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INFORMATION PAPER (IP/16)

ICAO Asia and Pacific (APAC)
Twenty-Ninth Meeting of the Meteorology Sub-Group
(MET SG/29)

Bangkok, Thailand, 18 - 22 August 2025

Agenda Item 6: Research, development and other initiatives

TROPICAL CYCLONE SIGMET AND TCA BACK-UP

(Presented by New Zealand)

SUMMARY

MetService New Zealand, under a Memorandum of Understanding with Fiji Meteorological Service (FMS), provides back-up for tropical cyclone (TC) aviation meteorological services if FMS is unable to issue products. Following a recent tool upgrade, MetService conducted two successful tests for its TC back-up capabilities, in coordination with FMS. Both exercises included stakeholder notifications and message dissemination via operational channels.

The tests confirmed system functionality and communication readiness. They also reinforced the value of regular testing, which has now been incorporated into MetService's annual schedule.

1. INTRODUCTION

1.1 MetService New Zealand, as Tropical Cyclone Warning Centre (TCWC) Wellington, provides back-up services for Fiji Meteorological Service (FMS), for its responsibilities as tropical cyclone advisory centre (TCAC) Nadi and meteorological watch office (MWO) Nadi, as outlined in Attachment 5A of the World Meteorological Organization Regional Area V Tropical Cyclone Operational Plan. MetService recently upgraded two internal tools used to issue back-up tropical cyclone (TC) SIGMETs and tropical cyclone advisories (TCAs).

2. DISCUSSION

2.1 Recognising the value of regular system testing, as demonstrated through participation in the Annual ICAO APAC SIGMET Test and regular volcanic ash advisory centre (VAAC) back-up tests in its capacity as VAAC Wellington, MetService has implemented new procedures to strengthen operational readiness. These procedures include conducting back-up tests for TC SIGMET and TCA services annually and following any significant system updates.

TC SIGMET Back up

2.2 MetService, in coordination with FMS in its capacity as MWO Nadi, a TC SIGMET back-up test for the Nadi FIR was conducted on 13 May 2025. The Regional OPMET Data Bank (RODB) Brisbane was also notified in advance.

2.3 On the day of the test, communication was maintained with MWO Nadi forecasters via Microsoft Teams to confirm the test was a GO and to agree on the TC SIGMET number to be used. A TC SIGMET with status indicator TEST was issued with a short validity of 15 minutes and cancelled 13 minutes later. The next available SIGMET number was reconfirmed with Nadi post-cancellation.

2.4 Traditional Alphanumeric Code (TAC) dissemination of the TEST TC SIGMET was confirmed both internally and externally, including positive acknowledgment from RODB Brisbane, who confirmed receipt.

TCA Back up

2.5 An update to the tool used for issuing TCA back-up messages for TCAC Nadi prompted a scheduled test on 14 July 2025 to validate system performance and stakeholder communication.

2.6 Pre-test coordination included confirming AFTN addresses with TCAC Nadi and notifying stakeholders by email. This also served to verify the currency of the contact list.

2.7 On the day of the test, a GO/NO-GO was confirmed with Nadi at 11:30 AM NZST. The test began with an email advising that TCWC Wellington had assumed tropical cyclone warning responsibilities. A back-up TCA, with status indicator TEST, was issued at 11:37 AM, including a request for acknowledgment. The test concluded at 11:52 AM, with confirmation that TCAC Nadi had resumed normal operations.

2.8 TAC Dissemination of the TEST TCA was confirmed both internally and externally, including positive acknowledgment from RODB Brisbane, who confirmed receipt. However, responses from other recipients were very limited.

Actions for follow up

2.9 Following the test, it was noted that three AFTN addresses returned an ‘unknown’ result. This will be followed up with FMS to reconfirm the current AFTN address list and apply any necessary updates.

2.10 For both the TC SIGMET and Tropical Cyclone Advisory (TCA) tests, the translation from TAC to IWXXM was successfully completed. However, it appears that the IWXXM versions were not disseminated due to the current tool configuration. This issue is under investigation, and a resolution is actively being pursued to ensure proper dissemination in future tests.

2.11 These tests were valuable in confirming operational readiness and have been incorporated into Wellington’s annual testing schedule. MetService acknowledges and appreciates the support of FMS and all participating stakeholders.

3. ACTION BY THE MEETING

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

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