



**GOVERNMENT OF INDIA
CIVIL AVIATION DEPARTMENT
OFFICE OF DIRECTOR GENERAL OF CIVIL AVIATION
NEW DELHI**

OPERATIONS CIRCULAR 8 OF 2011

**AV. 22024/8/2010-FSD
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Subject: ATCO Work-Load

Description

The role of the ATCO is to ensure the safe and expeditious flow of air traffic through the airspace for which they have responsibility. A controller must remain alert and effective throughout that part of their assigned shift which involves operational duty, ready to cope with unexpected or unforeseen situations such as the consequences of aircraft emergency declarations or extreme weather conditions.

The workload of a controller must be accurately assessed to permit optimum efficiency. If it is too high for too long, they may be overstretched. If it is too low for too long, this not only constitutes an inefficient application of resources but is likely to increase the chances of a controller becoming distracted from their primary task.

Effects

- An overworked controller may:
 - Have difficulty maintaining Situational Awareness;
 - Overlook a developing unsafe situation;
 - Make errors of judgement;
 - Become confused;
 - Be unable to cope with a sudden increase in workload.
- A controller experiencing significant periods of underwork during a particular shift may become bored and distracted from their primary task. Repetition of this over many consecutive shifts may lead to Complacency and invites specific measures for Risk Mitigation

Defences

- Airspace is divided into sectors of responsibility sized according to the capability of a single controller.
- These sectors must be capable of being combined or split on a tactical basis where traffic levels vary a lot from the sector design assumptions.
- Controllers are provided with Safety Nets and back-up teams to support their work.
- Shift patterns are designed to ensure that controllers can have sufficient rest and reflect the different off duty rest issues for night-time and day-light duties.
- Each working duty contains appropriate breaks to allow controllers to rest and, if necessary, to recover after periods of high workload.
- SOPs properly define hand-over procedures so that an on-going controller is fully briefed before taking over a position.
- Ensure that all aspects of OJT are governed by effective SOP

Contributory Factors

- Staff shortage;
- Equipment malfunction or failure;
- Controller Position Design;
- Poor TRM;
- Inadequate SOPs.

Solutions

- Ensure that staffing levels are adequate to cope with the expected task in peak periods, plus a margin to allow for sickness, training, etc;
- Split sectors in periods of very high activity; combine sectors in quiet periods;
- Rotate controllers' duties to provide variety;
- Review and if necessary improve the design of the controller's position;
- Ensure that adequate rest breaks are scheduled and that rest conditions are satisfactory.
- Review and if necessary improve TRM training provisions.
- Review and if necessary improve SOPs for handover/takeover of duties; ensure that SOPs are followed.

Sd/-
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