. The MIDRMA shall continue to carry out continuous survey and investigation on the number and causes of non-approved aircraft operating in the MID RVSM airspace.

e. The MIDRMA shall continue to encourage States to submit their Large Height Deviation Reports using the MIDRMA online reporting tool which has been upgraded to improve the level of reporting.

Therefore, it is concluded that this Safety Objective is currently met.

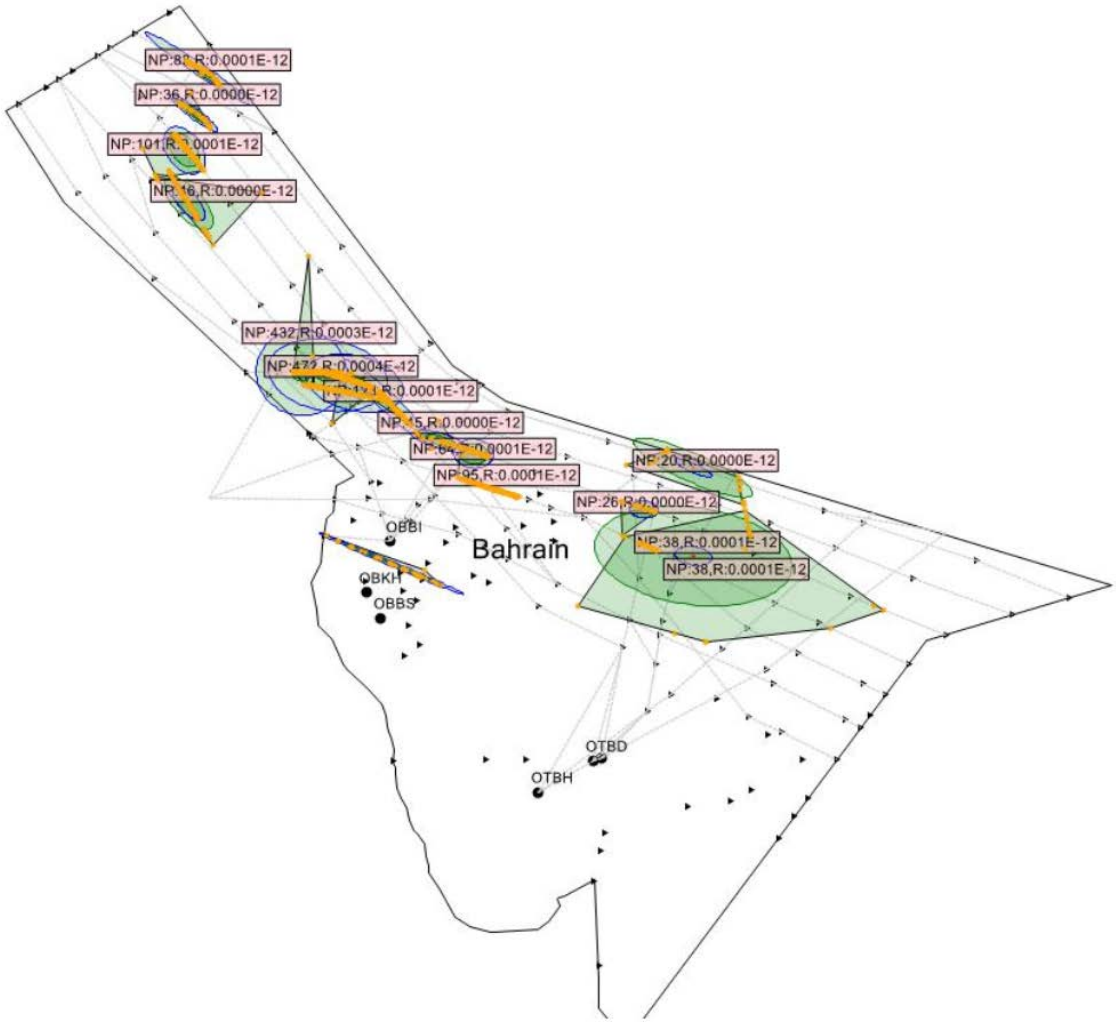
- END -

Appendix B

THE MID MMR as of October 2019

STATE	RVSM APPROVED A/C	RESULTS OR COVERED	NOT COVERED
BAHRAIN	57	57	0
EGYPT	149	127	22
IRAN	212	209	3
IRAQ	39	39	0
JORDAN	44	40	4
KSA	265	252	13
KUWAIT	60	51	9
LEBANON	28	28	0
LIBYA	27	26	1
OMAN	75	73	2
QATAR	272	272	0
SUDAN	21	17	4
SYRIA	14	11	3
UAE	593	584	9
YEMEN	6	0	6

Appendix C –MIDRMA Member States Hot Spots Generated from September 2018 TDS (for information ONLY)



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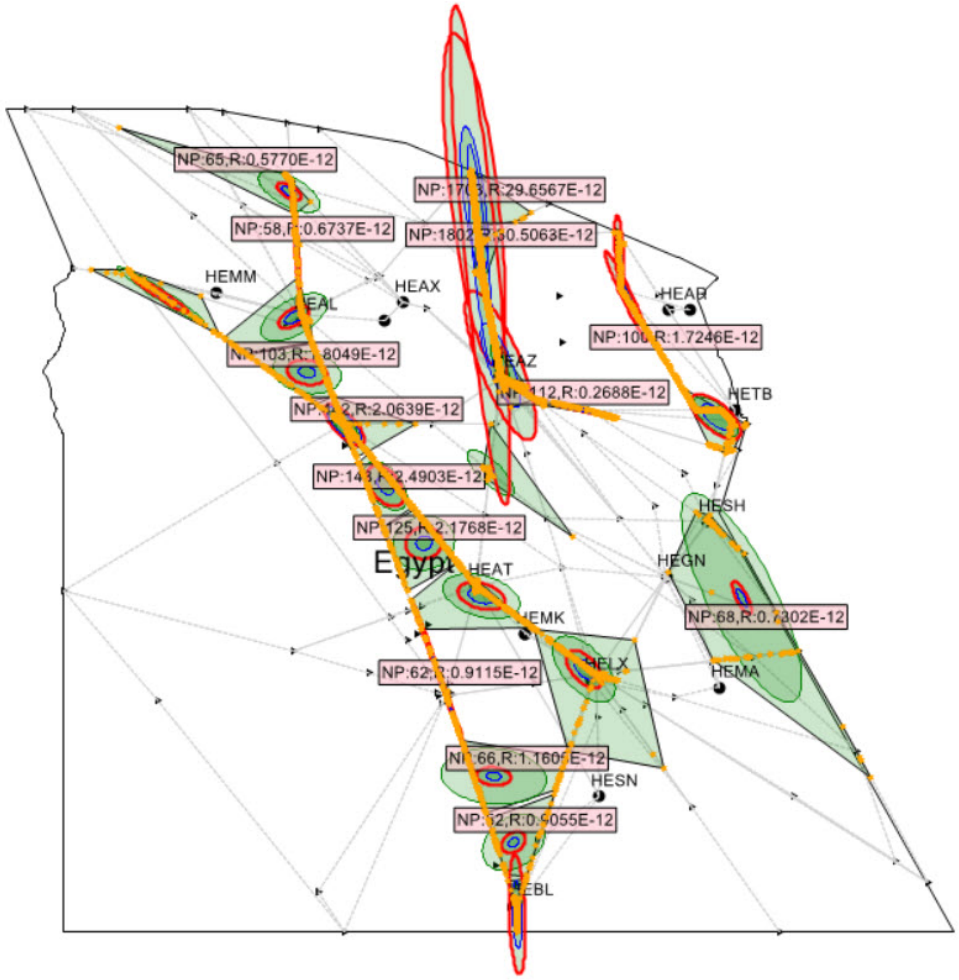
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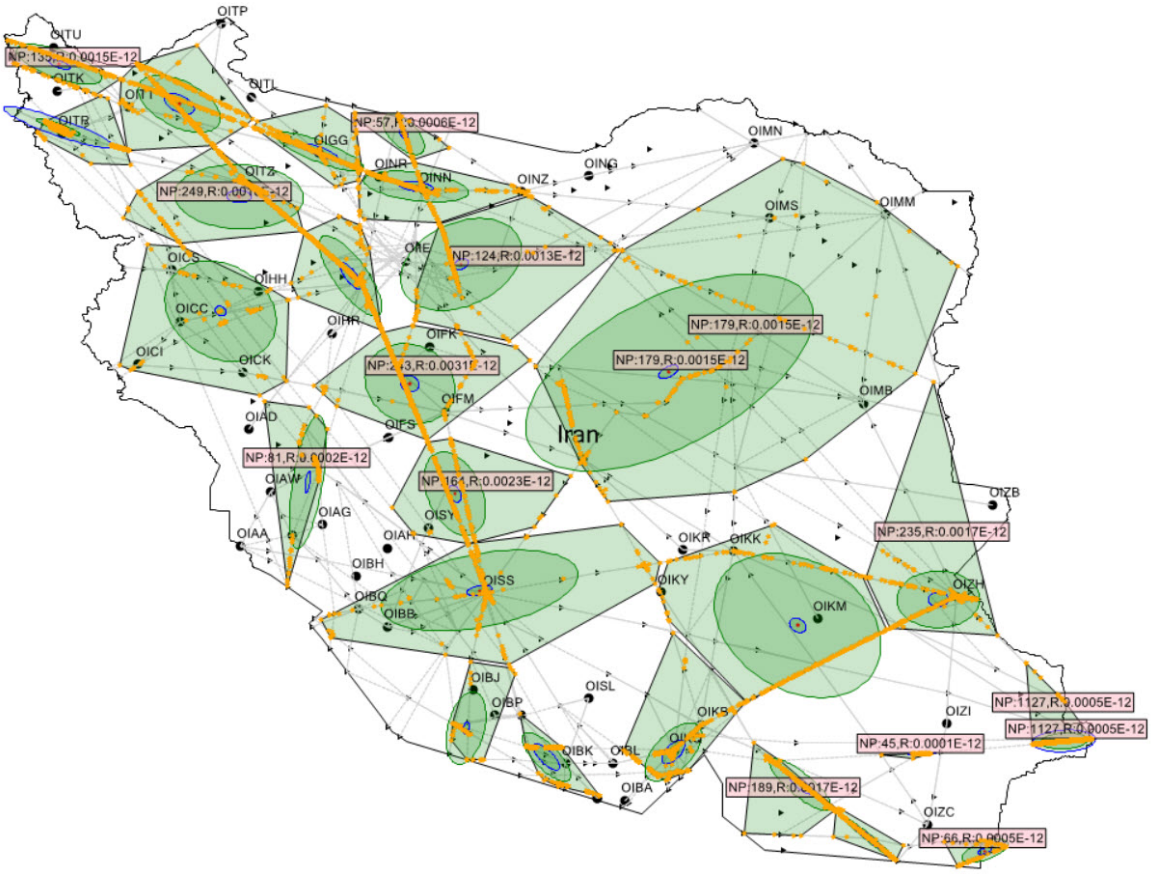
HEBL

Cairo FIR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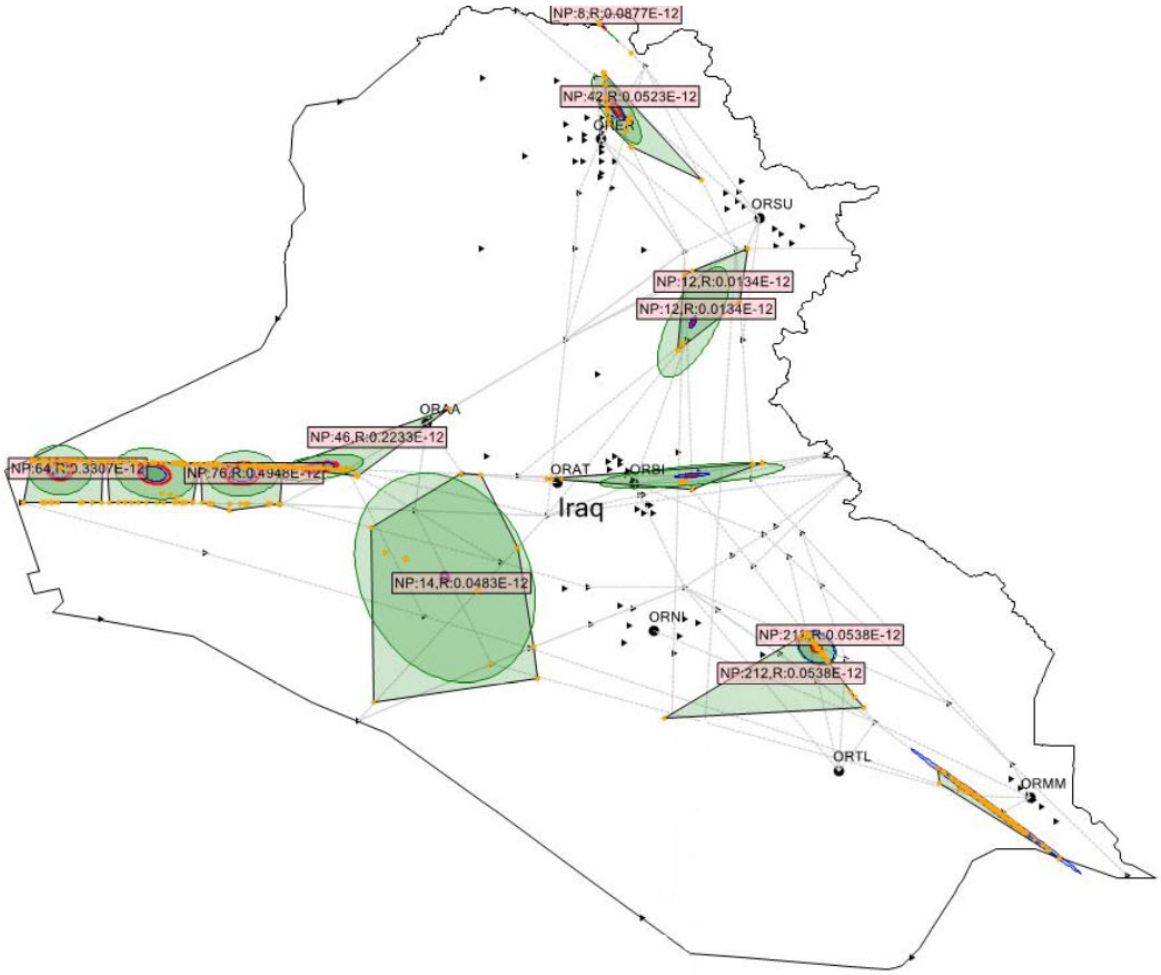
Tehran FIR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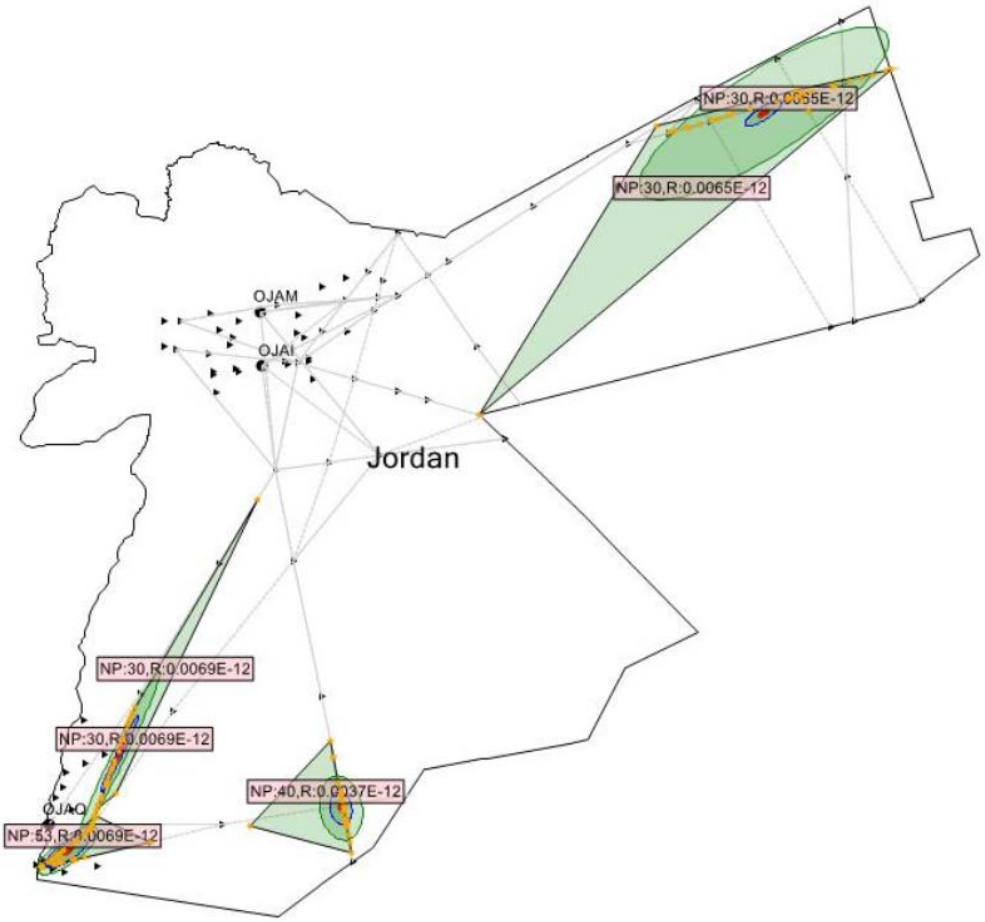
Baghdad FIR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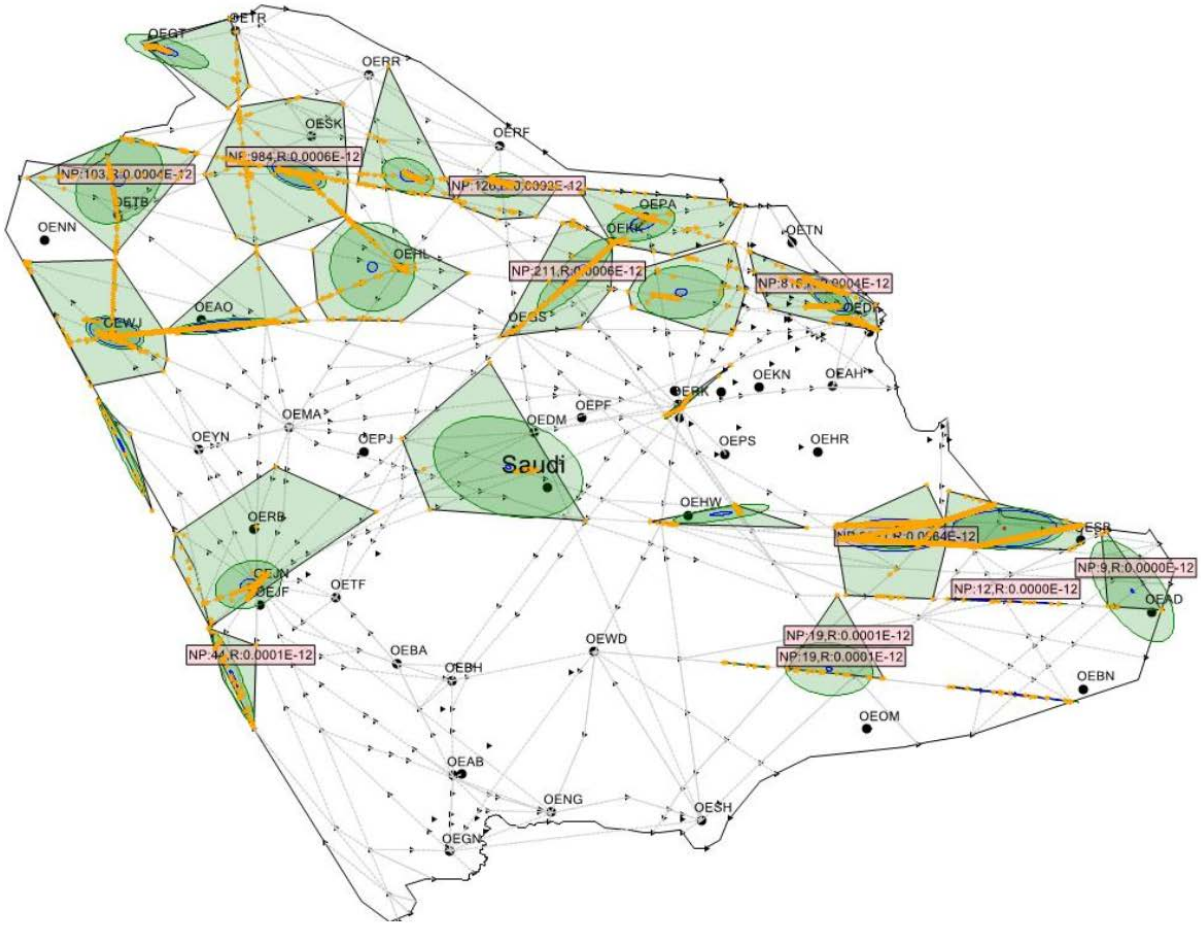
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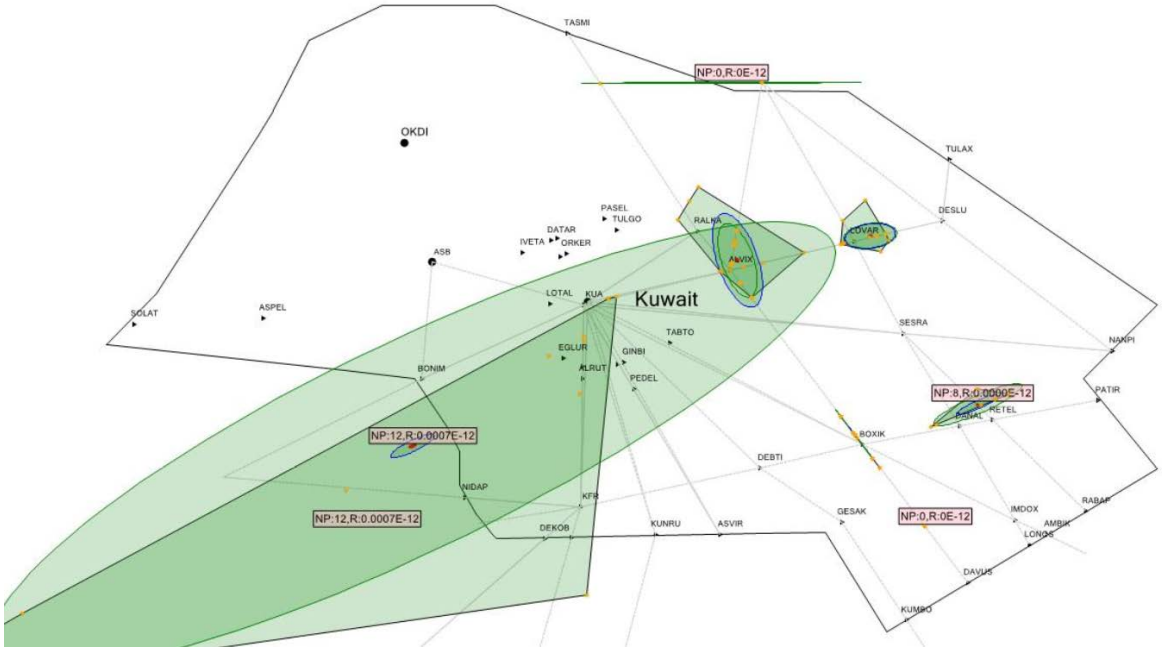
Muscat FIR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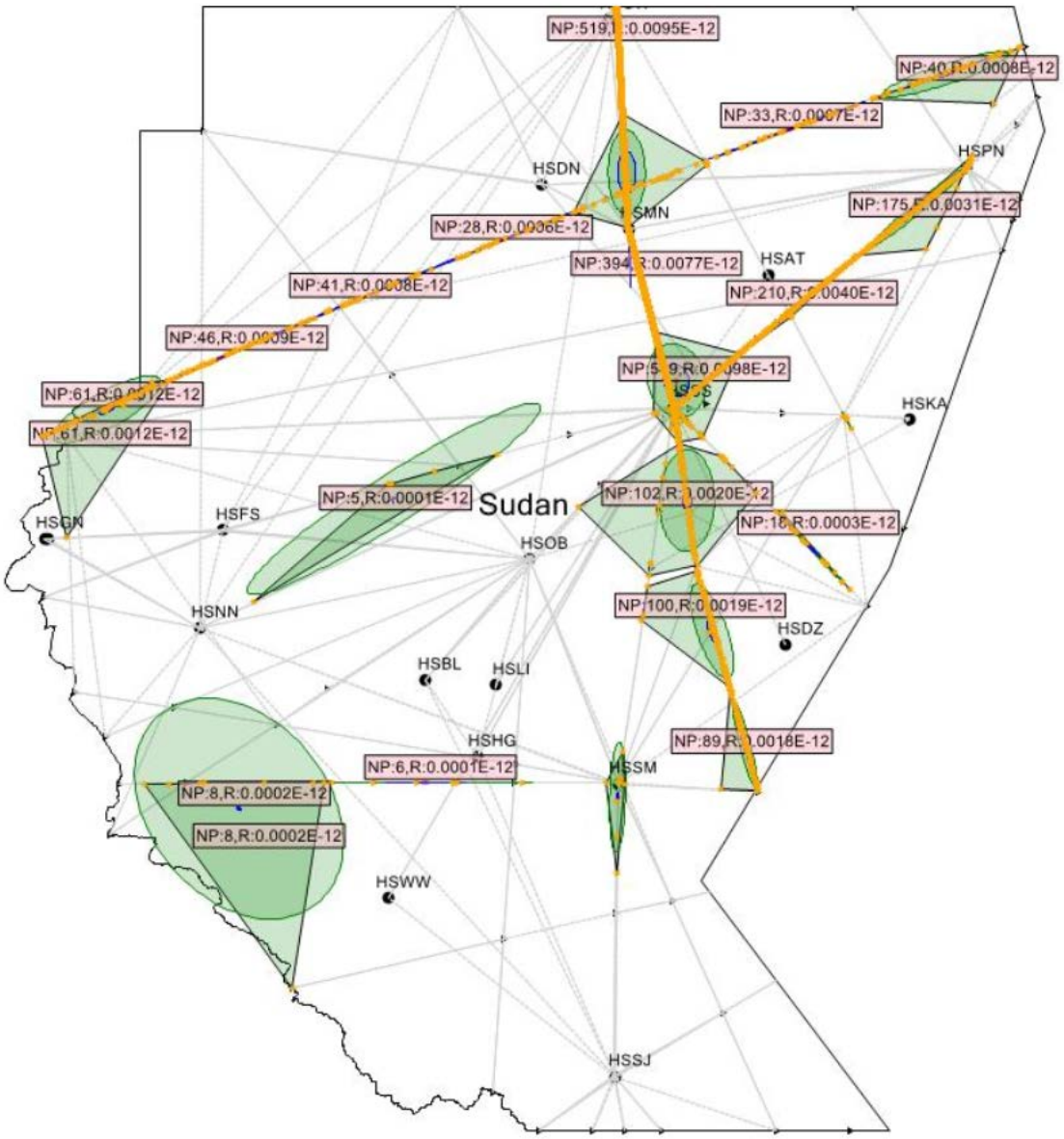
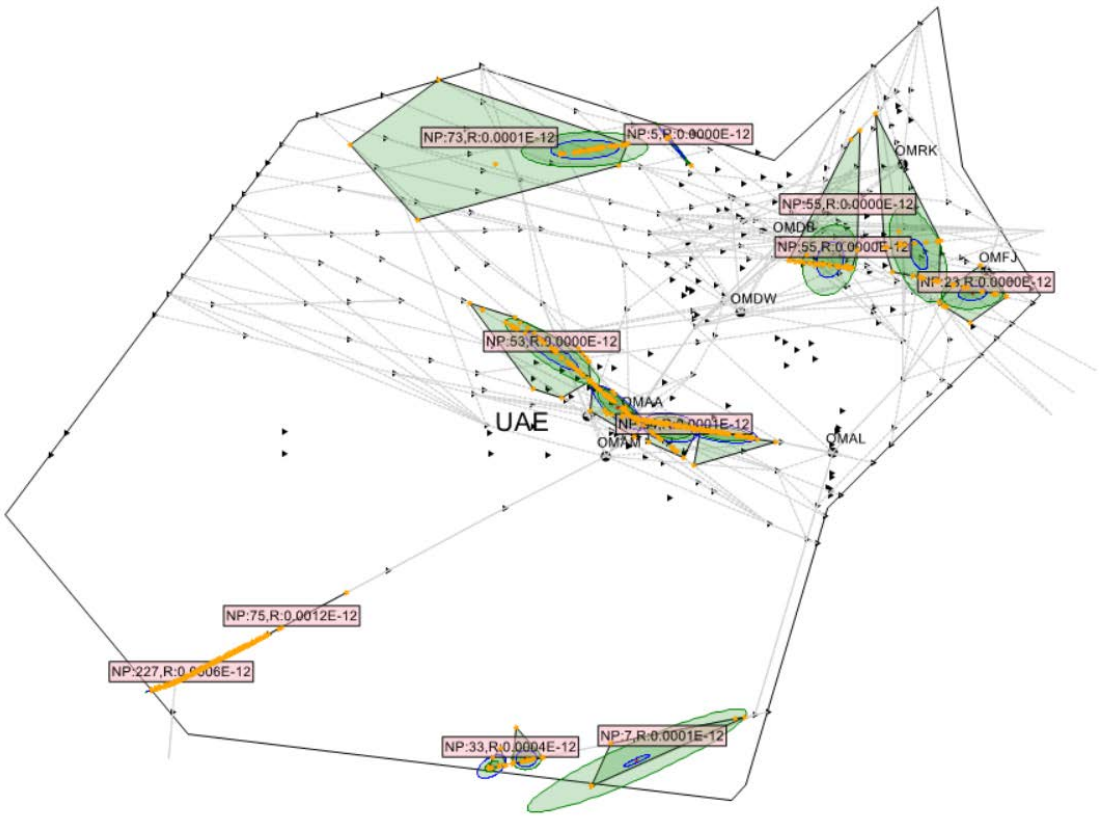
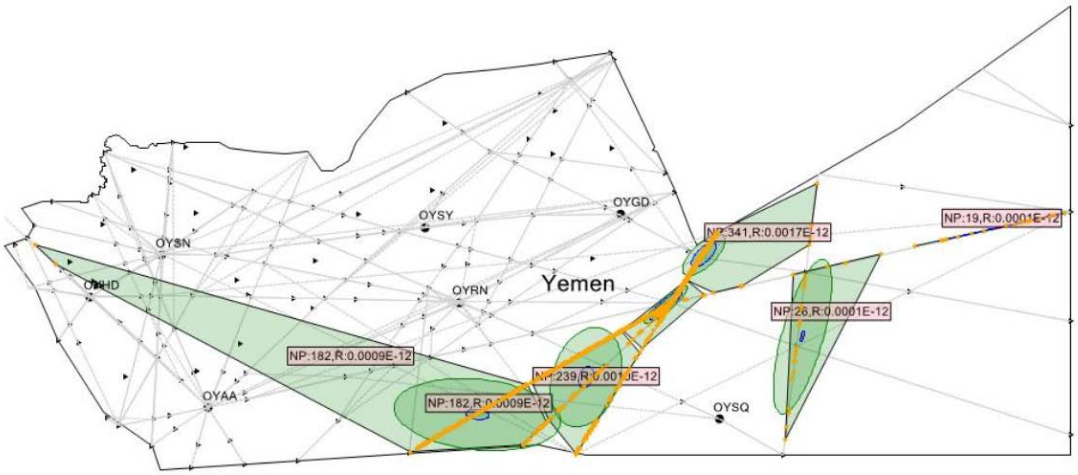
Kuwait FIR



