

To, All Operators,

Subject: Monsoon Circular 2025

This is to inform you that the Monsoon Circular 2025, approved by CAA Nepal on 14th May 2025 (2082/01/31 B.S.), is now in effect for the ongoing monsoon season.

All concerned are hereby instructed to review the Circular and ensure strict compliance with its provisions without delay.

The Circular can be accessed on the FSSD section of the CAAN official website for your reference.

Capt. S. Munankarmi Chief Flight Operations Division

CC:

-Director General, CAA Nepal, CAAN Head Office sir, for your kind information -Deputy Director General, -DDG-2, CAAN, ,..... sir, for your kind information -CHIEF, FSSD, CAAN, Sinamangal, sir, for your kind information --CHIEF,AWD, FSSD,CAAN......, for your kind information



1. BACKGROUND:

In view of the imminent onset of the **Monsoon Season** (June to September), the Civil Aviation Authority of Nepal (CAAN) issues this advisory to enhance the safety of aviation operations during this period. Due to the severe weather conditions, including heavy rainfall, reduced visibility, and turbulent winds, aviation operations during the monsoon require heightened awareness, preparedness, and coordination across all levels of the aviation industry.

These weather conditions significantly affect the Air Traffic Management (ATM) system's capacity, underscoring the critical need for monsoon awareness among aviation stakeholders. Previous monsoon seasons have highlighted operational challenges, including increased incidents of Controlled Flight Into Terrain (CFIT) accidents and runway safety-related issues.

This advisory circular aims to provide guidelines for pilots, air traffic controllers (ATC), ground staff, and airport operators to mitigate risks associated with the monsoon season.

1. Overview of Monsoon Season Hazards:

During the monsoon season, the following weather-related challenges are common:

- Heavy rainfall leading to poor visibility
- Severe turbulence affecting aircraft stability
- Wind shear near mountains and airports
- Flooding on runways, potentially leading to safety hazards
- Increased likelihood of CFIT (Controlled Flight Into Terrain) accidents

It is essential that all aviation stakeholders remain vigilant and adhere to the safety protocols outlined in this advisory circular.

2. RECOMMENDATION FOR FLIGHT OPERATORS:

- 2.1 Pre-Flight Preparation:
- 2.1.1.1 Weather Briefing: Pilots must obtain the latest METAR/TAF reports for departure, en-route, and destination airports. Continuous monitoring of weather updates during flight is essential.
- 2.1.1.2 Flight Plan Adjustments: Pilots should factor in potential weather disruptions (e.g., turbulence, thunderstorms) when planning flight routes and altitudes. Always have alternate airports in mind in case of diversion.
- 2.1.1.3 **Crew Briefing** : Crew Briefing by the dispatcher should cover Aircraft status, especially MEL and its impact on monsoon operations. Latest Departure, enroute, Destination and alternate weather should be provided to the crew and changes to enroute, destination and alternate weather should be transmitted to crew whenever there is a significant deterioration post pre-flight briefing stage.



The crew should also endeavor to keep themselves updated with required weatherinformation from all available sources. Similarly, Operations Control Center shall also effectively monitor changing weather patterns and continuously update latest weather throughout the flight, by all possible tools and means.

- 2.1.1.4 **Fuel uplift** : Fuel uplift calculation should be done very judiciously and it should take into account enroute and destination weather and trend forecast and strictly adhere to company policy. Selection of a suitable destination alternate is also an important aspect adverse and monsoon conditions.
- 2.1.1.5 NOTAMS : NOTAMS regarding degradation of any Nav aids, runway or Approach Lighting System, Runway or Taxi way closures should be well reviewed prior departure.
- 2.1.1.6 **MEL**: Comply the Monsoon operations provisions of each approved aircraft MEL, as applicable and ensure the serviceability of the following items listed below as well as not release the aircraft under MEL during the monsoon period:
 - a) Anti-Skid System
 - b) Windshield wipers system
 - c) Weather Radar System and Predictive Windshear System (If installed)
 - d) Slats and Flaps System
 - e) Engine Reverse Thrust System
 - f) Ground Proximity Warning System
 - g) Aircraft Communication and Navigation system

h) Ensure Brakes are well serviced and that no visible threads are present and the shoulder tread groove) is not entirely worn out.

Note: For Aircraft having redundant systems, operator may consider to release the aircraft in MEL if equivalent level of safety can be assumed taking into account the aircraft design.

