

International Civil Aviation Organization



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INFORMATION PAPER (IP/12)

ICAO Asia and Pacific (APAC)
Twenty-Eighth Meeting of the Meteorology Sub-Group
(MET SG/28)

Bangkok, Thailand, 8 to 12 July 2024

Agenda Item 6: Research, development and other initiatives

**GENERATION AND OPERATIONALIZATION
OF FORECAST THUNDERSTORM SIGMET**

(Presented by Nepal)

SUMMARY

Nepal has been issuing observation-based thunderstorm SIGMETs for the last decade, but the paper highlights the urgent need to prepare and operationalize forecast thunderstorm SIGMETs.

1. INTRODUCTION

1.1. The paper emphasizes the need for preparing and operationalizing forecast Thunderstorm SIGMETs in Nepal. Till now, Nepal has been issuing observational TS SIGMETs, but it is crucial to issue forecast SIGMETs and develop criteria for their implementation. For this, deep understanding about forecast SIGMET is required for Nepal.

1.2. Not only this, Nepal should observe the existing practise in other countries regarding the forecast SIGMET. It aims to enhance aviation safety by improving thunderstorm forecasting. The paper also highlights the importance of accurate forecasting and timely dissemination in aviation safety and its smooth operation. So Nepal needs to develop understanding on forecast SIGMET and propose the different criteria to issue the forecast. Next steps involve implementing the proposed criteria and conducting regular reviews to make it operational.

2. DISCUSSION

2.1 Airlines in Nepal need forecast thunderstorm SIGMETs to enhance flight safety, operational efficiency, and passenger comfort. These forecasts provide advance warnings about potential thunderstorm activity, allowing airlines to Avoid Severe Weather. Pilots can plan routes to avoid areas with forecasted thunderstorms, reducing the risk of turbulence, lightning strikes, and other weather-related hazards. It will improve flight Planning.

2.2 Airlines can make informed decisions about flight paths, fuel requirements, and scheduling, leading to more efficient and cost-effective operations. Early warnings enable proactive measures to ensure passenger and crew safety, including possible delays or cancellations if severe

2.3 Weather is anticipated. Forecast SIGMET helps airlines anticipate and mitigate potential delays and disruptions, improving overall service reliability and customer satisfaction. Ground operations can be better managed with advanced knowledge of weather conditions.

2.4 In summary, forecast thunderstorm SIGMETs are crucial for airlines to ensure safe, efficient, and reliable operations. Nepal has been issuing observation-based thunderstorm SIGMETs for the last decade, but the paper highlights the urgent need to prepare and operationalize forecast thunderstorm SIGMETs.

3. ACTION BY THE MEETING

3.1. The meeting is invited to:

- a) Note the information contained in this paper

MET SG/28
Appendix A to IP/12

Appendix A

1. Observation based Thunderstorm SIGMET issued by Nepal (example):

