



International Civil Aviation Organization

Middle East Regional Monitoring Agency Board

**Eleventh Meeting (MIDRMA Board/11)
(Cairo, 27–29 September 2011)**

Agenda Item 4: RVSM Monitoring and Related Technical Issues

MID RVSM SAFETY MONITORING ACTIVITY

(Presented by the Secretariat)

SUMMARY

The aim of this paper is to highlight the requirements for the continuous RVSM monitoring activity, and to review MID Region height-keeping monitoring Strategy.

Action by the meeting is at paragraph 3.

REFERENCES

- MIDANPIRG/12 Report
- MIDRMA Board/10 Report

1. INTRODUCTION

1.1 The meeting may wish to recall that the duties and responsibilities of the MIDRMA include the development of RVSM Safety Monitoring Reports, with a view to verify that the defined safety levels continue to be met. States are requested to provide required data on a regular basis and in a timely manner to the MIDRMA for the achievement of this task. Data includes mainly:

- i) approval of operators and aircraft for RVSM operations (on monthly basis);
- ii) Altitude Deviation Reports (ADR) for deviations exceeding 300 ft (on monthly basis);
- iii) Coordination Failure Reports (CFR) (on monthly basis); and
- iv) traffic data (as requested by the MIDRMA Board)

2. DISCUSSION

2.1 The meeting may wish to recall that the ICAO Doc. 9574, Manual on Implementation of a 300 m (1000 ft) Vertical Separation Minimum between FL 290 and FL 410 Inclusive, calls for regional review of Altitude Deviation Reports (large height deviations) occurring in airspace where RVSM has been implemented.

2.2 The meeting may wish to recall that, MIDANPIRG/12 noted with concern that Yemen has not been complying with MIDANPIRG/11 Conclusion 11/21 related to the provision of required data to the MIDRMA on a regular basis and in a timely manner, and accordingly, the meeting agreed to the inclusion of Yemen in the MIDANPIRG List of Air Navigation Deficiencies.

2.3 MIDANPIRG/12 noted with concern that the reporting of Altitude Deviation Reports (ADRs), which is considered one of the most important elements for the development of the Safety Monitoring Reports, is far below expectations. In this regard, it was recognized that it's unrealistic that a number of FIRs experiencing high volume of traffic continue to report NIL ADRs since 2007. In this respect, MIDANPIRG/12, through Decision 12/14, established the MID RVSM Scrutiny Group, to perform the review of ADRs, with the objective of determining which reports have an influence on the risk of collision associated with the application of RVSM. In addition, the Scrutiny Group analyses and validates the Coordination Failure Reports (CFRs), and where applicable proposes remedial actions and procedures.

2.4 The meeting may wish to recall that data collection, processing, storage and reporting are fundamental to the performance-based approach and forms part of performance monitoring and management. In this respect, it's to be highlighted that MIDANPIRG/12 developed the following Conclusions related performance monitoring of the air navigation systems in the MID Region:

CONCLUSION 12/47: MID REGION PERFORMANCE METRICS

That:

a) the following MID Region Metrics be adopted for performance monitoring of the air navigation systems:

MID Metric 1: Number of accidents per 1,000 000 departures;

MID Metric 2: Percentage of certified international aerodromes;

MID Metric 3: Number of Runway incursions and excursions per year;

MID Metric 4: Number of States reporting necessary data to the MIDRMA on regular basis and in a timely manner;

MID Metric 5: The overall collision risk in MID RVSM airspace;

MID Metric 6: Percentage of air navigation deficiencies priority "U" eliminated;

MID Metric 7: Percentage of instrument Runway ends with RNP/RNAV approach procedure; and

MID Metric 8: Percentage of en-route PBN routes implemented in accordance with the regional PBN plan.

b) the MIDANPIRG subsidiary bodies monitor the Metrics related to their work programmes; develop associated performance targets and provide feed-back to MIDANPIRG.

*CONCLUSION 12/48: DATA COLLECTION FOR MID REGION
PERFORMANCE METRICS*

That, States be invited to:

- a) incorporate the agreed MID Region Performance Metrics into their National performance monitoring process;*
- b) collect and process relevant data necessary for performance monitoring of the air navigation systems to support the regional Metrics adopted by MIDANPIRG; and*
- c) submit this data to the ICAO MID Regional Office on a regular basis.*

2.5 In accordance with the MIDANPIRG Conclusion 12/47, the MIDRMA Board and the ATM/SAR/AIS SG are requested to develop performance targets associated with the Metrics Nr. 4 (*Number of States reporting necessary data to the MIDRMA on regular basis and in a timely manner*) and Nr. 5 (*The overall collision risk in MID RVSM airspace*).