Khartoum FIR



Emirates FIR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Sana’a FIR

APPENDIX 5.1A

Initial Revised Draft of the MID Air Navigation Strategy

Priority 1: Elements that have the highest contribution to the improvement of air navigation safety, capacity and/or efficiency in the MID Region. These elements should be implemented where applicable and will be used for the purpose of regional air navigation monitoring and reporting.

Priority 2: Elements recommended for implementation based on identified operational needs and benefits.

Priority 1 Thread: Any thread with at least 1 priority 1 element.

APTA		*Applicability*	*Priority*	Performance Indicators/Supporting Metrics	Targets	Timelines
APTA B0/1	PBN Approaches (with basic capabilities)	All RWYs ENDs at International Aerodromes	Priority 1	Indicator: % of runways ends at international aerodromes provided with Baro-VNAV approach procedures (LNAV/VNAV) Supporting metric: Number of runways ends at international aerodromes provided with Baro-VNAV approach procedures (LNAV/VNAV)		
APTA B0/2	PBN SID and STAR procedures (with basic capabilities)	All RWYs ENDs at International Aerodromes	Priority 1	Indicator: % of runway ends at international aerodromes provided with PBN SID and STAR (basic capabilities). Supporting Metric: Number of runways ends at international aerodromes provided with PBN SIDs and STAR (basic capabilities).		
APTA B0/3	SBAS/GBAS CAT I precision approach procedures	AT the state discretion's	Priority 2			
APTA B0/4	CDO (Basic)	OBBI, HESH, HEMA, HEGN, OIIE, OIKB, OIFM, OJAI, OJAQ, OKBK, OLBA, OOMS, OTHH, OEJN,	Priority 1	Indicator: % of International Aerodromes/TMA with CDO implemented as required. Supporting Metric: Number of International Aerodromes/TMAs with CDO implemented as required.		

APTA		*Applicability*	*Priority*	Performance Indicators/Supporting Metrics	Targets	Timelines
		OEMA, OEDF, OERK, HSSS, HSPN, OMAA, OMDB, OMDW, OMSJ				
APTA B0/5	CCO (Basic)	OBBI, HESN, HESH, HEMA, HEGN, HELX, OIIE, OIKB, OIFM, ORER, ORNI, OJAM, OJAI, OJAQ, OKBK, OLBA, OOMS, OOSA, OTHH, OEJN, OEMA, OEDF, OERK, HSNN, HSOB, HSSS, HSPN, OMAA, OMDB, OMDW, OMSJ	Priority 1	Indicator: % of International Aerodromes/TMA with CCO implemented as required. Supporting Metric: Number of International Aerodromes/TMAs with CCO implemented as required.		
APTA B0/6	PBN Helicopter Point in Space (PinS) Operations	AT the state discretion's	Priority 2			
APTA B0/7	Performance based aerodrome operating minima – Advanced aircraft	TBD	New element Priority 1 with applicability area	Indicator: % of International Aerodromes with PB AOM implemented for Advanced aircraft as required. Supporting Metric: Number of International Aerodromes with PB AOM implemented for Advanced aircraft as required.		
APTA B0/8	Performance based aerodrome operating minima – Basic aircraft	AT the state discretion's	Priority 2			

APTA		*Applicability*	*Priority*	Performance Indicators/Supporting Metrics	Targets	Timelines
APTA B1/1	PBN Approaches (with advanced capabilities)	AT the state discretion's	Priority 2			
APTA B1/2	PBN SID and STAR procedures (with advanced capabilities)	AT the state discretion's	Priority 2			
APTA B1/3	Performance based aerodrome operating minima – Advanced aircraft with SVGS	AT the state discretion's	Priority 2			
APTA B1/4	CDO (Advanced)	AT the state discretion's	Priority 2			
APTA B1/5	CCO (Advanced)	AT the state discretion's	Priority 2			

FRTO		*Applicability*	*Priority*	Performance Indicators/Supporting Metrics	Targets	Timelines
FRTO B0/1	Direct routing (DCT)	AT the state discretion's	Priority 2			
FRTO B0/2	Airspace planning and Flexible Use of Airspace (FUA) Level 1 Strategic	All States	Priority 1	Indicator: % of States that have implemented FUA. Supporting metric*: number of States that have implemented FUA.		
	Airspace planning and Flexible Use of Airspace (FUA) Level 2 Pre-tactical	All States	Priority 1	Indicator: % of States that have implemented FUA Level 1 Supporting metric*: number of States that have implemented FUA Level 1		
	Airspace planning and Flexible Use of Airspace (FUA) Level 3 Tactical	All States	Priority 1	Indicator: % of States that have implemented FUA Level 2 Supporting metric*: number of States that have implemented FUA Level 2		

FRTO		*Applicability*	*Priority*	Performance Indicators/Supporting Metrics	Targets	Timelines
FRTO B0/3	Pre-validated and coordinated ATS routes to support flight and flow	AT the state discretion's	Priority 2	Indicator: % of States that have implemented FUA Level 3 Supporting metric*: number of States that have implemented FUA Level 3		
FRTO B0/4	Basic conflict detection and conformance monitoring	In high traffic density areas	Priority 1	Indicator: % of States that have implemented conflict detection tools (Medium Term Conflict Detection Tool- MTCD) and conformance monitoring warnings. Supporting metric*: number of States that have implemented conflict detection tools (Medium Term Conflict Detection Tool- MTCD) and conformance monitoring warnings.		
FRTO B1/1	Free Route Airspace (FRA)	AT the state discretion's	Priority 2			
FRTO B1/2	Required Navigation Performance (RNP) routes	AT the state discretion's	Priority 2			
FRTO B1/3	Advanced Flexible Use of Airspace (FUA) and management of real time airspace data	AT the state discretion's	Priority 2			
FRTO B1/4	Dynamic sectorization	AT the state discretion's	Priority 2			
FRTO B1/5	Enhanced Conflict Detection Tools and Conformance Monitoring	AT the state discretion's	Priority 2			
FRTO B1/6	Multi-Sector Planning	AT the state discretion's	Priority 2			
FRTO B1/7	Trajectory Options Set (TOS)	AT the state discretion's	Priority 2			

NOPS		*Applicability*	*Priority*	Performance Indicators/Supporting Metrics	Targets	Timelines
NOPS B0/1	Initial integration of collaborative airspace management with air traffic flow management	All States	Priority 1	Indicator: % of States integrating collaborative airspace management with air traffic flow management Supporting metric: number of States that have integrated collaborative airspace management with air traffic flow management		
NOPS B0/2	Collaborative Network Flight Updates	AT the state discretion's	Priority 2			
NOPS B0/3	Network Operation Planning basic features	AT the state discretion's	Priority 2			
NOPS B0/4	Initial Airport/ATFM slots and A-CDM Network Interface	AT the state discretion's	Priority 2			
NOPS B0/5	Dynamic ATFM slot allocation	AT the state discretion's	Priority 2			
NOPS B1/1	Short Term ATFM measures	AT the state discretion's	Priority 2			
NOPS B1/2	Enhanced Network Operations Planning	AT the state discretion's	Priority 2			
NOPS B1/3	Enhanced integration of Airport operations planning with network operations planning	AT the state discretion's	Priority 2			
NOPS B1/4	Dynamic Traffic Complexity Management	AT the state discretion's	Priority 2			
NOPS B1/5	Full integration of airspace management with air traffic flow management	AT the state discretion's	Priority 2			
NOPS B1/6	Initial Dynamic Airspace configurations	AT the state discretion's	Priority 2			

NOPS		*Applicability*	*Priority*	Performance Indicators/Supporting Metrics	Targets	Timelines
NOPS B1/7	Enhanced ATFM slot swapping	AT the state discretion's	Priority 2			
NOPS B1/8	Extended Arrival Management supported by the ATM Network function	AT the state discretion's	Priority 2			
NOPS B1/9	Target Times for ATFM purposes	AT the state discretion's	Priority 2			
NOPS B1/10	Collaborative Trajectory Options Program (CTOP)	AT the state discretion's	Priority 2			

DAIM		*Applicability*	*Priority*	Performance Indicators/Supporting Metrics	Targets	Timelines
DAIM B1/1	Provision of quality-assured aeronautical data and information	All States	Priority 1	Supporting Metrics: 1- Number of States that have implemented QMS for AIS/AIM 2- Number of States that have implemented WGS-84 for horizontal plan (ENR, Terminal, AD) and have implemented WGS-84 Geoid Undulation 3- Number of States that have implemented an AIXM-based AIS database (AIXM V5.1+) 4- Number of States that have established formal arrangements with at least 50% of their AIS data originators		
DAIM B1/2	Provision of digital Aeronautical Information Publication (AIP) data sets		Priority 2			
DAIM B1/3	Provision of digital terrain data sets	All States	Priority 1	Indicator: % of States that provide required Terrain digital datasets		

DAIM		*Applicability*	*Priority*	Performance Indicators/Supporting Metrics	Targets	Timelines
				Supporting Metric: Number of States that provide required Terrain digital datasets		
DAIM B1/4	Provision of digital obstacle data sets	All States	Priority 1	Indicator: % of States that provide required Obstacle digital datasets Supporting Metric: Number of States that provide required Obstacle digital datasets		
DAIM B1/5	Provision of digital aerodrome mapping data sets		Priority 2			
DAIM B1/6	Provision of digital instrument flight procedure data sets		Priority 2			
DAIM B1/7	NOTAM improvements		Priority 2			

FICE		*Applicability*	*Priority*	Performance Indicators/Supporting Metrics	Targets	Timelines
FICE B0/1	Automated basic inter facility data exchange (AIDC)	As per the AIDC/OLDI Applicability Table	Priority 1	Indicator: % of priority 1 AIDC/OLDI Interconnection have been implemented Supporting metric: Number of AIDC/OLDI interconnections implemented between adjacent ACCs.		

ASUR		*Applicability*	*Priority*	Performance Indicators/Supporting Metrics	Targets	Timelines
ASUR B0/1	Automatic Dependent Surveillance – Broadcast (ADS-B)		New element Priority 1 with applicability area	Indicator: % of States that have implemented ADS-B to supplement surveillance coverage *Supporting Metric: Number of applicable States that have implemented ADS-B		

ASUR B0/2	Multilateration cooperative surveillance systems (MLAT)		New element Priority 1 with applicability area	Indicator: % of States that have implemented Mulitlateration as required *Supporting Metric: Number of applicable States that have implemented Mulitlateration		
ASUR B0/3	Cooperative Surveillance Radar Downlink of Aircraft Parameters (SSR-DAPS)	All States	Priority 1	Indicator: % of States that have enabled the downlink of the aircraft parameter (DAPS) *Supporting Metric: Number of States enable ATM System to obtain DAPS from the cooperative surveillance radars		
ASUR B1/1	Reception of aircraft ADS-B signals from space (SB ADS-B)		Priority 2			

SNET		*Applicability*	*Priority*	Performance Indicators/Supporting Metrics	Targets	Timelines
SNET B0/1	Short Term Conflict Alert (STCA)	All States	Priority 1	Indicator: % of States that have implemented Short-term conflict alert (STCA) Supporting metric*: number of States that have implemented Short-term conflict alert (STCA)		
SNET B0/2	Minimum Safe Altitude Warning (MSAW)	All States	Priority 1	Indicator: % of States that have implemented Minimum safe altitude warning (MSAW) Supporting metric*: number of States that have implemented Minimum safe altitude warning (MSAW)		
SNET B0/3	Area Proximity Warning (APW)	TBD	Priority 1	Indicator: % of States having implemented APW. Supporting metric*: number of States having implemented APW.		

SNET		*Applicability*	*Priority*	Performance Indicators/Supporting Metrics	Targets	Timelines
SNET B0/4	Approach Path Monitoring (APM)	AT the state discretion's	Priority 2			
SNET B1/1	Enhanced STCA with aircraft parameters	AT the state discretion's	Priority 2			
SNET B1/2	Enhanced STCA in complex TMA	AT the state discretion's	Priority 2			

GADS		*Applicability*	*Priority*	Performance Indicators/Supporting Metrics	Targets	Timelines
GADS B1/1	Aircraft Tracking		Priority 2			
GADS B1/2	Contact directory service	All states	Priority 1	Indicator: % of States provided Point of Contact information ICAO MID: create online GADSS POC repository		

AMET		*Applicability*	*Priority*	Performance Indicators/Supporting Metrics	Targets	Timelines
AMET B0/1	Meteorological observations products	All states	Priority 1	Indicator: % of States that provides the following Meteorological observations products, as required: 1. Automatic Weather Observation System (AWOS) information (including real-time exchange of wind and RVR data) 2. Local reports (MET REPORT / SPECIAL) 3. Aerodrome reports (METAR / SPECI) 4. Lightning information 5. Ground-based weather radar information 6. Meteorological satellite imagery 7. Aircraft meteorological report (ie. ADS-B, AIREP, AMDAR etc.) 8. Vertical wind and temperature profiles		

AMET		*Applicability*	*Priority*	Performance Indicators/Supporting Metrics	Targets	Timelines
				9. Volcano Observatory Notice for Aviation (VONA) 10. Wind shear alerts Supporting metric: number of States that provides the above Meteorological observations products, as required.		
AMET B0/2	Meteorological forecast and warning products	All states	Priority 1	Indicator: % of States that provides the following Meteorological forecast and warning products, as required. 1. World Area Forecast System (WAFS) gridded products 2. Significant Weather (SIGWX) 3. Low-level Area Forecast (GAMET) 4. Aerodrome Forecast (TAF) 5. Trend Forecast (TREND) 6. Take-off Forecast 7. Tropical Cyclone Advisory (TCA) 8. Volcanic Ash Advisory (VAA) 9. AIRMET 10. SIGMET 11. Aerodrome Warning 12. Wind Shear Warning Supporting metric: number of States that provides the above Meteorological forecast and warning products, as required.		
AMET B0/3	Climatological and historical meteorological products	All states	Priority 1	Indicator: % of States that provides Climatological and historical meteorological products, as required. Supporting metric: number of States that provide Climatological and historical meteorological products, as required.		

AMET		*Applicability*	*Priority*	Performance Indicators/Supporting Metrics	Targets	Timelines
AMET B0/4	Dissemination of meteorological products	All states	Priority 1	Indicator: % of States that disseminating Meteorological products using a variety of formats and means (TAC, Gridded, Graphical, BUFR code, IWXXM) Supporting metric: number of States that disseminating Meteorological products using the above formats and means.		
AMET B1/1	Meteorological observations information		Priority 2			
AMET B1/2	Meteorological forecast and warning information		Priority 2			
AMET B1/3	Climatological and historical meteorological information		Priority 2			
AMET B1/4	Dissemination of meteorological information		Priority 2			

ACAS		Applicability	Priority	Performance Indicators/Supporting Metrics	Targets	Timelines
ACAS B1/1	ACAS Improvements Operational	All States	Priority 1	Indicator: % of States requiring carriage of ACAS (TCAS v 7.1) for aircraft with a max certificated take-off mass greater than 5.7 tons Supporting metric: Number of States requiring carriage of ACAS (TCAS v 7.1) for aircraft with a max certificated take-off mass greater than 5.7 tons		

COMI		*Applicability*	*Priority*	Performance Indicators/Supporting Metrics	Targets	Timelines
COMI B0/1	Aircraft Communication Addressing and Reporting System (ACARS)		Priority 2			
COMI B0/2	Aeronautical Telecommunication Network/Open System Interconnection (ATN/OSI)		Priority 2			
COMI B0/3	VHF Data Link (VDL) Mode 0/A		Priority 2			
COMI B0/4	VHF Data Link (VDL) Mode 2 Basic		Priority 2			
COMI B0/5	Satellite communications (SATCOM) Class C Data		Priority 2			
COMI B0/6	High Frequency Data Link (HFDL)		Priority 2			
COMI B0/7	ATS Message Handling System (AMHS)	All States	Priority 1	Indicator: % of States have implemented AMHS connections with all adjacent COM Centres as required Supporting metric: Number of required AMHS interconnections established in the COM Centre		
COMI B1/1	Ground-Ground Aeronautical Telecommunication Network/Internet Protocol Suite (ATN/IPS)	All States	Priority 1	Indicator1: % of States that established National IP Network for voice and data communication Supporting metric: Number of States that established National IP Network for voice and data communication		

COMI		*Applicability*	*Priority*	Performance Indicators/Supporting Metrics	Targets	Timelines
				Indicator 2: % of States that joined the MID IP Network		
COMI B1/2	VHF Data Link (VDL) Mode 2 Multi-Frequency		Priority 2			
COMI B1/3	SATCOM Class B Voice and Data		Priority 2			
COMI B1/4	Aeronautical Mobile Airport Communication System (AeroMACS) Ground-Ground		Priority 2			

NAV		*Applicability*	*Priority*	Performance Indicators/Supporting Metrics	Targets	Timelines
NAVS B0/1	Ground Based Augmentation Systems (GBAS)	AT the state discretion's	Priority 2			
NAVS B0/2	Satellite Based Augmentation Systems (SBAS)	AT the state discretion's	Priority 2			
NAVS B0/3	Aircraft Based Augmentation Systems (ABAS)	All States	Priority 1	Indicator: % of States requiring aircrafts' equipage with the Aircraft Based Augmentation System (ABAS) to enable PBN Operations Supporting metric: Number of States requiring aircrafts' equipage with the Aircraft Based Augmentation System (ABAS) to enable PBN Operations		
NAVS B0/4	Navigation Minimal Operating Networks (Nav. MON)	All States	Priority 1	Indicator: % of States developed the plan of rationalized conventional navaids network to ensure the necessary levels of resilience for navigation		

NAV		*Applicability*	*Priority*	Performance Indicators/Supporting Metrics	Targets	Timelines
				Supporting metric: Number of States developed the plan of rationalized conventional navaids network to ensure the necessary levels of resilience for navigation		
NAVS B1/1	Extended GBAS	AT the state discretion's	Priority 2			

