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WORKING PAPER

Twenty-fourth Meeting of the Meteorology Sub-group (MET SG/24) of the Asia and Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG)

Web-conference, 16 – 20 November 2020

Agenda Item 5: Research, development and other initiatives

APAC USER REQUIREMENTS FOR SWIM-BASED MET INFORMATION SERVICES SUPPORTING ATFM

(Presented by Australia, Hong Kong China and Thailand *on behalf of MET/R WG Ad-hoc Group*)

SUMMARY

This paper presents a revised proposal on the development of APAC use cases and user requirements for System-Wide Information Management (SWIM) based MET information services supporting Air Traffic Flow Management (ATFM), including the terms of reference regarding the scope and objectives of the work to be conducted by the ad-hoc group consisting of MET and ATFM subject matter experts.

1. INTRODUCTION

1.1 At the APAC Meteorology/Air Traffic Management (MET/ATM) Seminar and the Eighth Meeting of the ICAO APAC Meteorological Requirements Working Group (MET/R WG/8) held in May 2019, Australia, Hong Kong China, and Thailand presented the recent global and regional developments relating to MET and ATM in SWIM (System-Wide Information Management) environment and proposed to develop a regional document for SWIM-based MET information services specifically to support ATFM in the Asia/Pacific Region.

1.2 The proposal was further discussed at MET SG/23 and the meeting adopted the following Decision:

Decision MET SG/23-7: Development of APAC User Requirements for SWIM-based MET Information Services Supporting ATFM

What: That, MET/R WG, in conjunction with the ATFM SG, establish an ad-hoc group to develop use cases and user requirements for future SWIM-based MET information services supporting ATFM.

Why: To further support a proposal presented by Australia, Hong Kong China and Thailand to develop a regional document for SWIM-based MET information services specifically to support ATFM in Asia/Pacific Region, taking into account the need to reflect

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the requirements of the ATFM community in the proposal and the need for more mature terms of reference for the proposal.

1.3 This paper discusses the way forward to document use cases and user requirements for SWIM-based MET information services supporting ATFM in the APAC Region.

2. DISCUSSION

2.1 APAC Regional Framework for Collaborative ATFM has been developed and maintained by Air Traffic Flow Management Steering Group (ATFM/SG) to provide, among other things, the performance improvement plan to address ATFM implementation and operational issues in the region. The Third Meeting of System-Wide Information Management Task Force (SWIM TF/3) held in May 2019 agreed that the SWIM implementation to support cross-border ATFM operation should be given high priority.

2.2 Following the discussion at MET SG/23, Australia, Hong Kong China, and Thailand revised the proposal and presented it to ATM SG/7 in August 2019 for discussion by the ATM community. ATM SG/7 adopted the inclusion of the following action item in the ATM SG Task List:

ATM SG Action Item 7/7

Circulate an invitation to ATFM experts to support the proposal in the Decision by encouraging subject matter experts from ATFM/SG to participate in an ad-hoc group to develop use cases and user requirements for future SWIM-based MET information services supporting ATFM (in consultation with ATFM/SG Chair, notify ATFM/SG participants and request they engage/participate).

2.3 ATFM SG/10 held in May 2020 reviewed and supported the proposal. Subject matter experts from the ATFM field was also nominated to participate in the proposed ad-hoc group.

2.4 Based on the comments received at MET SG/23, ATM SG/7 and ATFM SG/10, the proposal was further revised and presented at MET/R WG/9 in May 2020. The proposal ([MET/R WG/9 WP/04](#)) included terms of reference for the work, examples of use cases and data catalogues, and a draft table of contents of user requirements for SWIM-based MET information services supporting ATFM. The meeting was also informed of the SWIM-based MET information service described in the Plan for Meteorology in System-Wide Information Management (the MET-SWIM Plan) being developed by the ICAO Meteorology Panel Working Group on Meteorological Information Exchange (WG-MIE), which outlined the concepts of how MET information should be exchanged and disseminated in the SWIM environment.

2.5 MET/R WG/9 established an ad-hoc group consisting of subject matter experts from MET and ATFM experts were nominated to participate in this ad-hoc group as a result of ATFM SG/10 aforementioned.

2.6 Considering the ICAO Meteorology Panel's ongoing work in this area, the MET/R WG/9 noted that the work of the proposed ad-hoc group shall be supplementary to the global initiatives and specifically focused on regional requirements. The meeting therefore revised and endorsed the proposed terms of reference regarding the scope and objective of the work to be conducted by the ad-hoc group as follows.

- (1) To focus on SWIM-based MET information services specifically addressing the needs of ATFM in the APAC Region;

- (2) To document user requirements and use cases from ATFM in the APAC Region to facilitate the development of future SWIM-based MET information services;
- (3) To supplement the global concept described in the MET-SWIM Plan, prepared by the METP WG-MIE, and the MET requirements being developed by the METP Working Group on Meteorological Requirements and Integration (WG-MRI) in a global sense and IWXXM development by METP WG-MIE for effective exchange of MET information supporting AFTM operation;
- (4) To assist SWIM TF in identifying and developing the specifications of information services required to support operations based on user needs;
- (5) To identify MET and ATFM data to be exchanged using SWIM-based Information Exchange Services in the Region (examples shown in Appendix B) to enable the effective MET/ATM integration and to provide the baseline for further development of the regional SWIM data catalogue and service catalogue; and
- (6) To identify other granular MET-related requirements from ATFM perspective such as update frequency and forecast lead time of MET information to better support the development of future MET Information Exchange Services in the Region.

2.7 It is recommended that the MET SG supports the revised proposal on the development of APAC use cases and user requirements for System-Wide Information Management (SWIM) based MET information services supporting Air Traffic Flow Management (ATFM), including the terms of reference regarding the scope and objectives of the work to be conducted by the ad-hoc group consisting of MET and ATFM subject matter experts.

3. ACTION BY THE MEETING

- 3.1 The meeting is invited to:
 - a) note the information contained in this paper; and
 - b) discuss any relevant matter related to paragraph 2.7.
