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Agenda Item 6: Research, development and other initiatives

METEOROLOGICAL SERVICES IN SUPPORT OF ASIA-PACIFIC AIR TRAFFIC FLOW MANAGEMENT BY CHINA

(Presented by China)

SUMMARY

This paper presents China's meteorological service capability to support the Asia-Pacific regional Air Traffic Flow Management (ATFM). The purpose of this paper is, by providing the need of MET service for Asia-Pacific regional AFTM and the current capability of MET service provision in China, invite aeronautical meteorological service agencies in Asia to actively cooperate in regional hazardous weather coordination, as well as to share the meteorological data to better serve regional ATFM collaboration in Asia-Pacific region.

1. INTRODUCTION

1.1 Some Asia-Pacific air traffic flow management (ATFM) departments plan to carry out coordinated regional traffic flow management operations to promote the matching of flight traffic and airspace capacity, ensure the safety of civil aviation operations, and improve the operational efficiency of the Asia-Pacific region.

1.2 Meteorological services will serve as a critical component within the collaborative framework of Asia-Pacific regional ATFM.

1.3 China has been committed to improving aeronautical meteorological services in the Asia area, particularly in enhancing the issuance of harmonized Significant Meteorological Information (SIGMET). Since 2018, through the Hazardous Weather Coordination Platform (https://www.aamets.com), China has organized regular coordination on hazardous weather among Meteorological Watch Offices (MWOs) in the region, as well as continuously collecting user feedback to improve and update the platform.

1.4 In the future, China will continue cooperating with other meteorological service agencies in the Asia-Pacific through the Hazardous Weather Coordination Platform to support regional ATFM.

2. DISCUSSION

2.1 To support the operational coordination of the Asia-Pacific ATFM mechanism, in addition to collaborating with neighboring states on SIGMET coordination to improve the consistency and

harmonization of regional hazardous weather information, China has also developed Collaborative Convective Forecast Products (CCFP), which has been integrated into the domestic ATFM system.

2.2 To enhance the accuracy and effectiveness, the Aviation Meteorological Center of ATMB, CAAC collaborates with seven regional aviation meteorological centers of China, domestic ATFM departments and airlines to develop CCFP, which has a positive effect on ATFM improvement. CCFP is released three times a day (22UTC, 06UTC, 10UTC), each set of products includes convection forecasts for +2, +4, +6 and +8 hours, these products cover the main periods of convection in China.

2.3 Other historical, current and forecast meteorological information, focusing on significant weather phenomena such as typhoons, thunderstorms, turbulence, icing and space weather, are also provided for various purposes in different phase of ATFM in China.

2.4 The historical meteorological data, primarily comprising retrospective analyses of significant weather events (e.g., typhoons, thunderstorms) impacting aviation operations over a defined past period, is used to assess the effectiveness of meteorological services in ATFM and to support for optimizing collaborative mechanisms.

2.5 The main current and forecast meteorological information provided for China's AFTM typically includes:

- Typhoon evolution - projected tracks, intensity changes, and affected areas for both existing and developing systems;
- Convective weather - predicted timing, coverage areas, and associated cloud top heights of thunderstorms;
- In-flight hazards - forecasted intensity and spatial distribution of turbulence and icing conditions;
- Space weather impacts - anticipated severe space weather events with potential aviation operational effects.

2.6 China advocates for meteorological data exchange in the Asia-Pacific region to enhance ATFM collaboration.

3. ACTION BY THE MEETING

3.1 The meeting is invited to note the information contained in this paper.

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