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# Introduction



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- Between 1997 and 2005 RVSM was implemented in all of Europe, Middle East, North Africa, Southeast Asia, North America, South America, and over the North Atlantic, South Atlantic, and Pacific Oceans.
- Reduced Vertical Separation Minima (RVSM) was implemented in the **Middle Eastern airspace on 27th November 2003** (Except for Baghdad FIR which was implemented on 9th March 2011) reducing the vertical separation between RVSM-approved aircraft from 600m (2000ft) to 300m (1000ft) for aircraft operating at/between Flight Levels 290 and 410 inclusive.

# MIDRMA Establishment



- The Middle East Regional Monitoring Agency (MIDRMA) was established on the 24th November 2005 under the approval of Middle East Air Navigation Planning and Implementation Regional Group (MIDANPIRG) to assume the duties and responsibilities of the Regional Monitoring Agency (RMA) for the ICAO Middle East Region.
- The principal role of the MIDRMA is to assist the International Civil Aviation Organization (ICAO) in the continuation of the safety assessment program for the implementation of Reduced Vertical Separation Minimum (RVSM) and other monitoring requirements as determined by the MIDANPIRG.

# MIDRMA Establishment



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## MIDRMA Member States



Bahrain



Kuwait



KSA



Egypt



Lebanon



Sudan



Iran



Libya



Syria



Iraq



Oman



UAE



Jordan



Qatar



Yemen

# MIDRMA Establishment

## MIDRMA Member States – Area of Responsibility

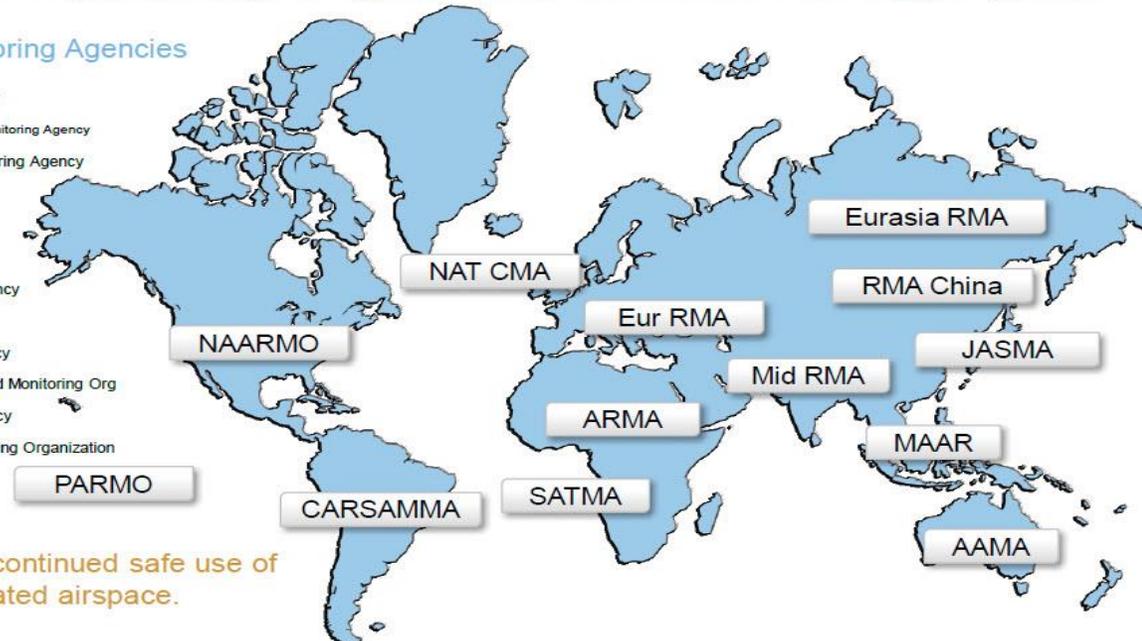


## Regional Monitoring Agencies

In all regions where RVSM has been implemented, regional monitoring agencies (RMAs) have been established by the appropriate planning and implementation regional groups (PIRGs) to satisfy the goals of the RVSM monitoring program.