2.6 The meeting may wish to recall that further to the amendment of Annex 6 Part I and Part II concerning long term monitoring requirements for height keeping performance, as of 18 November 2010, the State of Registry that had issued an RVSM approval to an operator would be required to establish a requirement which ensures that a minimum of two aeroplanes of each aircraft type grouping of the operator have their height-keeping performance monitored, at least once every two years or within intervals of 1000 flight hours per aeroplane, whichever period is longer. If an operator aircraft type grouping consists of a single aeroplane, monitoring of that aeroplane shall be accomplished within the specified period.

2.7 In connection with the above, MIDANPIRG/12, through Conclusion 12/17, reviewed and approved the MID Region height-keeping monitoring Strategy as at **Appendix A** to this working Paper.

2.8 The meeting may wish to recall that a MID RVSM Safety Assessment Seminar was successfully held in Bahrain from 22 to 24 February 2010. However, the level of attendance was not up to expectations. With a view to raise the awareness related to the requirements for sustained RVSM safety assessment activity and improve the knowledge of all involved parties, in particular with respect to Altimetry System Errors, it's proposed that a similar Seminar be organized by the MIDRMA in coordination with ICAO in 2013.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this working paper;
- b) review and update the status of provision of data by States and urge those that have not yet provided the required data to the MIDRMA to do so;
- c) agree on the list of States to be included in the MIDANPIRG list of air navigation deficiencies for non provision of required data to the MID RMA, on a regular basis and in a timely manner;
- d) agree on performance targets associated with the Metrics Nr. 4 (*Number of States reporting necessary data to the MIDRMA on regular basis and in a timely manner*) and Nr. 5 (*The overall collision risk in MID RVSM airspace*);
- e) review the MID Region height-keeping monitoring Strategy; and

- f) agree that a MID RVSM Seminar be organized in 2013, and endorse the following Draft Conclusion:

Why	Need to provide States with a better understanding of the RVSM height-keeping monitoring requirements and associated Altimetry System Errors
What	MID RVSM Safety Monitoring Seminar
Who	MIDRMA in coordination with ICAO
When	2013

DRAFT CONCLUSION 11/XX: MID RVSM SAFETY MONITORING SEMINAR

That, with a view to provide States with a better understanding of the RVSM height-keeping monitoring requirements and associated Altimetry System Errors:

- a) a MID RVSM Safety Monitoring Seminar be organized in 2013;*
- b) the MIDRMA coordinate with ICAO the organisation of the Seminar; and*
- c) MID States be encouraged to participate actively in this event.*

APPENDIX A

MID REGION HEIGHT-KEEPING MONITORING STRATEGY

Considering:

- a) The status of implementation of RVSM in the MID Region;
- b) the ICAO requirements for height-keeping monitoring contained in Annex 6, Annex 11 and Doc 9574 (RVSM Manual);
- c) the duties and responsibilities of the MIDRMA; and
- d) the sustained need for height-keeping monitoring of aircraft operating within the MID RVSM airspace;

Recognizing:

- i) that an important number of Middle East region aircraft do not have known monitoring results; and
- ii) the necessity to develop a MID Region Height monitoring infrastructure;

Agreed:

That the MID Region height-keeping monitoring Strategy is as described below:

1) Short Term:

- States to follow up with concerned aircraft operators to carry out necessary height keeping monitoring for the aircraft identified by the MIDRMA; and
- States encountering difficulties to get the necessary height monitoring results to coordinate with the MIDRMA for the conduct of GPS Monitoring Unit (GMU) monitoring for the identified operators' aircraft.

2) Medium and Long Term:

- the MIDRMA to conduct GMU Monitoring in the MID Region with self-sufficiency capability (acquisition of necessary hardware, software, training, etc);
- the use of the Omani Multilateral-based Height Monitoring Unit (HMU), or any other HMU that becomes available in the MID Region, as a possible means of conducting height-keeping monitoring; and
- the possibility of using a MID Region HMU infrastructure as the main mean of height-keeping monitoring in the Region, if supported by a feasibility study and business case and when decided by the MIDRMA Board to go ahead with such an important project.

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