International Civil Aviation Organization

WORKING PAPER (WP/07)

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Agenda Item 3: Quality control, monitoring and management of meteorological information exchange

REVIEW OF WS/LS SIGMET TEST 2024

(Presented by Singapore)

SUMMARY

This paper presents the analysis of the data collected during the WS/LS SIGMET Test that was conducted on 27 November 2024.

1. INTRODUCTION

1.1 The MET Divisional Meeting (2002) formulated Recommendation 1/12 b), Implementation of SIGMET requirements, which called, inter alia, for the relevant Planning and Implementation Regional Groups (PIRGs) to conduct periodic tests on the issuance and reception of SIGMET messages, particularly those for volcanic ash.

1.2 Information on the requirements for the dissemination and exchange of SIGMET is published in the Asia/Pacific Regional SIGMET Guide (10th edition Oct 2022). This document also outlines the procedures for conducting SIGMET tests. The test procedures encompass the three types of SIGMETs, namely:

- SIGMET for Volcanic ash (WV/LV SIGMET)
- SIGMET for Tropical cyclones (WC/LY SIGMET)
- SIGMET for weather and other phenomena apart from tropical cyclones and volcanic ash (WS/LS SIGMET)

2. DISCUSSION

2.1 WS/LS SIGMET Test 2024 data

2.1.1 The WS/LS SIGMET Test 2024 was conducted on 27 November 2024.

2.1.2 RODB Bangkok, RODB Brisbane, RODB Tokyo, RODB Nadi, RODB Singapore and the Regional OPMET Centre (ROC) London provided reception summaries of the WS/LS SIGMET Test 2024 to RODB Singapore, which is the WS/LS SIGMET test focal point in the Asia/Pacific region. The summarized data reception of the five Asia/Pacific RODBs and ROC London is shown in Appendix A.

2.2 WS SIGMET Test Participation Rate

2.2.1 24 of the possible 29 States listed in the Asia/Pacific SIGMET Guide participated in WS SIGMET Test 2024. The following 5 states shown in Table 1 did not issue WS SIGMET test messages in 2024:

1	**AFGHANISTAN**
2	AUSTRALIA
3	DPR KOREA
4	NAURU
5	PAPUA NEW GUINEA

Table 1: States that did not participate in WS SIGMET Test 2024

2.2.2 Afghanistan has yet to participate in any WS SIGMET Tests to date.

2.2.3 RODB Brisbane has informed the lack of Australian TEST message distribution was due to procedural misinterpretation by the duty RODB operator on the day of the testing, resulting in deletion of the TEST messages and their subsequent non delivery. The procedure in question is being reworked and clarified.

2.2.4 The State participation rate was 83%, which is lower when compared to the participation rate in 2022 (86%) and 2023 (90%), but fares better when compared to 2020 (79%) and 2021 (79%).

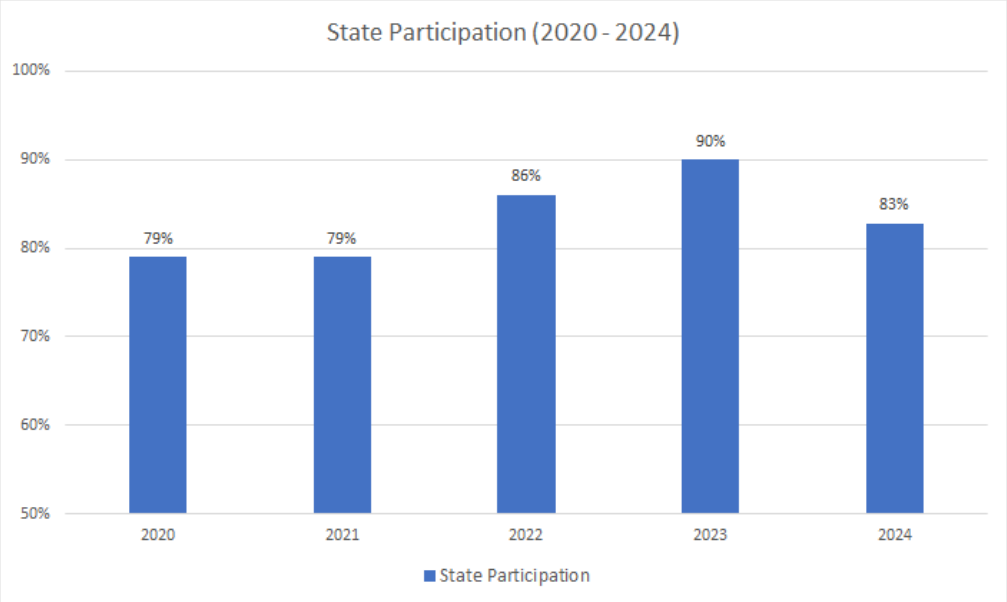

Figure 1: Comparison of state participation for WS SIGMET test over the past 5 years

2.2.5 Disregarding the five States that did not participate, 42 WS SIGMET test messages were issued by the MWOs during the WS SIGMET Test 2024.

