

International Civil Aviation Organization

WORKING PAPER



ICAO

Eighteenth Meeting of the Meteorological Information Exchange Working Group (MET/IE WG/18) and Tenth Meeting of the Meteorological Services Working Group (MET/S WG/10)

Web-conference, 27 to 31 July 2020

Agenda Item 3: Monitoring of meteorological information exchange

CURRENT STATUS AND PLAN OF IWXXM IMPLEMENTATION IN INDONESIA

(Presented by Indonesia)

SUMMARY

This paper presents the progress and future plan of the implementation of ICAO Meteorological Information Model (IWXXM) in Indonesia.

1. INTRODUCTION

- 1.1 The ICAO Annex 3 (Amendment 78) provision requires that OPMET data shall be disseminated in IWXXM GML form.
- 1.2 With regards to the implementation of IWXXM for digital OPMET exchange, BMKG as meteorological service provider and AirNav Indonesia as air navigation service provider, in coordination with DGCA of Indonesia, have progressed some initial efforts since early 2019. The national trial on the exchange of IWXXM messages using new-established system between respective agencies' clients was conducted on February 2020.

2. DISCUSSION

Initial preparation

- 2.1 BMKG has developed in-house software to convert OPMET data to the IWXXM format 3.0. Conversion of OPMET data from TAC forms to IWXXM forms enables the data receipt in the AMHS. OPMET data produced and disseminated by meteorological stations in TAC forms will be converted to IWXXM forms, using in-house software, in the upgraded BMKG's server which is planned to be located in the national OPMET center.
- 2.2 Generated IWXXM data was validated using validator provided in the WMO's github page (<https://github.com/wmo-im/iwxxm/blob/master/bin/validate-examples.py>). This process, at once, was aimed to ensure that the data converted to XML conform the IWXXM format.

National trial of IWXXM data exchange

- 2.3 Indonesia conducted IWXXM data exchange trial on 14 February 2020. The testing successfully transferred IWXXM data between 2 (two) User Agents via AMHS located in the national OPMET center (WIII). Data transfer was performed using the AMHS protocol. A stress load test was also applied in the trial which was divided into 3 (three) stages; 100 data, 200 data, and 400 data, which were sent to the agent in parallel. The User Agent received all complete data in all stages orderly. The trial resulted that the system worked well in national IWXXM messages exchange.

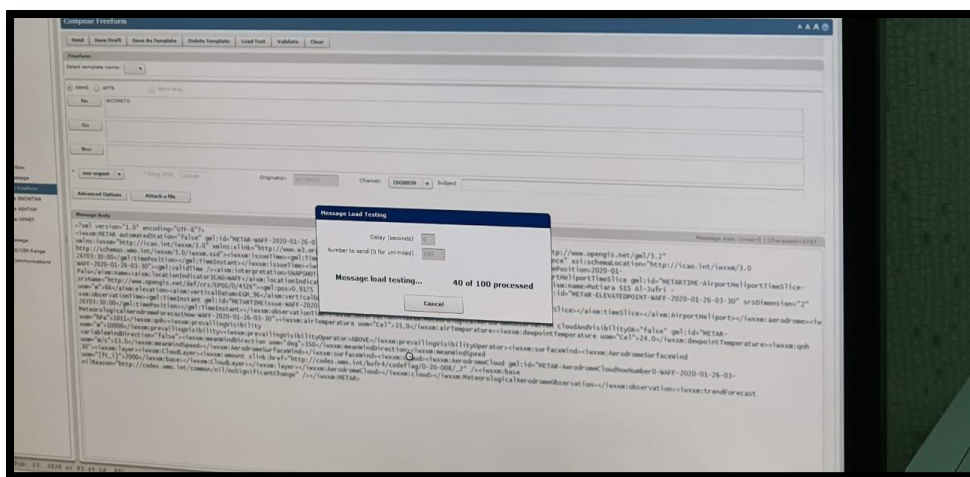


Figure 1. Stress load test of IWXXM data exchange trial

- 2.4 During the trial, all data was received in the correct folder in AMHS system namely OPMET folder, which indicated that the data was received in the User Agent, except of TAF, which was received in another folder namely 'inbox'. This led to a good lesson learned that a header should be added in the TAF exchange, which was identified immediately at that moment.

Future plan

- 2.5 Indonesia is planning to conduct further trial on IWXXM messages exchange. This aims to further test the OPMET data exchange within regional scheme using the system which has been successfully tested in the previous national testing.

3. ACTION BY THE MEETING

- 3.1 The meeting is invited to discuss regional trial of IWXXM data exchange between Indonesia and the relevant agencies.
- 3.2 The meeting is invited to note the information contained in this paper.