### ICAO-Endorsed Regional Monitoring Agencies

AAMA	Australian Airspace Monitoring Agency
ARMA	African and Indian Ocean (AFI) Regional Monitoring Agency
CARSAMMA	Caribbean and South American Monitoring Agency
China RMA	China Regional Monitoring Agency
EurAsia RMA	Regional Monitoring Agency Eurasia
Eur RMA	European Regional Monitoring Agency
JASMA	Japan Airspace Safety Monitoring Agency
MAAR	Monitoring Agency for Asia Region
Mid RMA	Middle East Regional Monitoring Agency
NAARMO	North American Approvals Registry and Monitoring Org
NAT CMA	North Atlantic Central Monitoring Agency
PARMO	Pacific Approvals Registry and Monitoring Organization
SATMA	South Atlantic Monitoring Agency



An RMA supports the continued safe use of RVSM within a designated airspace.

# MIDRMA Establishment



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## List of Regional Monitoring Agencies

- Africa and Indian Ocean (AFI) Regional Monitoring Agency (ARMA)
- Monitoring Agency For Asia Region (MAAR)
- Australia Airspace Monitoring Agency (AAMA)
- China Regional Monitoring Agency (China RMA)
- Regional Monitoring Agency Eurasia (EURASIA RMA)
- European Regional Monitoring Agency (EUR RMA)
- Japan Airspace Safety Monitoring Agency (JASMA)
- **Middle East Regional Monitoring Agency (MIDRMA)**
- North American Approvals Registry and Monitoring Organization (NAARMO)
- Pacific Approvals Registry and Monitoring Organization (PARMO)
- Caribbean and South American Monitoring Agency (CARSAMMA)
- South Atlantic Monitoring Agency (SATMA)
- North Atlantic Central Monitoring Agency (NAT CMA)

# MIDRMA Establishment

- The RMAs meet once a year under a group name Regional Monitoring Agencies Coordination Group (RMACG) the annual RMA meetings are essential for the success of the harmonization work being carried out by the group.



# Duties and Responsibilities



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- To establish and maintain a central registry of State RVSM approvals of operators and aircraft using the Middle East Region airspace where RVSM is applied.
- To initiate checks of the “approval status” of aircraft operating in the relevant RVSM airspace, identify non-approved operators and aircraft using RVSM airspace and notify the appropriate State of Registry/State of the Operator and other RMAs, accordingly.

# Duties and Responsibilities



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- To establish and maintain a database containing the results of height keeping performance monitoring and all altitude deviations of 300 ft or more within Middle East Region airspace, and to include in the database the results of MIDRMA requests to operators and States for information explaining the causes of observed large height deviations. (MMR)
- Provide timely information on changes of monitoring status of aircraft type classifications to State Authorities and operators.

# Duties and Responsibilities



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- To assume overall responsibility for assessing compliance of operators and aircraft with RVSM height keeping performance requirements in conjunction with RVSM introduction in the Middle East Region.
- To facilitate the transfer of approval data to and from other RVSM Regional Monitoring Agencies.

# Duties and Responsibilities



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- To establish and maintain a database containing the results of navigation error monitoring.
- To conduct safety analysis for RVSM operations in the MID Region and prepare RVSM Safety Monitoring Reports (SMR) as instructed by MIDANPIRG and the MIDRMA Board.

# Duties and Responsibilities



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- To conduct readiness and safety assessments to aid decision-making in preparation for RVSM implementation in those FIRs where RVSM is not yet implemented.
- To carry out post-implementation safety assessments, as appropriate.

# Duties and Responsibilities



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- Based on information provided by States related to planned changes to the ATS routes structure, advise States and MIDANPIRG on the effects of such changes on the safe RVSM operations in the MID Region.
- To liaise with other Regional Monitoring Agencies and organizations to harmonize implementation strategies.

# MIDRMA RVSM Safety Objectives



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The main objectives of the MIDRMA is to ensure that the three key safety objectives as set out by MIDANPIRG, through Conclusion 12/16, continue 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  **$2.5 \times 10^{-9}$**  fatal accidents per flight hour.

# MIDRMA Safety Objectives



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- **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 x 10<sup>-9</sup>** fatal accidents per flight hour.

# MIDRMA Safety Objectives



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- **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.

# Questions



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