SURF		*Applicability*	*Priority*	Performance Indicators/Supporting Metrics	Targets	Timelines
SURF-B0/1	Basic ATCO tools to manage traffic during ground operations		Priority 1	Indicator: % of Airports having implemented Basic ATCO tools to manage traffic during ground operations Supporting metric*: Number of Airports having implemented Basic ATCO tools to manage traffic during ground operations		
SURF-B0/2	Comprehensive situational awareness of surface operations		Priority 1	Indicator: % of Airports having implemented the surveillance service of A-SMGCS Supporting metric*: Number of Airports having implemented the surveillance service of A-SMGCS		
SURF-B0/3	Initial ATCO alerting service for surface operations		Priority 1	Indicator: % of Airports having implemented the A-SMGCS alerting service. Supporting metric*: Number of Airports having implemented the A-SMGCS alerting service		
SURF-B1/1	Advanced features using visual aids to support traffic management during ground operations	AT the state discretion's	Priority 2			
SURF-B1/2	Comprehensive pilot situational awareness on the airport surface	AT the state discretion's	Priority 2			

SURF		*Applicability*	*Priority*	Performance Indicators/Supporting Metrics	Targets	Timelines
SURF-B1/3	Enhanced ATCO alerting service for surface operations	AT the state discretion's	Priority 2			
SURF-B1/4	Routing service to support ATCO surface operations management	AT the state discretion's	Priority 2			
SURF-B1/5	Enhanced vision systems for taxi operations	AT the state discretion's	Priority 2			
ACDM		***Applicability***	***Priority***	**Performance Indicators/Supporting Metrics**	**Targets**	**Timelines**
ACDM-B0/1	Airport CDM Information Sharing (ACIS)		Priority 1	Indicator: % of Airports having implemented ACIS Supporting metric*: number of Airports having implemented ACIS		
ACDM-B0/2	Integration with ATM Network function		Priority 1	Indicator: % of Airports having integrated ACDM with the ATM Network function. Supporting metric*: Number of Airports having integrated ACDM with the ATM Network function		
ACDM-B1/1	Airport Operations Plan (AOP)		Priority 1	Indicator: % of Airports having implemented an Airport Operations Plan (AOP) Supporting metric*: having implemented an Airport Operations Plan (AOP)		
ACDM-B1/2	Airport Operations Centre (APOC)	AT the state discretion's	Priority 2			

AIR NAVIGATION REPORT

ICAO Middle East Region

2019

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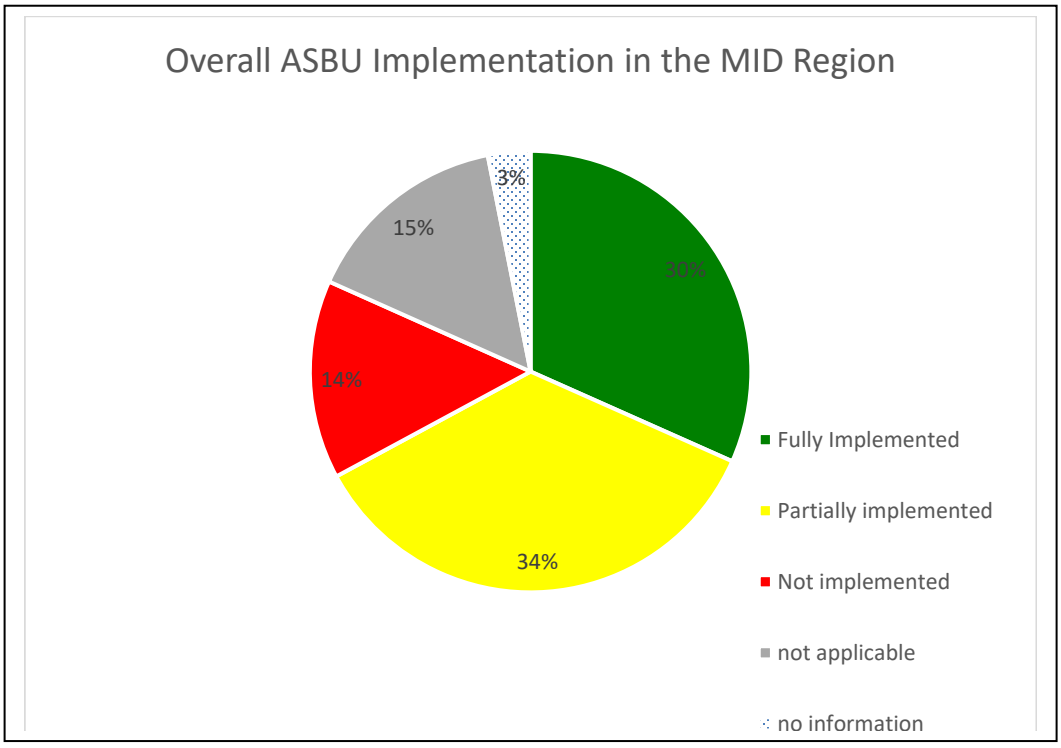
EXECUTIVE SUMMARY

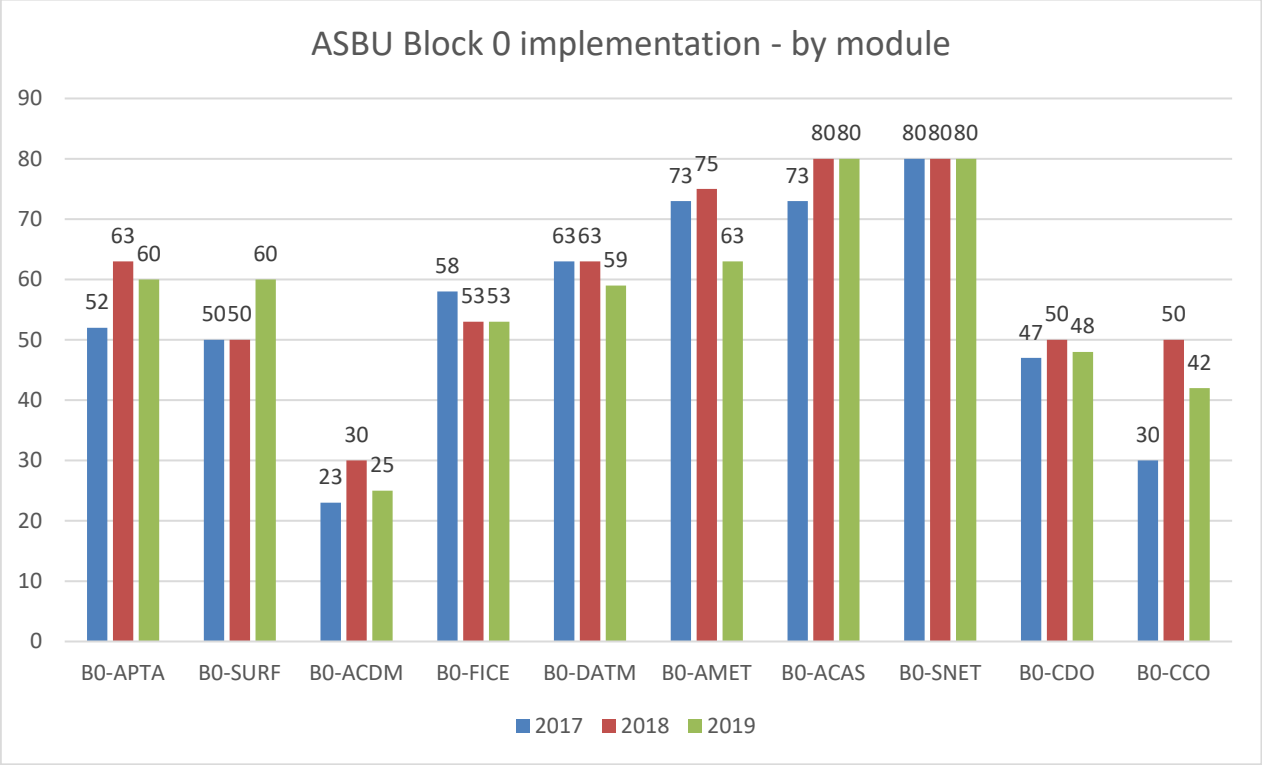
The Fourth Edition of the ICAO MID Air Navigation Report (2019) provides an overview of the status of implementation of the Priority 1 ASBU Block 0 Modules in the MID Region as well as the progress achieved by MID States compared to the Third Edition of the MID Air Navigation Report (2018).

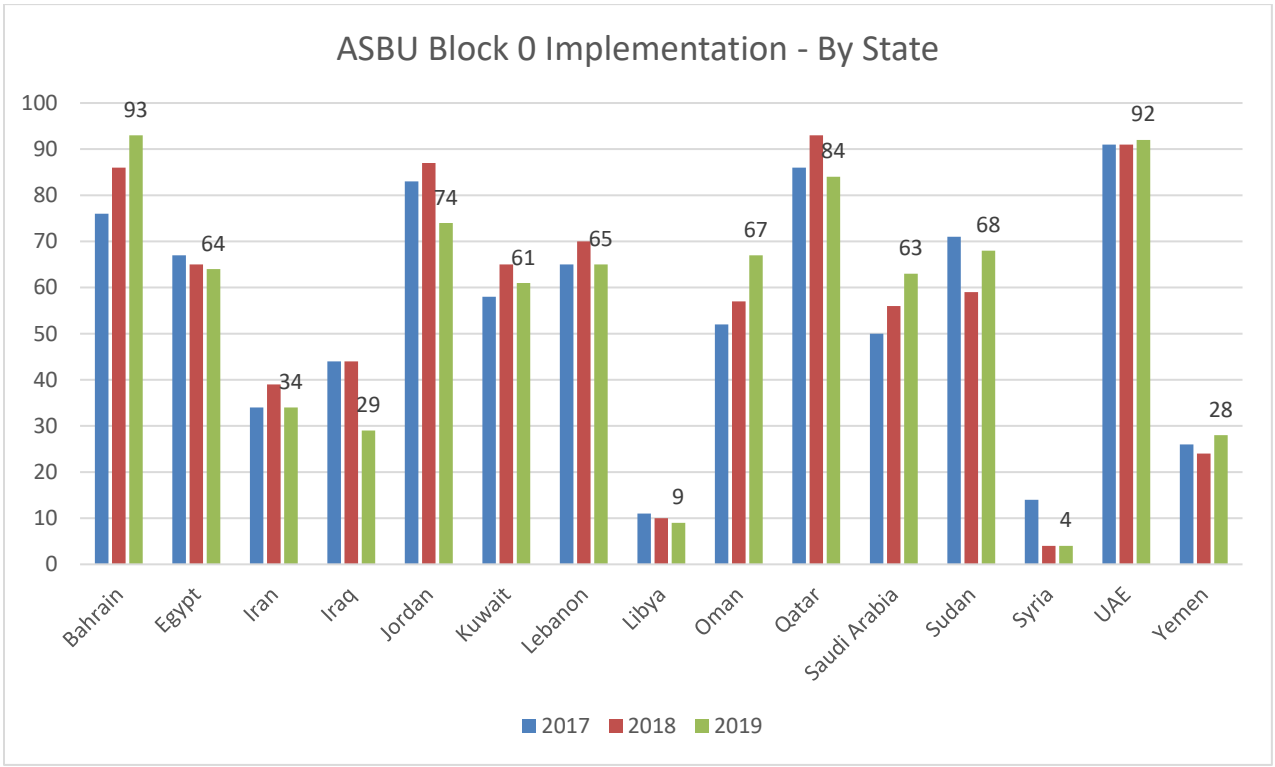
The main part of the document includes Section 2, which provides the status of implementation and the Regional Dashboard for the Priority 1 ASBU Block 0 Modules in the MID Region through different statistical maps and charts.

This Section will be complemented by providing the environmental protection matters in Section 3. Section 4 provides some best practices/success story.

To summarize the implementation status and progress of ASBU Block 0 Modules, the following ASBU Block 0 Implementation Dashboards present status and progress achieved in the implementation of each Module and by State. Detailed status is provided in Section 2.







Note 1 – utmost care was taken in the calculation of percentages, figures and numbers, however the statistics and graphs in this report should be considered as approximate amounts.

1. INTRODUCTION

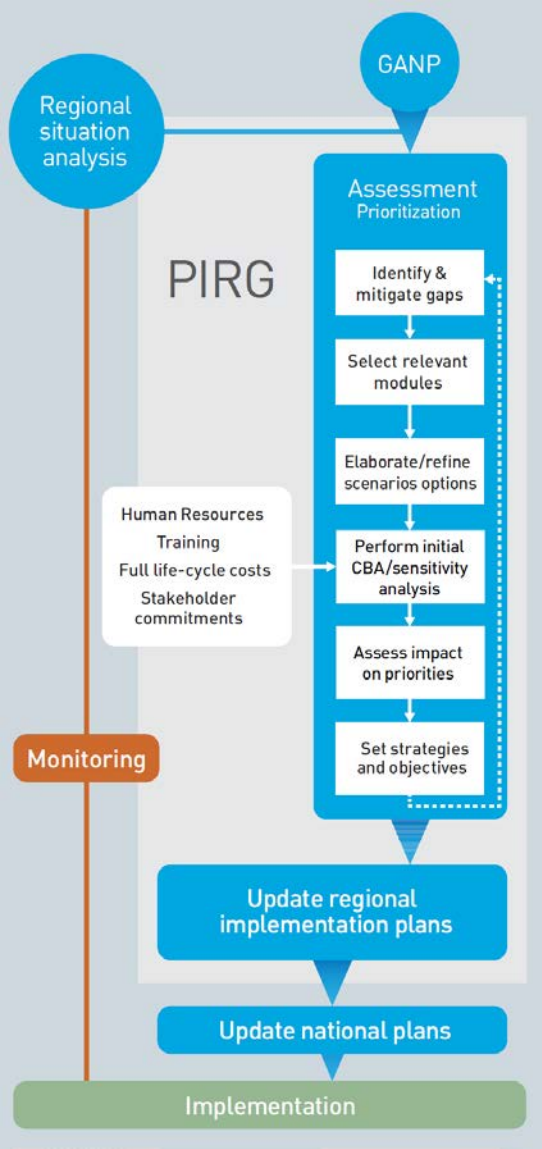
1.1 Objectives

The Fourth edition of the ICAO MID Region Air Navigation Report presents an overview of the planning and implementation progress for the Priority 1 ASBU Block 0 Modules (and its detailed elements) within the ICAO MID Region during the reporting period January till December 2019.

The implementation status data covers the fifteen (15) ICAO MID States.

GANP states that the regional national planning process should be aligned and used to identify those Modules which best provide solutions to the operational needs identified. Depending on implementation parameters such as the complexity of the operating environment, the constraints and the resources available, regional and national implementation plans will be developed in alignment with the GANP. Such planning requires interaction between stakeholders including regulators, users of the aviation system, the air navigation service providers (ANSPs), aerodrome operators and supply industry, in order to obtain commitments to implementation.

Accordingly, deployments on a global, regional and sub-regional basis and ultimately at State level should be considered as an integral part of the global and regional planning process through the Planning and Implementation Regional Groups (i.e. MIDANPIRG). The PIRG process will further ensure that all required supporting procedures, regulatory approvals and training capabilities are set in place. These supporting requirements will be reflected in regional online Air Navigation Plan (MID eANPs) developed by MIDANPIRG, ensuring strategic transparency, coordinated progress and certainty of investment. In this way, deployment arrangements including applicability dates can also be agreed and collectively applied by all stakeholders involved in the Region. The MID Region Air Navigation Report which contains all information on the implementation process of the Priority 1 ASBU Modules of the MID Region Air Navigation Strategy (MID Doc 002) is the key document for MIDANPIRG and its Subsidiary Bodies to monitor and analyze the implementation within the MID Region.



Regional Planning

1.2 Background

Following the discussions and recommendations from the Twelfth Air Navigation Conference (AN-Conf/12), the Fourth Edition of the Global Air Navigation Plan (GANP) based on the Aviation Systems Block Upgrades (ASBU) approach was endorsed by the 38th Assembly of ICAO in October 2013. The Assembly Resolution 38-02 which agreed, amongst others, to call upon States, planning and implementation regional groups (PIRGs), and the aviation industry to provide timely information to ICAO (and to each other) regarding the implementation status of the GANP, including the lessons learned from the implementation of its provisions and to invite PIRGs to use ICAO standardized tools or adequate regional tools to monitor and (in collaboration with ICAO) analyze the implementation status of air navigation systems.

The Seventeenth meeting of the MIDANPIRG Group (MIDANPIRG/17) which was held in Cairo, Egypt in April 2019 endorsed the revised version of the MID Region Air Navigation Strategy - MID Doc 002.

MIDANPIRG and its Subsidiary Bodies monitor the progress and the status of implementation of the ASBU Block 0 Modules in the MID Region.

Doha Declaration, which was endorsed by the third meeting of Directors General of Civil Aviation (DGCA-MID/3) (Doha, Qatar, 27-29 April 2015), has set five Targets for the Air Navigation Capacity and Efficiency, as follows:

1- *Optimization of Approach Procedures including vertical guidance (PBN):* Implement PBN approach procedures with vertical guidance, for all runways ends at international aerodromes, either as the primary approach or as a back-up for the precision approaches by 2017

2- *Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration:* 11 States to implement AIDC/OLDI between their ACCs and at least one adjacent ACC by 2017

3- *Service Improvement through Digital Aeronautical Information Management:* All States to complete implementation of Phase I of the transition from AIS to AIM by 2017

4- *Meteorological information supporting enhanced operational efficiency and safety:* 12 States to complete the implementation of QMS for MET by 2017

5- *ACAS Improvement:* All States require carriage of ACAS (TCAS v 7.1) for aircraft with a max certificated take-off mass greater than 5.7 tons by 2017

The MID Region Air Navigation Report is an integral part of the air navigation planning and implementation process in the MID Region; and the main tool for the monitoring and assessing the implementation of Air Navigation Systems and ASBUs in the MID Region.

1.3 Scope

This MID Air Navigation Report addresses the implementation status of the priority 1 ASBU Block 0 Modules for the reference period January 2019 to December 2019.

The Report covers the fifteen (15) ICAO MID States:

Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Oman, Qatar, Saudi Arabia, Sudan, Syria, United Arab Emirates and Yemen.

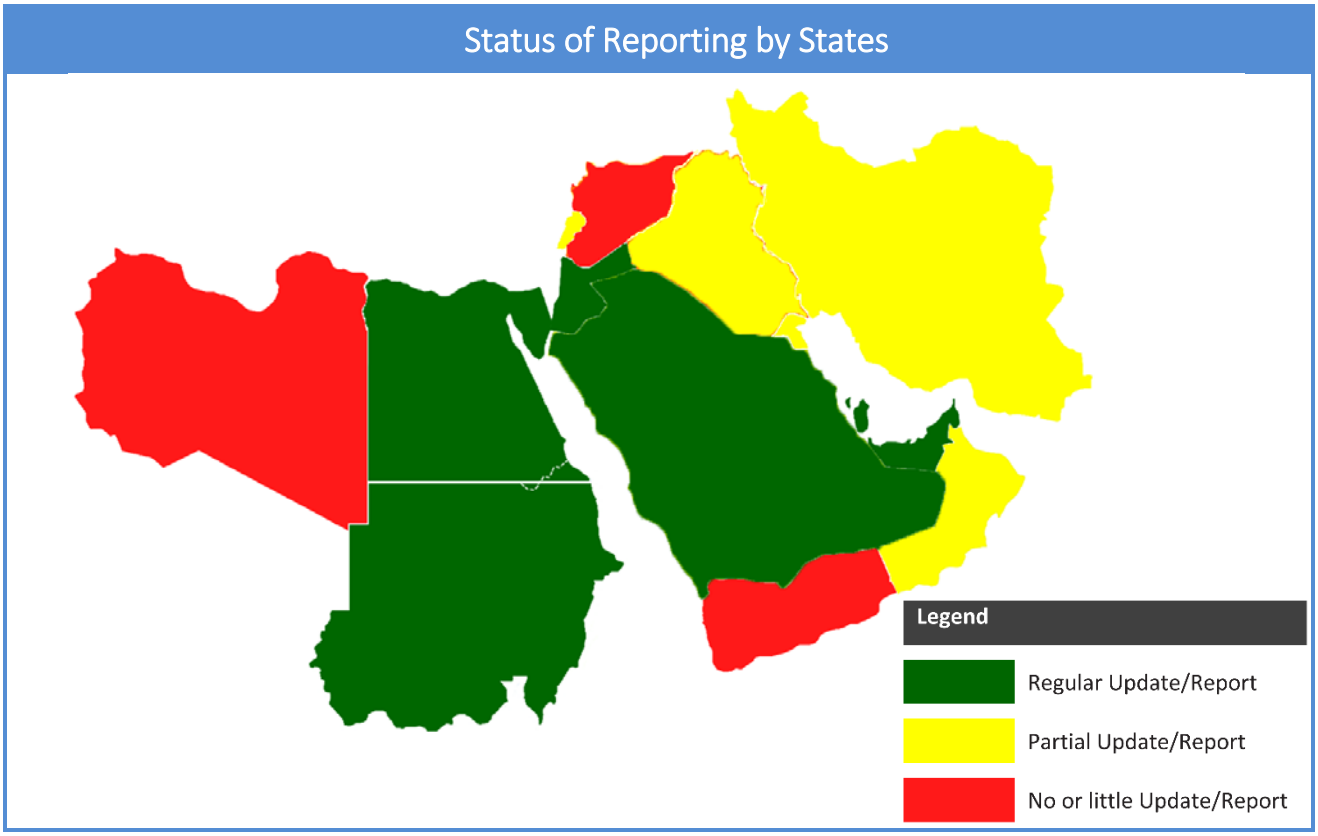
ICAO MID Region

1.4 Collection of Data

For the purpose of collecting necessary data for the MID Air Navigation Report-2019, a State Letter Ref.: AN 1/7 – 20/008 was issued on 9 January 2020, to follow-up on the MIDANPIRG Conclusion 17/10, which urged States to provide the relevant data necessary for the development of the MID Region Air Navigation Report-2019. However, some States did not respond to the State Letter. The status of reporting by States is shown in the following map.

Data collected from States was complemented by some updates provided mainly through the MIDANPIRG Subsidiary Bodies and the MID eANP Volume III.

Where the required data was not provided, it is indicated in the Report by color coding (Missing Data).



1.5 Structure of the Report

Executive Summary provides an overall review of the ASBU Block 0 implementation in the MID Region.

Section 1 (Introduction) presents the objective and background of the report as well as the scope covered and method of data collection.

Section 2 lists the priority 1 ASBU Block 0 Modules in the MID Region and presents the status of their implementation and their progress in graphical and numeric form.

Section 3 provides an update on the State's CO2 action plans and presents an estimation of environmental benefits, in terms of CO2 emissions reduction, accrued from the implementation of some ASBU Block 0 Modules in the MID Region.

Section 4 concludes the Report by providing a brief analysis on the status of implementation and the progress of the different priority 1 ASBU Block 0 Modules.

Appendix A provides detailed status of the implementation of Priority 1 Block 0 Modules and their associated Elements for the MID States.

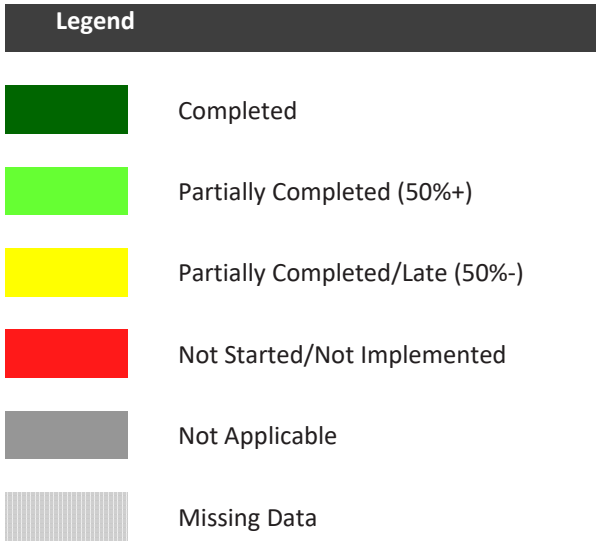
2. STATUS AND PROGRESS OF ASBU IMPLEMENTATION

The ICAO Block Upgrades refer to the target availability timelines for a group of operational improvements (technologies and procedures) that will eventually realize a fully-harmonized global Air Navigation System. The technologies and procedures for each Block have been organized into unique Modules which have been determined and cross-referenced based on the specific Performance Improvement Area to which they relate.

Block 0 Modules are characterized by operational improvements which have already been developed and implemented in many parts of the world. It therefore has a near-term implementation period of 2013–2018, whereby 2013 refers to the availability of all components of its particular performance modules and 2018 refers to the target implementation deadline. ICAO has been working with its Member States to help each determine exactly which capabilities they should have in place based on their unique operational requirements.

