



**MALDIVES CIVIL AVIATION AUTHORITY  
MALDIVES**

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**NOTICE OF PROPOSED RULE MAKING  
NPRM NO: 2012-03**

**02 August 2012**

**ASC OPS 1-5  
Performance Based Navigation**

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## 1. Purpose of this NPRM

- 1.1 The purpose of this NPRM is to specify the requirements for Performance Based Navigation (PBN) referred to in MCAR OPS 1 Subpart D.

## 2. Background to the Proposal

This ASC OPS 1-5 prescribes requirement for aircraft operators to ensure that aircraft operated in areas, or through portion of airspace, or on routes where navigation performance requirements have been specified, is certified according to these requirements, and, if required that to obtain relevant operational approval from CAA.

## 3. Key Stakeholders

The following are identified by the CAA as key stakeholders in the proposed amendments to regulations contained in this NPRM:

- Island Aviation Services Ltd
- Maldivian Air Taxi Pvt Ltd
- Trans Maldivian Airways Pvt Ltd
- Mega Global Air Services (Maldives) Pvt Ltd
- Asian Academy of Aeronautics
- Villa Air Pvt. Ltd
- Foreign carriers operating into the Maldives or flying across Maldives airspace

## 4. Submissions on the NPRM

### 4.1 Submissions are invited

Interested persons are invited to participate in the making of the proposed rules by submitting written data, views, or comments. All submissions will be considered before final action on the proposed rule making is taken.

### 4.2 How to make a submission

Comments on this proposal may be forwarded (*preferably by e-mail*), using the NPRM Submission Form given in Appendix 1. The NPRM Submission Form is also available on the MCAA website [www.aviainfo.gov.mv](http://www.aviainfo.gov.mv).

Submissions may be sent by the following methods:

by mail: Maldives Civil Aviation Authority  
11th Floor, Velaanaage  
Ameerahmedmagu, Male', 20096,  
Republic of Maldives

fax: + 960 3323039

e-mail: [safety@aviainfo.gov.mv](mailto:safety@aviainfo.gov.mv)

#### **4.3 Final date for submissions**

Comments must be received before 31<sup>st</sup> August 2012.

#### **4.4 Availability of the NPRM**

Any person may obtain a copy of this NPRM from:

MCAA website: [www.aviainfo.gov.mv/regulations/nprm.php](http://www.aviainfo.gov.mv/regulations/nprm.php)

**or from:** Maldives Civil Aviation Authority  
11th Floor, Velaanaage  
Ameerahmedmagu, Male', 20096,  
Republic of Maldives

#### **4.5 Further Information**

For further information contact the acting Regulation Project Coordinator:

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### **5 Proposed Rule Amendments**

Nil



Hussain Jaleel  
**Chief Executive**



**MALDIVES CIVIL AVIATION AUTHORITY**  
**Republic of Maldives**

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**AIR SAFETY CIRCULAR**

**ASC OPS 1-5**  
**Performance Based Navigation**

**Initial Issue, 02 August 2012**

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**PBN 0.0 APPLICABILITY**

This ASC addresses the requirements for Performance Based Navigation (PBN) referred to in MCAR OPS 1 Subpart D.

MCAR-OPS 1.243 states that, an operator shall ensure that an aeroplane operated in areas, or through portion of airspace, or on routes where navigation performance requirements have been specified, is certified according to these requirements, and, if required, that CAD has granted relevant operational approval.

**PBN 1.0 DEFINITIONS**

- (a) **Performance-based navigation (PBN)** - Area navigation based on performance requirements for aircraft operating along an ATS route, on an instrument approach procedure or in a designated airspace
- (b) **Navigation specification** - A set of aircraft and flight crew requirements needed to support performance-based navigation operations within a defined airspace as described in the ICAO PBN Manual (DOC 9613)
- (c) **Required navigation performance (RNP) specification** - A navigation specification based on area navigation that includes the requirement for performance monitoring and alerting, designated by the prefix RNP.
- (d) **Area navigation (RNAV) specification** - A navigation specification based on area navigation that does not include the requirement for performance monitoring and alerting, designated by the prefix RNAV

### **PBN 1.1 PERFORMANCE BASED NAVIGATION**

- (a) No person may operate flights along ATS routes, on an instrument approach procedure, or in a designated airspace where a Navigation Specification has been prescribed unless:
- (1) the person has received authorization from the Maldives Civil Aviation Authority.
  - (2) the aircraft is equipped with the navigation equipment to enable it to operate in accordance with the prescribed Navigation Specification; and
  - (3) the aircraft is equipped with navigation equipment that continuously provides information to the flight crew of adherence to or departure from track with respect to the required degree of accuracy at any point along that track.
- (b) No person may operate an aircraft unless it has sufficient navigation equipment that will enable the aircraft to navigate in accordance with paragraph (a) above, such that in the event of the failure of any piece of navigation equipment at any stage of flight, the remaining equipment will enable the aircraft to continue to a destination or an alternate destination.

### **PBN 1.2 ELECTRONIC NAVIGATION DATA MANAGEMENT**

No person shall employ electronic navigation data products that have been processed for application in the air and on the ground unless the CAA has approved:

- (1) the operator's procedures for ensuring that the process applied and the products delivered have acceptable standards of integrity and that the products are compatible with the intended function of the equipment that will use them;
- (2) the operator's programme for continual monitoring of both process and products; and
- (3) the operator's procedures to ensure the timely distribution and insertion of current and unaltered electronic navigation data to all aircraft that require it.

### **PBN 1.3 INITIAL PBN OPERATIONS TRAINING**

- (a) No person may serve nor may any AOC holder use a person as a flight crew member or flight operations officer (if applicable) unless he or she has completed the appropriate initial PBN operations training curriculum approved by the CAA.
- (b) The initial PBN training curriculum for each Navigation Specification shall ensure that each pilot and flight operations officer (if applicable) is qualified in the type of operation in which he or she serves and in any specialized or new equipment, procedures, and techniques, such as:
- (1) knowledge of specialized navigation procedures;
  - (2) knowledge of specialized equipment;
  - (3) SIDs and STARs (if applicable);
  - (4) the ability of the airborne equipment to fly the designed flight path. This may involve pilot intervention where the equipment functionality is limited;
  - (5) management of changes (procedure, runway, track, etc.);
  - (6) turn management (turn indications, airspeed & bank angle, lack of guidance in turns);
  - (7) route modification (insertion/deletion of waypoints, direct to waypoint) and restrictions on route modification;
  - (8) intercepting route, radar vectors; and

- (9) where GNSS is used, flight crews will be trained in GNSS principles.
- (c) Each AOC holder shall require each pilot and flight operations officer (if applicable) to complete a demonstration of competence to a defined standard of knowledge and performance.

**PBN 2.0 EFFECTIVITY**

This circular comes into effect from 02 August 2012

**For the Maldives Civil Aviation Authority**  
Hussain Jaleel  
CHIEF EXECUTIVE

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