2.3 WS SIGMET Test Reception

2.3.1 The reception of WS SIGMET test by the five Asia/Pacific RODBs and ROC London is listed in Table 2 below:

WS SIGMET Test 2024	RODB Bangkok	RODB Brisbane	RODB Singapore	RODB Tokyo	RODB Nadi	ROC London	Total
Number of Reception	41 of 42	40 of 42	42 of 42	37 of 42	38 of 42	42 of 42	240 of 252
Percentage of Reception	98%	95%	100%	88%	90%	100%	95%

Table 2: Asia Pacific RODBs' and ROC London's Reception of WS Test SIGMET

2.3.2 A comparison of the WS SIGMET test reception rate between 2020 and 2024 is presented in Figure 2. It shows the reception rate remains high over the years, with majority of the reception rate achieving 90% or more.

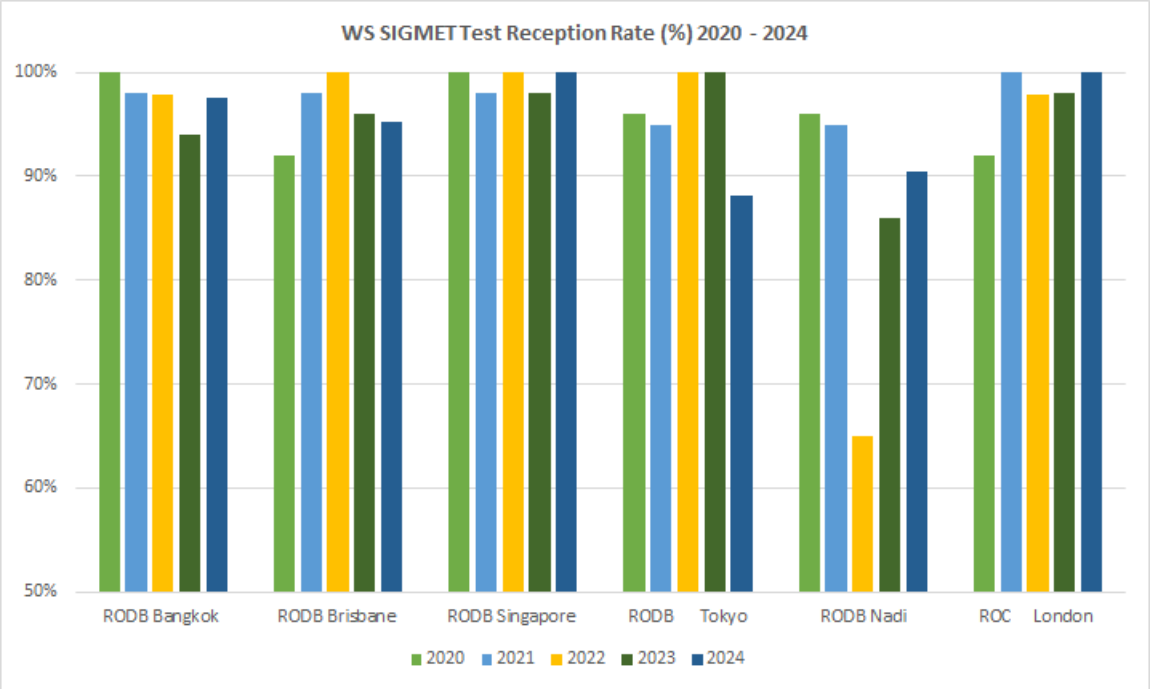

Figure 2: WS SIGMET Test Reception Rate for Past 5 Years

2.4 LS SIGMET Test Analysis

2.4.1 Following the provisions of ICAO Annex 3, the test messages (for SIGMET and for volcanic ash and tropical cyclone advisory information) should be disseminated in the ICAO meteorological information exchange model (IWXXM) format in addition to the dissemination of the test messages in abbreviated plain language and alphanumeric form following the templates provided in Annex 3.

