International Civil Aviation Organization

INFORMATION PAPER

TWENTIETH MEETING OF THE METEOROLOGY SUB-GROUP (MET SG/20) OF THE ASIA/PACIFIC AIR NAVIGATION PLANNING AND IMPLEMENTATION REGIONAL GROUP (APANPIRG)

Bangkok, Thailand, 6 – 9 June 2016

Agenda Item 6: Research, development and implementation issues in the MET field

6.1 Observations, reports, forecasts, advisories and warnings

TOOLS AVAILABLE FOR SIGMET COORDINATION

(Presented by Hong Kong, China)

SUMMARY

This paper presents the tools that have been developed by Hong Kong, China that might be useful to support the issuance of SIGMET and its coordination across FIR boundaries.

1. INTRODUCTION

1.1 Users had expressed the need for a globally-consistent, phenomena-based hazardous weather information that transcends Flight Information Regions (FIR). Work is at hand by the Regional Hazardous Weather Advisory Centre (RHWAC) work stream under the Working Group on Meteorological Information Service Development (WG-MISD) of Meteorological Panel (METP) to develop the provisions and necessary guidance material. Meanwhile to address the users' concern, it is important to improve the SIGMET coordination in the region.

1.2 At the SIGMET Coordination Meeting held from 25 to 26 May at the Meteorological Service of Singapore (MET SG/20 - IP/14) which Hong Kong, China also participated, it was noted that some of the tools developed by Hong Kong, China could potentially be useful to facilitate SIGMET coordination. Hong Kong, China is refining the tools with a view to support the SIGMET coordination trial.

2. DISCUSSION

2.1 In 2011, the "Global SIGMET Monitoring" webpage was developed by Hong Kong, China for ICAO to provide a one-stop shop for access to hazardous weather warnings and advisories that are currently valid around the world. A weather icon would be displayed on the FIR with the full text being accessible by clicking on the weather icon. The SIGMET Monitoring webpage had been used during SIGMET test for monitoring the issuance of SIGMET. The "Global SIGMET Monitoring" webpage however does not decode the SIGMET.

2.2 As a spin-off from a separate project, Hong Kong, China has developed a SIGMET decoder and a new webpage that display, in the form of polygon, the area where SIGMET is effective on top of an enhanced satellite picture with a timeline to show the validity period, was made available internally for use by Aviation Forecasters.

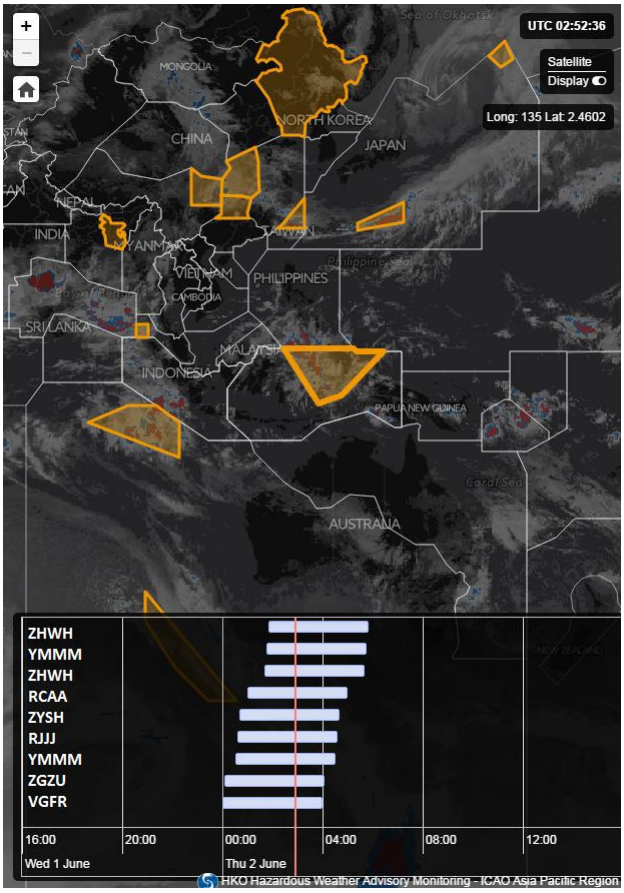

Figure 1. Enhanced SIGMET Monitoring webpage that shows the SIGMET polygons on top of Himawari-8 satellite picture. The timeline at the bottom shows the validity period of the SIGMET message.

2.3 Apart from SIGMET monitoring, a web-based SIGMET preparation tool has also been developed to allow the users to draw the SIGMET area and automatically generates the content of the SIGMET message.

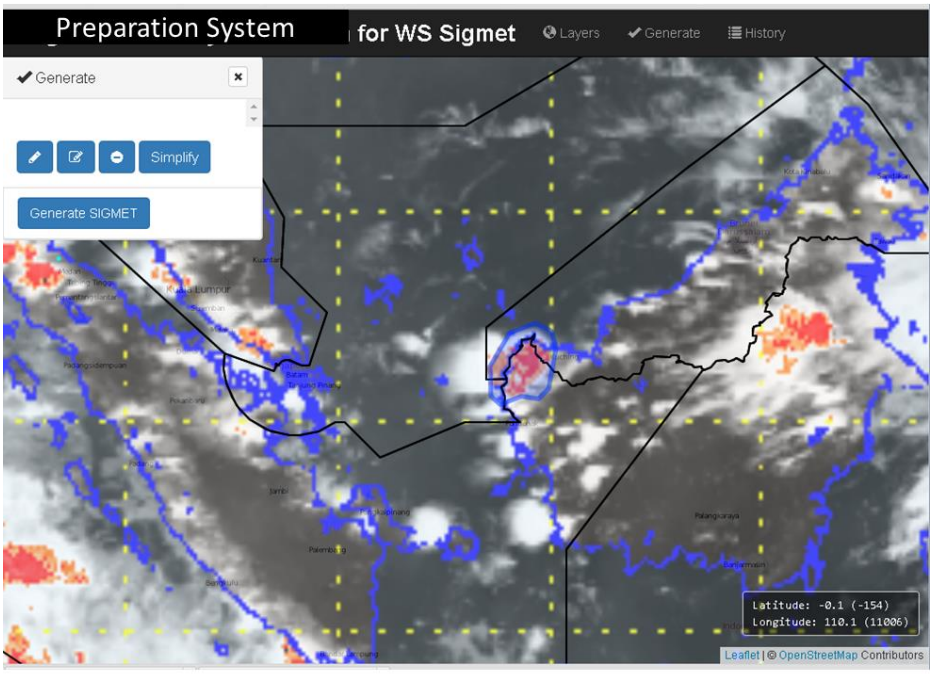

Figure 2. Web-based SIGMET preparation system that allow the users to draw the SIGMET polygons on top of Himawari-8 satellite picture. The content of the SIGMET message would then be automatically generated.

2.4 At the SIGMET Coordination Meeting, it was noted that these tools could be useful to facilitate SIGMET coordination across FIR boundaries and for preparation of SIGMET. Hong Kong, China is hardening these tools for use via internet and made them available to States participating in the SIGMET coordination trial for trial use.

3. ACTION BY THE MEETING

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

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