This chapter of the report gives an overview of the status of implementation for each of the Priority 1 ASBU Block 0 Modules for the MID States. The status of implementation of each Module versus its target(s) is also provided for each priority 1 ASBU Block 0 Module.

The following color scheme is used for illustrating the status of implementation:



Note – Missing data is excluded in the calculation of the average regional status of implementation.

2.1 MID Region ASBU Block 0 Modules Prioritization

This report covers twelve (out of eighteen) ASBU Block 0 Modules that have been determined by MIDANPIRG/17 as priority 1 for the MID Region (MID Doc 002 Edition April 2019, refers).

Module Code	Module Title	Priority	Start Date	Monitoring		Remarks
				Main	Supporting	
***Performance Improvement Areas (PIA) 1*: Airport Operations**						
B0-APTA	Optimization of Approach Procedures including vertical guidance	1	2014	PBN SG	ATM SG, AIM SG, CNS SG	
B0-WAKE	Increased Runway Throughput through Optimized Wake Turbulence Separation	2				
B0-RSEQ	Improve Traffic flow through Runway Sequencing (AMAN/DMAN)	2				
B0-SURF	Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)	1	2014	ANSIG	CNS SG	Coordination with RGS WG
B0-ACDM	Improved Airport Operations through Airport-CDM	1	2014	ANSIG	CNS SG, AIM SG, ATM SG	Coordination with RGS WG
Performance Improvement Areas (PIA) 2 Globally Interoperable Systems and Data Through Globally Interoperable System Wide Information Management						
B0-FICE	Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration	1	2014	CNS SG	AIM SG, ATM SG	
B0-DATM	Service Improvement through Digital Aeronautical Information Management	1	2014	AIM SG		
B0-AMET	Meteorological information supporting enhanced operational efficiency and safety	1	2014	MET SG		
Performance Improvement Areas (PIA) 3 Optimum Capacity and Flexible Flights – Through Global Collaborative ATM						
B0-FRTO	Improved Operations through Enhanced En-Route Trajectories	1	2014	ATM SG		
B0-NOPS	Improved Flow Performance through Planning based on a Network-Wide view	1	2014			
B0-ASUR	Initial capability for ground surveillance	2				

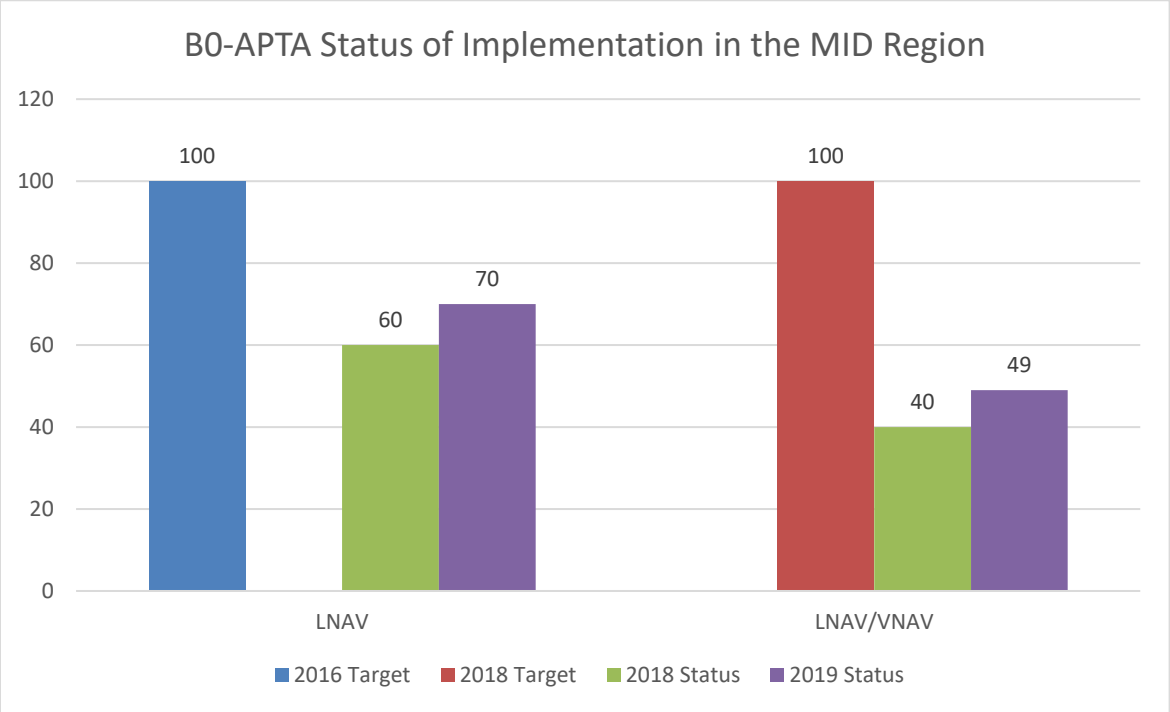
B0-ASEP	Air Traffic Situational Awareness (ATSA)	2				
B0-OPFL	Improved access to optimum flight levels through climb/descent procedures using ADS-B	2				
B0-ACAS	ACAS Improvements	1	2014	CNS SG		
B0-SNET	Increased Effectiveness of Ground-Based Safety Nets	1	2017	ATM SG		
Performance Improvement Areas (PIA) 4 Efficient Flight Path – Through Trajectory-based Operations						
B0-CDO	Improved Flexibility and Efficiency in Descent Profiles (CDO)	1	2014	PBN SG		
B0-TBO	Improved Safety and Efficiency through the initial application of Data Link En-Route	2		ATM SG	CNS SG	
B0-CCO	Improved Flexibility and Efficiency Departure Profiles - Continuous Climb Operations (CCO)	1	2014	PBN SG		

2.2 ASBU Implementation Status and Progress in the MID Region

2.2.1 B0-APTA

The use of performance-based navigation (PBN) and ground-based augmentation system (GBAS) landing system (GLS) procedures will enhance the reliability and predictability of approaches to runways, thus increasing safety, accessibility and efficiency. This is possible through the application of Basic global navigation satellite system (GNSS), Baro vertical navigation (VNAV), satellite-based augmentation system (SBAS) and GLS. The flexibility inherent in PBN approach design can be exploited to increase runway capacity.

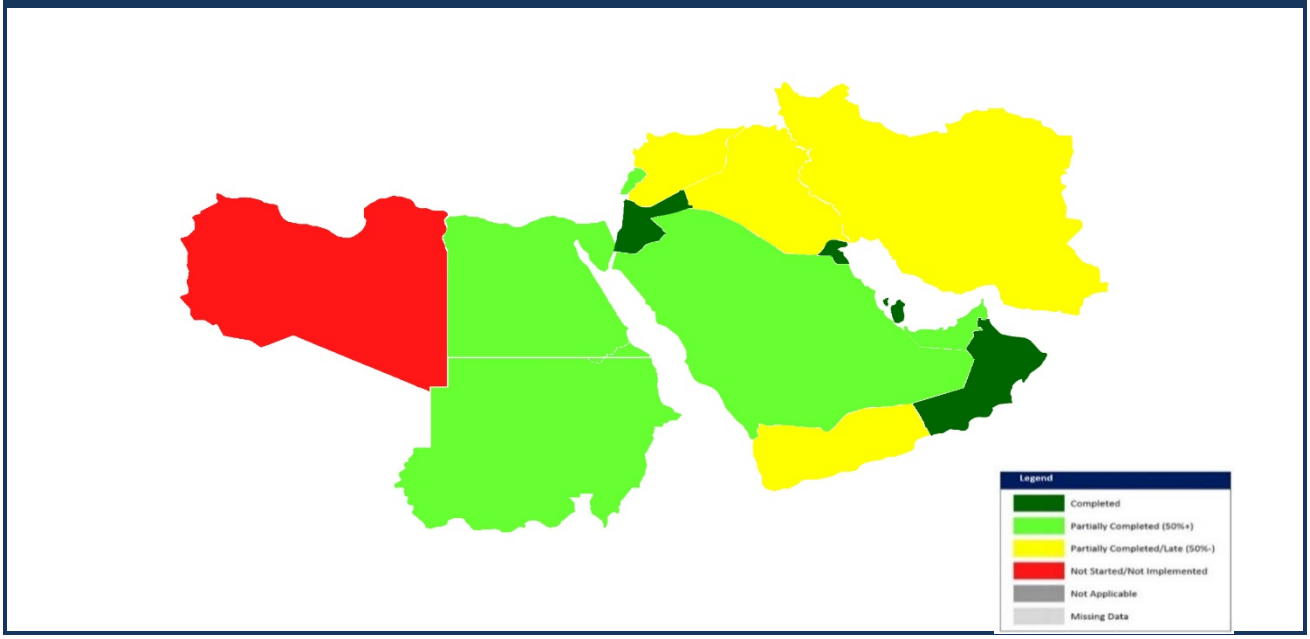
B0 – APTA: Optimization of Approach Procedures including vertical guidance				
Elements	**Applicability**	**Performance Indicators/Supporting Metrics**	**Targets**	**Timelines**
LNAV	All RWYs Ends at International Aerodromes	Indicator: % of runway ends at international aerodromes with RNAV(GNSS) Approach Procedures (LNAV) Supporting metric: Number of runway ends at international aerodromes with RNAV (GNSS) Approach Procedures (LNAV)	100% (All runway ends at Int'l Aerodromes, either as the primary approach or as a back-up for precision approaches)	Dec. 2016
LNAV/VNAV	All RWYs ENDs at International Aerodromes	Indicator: % of runways ends at international aerodromes provided with Baro-VNAV approach procedures (LNAV/VNAV) Supporting metric: Number of runways ends at international aerodromes provided with Baro-VNAV approach procedures (LNAV/VNAV)	100% (All runway ends at Int'l Aerodromes, either as the primary approach or as a back-up for precision approaches)	Dec. 2017



Module	Elements	Bahrain	Egypt	Iran	Iraq	Jordan	Kuwait	Lebanon	Libya	Oman	Qatar	Saudi	Sudan	Syria	UAE	Yemen
B0-APTA	LNAV															
	LNAV/VNAV															

The progress for B0-APTA is <u>good</u> (with approximately 60 % implementation).

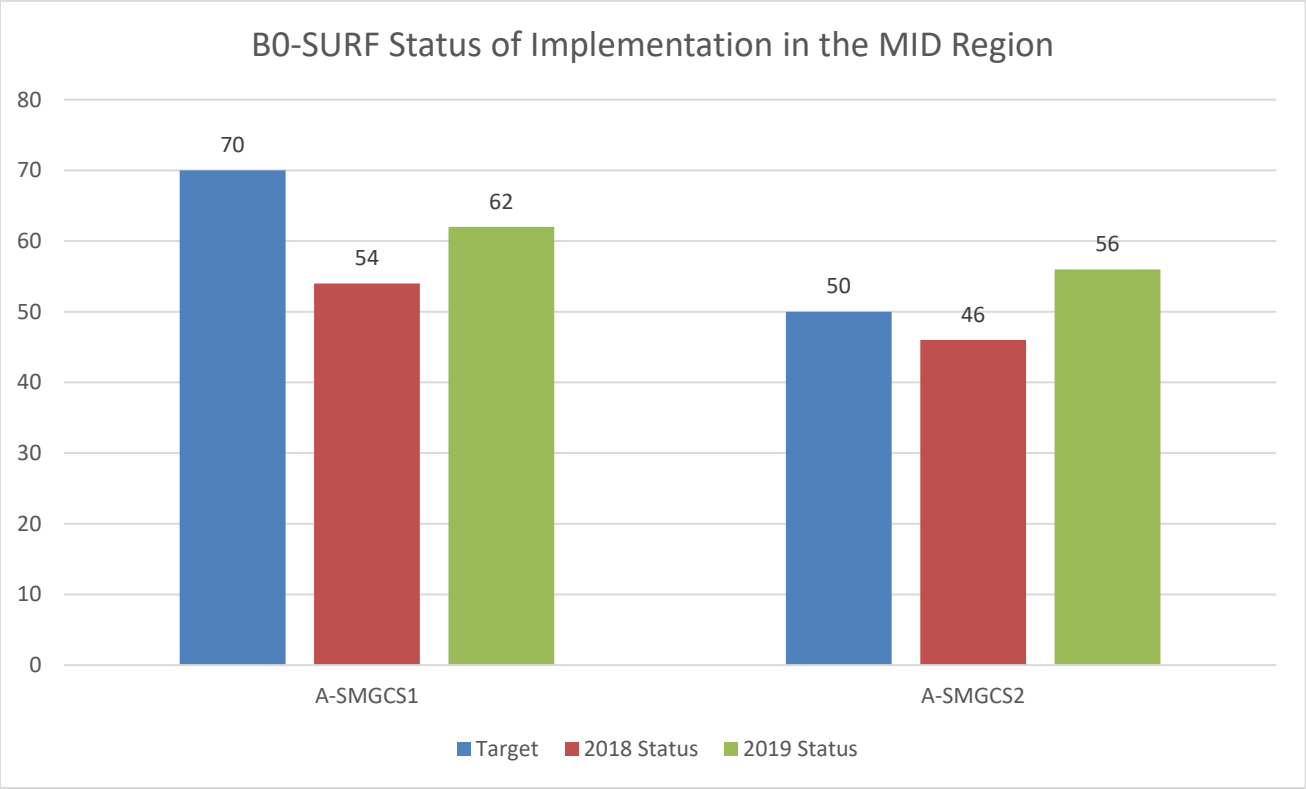
B0-APTA Status of implementation in the MID Region



2.2.2 B0-SURF

Basic A-SMGCS provides surveillance and alerting of movements of both aircraft and vehicles on the aerodrome thus improving runway/aerodrome safety. ADS-B information is used when available (ADS-B APT).

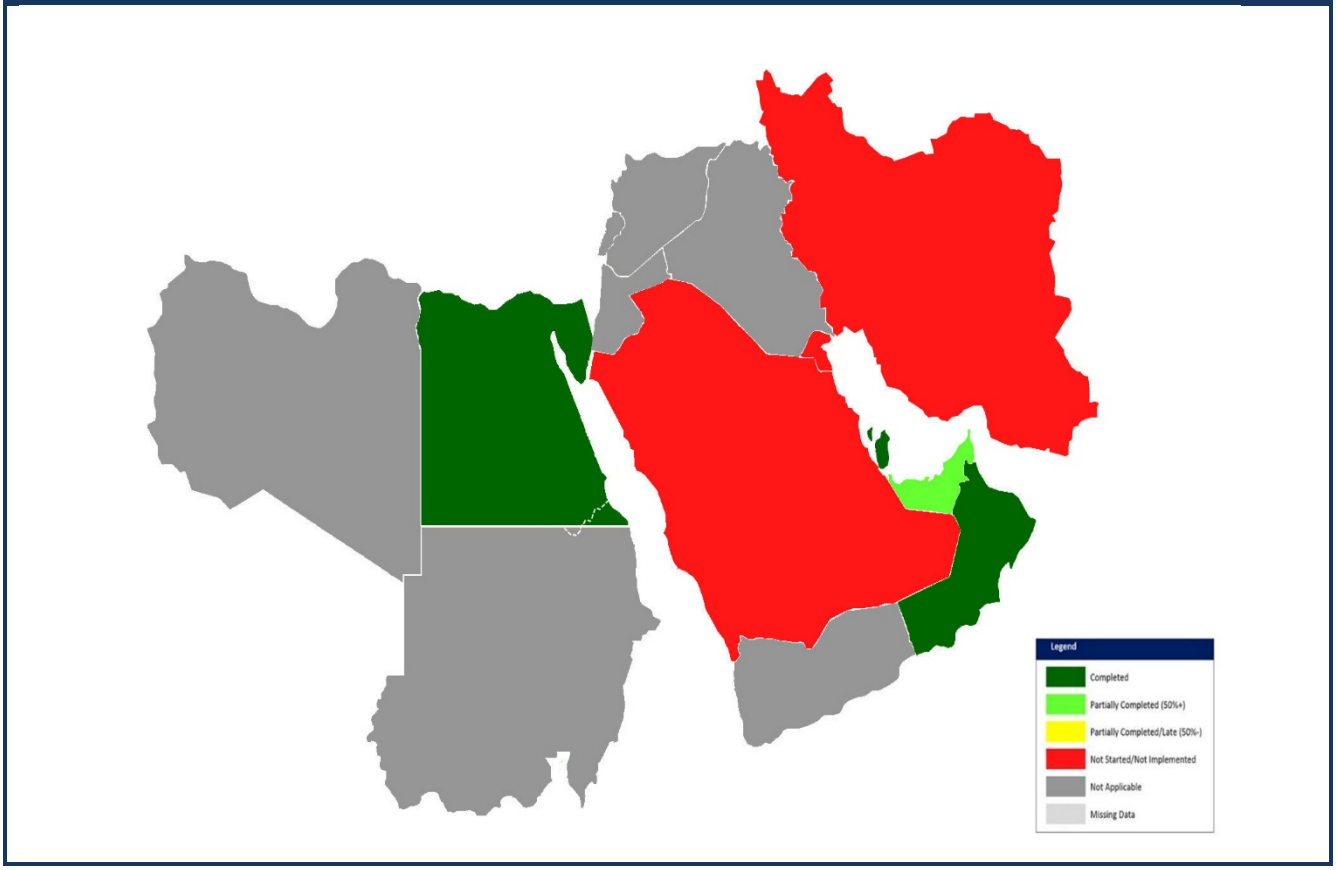
B0-SURF: Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)				
Elements	**Applicability**	**Performance Indicators/Supporting Metrics**	**Targets**	**Timelines**
A-SMGCS Level 1*	OBBI, HECA, OIII, OKBK, OOMS, OTBD, OTHH, OEDF, OEJN, OERK, OMDB, OMAA, OMDW	Indicator: % of applicable international aerodromes having implemented A-SMGCS Level 1 Supporting Metric: Number of applicable international aerodromes having implemented A-SMGCS Level 1	70%	Dec. 2017
A-SMGCS Level 2*	OBBI, HECA, OIII, OKBK, OOMS, OTBD, OTHH, OEJN, OERK, OMDB, OMAA, OMDW	Indicator: % of applicable international aerodromes having implemented A-SMGCS Level 2 Supporting Metric: Number of applicable international aerodromes having implemented A-SMGCS Level 2	50%	Dec. 2017



Module	Elements	Bahrain	Egypt	Iran	Iraq	Jordan	Kuwait	Lebanon	Libya	Oman	Qatar	Saudi	Sudan	Syria	UAE	Yemen
B0-SURF	A-SMGCS Level 1															
	A-SMGCS Level 2															

The progress for B0-SURF is good (with approximately 59% implementation). B0-SURF is not applicable for 7 States.

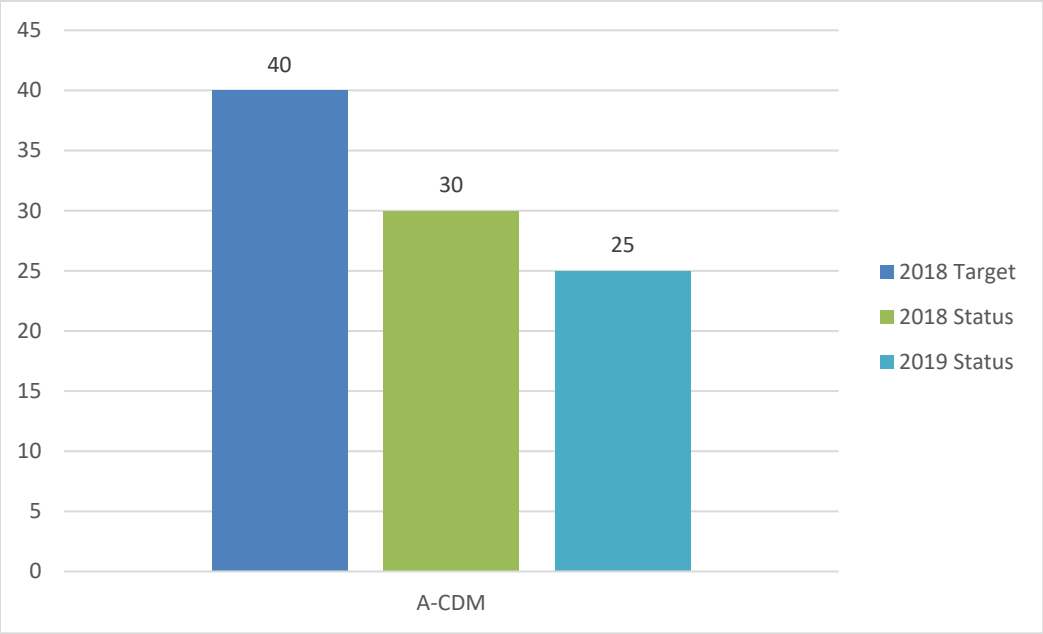
B0-SURF Status of implementation in the MID Region



2.2.3 B0-ACDM

To implement collaborative applications that will allow the sharing of surface operations data among the different stakeholders on the airport. This will improve surface traffic management reducing delays on movement and maneuvering areas and enhance safety, efficiency and situational awareness.

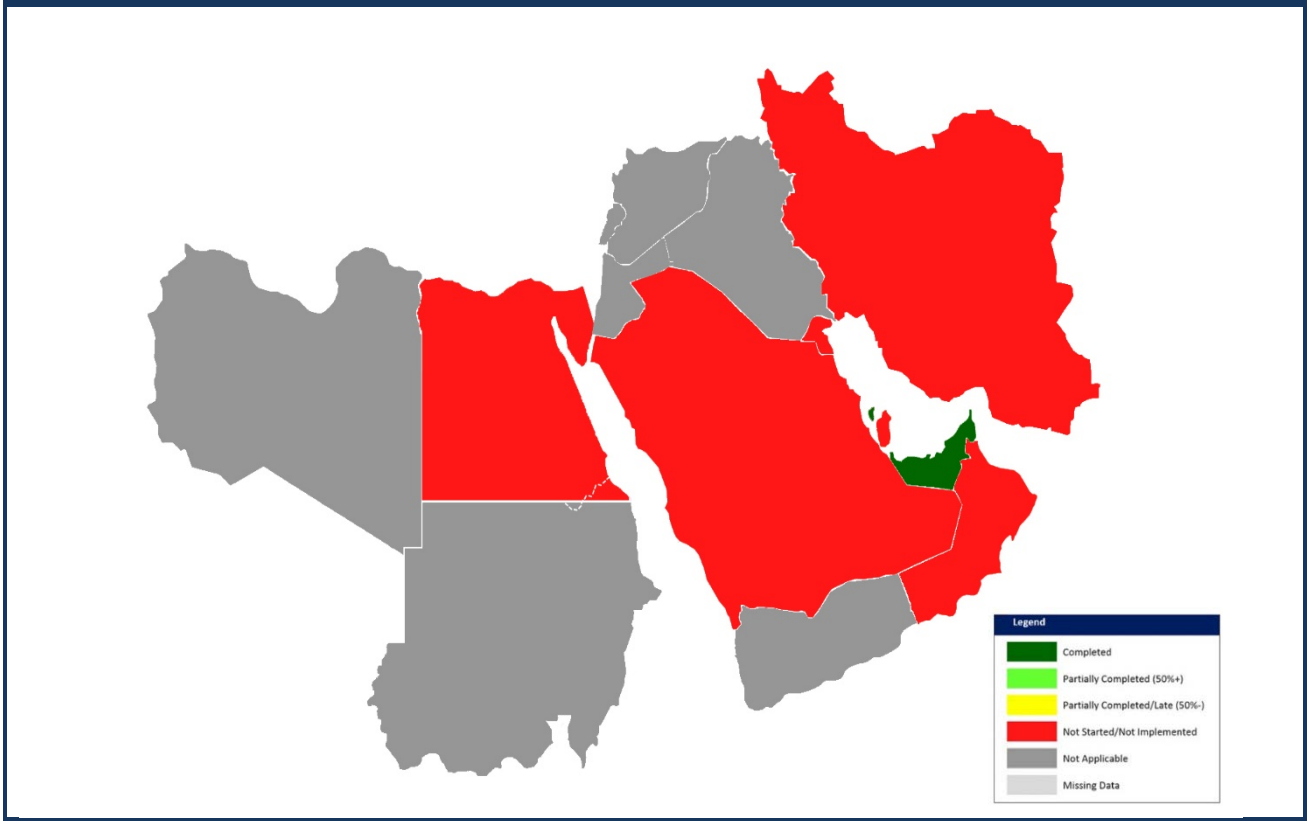
B0 – ACDM: Improved Airport Operations through Airport-CDM				
Elements	**Applicability**	**Performance Indicators/Supporting Metrics**	**Targets**	**Timelines**
A-CDM	OBBI, HECA, OIII, OKBK, OOMS, OTBD, OTHH, OEJN, OERK, OMDB, OMAA	Indicator: % of applicable international aerodromes having implemented improved airport operations through airport-CDM Supporting metric: Number of applicable international aerodromes having implemented improved airport operations through airport-CDM	50%	Dec. 2018



Module	Elements	Bahrain	Egypt	Iran	Iraq	Jordan	Kuwait	Lebanon	Libya	Oman	Qatar	Saudi	Sudan	Syria	UAE	Yemen
B0-ACDM	A-CDM															

The progress for B0-ACDM is very slow (with approximately 25% implementation. Nevertheless, implementation is ongoing in some States.

