International Civil Aviation Organization

INFORMATION PAPER

Twenty-fifth Meeting of the Meteorology Sub-group (MET SG/25)

Online, 18 – 22 October 2021

Agenda Item 5: Research, development and other initiatives

COLLABORATION ON HAZARDOUS WEATHER SERVICES BETWEEN HKO AND PAGASA

(Presented by Hong Kong, China and Philippines)

SUMMARY

This paper presents the concerted effort between the Hong Kong Observatory (HKO) and The Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) in harmonizing the hazardous weather information across the shared FIR boundary.

1. INTRODUCTION

1.1 The Hong Kong FIR and the Manila FIR share a common boundary over the northern part of the South China Sea. Hazardous weather associated with significant convection, tropical cyclones and even volcanic ash cross the FIR boundary from time to time, affecting the air traffic routes nearby. In view of that, a number of efforts have been spent in the past couple of years to strengthen the collaboration and information exchange between the two agencies (WP/21 MET/IE WG/18 & MET/S WG/10).

1.2 Meanwhile, as SIGMET Coordination has become a recommended practice under Amendment 79 to Annex 3 (Recommendation 3.4.4) since November 2020, the collaboration between HKO and PAGASA aviation forecasters was further strengthened.

1.3 This paper briefs about the scope of the collaboration, then illustrates the outcome of the collaboration.

2. DISCUSSION

Scope of collaboration

2.1 On 2nd November 2020, the HKO and PAGASA aviation forecasters started a trial to use a common chatroom developed by HKO to exchange (a) views on hazardous weather affecting or expected to affect the FIR boundary, (b) weather and aircraft observations, and (c) views on other operational matters while working in their respective platform. The trial transitioned to operational on 16th August 2021.

2.2 To fortify the close interaction, at the good suggestion of PAGASA, regular daily communication between the aviation forecasters was added on top of ad hoc coordination. The regular dialogue proves to be effective in enhancing forecasters situation awareness for the weather around the region that is of common interest. In addition, regular review meetings were also held (quarterly) to review the effectiveness of the coordination and difficulties encountered.

Outcome of the collaboration

2.3 From November 2020 to August 2021, a total of 150 collaboration cases, excluding the regular daily communications, were made. Out of that, 137 cases (91%) ended up with good harmonization in terms of the hazardous weather's coverage and development.

2.4 Figure 1 showed a few chat messages on the assessment for TC Saudel and its related WC SIGMET on Oct 2020. It facilitated a good coordination regarding a TC crossing the FIR boundary. Figure 2 showed another coordinated case about the associated WS SIGMET over the FIR boundary. The cloud top height, movement, intensity change and the coverage were all well aligned.

2.5 During the Fukutoku-Okanoba volcano eruption on 13-15 August 2021, the chat platform was also found to come in useful in facilitating the MWOs' timely dialogue on the relevant observations such as volcanic ash advisories, satellite imageries, pilot reports, etc. This assisted aviation forecasters in better assessing the impact of the volcanic ash cloud across the FIR boundary.

2.6 Overall speaking, the daily communication and ad hoc dialogue by the use of a chatroom demonstrated to be useful for facilitating neighbouring MWOs to gain mutual understanding, raise situation awareness and ultimately improve the aviation weather service over the region.

3. ACTION BY THE MEETING

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

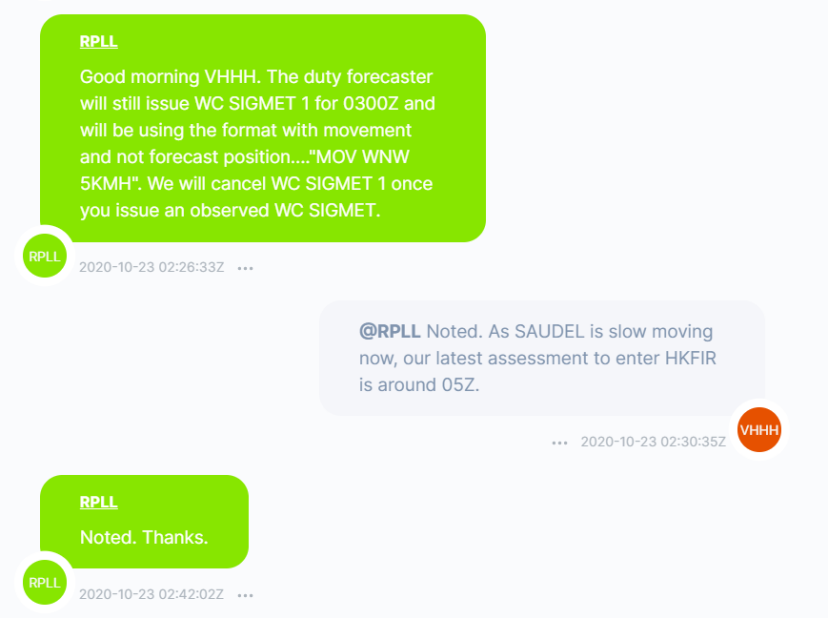

Figure 1 Chat dialogue between HKO and PAGASA aviation forecasters on TC Saudel.

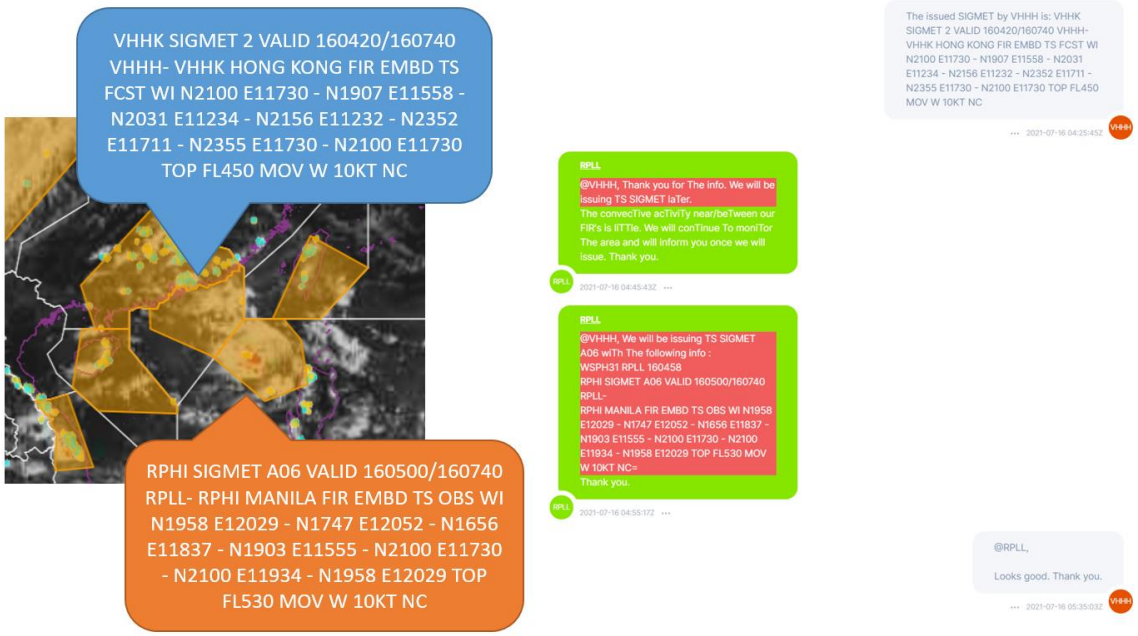

Figure 2 A coordinated case of issued SIGMETs (orange polygons) for Hong Kong and Manila FIRs (background: satellite imagery) on 16th July 2021 with the chat dialogue messages (right).