2.4.2 For the LS SIGMET Test 2024, the following states disseminated the test messages in IWXXM format: Australia, China, Fiji, French Polynesia, Japan, New Zealand, Philippines, Singapore, Solomon Islands and Thailand. It is heartening to see states starting to disseminate SIGMET test messages in IWXXM format.

2.5 CONCLUSION

2.5.1 5 of the 29 States, namely Afghanistan, Australia, DPR Korea, Nauru and Papua New Guinea did not participate in WS SIGMET Test 2024. The State participation rate was 83%, which is lower when compared to WS SIGMET test 2023 (90%) and WS SIGMET test 2022 (86%).

2.5.2 The average reception rate of the WS SIGMET test 2024 messages of the 5 Asia/Pacific RODBs and ROC London was 95%, which is the same as WS SIGMET test 2023 average reception rate.

2.5.3 The issue on incorrect use of the priority for the test messages persists in WS SIGMET test 2024.

2.5.4 10 states have disseminated IWXXM test messages during the 2024 WS/LS SIGMET test.

3. ACTION BY THE MEETING

3.1 The meeting is invited to discuss the following:

a) the results of the WS/LS SIGMET test presented above; and
b) the necessary follow-up issues arising from the WS/LS SIGMET Test 2024.

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APPENDIX A: Summary of WS SIGMET Test 2024 Results Received from Asia Pacific RODBs and ROC London

