

# Advisory Circular

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## FATIGUE MANAGEMENT PROGRAMME FOR AIR TRAFFIC CONTROLLERS

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### GENERAL

Advisory Circulars (ACs) are issued by the Director-General of Civil Aviation (DGCA) from time to time to provide practical guidance or certainty in respect of the statutory requirements for aviation safety. ACs contain information about standards, practices and procedures acceptable to CAAS. An AC may be used to demonstrate compliance with a statutory requirement. The revision number of the AC is indicated in parenthesis in the suffix of the AC number.

### PURPOSE

This AC provides guidance to demonstrate compliance with, and information related to, requirements on the establishment of a fatigue management programme (FMP) for air traffic controllers.

### APPLICABILITY

This AC is applicable to the Air Navigation Services Provider (ANSP) operating in accordance with the Manual of Standards (172 – Air Traffic Services) 2024 (MOS-172).

### RELATED REGULATIONS

This AC relates specifically to paragraph 87 of the MOS-172.

### RELATED ADVISORY CIRCULAR

AC 1-3 Safety Management System (SMS).

### CANCELLATION

This AC supersedes AC ATS-3 (Rev 0) dated 4 November 2021.

### EFFECTIVE DATE

This AC is effective from 24 February 2025.

## **OTHER REFERENCES**

ICAO Doc 9966 – Manual for the Oversight of Fatigue Management Approaches

### **1 FATIGUE MANAGEMENT**

- 1.1 This AC provides guidance and information on the establishment of an FMP, in accordance with paragraph 87 of the MOS-172.
- 1.2 The ANSP should review the FMP periodically to ensure that the FMP continues to fulfil its purpose of managing fatigue-related safety risks.
- 1.3 The ANSP should leverage its SMS to identify and manage fatigue-related risks. Further guidance on managing fatigue-related risks is contained in the ICAO Doc 9966 – Manual for the Oversight of Fatigue Management Approaches.

### **2 ROSTERING AND MONITORING PROCESS**

- 2.1 Paragraph 87(1) of the MOS-172 requires the ANSP to implement and maintain an FMP. The FMP must develop a roster that is commensurate with the air traffic control service provided. The roster must specify the scheduling limits, which must be in accordance with the scheduling limits specified in the Second Schedule of the MOS-172, or any variation to the scheduling limits that is approved by the Air Navigation Services Regulator (ANS Regulator).
- 2.2 The ANSP should establish a system, that includes a backup mechanism, to track air traffic controllers' actual deployment, ensuring continuity in rostering and monitoring. The ANSP should also submit a monthly report to the ANS Regulator, summarising any instances of deviation from the scheduling limits. The report should include the following details for each deviation:
  - (a) name of the air traffic controller;
  - (b) the air traffic controller's stream;
  - (c) when the deviation took place; and
  - (d) the specific scheduling limit that was deviated.

#### Air traffic controllers roster

- 2.3 The ANSP should publish the roster well in advance and minimise late changes to the roster.
- 2.4 When the ANSP provides for the air traffic controllers to swap duties, the ANSP must establish procedures to ensure compliance with the scheduling limits.

#### Deployment under certain operation circumstances

- 2.5 The ANSP may include in the FMP the types of operational circumstances under which air traffic controllers may be deployed under the following two variations that the ANS Regulator may approve to the scheduling limits:

- (a) the number of consecutive work days may be extended from 6 to 7 days, provided there is a minimum interval of 48 hours between the end of one period of consecutive work days and the next.
  - (b) the minimum duration of a non-duty period (between the end of one duty period and the start of the next duty period) of each air traffic controller may be reduced from 10 hours to 9 hours.
- 2.6 When an air traffic controller is deployed as described in paragraph 2.5, the ANSP must include this information in the monthly report to the ANS Regulator, as outlined in paragraph 2.2.

### **3 DEVIATION FROM SCHEDULING LIMITS**

- 3.1 Paragraph 87(2)(e) of the MOS-172 requires the ANSP to establish procedures for deviating from the scheduling limits to address any additional risks associated with unforeseen operational circumstances. The procedures should include, but are not limited to, the following:
- (a) types of unforeseen operational circumstances for deviating from the scheduling limits;
  - (b) roles and responsibilities of the relevant personnel; and
  - (c) identification of fatigue-related risks and the corresponding appropriate mitigations.
- 3.2 The ANSP must inform the ANS Regulator of the deviations within 72 hours, as required under paragraph 87(3) of the MOS-172.

### **4 VARIATION TO ADDRESS STRATEGIC OPERATIONAL NEEDS**

- 4.1 In accordance with paragraph 87(6) of the MOS-172, the ANSP must not vary the scheduling limits specified in the FMP to address strategic operational needs unless it has obtained the approval of the ANS Regulator.
- 4.2 The ANSP should establish procedures in the FMP for seeking approval from the ANS regulator to vary the scheduling limits to address strategic operational needs and ensure that any associated risks are managed to maintain at least an equivalent safety level. The procedures should include, but are not limited to, the following:
- (a) situations for seeking a variation;
  - (b) methodology for conducting risk assessments to demonstrate that associated risks will be managed to maintain an equivalent level of safety;
  - (c) documentation and recording of the variation;
  - (d) measures to ensure continued monitoring of the variation's impact through existing SMS activities; and
  - (e) personnel responsible for seeking the approval.

- 4.3 The ANSP should submit an application to vary a scheduling limit to the ANSP Regulator at least 6 weeks (or a shorter timeframe as agreed by the ANS Regulator) prior to the planned commencement of the variation. The application must contain the information as set out in paragraphs 87(7) and 87(8) of the MOS-172.

## **5 PROCEDURES TO FAMILIARISE ANSP PERSONNEL WITH FATIGUE MANAGEMENT**

- 5.1 The FMP must include procedures to familiarise the ANSP's personnel with the principles of fatigue management and the ANSP's policies with regard to fatigue management, as required under paragraph 87(2)(c) of the MOS-172.

- 5.2 Such procedures include training and should be developed based on scientific principles. The procedures and training should cover the effects of sleep loss or extended wakefulness, circadian phase, or workload (mental or physical activity) that can impair an air traffic controller's alertness and ability to perform safely.

- 5.3 The ANSP must keep such training records accordingly.