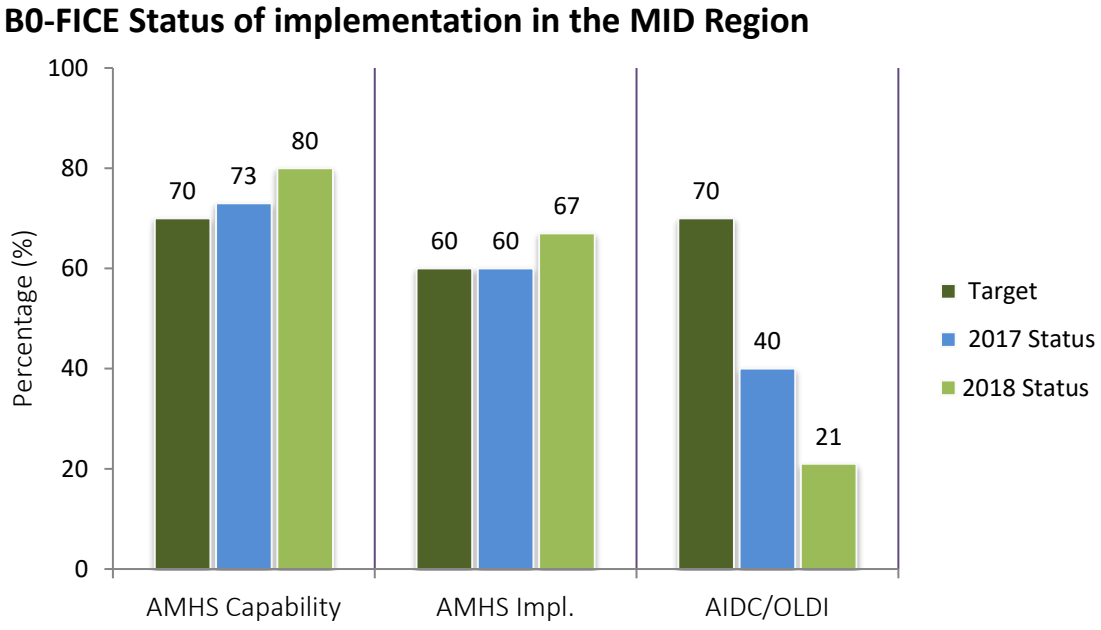
B0-ACDM Status of implementation in the MID Region



2.2.4 B0-FICE

To improve coordination between air traffic service units (ATSUs) by using ATS Interfacility Data Communication (AIDC) defined by the ICAO *Manual of Air Traffic Services Data Link Applications* (Doc 9694). The transfer of communication in a data link environment improves the efficiency of this process particularly for oceanic ATSUs.

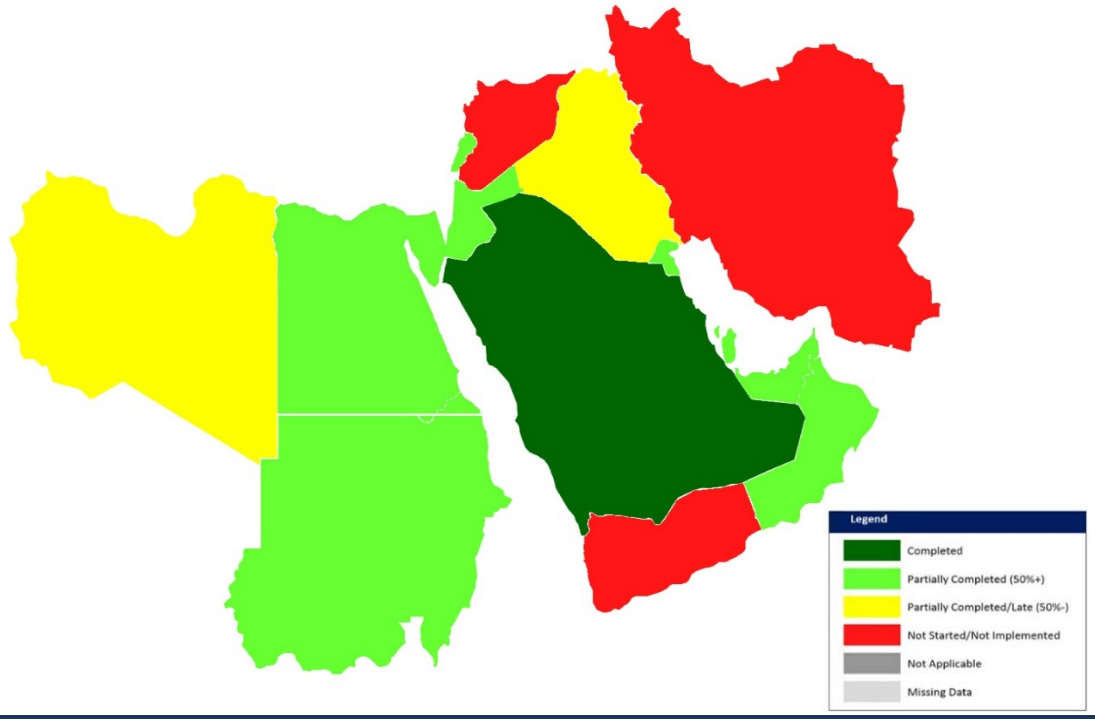
B0 – FICE: Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration				
Elements	**Applicability**	**Performance Indicators/Supporting Metrics**	**Targets**	**Timelines**
AMHS capability	All States	Indicator: % of States with AMHS capability Supporting metric: Number of States with AMHS capability	70%	Dec. 2017
AMHS implementation /interconnection	All States	Indicator: % of States with AMHS implemented (interconnected with other States AMHS) Supporting metric: Number of States with AMHS implemented (interconnections with other States AMHS)	60%	Dec. 2017
Implementation of AIDC/OLDI between adjacent ACCs	As per the AIDC/OLDI Applicability Table*	Indicator: % of priority 1 AIDC/OLDI Interconnection have been implemented Supporting metric: Number of AIDC/OLDI interconnections implemented between adjacent ACCs	70%	Dec. 2020



Module	Elements	Bahrain	Egypt	Iran	Iraq	Jordan	Kuwait	Lebanon	Libya	Oman	Qatar	Saudi	Sudan	Syria	UAE	Yemen
B0-FICE	AMHS capability															
	AMHS impl. /interconnection															
	Implementation of AIDC/OLDI between adjacent ACCs															

The progress for B0-FICE is reasonable (with approximately 53% implementation). However, the AIDC/OLDI implementation in 2019 decreased due to definition of new applicability area as agreed in MSG/6 meeting (3-5 December 2018, Egypt).

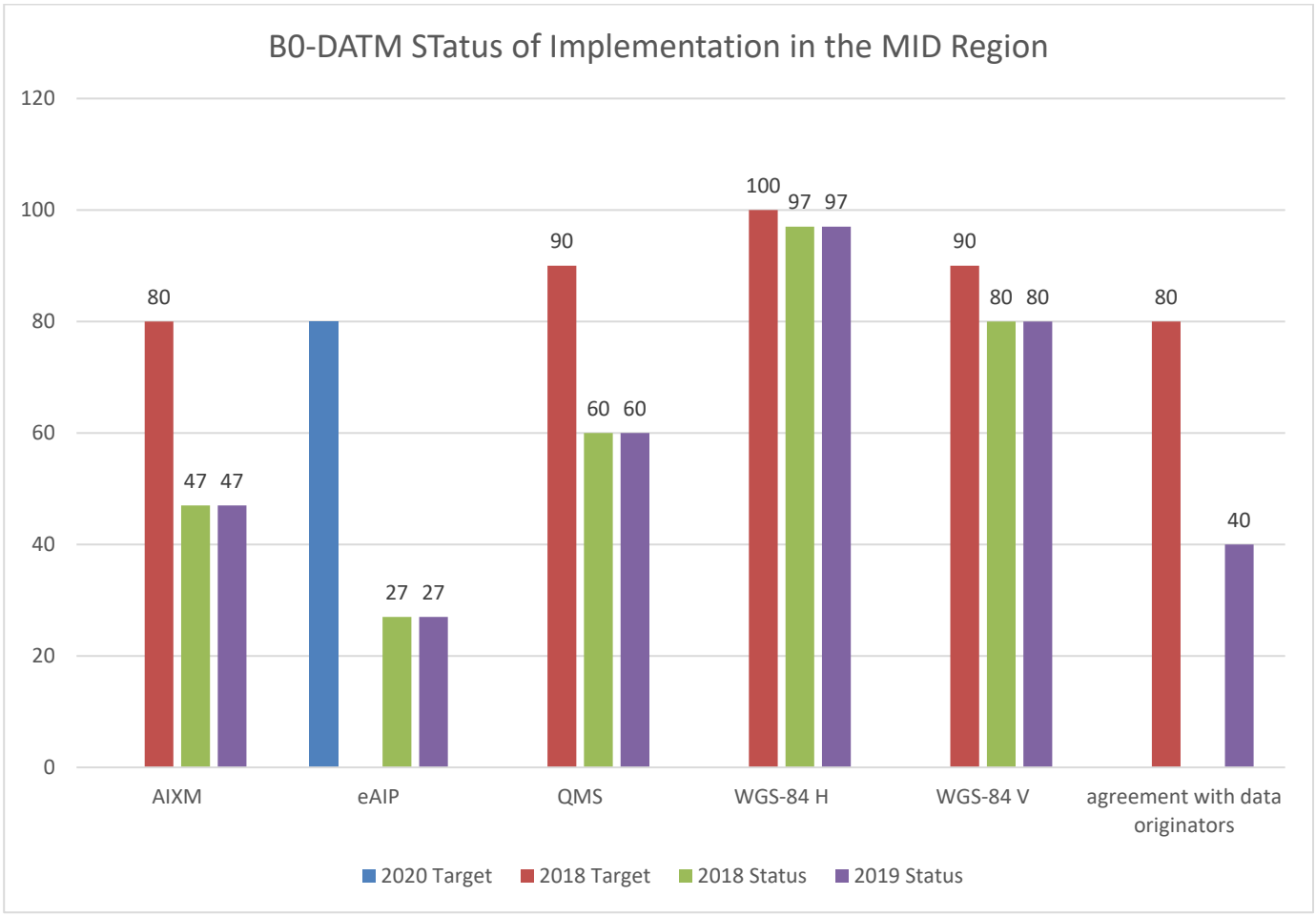
B0-FICE Status of implementation in the MID Region



2.2.5 B0-DATM

The initial introduction of digital processing and management of information, through aeronautical information service (AIS)/aeronautical information management (AIM) implementation, use of aeronautical information exchange model (AIXM), migration to electronic aeronautical information publication (AIP) and better quality and availability of data.

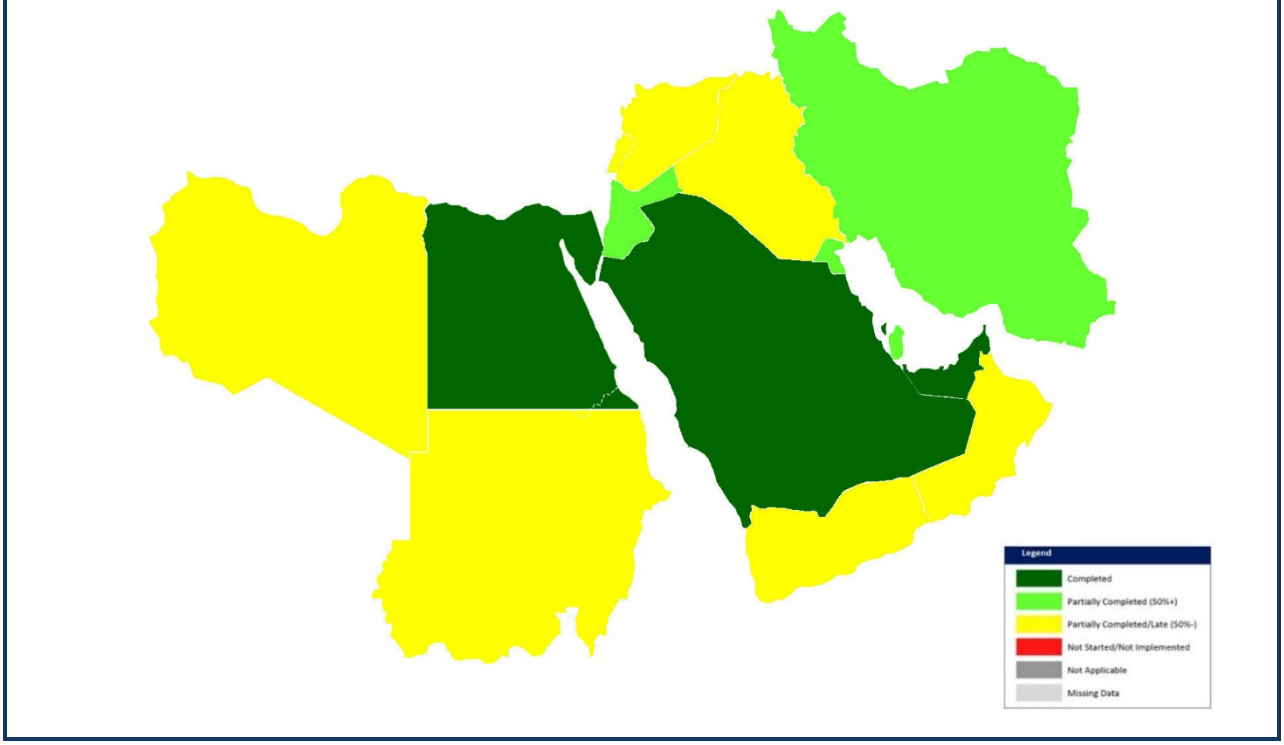
B0 – DATM: Service Improvement through Digital Aeronautical Information Management				
Elements	**Applicability**	**Performance Indicators/Supporting Metrics**	**Targets**	**Timelines**
AIXM	All States	Indicator: % of States that have implemented an AIXM-based AIS database Supporting Metric: Number of States that have implemented an AIXM-based AIS database	80%	Dec. 2018
eAIP	All States	Indicator: % of States that have implemented an IAID driven AIP Production (eAIP) Supporting Metric: Number of States that have implemented an IAID driven AIP Production (eAIP)	80%	Dec. 2020
QMS	All States	Indicator: % of States that have implemented QMS for AIS/AIM Supporting Metric: Number of States that have implemented QMS for AIS/AIM	90%	Dec. 2018
WGS-84	All States	Indicator: % of States that have implemented WGS-84 for horizontal plan (ENR, Terminal, AD) Supporting Metric: Number of States that have implemented WGS-84 for horizontal plan (ENR, Terminal, AD) Indicator: % of States that have implemented WGS-84 Geoid Undulation Supporting Metric: Number of States that have implemented WGS-84 Geoid Undulation	Horizontal: 100% Vertical: 90%	Dec. 2018 Dec. 2018
Agreement with data originators	All States	Indicator: % of States that have signed Service Level Agreements (SLA) with at least 50% of their AIS data originators Supporting Metric: Number of States that have signed Service Level Agreements (SLA) with at least 50% of their AIS data originators	80%	Dec. 2020


B0-DATM STatus of Implementation in the MID Region
120
100
80
60
40
20
0
80
47 47
27 27
90
60 60
100
97 97
90
80 80
80
40
AIXM
eAIP
QMS
WGS-84 H
WGS-84 V
agreement with data originators
2020 Target
2018 Target
2018 Status
2019 Status

Module	Elements	Bahrain	Egypt	Iran	Iraq	Jordan	Kuwait	Lebanon	Libya	Oman	Qatar	Saudi	Sudan	Syria	UAE	Yemen
B0-DATM	AIXM															
	eAIP															
	QMS															
	WGS-84 – H															
	WGS-84 – V															
	Agreement with data originators															

The progress for B0-DATM is good (with approximately 59% implementation). However, DATM implementation decreased due to adding new element of having agreement with data originators.

B0-DATM Status of implementation in the MID Region



2.2.6 B0-AMET

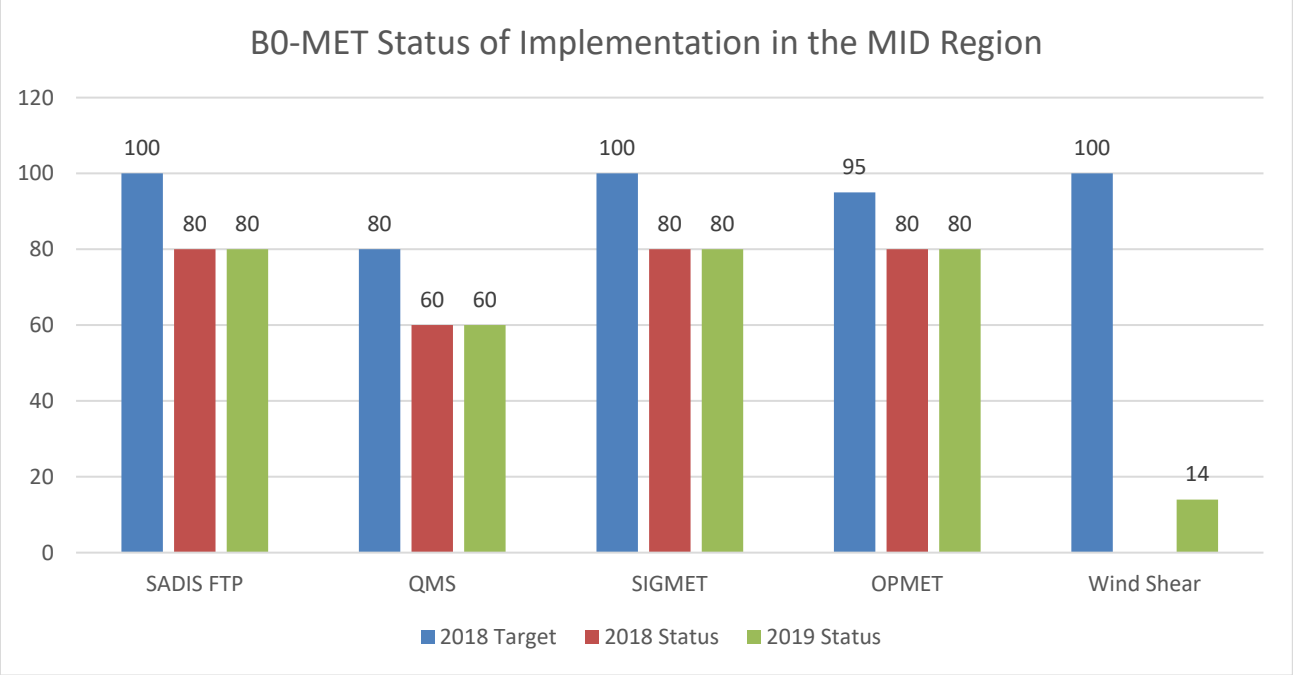
Global, regional and local meteorological information:

a) forecasts provided by world area forecast centres (WAFC), volcanic ash advisory centres (VAAC) and tropical cyclone advisory centres (TCAC);

b) aerodrome warnings to give concise information of meteorological conditions that could adversely affect all aircraft at an aerodrome including wind shear; and

c) SIGMETs to provide information on occurrence or expected occurrence of specific en-route weather phenomena which may affect the safety of aircraft operations and other operational meteorological (OPMET) information, including METAR/SPECI and TAF, to provide routine and special observations and forecasts of meteorological conditions occurring or expected to occur at the aerodrome.

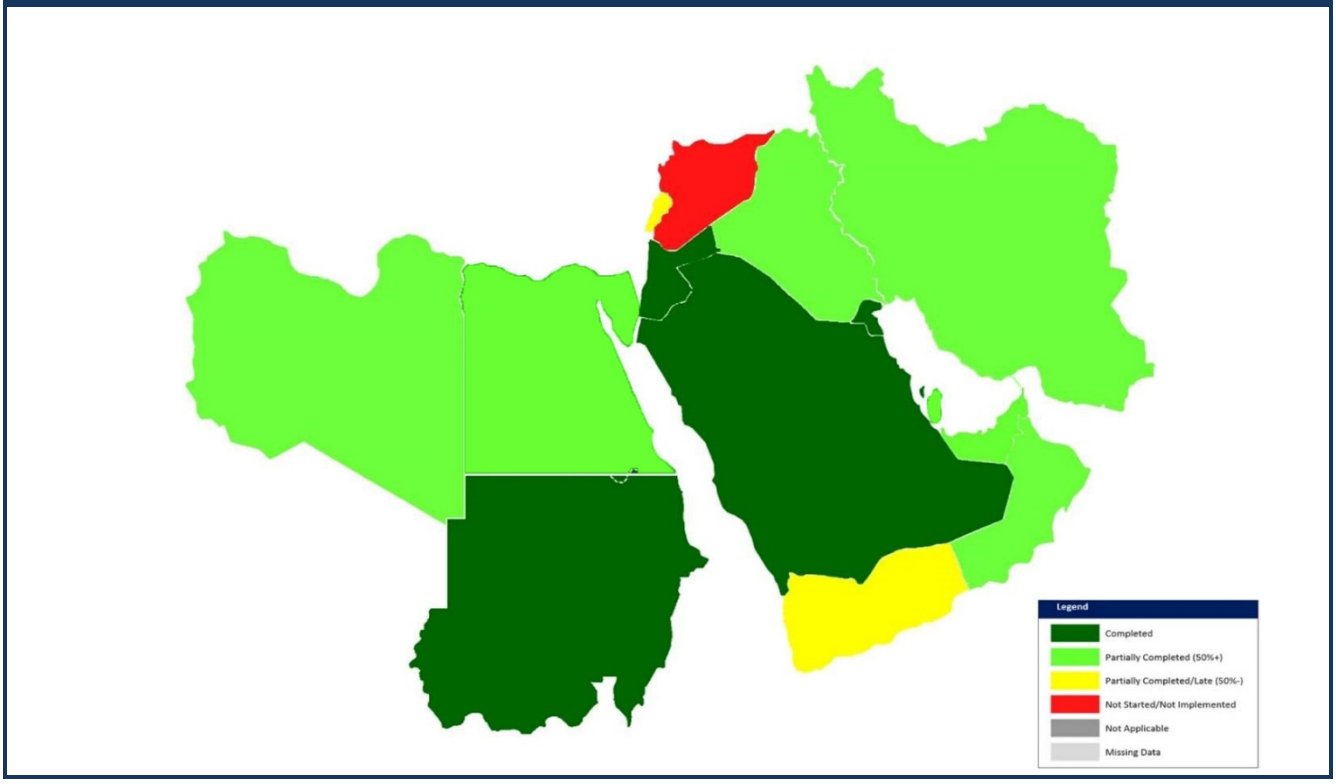
B0 – AMET: Meteorological information supporting enhanced operational efficiency and safety				
Elements	**Applicability**	**Performance Indicators/Supporting Metrics**	**Targets**	**Timelines**
SADIS FTP	All States	Indicator: % of States having implemented SADIS FTP service Supporting Metric: Number of States having implemented SADIS FTP service	100%	Dec. 2018
QMS	All States	Indicator: % of States having implemented QMS for MET Supporting metric: number of States having implemented QMS for MET	80%	Dec. 2018
SIGMET	All States with MWOs in MID Region	Indicator: % of States having implemented SIGMET Supporting metric: number of States having implemented SIGMET	100%	Dec. 2018
OPMET	All States	Indicator: % of States having implemented METAR and TAF Supporting metric: number of States having implemented METAR and TAF	95%	Dec. 2018
WIND SHEAR	List of Aerodrome where wind shear reports a safety issue	Indicator: Availability of wind shear automated system Supporting metric: TBD	TBD	TBD



Module	Elements	Bahrain	Egypt	Iran	Iraq	Jordan	Kuwait	Lebanon	Libya	Oman	Qatar	Saudi	Sudan	Syria	UAE	Yemen
B0-AMET	SADIS FTP															
	QMS															
	SIGMET															
	OPMET															
	Wind Shear															

The progress for B0-AMET is good (with approximately 63% implementation). The implementation of AMET decreased due to adding new element "wind shear".

B0-AMET Status of implementation in the MID Region



2.2.7 B0-FRTO

To allow the use of airspace which would otherwise be segregated (i.e. special use airspace) along with flexible routing adjusted for specific traffic patterns. This will allow greater routing possibilities, reducing potential congestion on trunk routes and busy crossing points, resulting in reduced flight length and fuel burn.