2.1.1.7 Terrain Awareness:

- **CFIT Mitigation**: Pilots must be extra cautious when flying near mountainous terrain, particularly during low visibility conditions. **TAWS** (Terrain Awareness Warning Systems) must be activated and functioning properly.
- Avoiding Controlled Flight Into Terrain (CFIT): Strict adherence to flight path altitudes and regular checks of the aircraft's descent rate are critical in mountainous areas



2.2 In-Flight Procedures:

2.2.1 Altitude Management: Pilots should fly at higher altitudes to avoid turbulence, especially when crossing mountainous regions or flying through storm systems.

2.2.2 **Turbulence and Wind Shear**: Be prepared for sudden wind shifts and turbulence, particularly during takeoff, approach, and landing phases. Maintain flexibility in routing and altitude adjustments.

2.2.3 Taxi & Take off

- 2.2.3.1 The effect of prevailing wind conditions and runway surface condition on aircraft performance should be taken into account for performance calculations. Any significant deviation, specially increase in tail wind conditions and deteriorating runway surface conditions should warrant performance to be re-calculated prior to take-off.
- 2.2.3.2 Correct use of weather radar is very important. A common error is not having the weather radar in the correct mode and range during take-off. Situational awareness and RT monitoring give indications of the anticipated weather in the take-off path. When in doubt on course of action prior to departure due to weather radar display, information from air traffic controller can be sought regarding weather avoidance action by other departing aircrafts. Intentions of weather avoidance should be communicated clearly to ATC prior to take-off if possible. Flight crew should be aware of suspected windshear on departure path and review windshear procedures in case of adverse weather conditions.

2.2.4 Approach and Landing:

- 2.2.4.1 VFR flights must avoid clouds at all times. If not feasible, ascend to a safe altitude and maintain Visual Meteorological Conditions (VMC) or declare and comply with Instrument Flight Rules (IFR). If conducting an Instrument Approach, all efforts should be made to conduct instrument approaches where lateral and vertical guidance is available. Visual approaches should be avoided as far as possible. Weather minima should be strictly followed.
- 2.2.4.2 Stabilized approach and the importance of the same has been documented at many places. However, it has been observed in a majority of runway excursions and hard landings were caused due unstabilised approaches. In adverse weather, stabilized approach is the first step towards a safe landing.
- 2.2.4.3 Avoid relying solely on GPS for navigation during adverse weather conditions in airspace or airfleids lacking established provisions.
- 2.2.4.4 The most important maneuver on approach to landing is a go-around. Every approach during heavy rain should be done with a "think Go Around" commitment. Accidents happen mainly because of what is called "Press-on-itis." Once a bit of the runway is sighted, pilots lose focus



on whether they are in a stabilised condition for a safe landing or not. If weather conditions deteriorate, initiate a **Go-Around** without hesitation.

- 2.2.4.5 Rain at night increases the apparent brilliance of the Approach Light System making the runway appear to be closer than it really is. The risk is that a pilot will land short of the runway threshold. Runway surface conditions can also induce illusions. As a wet runway reflects very little light, a pilot may think that the aircraft is further away, contributing to the risk of a late flare and hard landing. Flying in haze too creates the impression that the runway is further away, inducing a tendency to follow a shallow glide path. Report to ATC regarding braking action and directional control when landing on wet or contaminated runways. Flight crew should request alternate clearance if unable to comply with ATC-issued clearances and mandatorily report weather deviations.
- 2.2.4.6 Regular updates should be obtained from available sources for enroute and destination weather specially if there is a forecast of adverse weather enroute or at destination aerodrome. Alternate selection during such periods needs to be given due consideration. The available fuel should be constantly monitored, as enroute weather avoidance and use of anti-ice devices may end up consuming more than the planned fuel for such activity.
- 2.2.4.7 Prior to descent, weather and fuel for diversion should be discussed and clearly understood by the crew members, as this can create uncertainties at later stages of the approach.

NOTES:

1. PIREP: A pilot report or PIREP is a pilot's report of actual weather conditions encountered while airborne. Typically, pilots file a report to ATC or Flight Service when the weather conditions are not the same as the forecast, or when the conditions are actually worse than the forecast. Low visibility, turbulence, icing and thunderstorms are good examples of actual weather conditions that may not be in the forecast but may be conditions a pilot experiences during flight.

2. FOQA Monitoring/ FDAP : All operators should increase crew awareness on the flight parameters that are likely to be exceeded during monsoon, take corrective measures in a timely and appropriate manner by utilizing all Safety Management tools including FDAP as applicable.