International Civil Aviation Organization

WORKING PAPER

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 8: Monitoring of meteorological services

ACTIVITIES OF THE PACIFIC ISLAND AVIATION WEATHER SERVICES PANEL

(Presented by Pacific Islands Aviation Weather Services Panel Task Team)

SUMMARY

This paper outlines the activities of the Pacific Islands Aviation Weather Services (PIAWS) Panel, focusing on the activities of the PIAWS Task Team; assisting Pacific States in resolving air navigation deficiencies and assisting Pacific States in meeting the 5 November 2020 deadline for disseminating ICAO OPMET in IWXXM format.

1. INTRODUCTION

1.1 The Pacific Islands Aviation Weather Services (PIAWS) Panel is one of six expert Panels of the Pacific Meteorological Council (PMC), itself a specialised subsidiary body of the Secretariat of the Pacific Regional Environment Programme (SPREP). SPREP is the regional organisation established by the Governments and Administrations of the Pacific, charged with protecting and managing the environment and natural resources of the Pacific.

1.2 At the fifth meeting of the PMC, held in Apia, Samoa 7-9 August 2019, the meeting agreed that it:

Endorsed the establishment of a PIAWS Panel Task Team (Members: Fiji, New Zealand, and Tonga) on ICAO compliance:
(a) to develop a work plan for addressing deficiencies in consultation with the concerned ICAO Member States; and
(b) to understand current capabilities with regards to the IWXXM implementation and dissemination and to develop a work plan to assist each ICAO Member State in the Pacific region to meet the IWXXM requirements.

The Task Team also consists of WMO and ICAO APAC Office representatives.

2. DISCUSSION

Pacific Air Navigation Deficiencies

2.1 The PIAWS Panel Task Team (called "the Task Team" for ease of reference) collated the deficiencies relating to Pacific Island States and organised them into categories (observations, WAFS forecasts provision, SIGMET issuance and volcanic activity information provision).

The Task Team found that for Pacific States there are currently:

- Four aerodrome observation deficiencies
- Four SIGMET issuance deficiencies
- Two volcanic activity information deficiencies
- Three deficiencies on the provision of WAFS forecasts

2.2 The deficiencies were then reviewed to understand whether the original stated problems were still in place and then suggested work plans developed for the relevant States, outlining a possible way to resolve the deficiency. The first deficiency work plan was sent to the State concerned in January 2020 by the ICAO APAC Office, with a further 8 deficiency plans either finalised or close to finalisation.

2.3 Support has also been provided to the Solomon Islands on its SIGMET and WAFS deficiency resolution, through the provision of advice, as well as assisting with the development of an exercise to demonstrate the provision of volcanic ash SIGMETs. Support has also been provided to Tonga on its volcanic activity information provision deficiency, with VAAC Wellington undertaking a series of VONA issuance exercises with the Tonga Meteorological Service.

2.4 The Task Team has noted, through its consideration of the Tonga volcanic activity information provision deficiency, that Tonga does not have a State volcano observatory designated in the APAC air navigation plan (see Attachment A to this paper). In looking further, the Task Team also noted the absence of designated State volcano observatories for other States in the APAC region, which have active or potentially active volcanoes (as per Annex 3, Chapter 3, sec 3.6 "*Contracting States with active or potentially active volcanoes shall arrange that State volcano observatories monitor these volcanoes*..."). The Task Team also notes that many of these States without designated State volcano observatories do actually provide information on volcanic activity to aviation users, sometimes in the Volcano Observatory Notice to Aviation (VONA) format.

2.5 The ICAO Meteorology Panel (METP) Meteorological Operations Group (MOG) International Airways Volcano Watch (IAVW) Work Stream is proposing to elevate the VONA to be a "recommended practice" in Amendment 80 to Annex 3. Only *designated* State Volcano Observatories should issue a VONA when volcanic activity indicates a requirement to. Further, to enable cost recovery for this service, State Volcano Observatories must be designated in their respective regional air navigation plans.

2.6 To ensure that information on volcanic activity is provided to support the safe operation of aviation in the Asia-Pacific region, the Task Team proposes the following recommendation for the meeting to consider:

Recommendation
That:

a) An ad-hoc group consisting of (….) determines a list of States in the APAC Region that have active or potential active volcanoes, and have not formalised the designation of a State volcano observatory, and provides this list to the ICAO APAC Office;
b) The ICAO APAC Office contacts these States and invites them to consider an update to the APAC Air Navigation Plan Volume 1 Table MET I-1, designating a State Volcano Observatory; and
c) The ICAO APAC Office coordinates with those States, a single update of the APAC Air Navigation Plan to reflect the requirements for State Volcano Observatories in the APAC region.

Pacific State IWXXM Implementation

2.7 The Task Team conducted a survey in December 2019 amongst the members of the PIAWS Panel, to understand current capabilities with regards to the IWXXM implementation and dissemination.

2.8 Seventeen responses were received, representing fifteen States. At the time of the survey, five respondents had no plan for IWXXM dissemination, the rest had plans of varying maturity.

2.9 A limiting factor to creating and disseminating IWXXM format OPMET is that there is limited AFTN and AMHS connections through the southwest Pacific region. There is an AFTN link between Fiji and New Zealand, and Fiji and Australia, with an extended-AMHS link expected to be available in 2021. Further, few Pacific States have the ability to generate IWXXM at source or translate to IWXXM themselves, so translation services will be required for many States at least in the near future.

2.10 The Task Team is now developing a plan to create an IWXXM translation "case study" for one Pacific State, demonstrating the use of a translation agreement and process to inform the OPMET originator of any mistakes in the formation of their TAC message. It is hoped that an agreement with an IWXXM translation service provider will be agreed in the next few months.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note the information contained in this working paper;
b) consider the recommendation made in 2.6;
c) endorse the work of the PIAWS Panel Task Team in assisting Pacific States in the resolution of their air navigation deficiencies and consider how lessons learned by the Task Team may assist other States in their MET deficiency resolution; and
d) discuss any relevant matters as appropriate.

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Attachment A

TABLE MET I-1
STATE VOLCANO OBSERVATORIES

Explanation of the Table

Column
1 Name of the State responsible for the provision of volcano observatory
2 Name of the volcano observatory

State	Volcano Observatory
1	**2**
China	Heilongjiang Wudalianchi Volcano Observatory
China	Jilin Changbai Mountain Tianchi Volcano Observatory
Japan	Fukuoka Volcanic Observation and Information Center, Japan Meteorological Agency
Japan	Kagoshima Local Meteorological Office, Japan Meteorological Agency
Japan	Sapporo Volcanic Observation and Information Center, Japan Meteorological Agency
Japan	Sendai Volcanic Observation and Information Center, Japan Meteorological Agency
Japan	Tokyo Volcanic Observation and Information Center, Japan Meteorological Agency
India	TBD
Indonesia	Directorate of Volcanology and Geological Hazard Mitigation (DVGHM)
New Zealand	Wairakei Research Centre Institute of Geological and Nuclear Sciences
Papua New Guinea	Rabaul