B0 – FRTO: Improved Operations through Enhanced En-Route Trajectories				
Elements	**Applicability**	**Performance Indicators/Supporting Metrics**	**Targets**	**Timelines**
Flexible Use of Airspace (FUA) Level 1 Strategic	All States	Indicator: % of States that have implemented FUA Level 1 Supporting metric*: number of States that have implemented FUA Level 1	50%	Dec. 2019
FUA Level 2 Pre-tactical	All States	Indicator: % of States that have implemented FUA Level 2 Supporting metric*: number of States that have implemented FUA Level 2	60%	Dec. 2020
FUA Level 3 Tactical	All States	Indicator: % of States that have implemented FUA Level 3 Supporting metric*: number of States that have implemented FUA Level 3	60%	Dec. 2022

** Implementation should be based on the published aeronautical information*

Module	**Elements**	**Bahrain**	**Egypt**	**Iran**	**Iraq**	**Jordan**	**Kuwait**	**Lebanon**	**Libya**	**Oman**	**Qatar**	**Saudi**	**Sudan**	**Syria**	**UAE**	**Yemen**
B0-FRTO	Flexible Use of Airspace (FUA) Level 1 Strategic															
	FUA Level 2 Pre-tactical															
	FUA Level 3 Tactical															

Note – B0-FRTO implementation data will be further collected during the ATM SG/6 meeting planned in 2021.

2.2.8 B0-NOPS

Air Traffic Flow Management (ATFM) is used to manage the flow of traffic in a way that minimizes delay and maximizes the use of the entire airspace. ATFM can regulate traffic flows involving departure slots, smooth flows and manage rates of entry into airspace along traffic axes, manage arrival time at waypoints or Flight Information Region (FIR)/sector boundaries and re-route traffic to avoid saturated areas. ATFM may also be used to address system disruptions including crisis caused by human or natural phenomena.

Experience clearly shows the benefits related to managing flows consistently and collaboratively over an area of a sufficient geographical size to take into account sufficiently well the network effects. The concept for ATFM and demand and capacity balancing (DCB) should be further exploited wherever possible. System improvements are also about better procedures in these domains, and creating instruments to allow collaboration among the different actors**.**

B0 – NOPS: Improved Flow Performance through Planning based on a Network-Wide view				
Elements	**Applicability**	**Performance Indicators/Supporting Metrics**	**Targets**	**Timelines**
ATFM Measures implemented in collaborative manner	All States	Indicator: % of States that have established a mechanism for the implementation of ATFM Measures based on collaborative decision Supporting metric: number of States that have established a mechanism for the implementation of ATFM Measures based on collaborative decision	100%	Dec. 2018
ATFM Structure	All States	Indicator: % of States that have established an ATFM Structure Supporting metric: number of States that have established an ATFM Structure	100 %	Dec. 2019

.

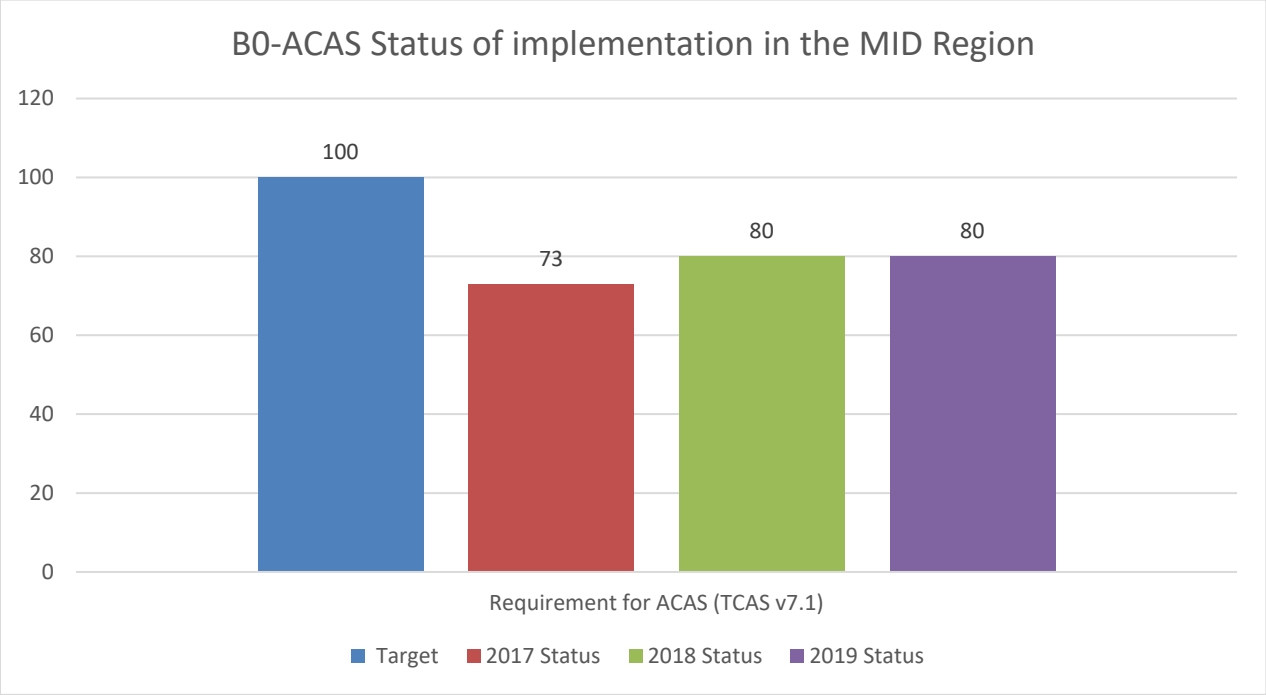
Module	Elements	Bahrain	Egypt	Iran	Iraq	Jordan	Kuwait	Lebanon	Libya	Oman	Qatar	Saudi	Sudan	Syria	UAE	Yemen
B0-NOPS	ATFM Measures implemented in collaborative manner															
	ATFM Structure															

Note – B0-NOPS implementation data will be further collected during the ATFM TF/4 meeting planned in September 2020.

2.2.9 B0-ACAS

To provide short-term improvements to existing airborne collision avoidance systems (ACAS) to reduce nuisance alerts while maintaining existing levels of safety. This will reduce trajectory deviations and increase safety in cases where there is a breakdown of separation.

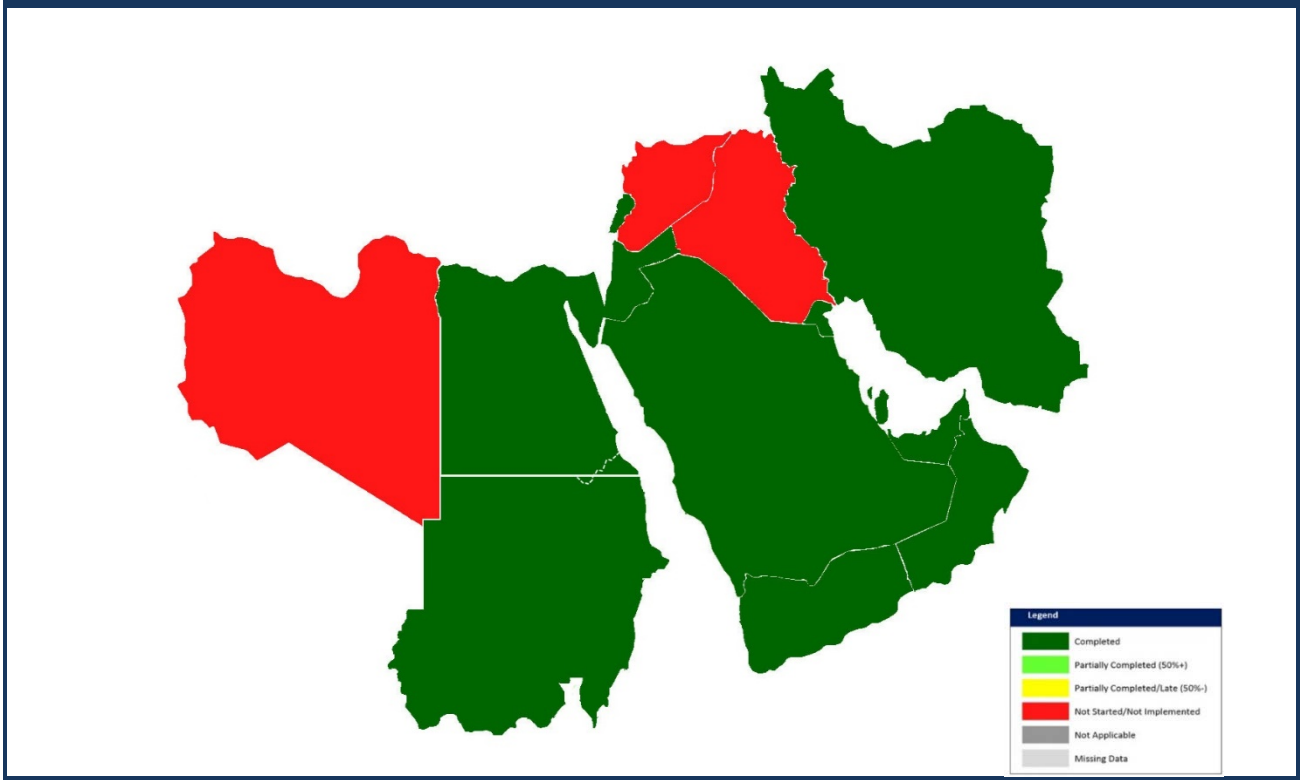
B0 – ACAS: ACAS Improvements				
Elements	**Applicability**	**Performance Indicators/Supporting Metrics**	**Targets**	**Timelines**
Avionics (TCAS V7.1)	All States	Indicator: % of States requiring carriage of ACAS (TCAS v 7.1) for aircraft with a max certificated take-off mass greater than 5.7 tons Supporting metric: Number of States requiring carriage of ACAS (TCAS v 7.1) for aircraft with a max certificated take-off mass greater than 5.7 tons	100%	Dec. 2017



Module	Elements	Bahrain	Egypt	Iran	Iraq	Jordan	Kuwait	Lebanon	Libya	Oman	Qatar	Saudi	Sudan	Syria	UAE	Yemen
B0-ACAS	ACAS (TCAS V7.1)															

The progress for B0-ACAS is very good (with approximately 80% implementation).

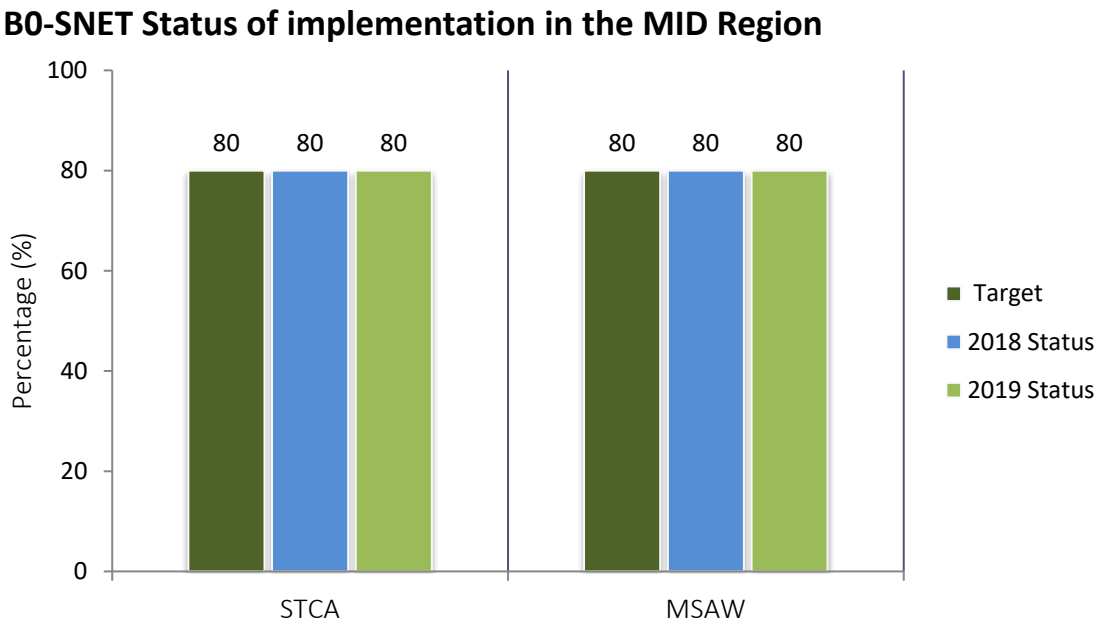
B0-ACAS Status of implementation in the MID Region



2.2.10 B0-SNET

To enable monitoring of flights while airborne to provide timely alerts to air traffic controllers of potential risks to flight safety. Alerts from short-term conflict alert (STCA), area proximity warnings (APW) and minimum safe altitude warnings (MSAW) are proposed. Ground-based safety nets make an essential contribution to safety and remain required as long as the operational concept remains human centered.

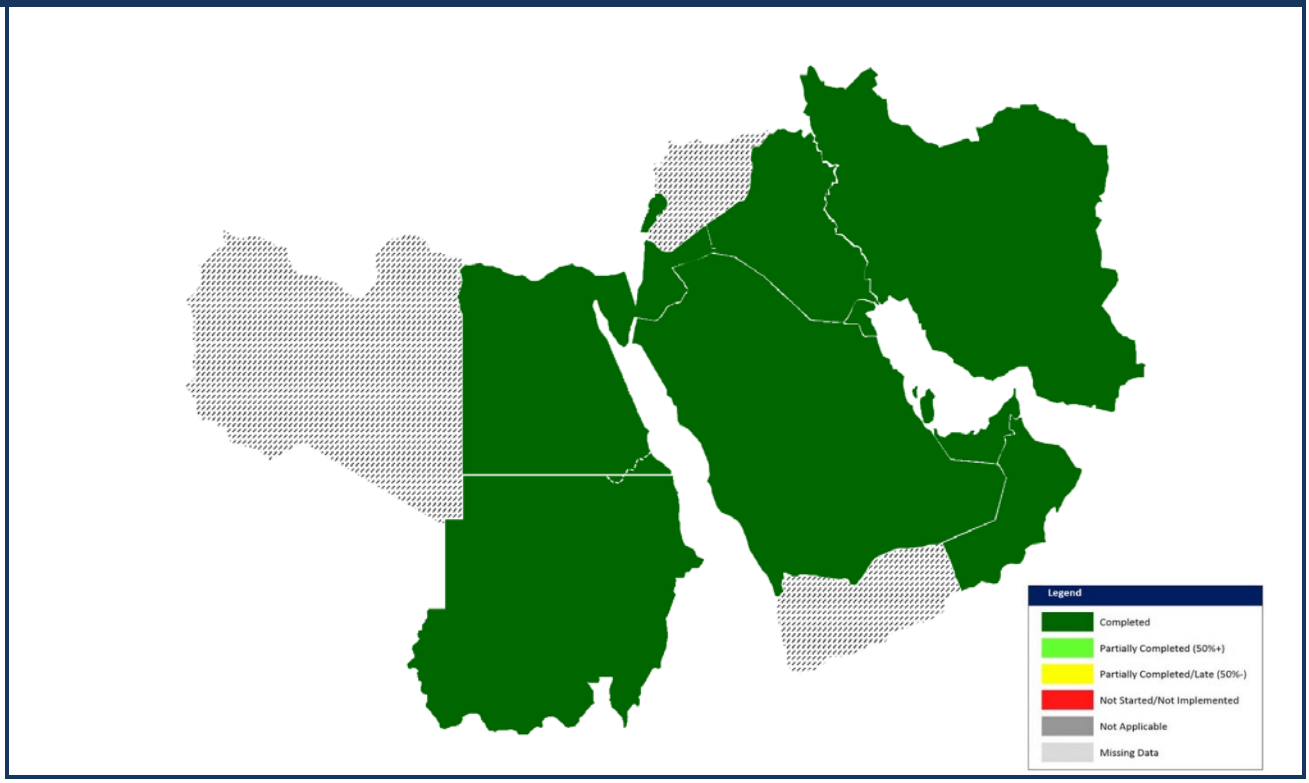
B0 – SNET: Increased Effectiveness of Ground-based Safety Nets				
Elements	**Applicability**	**Performance Indicators/Supporting Metrics**	**Targets**	**Timelines**
Short-Term Conflict Alert (STCA)	All States	Indicator: % of States that have implemented Short-term conflict alert (STCA) Supporting metric*: number of States that have implemented Short-term conflict alert (STCA)	80 %	Dec. 2018
Minimum Safe Altitude Warning (MSAW)	All States	Indicator: % of States that have implemented Minimum safe altitude warning (MSAW) Supporting metric*: number of States that have implemented Minimum safe altitude warning (MSAW)	80 %	Dec. 2018



Module	Elements	Bahrain	Egypt	Iran	Iraq	Jordan	Kuwait	Lebanon	Libya	Oman	Qatar	Saudi	Sudan	Syria	UAE	Yemen
B0-SNET	Short-term conflict alert (STCA)															
	Minimum safe altitude warning (MSAW)															

The progress for B0-SNET is very good (with approximately 80% implementation).

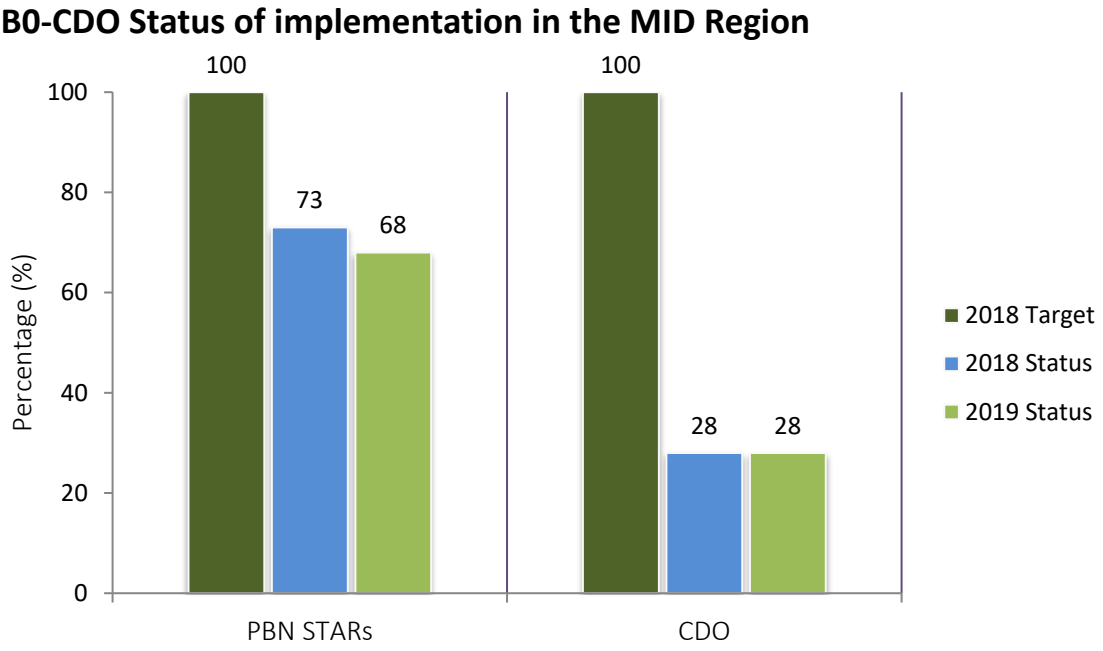
B0-SNET Status of implementation in the MID Region



2.2.11 B0-CDO

To use performance-based airspace and arrival procedures allowing aircraft to fly their optimum profile using continuous descent operations (CDOs). This will optimize throughput, allow fuel efficient descent profiles and increase capacity in terminal areas.

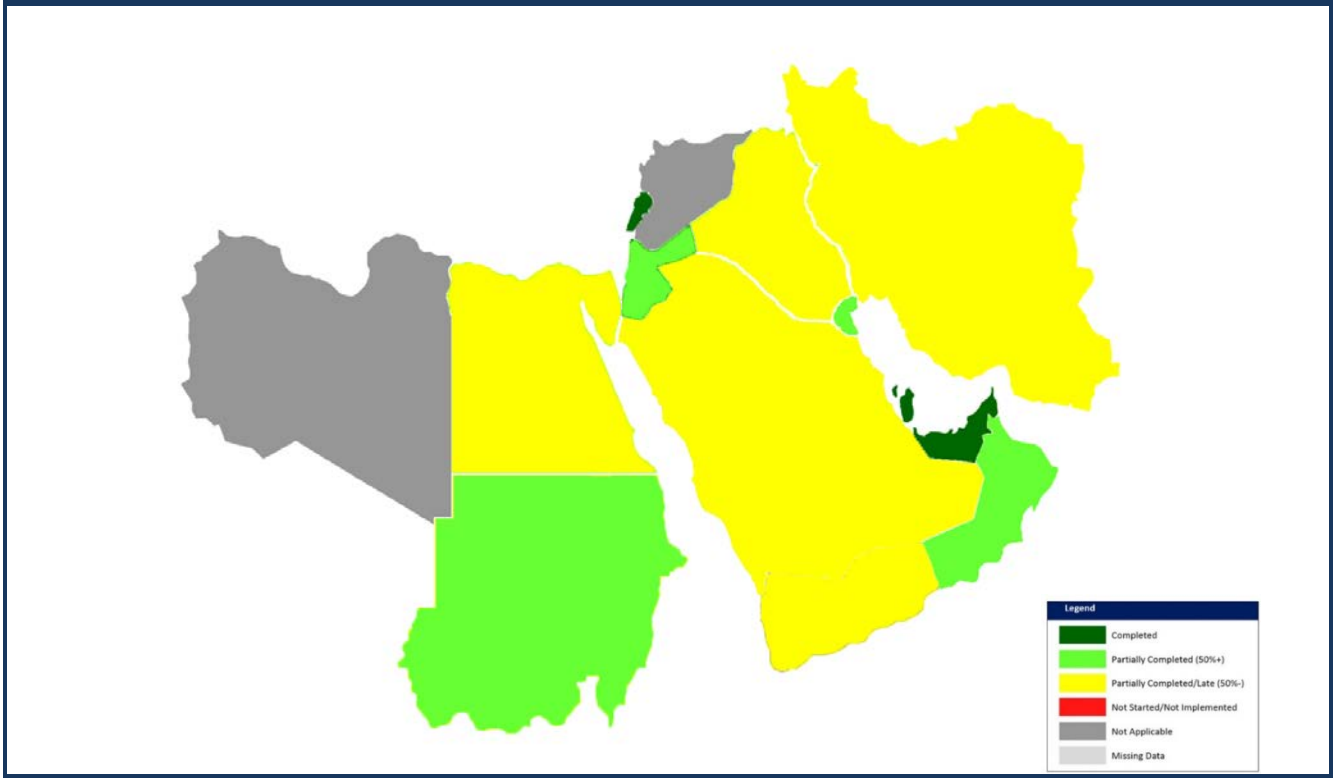
B0 – CDO: Improved Flexibility and Efficiency in Descent Profiles (CDO)				
Elements	**Applicability**	**Performance Indicators/Supporting Metrics**	**Targets**	**Timelines**
PBN STARs	OBBI, HESN, HESH, HEMA, HEGN, HELX, OIIE, OISS, OIKB, OIMM, OIFM, ORER, ORNI, OJAM, OJAI, OJAQ, OKBK, OLBA, OOMS, OOSA, OTHH, OEJN, OEMA, OEDF, OERK, HSNN, HSOB, HSSS, HSPN, OMAA, OMAD, OMDB, OMDW, OMSJ	Indicator: % of International Aerodromes/TMA with PBN STAR implemented as required. Supporting Metric: Number of International Aerodromes/TMAs with PBN STAR implemented as required.	100% (for the identified Aerodromes/TMAs)	Dec. 2018
International aerodromes/TMAs with CDO	OBBI, HESH, HEMA, HEGN, OIIE, OIKB, OIFM, OJAI, OJAQ, OKBK, OLBA, OOMS, OTHH, OEJN, OEMA, OEDF, OERK, HSSS, HSPN, OMAA, OMDB, OMDW, OMSJ	Indicator: % of International Aerodromes/TMA with CDO implemented as required. Supporting Metric: Number of International Aerodromes/TMAs with CDO implemented as required.	100% (by for the identified Aerodromes/TMAs)	Dec. 2018



Module	Elements	Bahrain	Egypt	Iran	Iraq	Jordan	Kuwait	Lebanon	Libya	Oman	Qatar	Saudi	Sudan	Syria	UAE	Yemen
B0-CDO	PBN STARs															
	International aerodromes/TMAs with CDO															

The progress for B0-CDO is <u>acceptable</u> (with approximately 48% implementation).

