



ICAO

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**Agenda Item 3: Planning and implementation of meteorological services****MET SERVICES SUPPORT HIGH EFFICIENCY OF AIR TRAFFIC  
MANAGEMENT IN SOUTHWEST CHINA**

(Presented by China)

**SUMMARY**

This paper presents the improvements of MET services for ATM in southwest China, with highlights on MET-ATM integration during the pre-tactical and tactical management stages. Under the CDM mechanism, ATM and MET experts can form a common situational awareness, which is beneficial to improve the efficiency of ATM operation.

**1. INTRODUCTION**

1.1 Under the MDRS (Massive Delay Response System) rules developed by CAAC (Civil Aviation Administration of China) in 2014, the civil aviation MET service organization designed specific MET products for ATFM (Air Traffic Flow Management) and ATC (Air Traffic Control) operation. Each regional MET office is responsible for MET services in the relevant region. In terms of ATFM MET service, emphasis was put on pre-tactical management and tactical management, so that MET-ATM integration are promoted significantly over the years.

1.2 Pre-tactical management phase

1.2.1 To support strategic decision making of ATFM, the leading time of MDRS products can reach 30 hours now. Meteorologists give weathering briefing on MDRS, and join in the coordinating decision making of ATFM. Simultaneously, an expert team consisting of meteorologists and ATFM experts kept on assessing and optimizing the effects of collaboration between MET and ATFM. The expert team focused on matching-ratio between MDRS response level, weather forecasts and impacts on flights operation in relevant airspace. The matching ratio of Chengdu in 2021 thunderstorm season (from May to September) is 94.74%, which shows an increase of 4.5% over last year.

1.3 Tactical management phase

1.3.1 Southwest regional MET office provides MET services 6-12 hours in advance for en-route flights, which contains prospective weather and impacts on the air traffic operation in different airspace sectors or air routes. Meteorologists give advice to ATC units on route deviations or closure, flight flying-around, diversions, etc.

1.3.2 For TMA (Terminal Control Area) operation, MET services should be more detailed in temporal and spatial scale, especially under the adverse weather which impacts on busy sectors and key navigation points. In summer season, the coordinated weather information should include coverage ratio and intensity of thunderstorm (Figure1) , so as to build situational awareness with TMA.

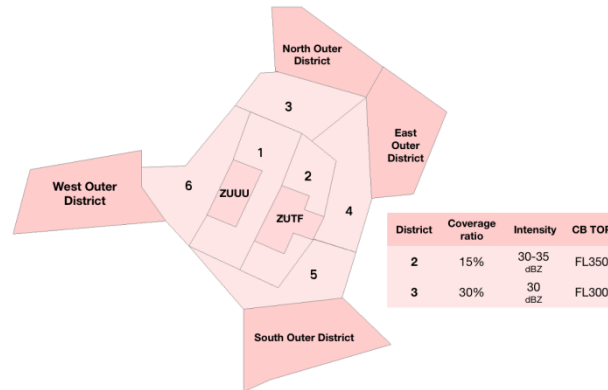


Figure 1 Sectors of weather warning in Chengdu Terminal Area

1.3.3 When the adverse weather is forecasted, detailed MET information with description on the impacts of take-off and landing operation, including wind changes and estimated minimum RVR (Figure2) etc. should be sent to Tower Controllers.



Figure 2 RVR prediction of Shuangliu Airport

1.4 Under the rules of MDRS, ATFM and ATC units raise demands on MET services without different temporal and spatial scales. Reasonable and effective transmission of MET information to different users is critical. In addition to the face-to-face weather briefing, southwest regional MET office can also attend operation coordination meeting through chatroom, desktop video consultation system or specific website etc. in time to shared situational awareness with ATM users.

## 2. DISCUSSION

2.1 Specific MET information contributes to MET-ATM integration.

2.2 MET, ATFM and ATC coordination contributes to high efficiency of ATM operation.

## 3. ACTION BY THE MEETING

3.1 Note the information contained in this paper.