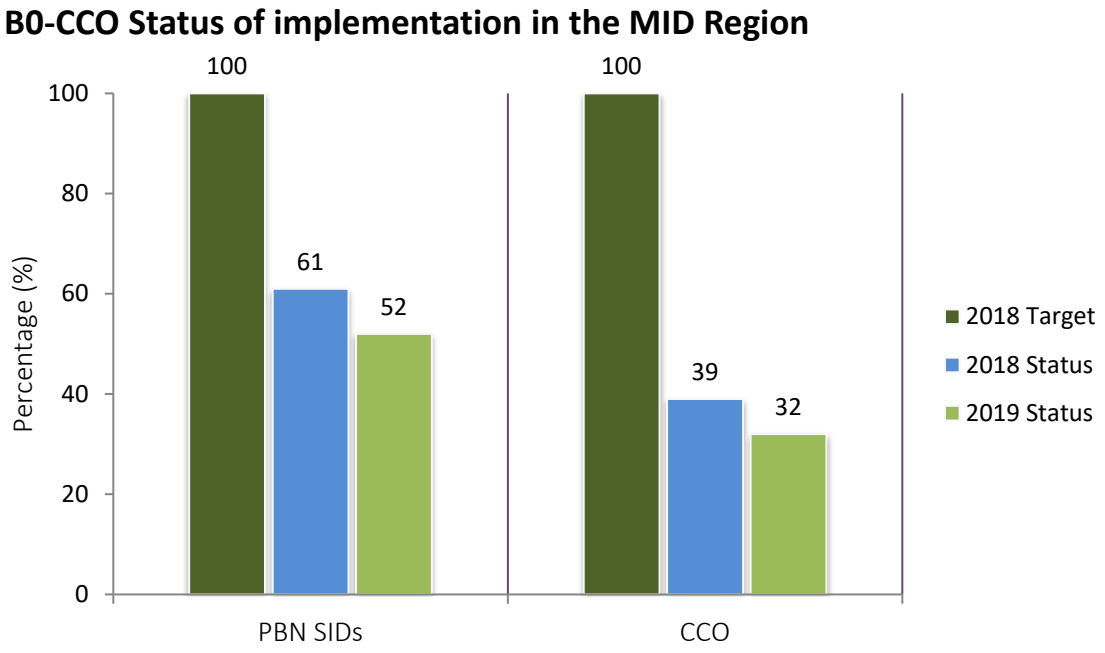
B0-CDO Status of implementation in the MID Region



2.2.12 B0-CCO

To implement continuous climb operations in conjunction with performance-based navigation (PBN) to provide opportunities to optimize throughput, improve flexibility, enable fuel-efficient climb profiles and increase capacity at congested terminal areas.

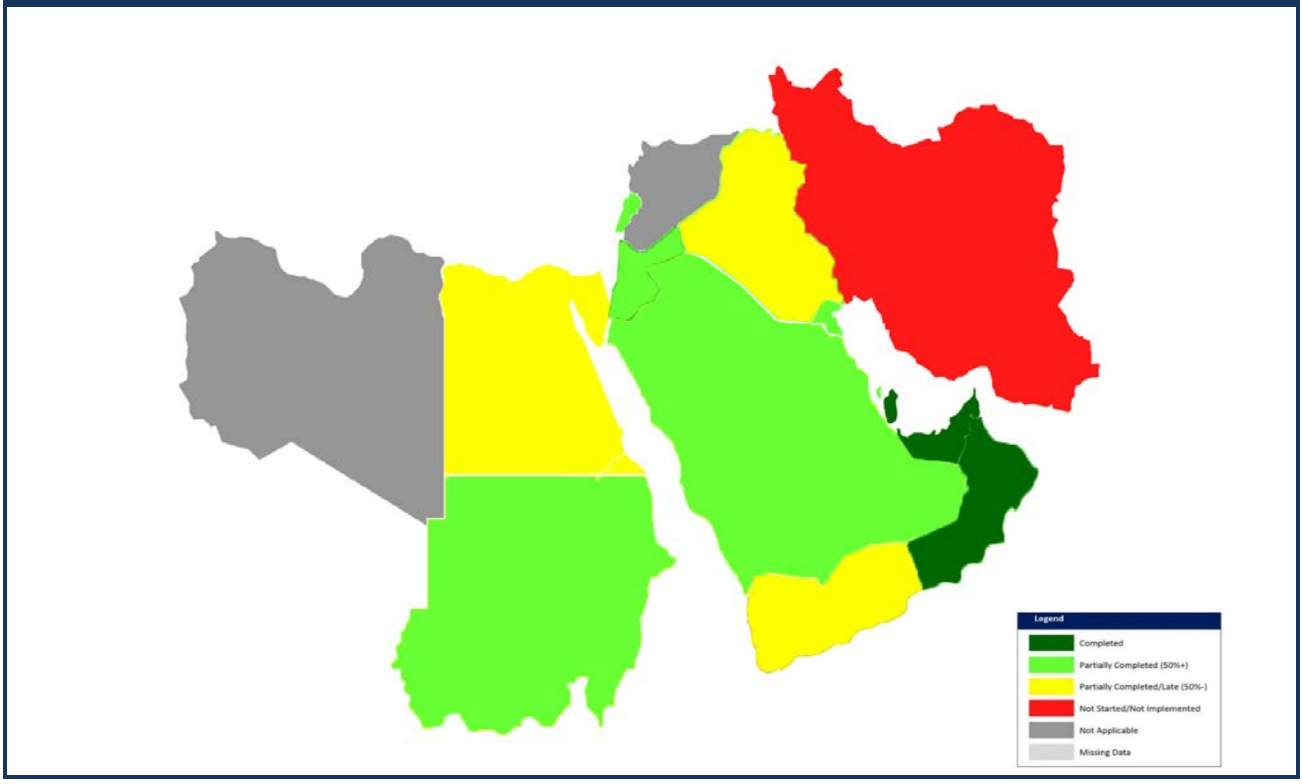
B0 – CCO: Improved Flexibility and Efficiency Departure Profiles - Continuous Climb Operations (CCO)				
Elements	**Applicability**	**Performance Indicators/Supporting Metrics**	**Targets**	**Timelines**
PBN SIDs	OBBI, HESN, HESH, HEMA, HEGN, HELX, OIIE, OISS, OIKB, OIMM, OIFM, ORER, ORNI, OJAM, OJAI, OJAQ, OKBK, OLBA, OOMS, OOSA, OTHH, OEJN, OEMA, OEDF, OERK, HSNN, HSOB, HSSS, HSPN, OMAA, OMAD, OMDB, OMDW, OMSJ	Indicator: % of International Aerodromes/TMA with PBN SID implemented as required. Supporting Metric: Number of International Aerodromes/ TMAs with PBN SID implemented as required.	100% (for the identified Aerodromes/TMAs)	Dec. 2018
International aerodromes/TMAs with CCO	OBBI, HESN, HESH, HEMA, HEGN, HELX, OIIE, OIKB, OIFM, ORER, ORNI, OJAM, OJAI, OJAQ, OKBK, OLBA, OOMS, OOSA, OTHH, OEJN, OEMA, OEDF, OERK, HSNN, HSOB, HSSS, HSPN, OMAA, OMDB, OMDW, OMSJ	Indicator: % of International Aerodromes/TMA with CCO implemented as required. Supporting Metric: Number of International Aerodromes/TMAs with CCO implemented as required.	100% (for the identified Aerodromes/TMAs)	Dec. 2018



Module	Elements	Bahrain	Egypt	Iran	Iraq	Jordan	Kuwait	Lebanon	Libya	Oman	Qatar	Saudi	Sudan	Syria	UAE	Yemen
B0-CCO	PBN SIDs															
	Intl ADs/TMAs with CCO															

The progress for B0-CCO is low (with approximately 42% implementation).

B0-CCO Status of implementation in the MID Region



3. ENVIRONMENTAL PROTECTION

3.1 Introduction

Environmental Protection, to minimize the adverse environmental effects of civil aviation activities, is one of the five strategic objectives of ICAO. With a view to minimizing the adverse effects of international civil aviation on the environment, ICAO formulates policies, develops and updates Standards and Recommended Practices (SARPs) on aircraft noise and aircraft engine emissions, and conducts outreach activities. Information related to the ICAO activities on environmental protection is available on the ICAO website at: https://www.icao.int/environmental-protection/Pages/default.aspx

This section provides an update on the States' Action Plans on CO2 Emissions Reduction; and presents an estimation of environmental benefits, in terms of fuel saving / CO2 emissions reduction, accrued from the implementation of some ASBU Block 0 Modules in the MID Region.

3.2 States' Action Plans on CO2 Emissions Reduction

The ICAO Assembly 38 (24 September to 4 October 2013) endorsed the Resolution 38-18 Consolidated statement of continuing ICAO policies and practices related to environmental protection – Climate Change which encouraged States to voluntarily prepare and submit Action Plans on CO2 emission reduction to ICAO. An ambitious work programme was further laid down for capacity building and assistance to States in the development and implementation of their Action Plans to reduce emissions, which States were initially invited to submit by the 37th Session of the ICAO Assembly in October 2010.

ICAO Assembly 39 (Montreal, Canada, 27 September – 6 October 2016) encouraged States, through Assembly Resolution 39-2 Consolidated statement of continuing ICAO policies and practices related to environmental protection – Climate change, to submit voluntary Action Plans outlining respective policies and actions, and annual reporting on international aviation CO2 emissions to ICAO.

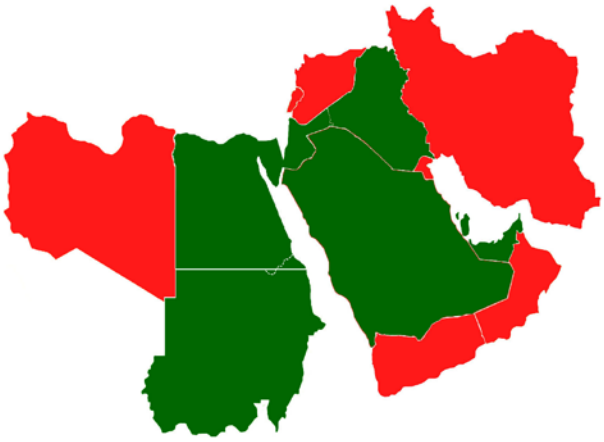
The MIDANPIRG/16 meeting (Kuwait, 13 - 16 February 2017) invited States to develop/update their Action Plans for CO2 emissions reduction and submit them to ICAO through the APER website or the ICAO MID Regional Office.

An Action Plan is a means for States to communicate to ICAO information on activities to address CO2 emissions from international aviation. The level of information contained in an action plan should be sufficient to demonstrate the effectiveness of actions and to enable ICAO to measure progress towards meeting the global goals set by Assembly Resolution A38-18. Action plans give States the ability to: establish partnerships; promote cooperation and capacity building; facilitate technology transfer; and provide assistance.

The Status of the provision of Action Plans on CO2 emission in the MID Region is as follows:

State	Action Plans
Bahrain	June 2015
Egypt	July 2016
Iran	-
Iraq	June 2012
Jordan	September 2013
Kuwait	-
Lebanon	-
Libya	-
Oman	-
Qatar	March 2020
Saudi Arabia	April 2018
Sudan	January 2015
Syria	-
UAE	June 2012 (update May 2018)
Yemen	-

Status of States' Action Plans



3.3 Estimation of the Environmental Benefits accrued from implementation of ASBU Block 0 Modules

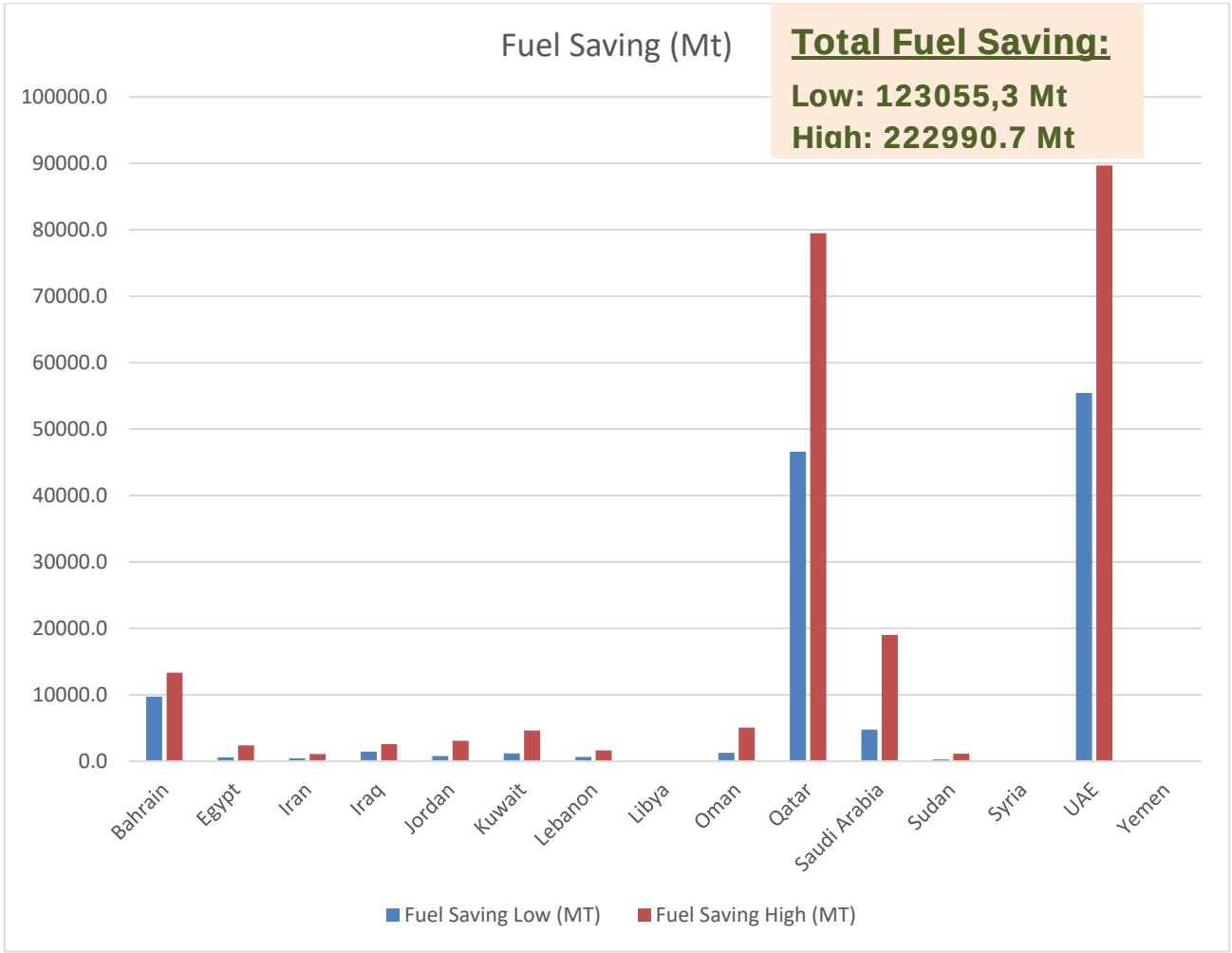
CAEP/10 conducted an assessment of the potential environmental benefits (fuel savings / CO2) for the period between the start of implementation of ASBU Block 0 modules in 2013 and the planned implementation of such modules in 2018 (end of Block 0). In order to accomplish this task, CAEP developed sets of Rules-of-Thumb for each studied module with the overall intent to provide a conservative estimate of ASBU Block 0 fuel saving benefits. Rules-of-Thumb were developed using existing, publically available data, literature, and assumptions, together with the professional judgment of the analysts. A total of twenty-three (23) rules of thumb have been developed for thirteen (13) ASBU Block 0 Modules.

The results of the ASBU Block 0 analysis conducted by CAEP highlight a potential reduction in fuel consumption by 2018 due to the implementation of ASBU Block 0 modules when compared to the 2013 baseline. The results show that the following Block 0 Modules (operational improvements) would have the biggest contribution to fuel saving in the MID Region:

- **CCO 1 (CCO)**
- **CDO 1 (CDO)**
- ACDM
- **CDO 2 (PBN STARs)**
- ASUR (ADS-B Surveillance)
- **CCO 2 (PBN SIDs)**
- **APTA 1 (Radius to Fix)**

As the status of implementation of B0-ACDM and B0-ASUR is still low in the MID Region, a Methodology for the Estimation of environmental benefits accrued from the implementation of priority 1 Block 0 Modules in the MID Region has been developed for B0-APTA, CCO and CDO, based on the Rules of Thumb and the available traffic data.

The estimation has shown a **total of 123055.3 to 222990.7 Mt** of fuel saving in the MID Region (**383,933 to 695730,9 Tonnes of CO2**), as a result of the implementation of the selected Block 0 Modules (APTA, CDO and CCO), as shown below:



4. SUCCESS STORIES/BEST PRACTICES

4.1 IRAN: IAC Cyber Security Experiences and Countermeasures

Introduction

Several years ago, for the first time Iran Airports and Air Navigation Company (IAC) encountered cyber security threats face to face. A number of our systems, like flight planning and flight information systems, were breached. Since it was the first experience, and IAC had many problems to resolve the issues. So, it was determined to prepare for such situations and work on the security of our systems. That was very cumbersome job as IAC hadn't any clue where we should start. So, IAC started by consulting with authorities and organizations in Iran which worked with companies on cyber security. Also, they used the views of private companies in our country whom had worked in this domain. So, the journey was begun.

Challenges

The first thing IAC did was to analyze the attack chains that was experienced and to familiarize themselves with the attack vector they had in their hand in the network.

Lack of strict policies for using internet in operational stations and networks was one of our weak places. Also, IAC did have a diverse and geographically dispersed network across the country, which made their attack vector very large. Actually, IAC didn't have a bird's-eye view about what was happening in our network. IAC also had some issues about trained staff in cyber security. Using legacy systems in operational units which weren't updated and patched was also another issue. These were some of IAC challenges that should be addressed and resolved. So, the work was begun.

Action Plan

IAC set up a security committee and started to prioritize what we should do. IAC held meetings regularly with different parties and stakeholders. The committee tried to grasp the attention of senior management on the cyber security issues. By publishing instructions and guidelines, it was tried to improve cyber security awareness in all airports. One of the first steps they agreed on, was to move toward a solution for detection of cyber security incidents. This would give them an edge in addressing cyber security incidents. IAC wanted to be the first one who knows what is happening in their network. So, they started the Security Operation Centre (SOC) project.

The first step was to collect logs from all devices and servers in order to detect incidents by analyzing these logs. IAC came up with a thorough plan to deploy a distributed solution for SIEM across the country which support all our airports. The committee gave a special attention to the security of business-critical and operational systems and made decisions in use the principle of least privilege and need to know access control policies to improve their security.

Current Situation

IAC finished deployment of our plan about SIEMs. So, right now they have a universal view about what is happening in all airports with respect to assets.

This improved its visibility about what is happening in network. Regarding the operational networks like AFTN, FIDS, and etc., this new visibility helped them in the process of isolating these networks and taking measures which lead to more secure networks. Actually, this is the current project in our hand. IAC is going to harden whole systems and networks which consist of operational data in our network.

Future

IAC is going to enhance capabilities in post-detection steps of security incidents, will work in responses to the detected security incidents in the form of CERT. IAC is going to equip the SOC with software and solutions for improving the capabilities about incident handling. The other part IAC is trying to achieve is including other operational systems and networks in watch. Beside works it was planned to do detection and analysis of security incidents, IAC have some plans about prevention aspects of cyber security incidents. IAC is going to implement a thorough and evolved firewalling plan for the communications of our airports and systems used in our operational environment.

Conclusion

After couple of incidents IAC had in the past, spending time and money on cyber security is paying off by having a more secure and hardened network which is monitored continuously in 7 x 27 style. But security is not an absolute thing, so IAC is planning to extend scope and improving its capabilities. Also, they are planning to invest on completing the cycle of handling security incidents and resolution of them.

4.2 SAUDI ARABIA: Saudi Air Navigation Services Company (SANS) 2019 Achievements

Since the corporatization of the Saudi Air Navigation Services Company (SANS), the winds of transformation have been uplifting the company to new levels of operational excellence; a new strategic direction, culture change, organizational optimization, and human resource development have all supported in building a solid foundation on which the re-envisioned company has been growing.

SANS Maintenance Control Center

As part of the ongoing efforts to support the company vision of becoming a regional & global industry leader, SANS achieved a new milestone in the continuous journey towards excellence; the implementation & launch of the new Maintenance Control Center (for navigation equipment).
CEO – Eng. Ryyan Tarabzoni – along with the leadership team - inaugurated the newly established Maintenance Control Center that is fully equipped and operational with the latest equipment and systems, making it one of the most modern global centers in the field of real-time monitoring and control for the maintenance of navigational systems worldwide.

Online Customer Center

One of the strategic pillars at SANS is focused on forging & maintaining strategic partnerships with all external stakeholders, customers, and partners. Therefore, the Customer Relationship Management (CRM) Dept. pioneered the Regions first online Customer Center. This platform offers web-based services that make interaction with SANS quicker, easier, and more efficient by providing simple access to a range of services including Pilot Briefing, Complaints/Inquire/Suggestions (as well a history of your communications), and Search & Rescue. In addition to the aforementioned services, a Billing System will be added to the Customer Center that will allow customers to manage their billing requirements more efficiently.

SANS Safety Management System (SMS) & Just Culture

There are a number of mandated objectives by both ICAO & GACA (General Authority for Civil Aviation – KSA), as such the SMS & Just Culture were implemented at SANS with the objective of not only ensuring compliance with requirements but to also effectively manage safety risks in order to enhance safety performance of air navigation services. Shortly after the implementation, SANS received the Level 1 & 2 acceptance from GACA and proceeded to focus on SMS process & procedures for day-to-day activities by utilizing on-going coaching, safety awareness & specialized SMS trainings for all concerned staff. SMS audits were conducted to further ensure full implementation from all directorates was achieved.

In June 2019, SANS SMS was fully accepted by GACA (level 4) and full implementation throughout the company was achieved by the end of the year. One of the critical components of the SMS implementation was to design and roll-out a positive safety culture within the organization. To achieve this milestone, SANS adopted a Just Culture policy (the cornerstone to building a firm safety culture within the organization) based on best practices from EUROCONTROL which clearly defines the approach of the company to encourage employees to provide essential safety information via reporting. SANS Just Culture Policy provided a clear message on how the company will support a fair culture in which front-line operators and others are not punished for actions, omissions or decisions taken by them

which are commensurate with their experience and training, but where gross negligence, willful violations and destructive acts are not tolerated. In addition to the Just Culture Policy, a Just Culture Handbook and Just Culture Assessment Tool were also developed to explain and provide guidelines about the implementation of Just Culture within SANS. Through numerous communications activities supported by the Corporate Communications Directorate, a common understanding of Just Culture has been created in which it covers all levels of SANS staff. These communications activities support the enhancement and implementation of the SMS process in addition to raising internal awareness of the policies and encouraging open reporting which in turn supports the creation of performance safety indicators. The successful implementation of this initiative further reinforces SANS position as a regional industry leader.

EANSP – ATM System Project

Continuous improvements and implementing new technologies is vital to the contribution of sustainability and growth in a company such as SANS. Therefore, the Engineering Services Directorate have always been hard at work to optimize the technologies utilized by SANS to ensure the readiness of all locations. The enhancement of air navigation services & procedures project incorporated the implementation of new ATM systems that provide effective air traffic management in numerous international airports in KSA, including 12 remote towers. The ATM systems in both King Abdulaziz International Airport (Jeddah) and King Khalid International Airport (Riyadh) have been integrated to provide En-route traffic back-up for each other in case required. The new systems have helped to resolve a number of previous limitations such as:

- Automatic Coordination (If flight trajectory crosses the ATS sector boundary vertically / outside a fixed point)
- SNET Nuisance Alerts (STCA nuisance alerts due to garbling effect / for diversion tracks / duplicate cases due to track splits / MSAW nuisance alerts for arrival flight on final)
- Playback (Capability of the CWP recording in open video format file / limited functionality in interaction playback mode / absence of synchronization between video and voice recording during playback and the statistical tool on current ATM system)
- Missed Tower Operational Roles (tower / ground / delivery / apron)
- Statistical Tools (absence of the statistical tool on current ATM system / RMA report for whole KSA airspace / centralized merged data to billing)

New functions include:

- Arrival / Departure manager (AMAN / DMAN)
  - Improve sequencing and metering of arrival/departure aircraft in selected TMAs and airports.
  - Information exchange mechanisms, tools and procedures in support of AMAN operations in adjacent ACCs and/or subjacent TMAs.
- Airspace Management (ASM)
  - Collaborative civil-military airspace planning to ensure that airspace is used more flexibly, capacity is better balanced, and predictability is enhanced through greater adherence to planned activities.
- Datalink (Controller-Pilot Data Link Communications (CPDLC) / ADS-C / Departure Clearance) (DCL)
  - Silent interaction between ATCO and Aircraft Pilot for routing tactical commands
- 4D trajectory prediction
- Medium Term Conflict Detection
  - Advanced conflict detection based on active flight plan information
  - Free Route Airspace needs to be supported by Conflict Detection Tools
- Monitoring Aids (SSR code monitoring / callsign monitoring / Heading monitoring / Non-Transgression Zone (NTZ) monitoring)
  - Runway Management
- Dynamic ACC & Tower Sectorization
- Traffic flow prediction
- Tower electronic flight strips
- Weather presentation

All the enhancements, implementations, and improvements not only support the safety and effectiveness of SANS operations, but they also contribute to increasing the capacity of air traffic within Saudi airspace, as well we have a positive impact on emissions reduction due to more efficient procedures.

4.3 UAE: ANS Safety Integrated Management (ASIM) Automating a Safety Management System

The development of the Safety Management System (SMS) at Sheikh Zayed Air Navigation Centre (SZC) involved a journey of discovery as the organization documented the safety resources, processes, training and controls. Most SMS are created manually using spreadsheets across many departments. SZC was no different to any other organization. Whilst spreadsheets can be a powerful tool, they lacked the function of showing how an overall system was required to make safety management effective.

Sheikh Zayed Air Navigation Centre started documenting their first SMS in early 2010. This was a very complex process as the system needed to be applied across multiple certificate holders of Air Traffic Management (ATM), Communications Navigation & Surveillance (CNS), Aeronautical Information Management (AIM) and Instrument Flight Procedure Design (IFPD) within the centre. Over the years, a comprehensive set of data was managed. As with any manually managed system there were numerous challenges met especially when trying to link hazards across departments and displaying risk ownership.

In 2017, the efficiency of manual processes was reviewed and an evaluation of which direction to take for the next evolution of the SZC Safety Management system was conducted. The decision was to proceed with automation.

SZC first looked at what components to automate. It was clear that there would be a benefit in automating Safety Risk Management as well as Safety Assurance. SZC saw this system as protecting the organization in its day-to-day activities, this then brought the idea of the name ASIM. Asim in Arabic is a name meaning guardian or defender.

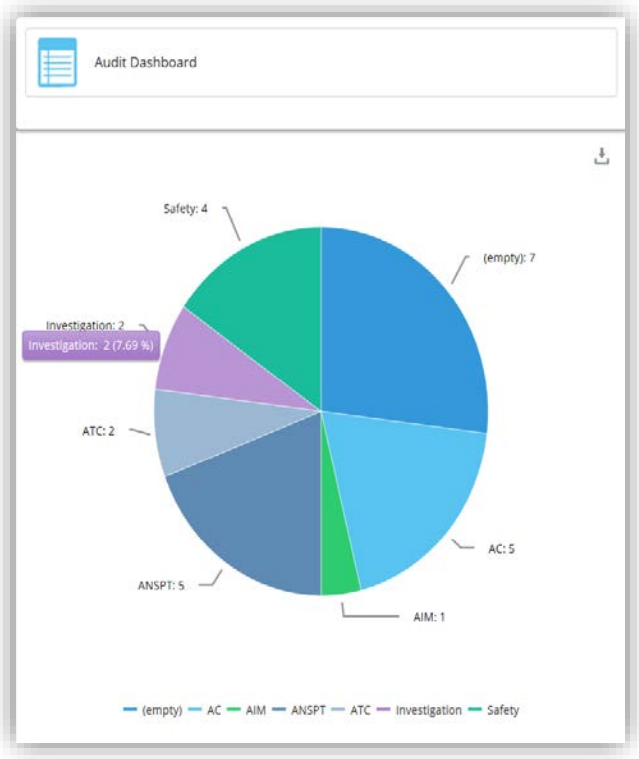
Developing ASIM for hazard identification and safety risk assessment introduced a transparent workflow, which helped to monitor and track hazards across multiple departments. The Management of Change Process was also chosen to help create a more efficient workflow.

The process of building the workflows laid the foundations of each element. These workflows were built to have a closed loop functionality to ensure that there was always feedback in the system to the originator as well as displaying clearly, where any process was at any point in time and with whom the responsibility lays. Once the workflows were drawn up, the test bed was created to ensure that any gaps were identified before putting them into service. It was very clear at that point that there was a chance to create a dynamic link between all safety elements including risk identification, change management as well as mandatory and voluntary reporting systems.

SZC found ASIM easy to use during the testing and decided to integrated it with the Mandatory Occurrence Reporting system (ROSI) used by the Competent Authority. This allowed easy reporting for the ATCOs and gave the Investigation Team a myriad of data and statistics extraction within the organization, providing feedback and identifying "hotspots" and possible areas for improvement to aviation safety.

The key to the success of automating any IT Platform is user access. By designing the workflows across multiple user levels SZC created a more open SMS, which in turn, helped foster a more open reporting culture.

All SZC staff have a defined access level. The level of access depends on the role and responsibilities within each department. In general, all users, irrespective of position held, have access to the internal Voluntary Reporting module, the “Let’s Improve” Module as well as the “Task & Action” Module as a minimum. Staff can then see real time suggestions along with any open reporting of safety concerns. Safety Ambassadors and Safety Team members have access to their respective departmental Hazard & Risks module as well as the Management of Change module. Department Directors have access to all modules both within their department and across departmental functions when required. Finally, Quality and Safety have oversight across all departments along with the Accountable Executive, which ensures that all SMS activities can be tracked in real-time.



Since going live with the system, there has been a 67% increase of risk identification. We have had a 200% increase in identified and managed changes as well. Safety recommendations are transparent and distributed for actions with a defined timescale in order to improve the efficiency as well as safety. Feedback is automatically sent via email to the initiator of the Mandatory Occurrence Report. As reports are generated, ASIM has the ability to display/reveal statistics and potential "hot spots" which greatly contributes to a proactive approach by helping us to discover trends and identify areas of improvement more easily.

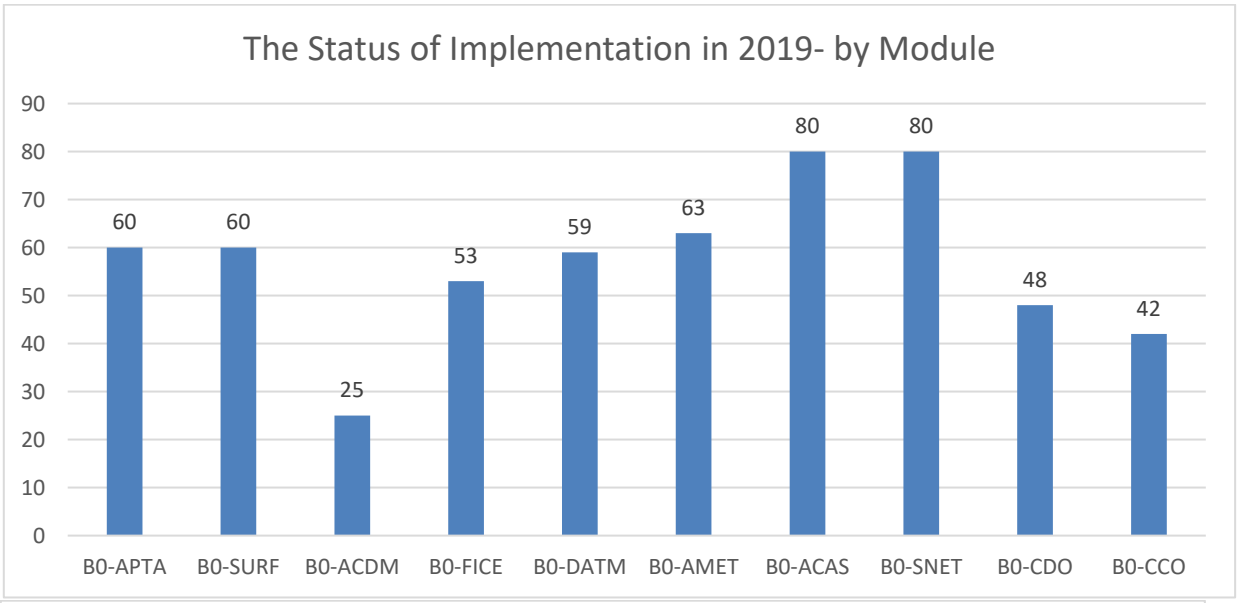
The use of ASIM has improved the process of investigation and implementation of safety recommendations by enabling effective interaction between departments across all certificate holders. It has also given personnel easy access to a system that they are an inherent part of. ASIM has been designed to grow and expand in the future in order to continue to improve the safety record and the efficiency of the SMS. SZC is already planning updates to the present system modules to streamline processes and improve procedures. It is expected that the future development of ASIM will bring SZC closer to a true Just Culture environment putting personnel at the center of true Data Driven Decision making. This unique system placed SZC at the forefront in terms of automating the implementation and effectiveness of the safety management system.

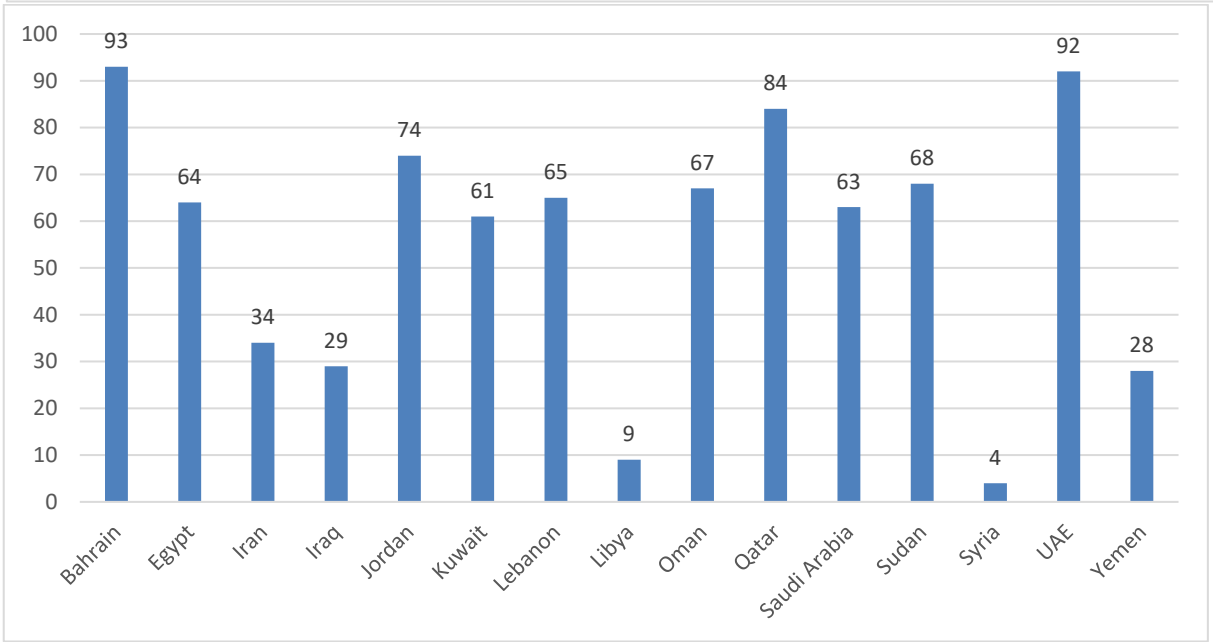
5. CONCLUSION

The overall implementation of priority 1 ASBU Block 0 Modules in the MID Region is around 56% compared to 58% in 2018. The implementation of some modules has been acceptable/good; such as B0-ACAS, B0-AMET and B0-SNET. Nevertheless, some States are still facing challenges to implement the majority of the Block 0 Modules.

The status of implementation of the ASBU Block 0 Modules also shows that Bahrain, Jordan, Qatar and UAE made a good progress in the implementation of the priority 1 ASBU Block 0 Modules.

An estimated amount of **118,159** to **201,169** Mt of fuel (total of **123055.3** to **222990.7** Mt Tonnes of CO2) has been saved in the MID Region in 2019, as a result of the implementation of the selected Block 0 Modules (APTA, CDO and CCO).





Status of implementation of Doha Declaration Targets:

Doha Declaration was endorsed by the third meeting of Directors General of Civil Aviation (DGCA-MID/3) in Doha, Qatar from 27 to 29 April 2015. Doha Declaration set five Targets for the Air Navigation Capacity and Efficiency, as follows:

1- Optimization of Approach Procedures including vertical guidance (PBN): Implement PBN approach procedures with vertical guidance, for all runways ends at international aerodromes, either as the primary approach or as a back-up for the precision approaches by 2017

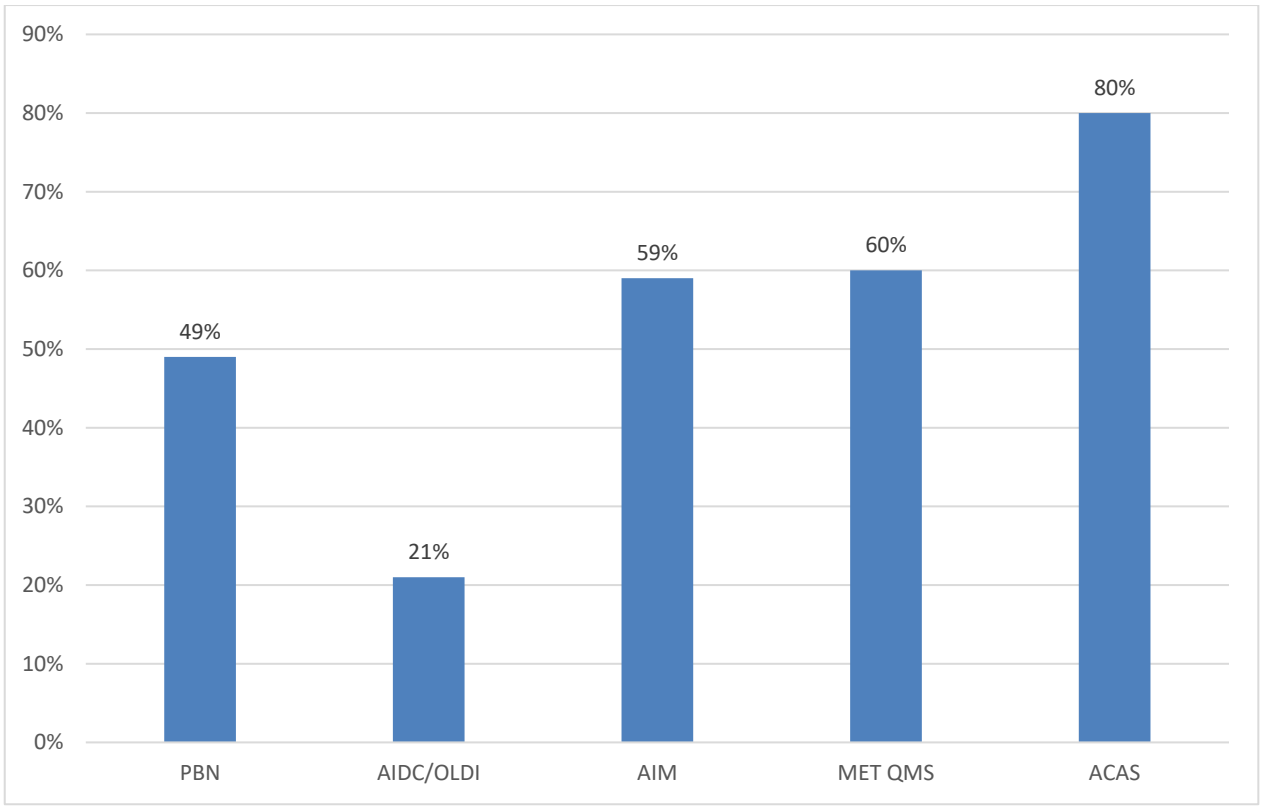
2- Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration: 11 States to implement AIDC/OLDI between their ACCs and at least one adjacent ACC by 2017

3- Service Improvement through Digital Aeronautical Information Management: All States to complete implementation of Phase I of the transition from AIS to AIM by 2017

4- Meteorological information supporting enhanced operational efficiency and safety: 12 States to complete the implementation of QMS for MET by 2017

5- ACAS Improvement: All States require carriage of ACAS (TCAS v 7.1) for aircraft with a max certificated take-off mass greater than 5.7 tons by 2017

Status of implementation by States related to the Targets of the Doha Declaration is as follows:



Status of implementation of Doha Declaration Targets

APPENDIX A: STATUS OF ASBU BLOCK 0 MODULES

	APTA	SURF	ACDM	FICE	DATM	DMET	ACAS	SNET	CDO	CCO	Average Module Implementation
Bahrain											
Egypt											
Iran											
Iraq											
Jordan											
Kuwait											
Lebanon											
Libya											
Oman											
Qatar											
Saudi Arabia											
Sudan											
Syria											
UAE											
Yemen											
Average regional implementation											

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APPENDIX 5.2A

TERMS OF REFERENCE (TOR) OF THE MIDANPIRG AIR TRAFFIC FLOW MANAGEMENT TASK FORCE (ATFM TF)

I. TERMS OF REFERENCE

1.1 Perform a joint assessment and confirmation of the Pre-requisites for a regional ATFM. This shall include:

a) Assessment of the performance objectives of the individual participating States and definition of common performance objectives for a regional ATFM service.

b) Perform a data collection and analysis to identify hot-spot areas and critical times in a regional ATFM service area where demand consistently exceeds capacity. The reasons and contributing factors for unbalanced demand and capacity are to be identified.

c) Analysis of air traffic flows within the designated area of the regional ATFM service that is causing unbalanced demand and capacity. The analysis shall identify the traffic fractions that due to their uniformity are candidates for effective ATFM measures to increase the efficiency without violating the equity principle.

1.2 Develop an ATFM Concept of Operations and a Framework, which addresses ATFM minimum requirements for the implementation of ATFM in the ICAO MID Region.

1.3 Agree on a mechanism to support the phased implementation of ATFM measures in the MID Region, when and where required.

1.4 Identify, research and recommend appropriate guidance regarding:

a) aerodromes and enroute capacities under the normal circumstances and adjustment factors affecting the capacity;

b) regular review for all aerodromes and ATC sectors where traffic demand is expected to reach capacity, or is resulting in traffic congestion;

c) regular review of the implemented ATFM measures and the related publications; to support implementation of the required mesures and reflection by the data houses and compliance of the airspace users.

d) mechanisms for ATFM data gathering, and exchanging operational data related to airspaces/aerdromes availablility and air operation data between States, ANSPs, Airspace users, Organizations and ICAO, which may include:

i. adjusted aerodromes and enroute capacity due to factors affecting capacity such as:
- amid and after crisis management measures (mainly related to ANS Business Continouty Plans and recovery),
- special use airspace status, runway closures, or
- weather phenominas;

ii. traffic demand information, which may include flight schedules, flight plan data, repetitive flight plan data as well as associated surveillance updates of flight status; and

iii. ATFM Daily Plan.

e) measure compliance of airspace users with the applicable ATFM measures; and

f) any other guidance relevant to the Regional ATFM Framework.

1.5 Consider existing and planned ATFM initiative in the Region, and make specific recommendations to ensure their alignment.

1.6 Ensure inter-regional ATFM harmonization with adjacent ICAO Regions.

1.7 Recommend appropriate inputs to the MID Air Navigation Strategy (ASBU Threads, Elements, applicability areas, Metrics, Indicators and Targets) relevant to ATFM such as NOPS, A-CDM, etc.

1.8 Report to the ATM SG.

1.9 Review periodically its Terms of Reference and propose amendments, as necessary.

1.10 Coordinate, as deemed necessary, with the Aerodrome Safety, Planning and Implementation Group (ASPIG) and the Meteorology Sub-Group (MET SG) the issues of mutual interest.

II. COMPOSITION

2.1 The Task Force is composed of MID ATFM focal points and experts from:

a) MIDANPIRG Member States;

b) India, FAA, AACO, ACAO, AEROTHAI, CANSO, EUROCONTROL, IATA, and ICAO (Bangkok, Cairo, Paris Offices and HQ); and

c) other representatives from provider States and Industry may be invited on ad hoc basis, as observers, when required.

2.2 The Task Force shall elect a Chairperson to act as the point of contact on behalf the Task Force.

2.3 The Task Force shall meet at least once a year and when deemed necessary. The meetings of the Task Force could be conducted virtually; and face-to-face meetings will be conducted only when necessary.

2.4 ICAO MID Office will act as the Secretary of the ATFM Task Force meetings.

ATTACHMENT A

LIST OF PARTICIPANTS

State/ Org	Contact	Title
Bahrain	Mr. Ahmed Mohammed Bucheeri	Chief Air Traffic Management
	Mr. Yassen Hassan Al Sayed	Director Air Navigation Systems
	Mr. Abdulla Hasan al Qadhi	Chief AIM & Airspace Planning
Egypt	Mr. Tayseer Kasem	G.D Air Traffic Services
	Mr. Ahmed Mostafa M. Arman	Senior ANS/ATM Inspector
	Mr. Ahmed Abdelwahab M. El Morady	Senior ANS/ATM Inspector
	Mr. Ahmed Saied Abdel Monsef	Senior ANS Safety Oversight Inspector
	Mr. Mohamed Abdel Monem	ANS/ATM Inspector
	Mr. Ahmed Allam	Senior AIM Officer-NANSC
	Mr. Mahmoud Mabrouk	General Manager of Int'l Affairs
	Mr. Ehab Raslan	General Manager of Research and Development
	Mr. Waheed Soliman	CNS Engineer
	Mr. Mohamed Yahia	R & D Specialist
Iran	Mr. Meisam Shaker Arani	Acting Director for ANS and Aerodrome Oversight
	Mr. Mohammad Amirani	Deputy of Aviation Operations
	Mr. Amir Hossein Sadegheheh	General Director of ATM
	Mr. Majid Yarandi	Aero-ICT General Managere
	Siamak Behnam Deylami	General Director of CNS
	Mr. Alireza Hazrati	Air Traffic Controller
Iraq	Mr. Fadel Gatea	ATM Director
	Mr. Ali Bander	CNS Director GCANS-Iraq
	Fatimah Hasan Mohammed	ATS inspector
Jordan	Mr. Khaled Arabiyat	Director of ATM
	Eng. Muneeb Al-Ali	Director/ Aerodromes Safety and Standard (DASS)
	Mr. Tamer Al Nabelsi	ATM Division
	Ms. Narman Asad	Acting chief of ATM Training Division

State/ Org	Contact	Title
Kuwait	Mr. Adel S Boresli	Director of MET Department
	Mr. Faisal A. Al-Asousi	Superintendent of A.T.S.
	Mr. Rashid Al Adwani	Engineer
	Mr. Salah Almushaiti	Superintendent of AIS
	Mr. Mohamad Aleneze	Chief of AIS
Oman	Mr. Mohamed Al Zaabi	President of Civil Aviation Authority
	Mr. Mubarak Saleh Al Gheilani	Acting Director General Civil Aviation Regulations
	Mr.Hamad Ali Al-Abri	General Director of Air Navigation
	Mr. Saleh Abdulla Al Harthy	CNS Director
	Mr. Naser Salim Al-Mazroui	Acting Director of Air Traffic Control Center
	Mr. Jaffer Abdul Amir Moosani	Director of Aviation Information Administration
Qatar	Mr. Ahmed Al-Eshaq	Director Air Navigation
	Mr. Nasser Alsowaidi	
	Mr. Saleh Mohamed Al Nisf	Head of IMS/Senior ATC
	Mr. Ali Mohamed Al-Hail	Head of Radar Engineering Unit
	Mrs. Pamelramdoyala Erice	AIM Supervisor
	Mr. Dhiraj Ramdoyal	NCMC/Head ANSI/SSP Administrator
	Mr. Kevin Cooper	ANS Advisor
	Mr. Mohammed Almuhammadi	SATC
Saudi Arabia	Mr. Abdullah M. Albathi	Acting GM. Airspace Standards
	Mr. Mazen M. Alshihri	Delegated (Airspace Management & Planning Manager)
	Mr. Ahmad Abughallab	ATFM Section Head
	Mr. Loay Abdullah Beshawri	Automation/Surveillance Engineering
	Mr. Ridha Dridi	ANS Technical and Safety Advisor
	Mr. Khaled Saeed Hashlan	General Manager, Aviation Information Standards
	Mr. Imed ben saad	Aviation Information Standards
	Mr. Anas Ibrahim Fallatah	Aviation Information Standards

State/ Org	Contact	Title
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	Mr. Mohamed A. Ben Abdessalem	AIM Strategy Specialist
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	Mr. Tareq Algerf	ANS
	Mr. Muhammad Salamah	Deputy ATS Director
	Mr. Osama Ibrahim	Chief Air Navigation Department
	Mrs. Nada Mahfoud	Air Navigation Safety Inspector
	Mrs. Nissrin Hassan	Air Navigation Safety Inspector
UAE	Mr. Ahmed Ibrahim Al Jallaf	Assistant Director General ANS
	Mr. Hamed Al Belushi	ANS Specialist
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