State	Meteorological Watch Office (MWO)		SIGMET Guide			Transmitted Header						RODB and EUR ROC Reception					
	Location	MWO	TTAAii	CCCC	FIR	Priority	TTAAii	CCCC	YYGGgg	MWO	FIR	VTBB	YBBN	WSSS	RJTD	NFFN	EBBR
AFGHANISTAN	KABUL	OAKB	WSAH31	OAKB	OAKX												
AUSTRALIA	BRISBANE	YBRF	WSAU21	YBRF	YBBB												
	BRISBANE	YBRF	WSAU21	YBRF	YMMM												
	MELBOURNE (RFC)	YMRF	WSAU21	YMRF	YBBB												
	MELBOURNE (RFC)	YMRF	WSAU21	YMRF	YMMM												
	MELBOURNE (WMC)	YMMC	WSAU21	YMMC	YBBB												
	MELBOURNE (WMC)	YMMC	WSAU21	YMMC	YMMM												
BANGLADESH	DHAKA	VGHS	WSBW20	VGHS	VGFR	FF	WSBW20	VGHS	270200	VGHS	VGFR	02:00	02:00	02:00	02:00	02:00	02:00
CAMBODIA	PHNOM PENH	VDPP	WSKP31	VDPP	VDPF	FF	WSKP31	VDPP	270201	VDPP	VDPF	02:01	02:01	02:01	02:01	02:01	02:02
CHINA	BEIJING	ZBAA	WSCI33	ZBAA	ZBPE	FF	WSCI33	ZBAA	270200	ZBAA	ZBPE	02:01	02:00	02:00		02:05	02:01
	CHENGDU	ZUUU	WSCI36	ZUUU	ZPKM	FF	WSCI36	ZUUU	270205	ZUUU	ZPKM	02:08	02:05	02:05	02:05	02:05	02:06
	GUANGZHOU	ZGGG	WSCI35	ZGGG	ZGZU	FF	WSCI35	ZGGG	270202	ZGGG	ZGZU	02:03	02:02	02:02	02:02	02:01	02:03
	HAIKOU	ZJHK	WSCI35	ZJHK	ZJSA	FF	WSCI35	ZJHK	270202	ZJHK	ZJSA	02:02	02:02	02:02	02:02	02:02	02:02
	HONG KONG	VHHH	WSSS20	VHHH	VHHK	FF	WSSS20	VHHH	270200	VHHH	VHHK	02:00	02:00	02:00	02:00	02:00	02:00
	SHANGHAI	ZSSS	WSCI34	ZSSS	ZSHA	FF	WSCI34	ZSSS	270200	ZSSS	ZSHA	02:01	02:00	02:00	02:00	02:00	02:01
	SHENYANG	ZYTX	WSCI38	ZYTX	ZYSH	FF	WSCI38	ZYTX	270204	ZYTX	ZYSH	02:04	02:04	02:04	02:04	02:05	02:05
	TAIBEI	RCTP	WSCI31	RCTP	RCAA	FF	WSCI31	RCTP	270201	RCTP	RCAA	02:01	02:01	02:04		02:01	02:03
	URUMQI	ZWWW	WSCI39	ZWWW	ZWUQ	FF	WSCI39	ZWWW	270201	ZWWW	ZWUQ	02:02	02:01	02:01	02:01	02:01	02:02
	WUHAN	ZHHH	WSCI45	ZHHH	ZHWH	FF	WSCI45	ZHHH	270201	ZHHH	ZHWH	02:01	02:01	02:01	02:01	02:01	02:02
	XI'AN	ZLXY	WSCI37	ZLXY	ZLHW	FF	WSCI37	ZLXY	270202	ZLXY	ZLHW	02:02	02:02	02:02	02:02	02:02	02:02
DPR KOREA	SUNAN	ZKPY	WSKR31	ZKPY	ZKKP												
FIJI	NADI	NFFN	WSFJ01,02..	NFFN	NFFF	FF	WSFJ03	NFFN	270200	NFFN	NFFF	02:00	02:00	02:00	02:00	02:00	02:00
FRENCH POLYNESIA	TAHITI	NTAA	WSPF21,22,23,24	NTAA	NTTT	FF	WSPF21	NTAA	270212	NTAA	NTTT	02:12	02:12	02:12	02:12	02:12	02:13
INDIA	CHENNAI	VOMM	WSIN31	VOMM	VOMF	FF	WSIN31	VOMM	270202	VOMM	VOMF	02:03	02:03	02:03	02:03	02:02	02:03
	KOLKATA	VECC	WSIN31	VECC	VECF	FF	WSIN31	VECC	270204	VECC	VECF	02:04	02:04	02:04	02:04	02:04	02:05
	MUMBAI	VABB	WSIN31	VABB	VABF	FF	WSIN31	VABB	270201	VABB	VABF	02:01	02:01	02:01	02:01	02:01	02:01
	NEW DELHI	VIDP	WSIN31	VIDP	VIDF	FF	WSIN31	VIDP	270159	VIDP	VIDF	02:00	02:00	02:00	02:00	02:00	02:00
INDONESIA	JAKARTA	WIII	WSID20	WIII	WIIF	FF	WSID20	WIII	270200	WIII	WIIF	02:00	02:00	02:00		02:00	02:01
	MAKASSAR	WAAA	WSID21	WAAA	WAAF	FF	WSID21	WAAA	270200	WAAA	WAAF	02:01	02:00	02:00		02:00	02:01
JAPAN	TOKYO	RJTD	WSJP31	RJTD	RJJJ	FF	WSJP31	RJTD	270205	RJTD	RJJJ	02:06	02:05	02:05	02:05	02:05	02:07
LAO PDR	VIENTIANE	VLVT	WSLA31	VLVT	VLVT	FF	WSLA31	VLVT	270200	VLVT	VLVT	02:24	02:24	02:24	02:24	02:05	02:26
MALAYSIA	KUALA LUMPUR	WMKK	WSMS31	WMKK	WBFC	FF	WSMS31	WMKK	270201	WMKK	WBFC	02:01	02:01	02:01	02:01	02:01	02:02
	KUALA LUMPUR	WMKK	WSMS31	WMKK	WMFC	FF	WSMS31	WMKK	270202	WMKK	WMFC	02:02	02:02	02:02	02:02		02:02
MALDIVES	MALE	VRMM	WSMV31	VRMM	VRMF	FF	WSMV31	VRMM	270205	VRMM	VRMF	02:07	02:07	02:07	02:07	02:05	02:07
MONGOLIA	ULAANBAATAR	ZMUB	WSMO31	ZMUB	ZMUB	FF	WSMO31	ZMUB	270156	ZMUB	ZMUB			02:00		02:00	02:01
MYANMAR	YANGON	VYYY	WSBM31	VYYY	VYYY	GG	WSBM31	VYYY	270202	VYYY	VYYF	02:02	02:02	02:02	02:02	02:02	02:04
NAURU	NAURU	ANYN	WSNW20	ANYN	ANAU												
NEPAL	KATHMANDU	VNKT	WSNP31	VNKT	VNSM	FF	WSNP31	VNKT	270200	VNKT	VNSM	02:00	02:00	02:00	02:00	02:00	02:01
NEW ZEALAND	WELLINGTON	NZKL	WSNZ21	NZKL	NZZC	FF	WSNZ21	NZKL	270206	NZKL	NZZC	02:07	02:06	02:06	02:06		02:07
	WELLINGTON	NZKL	WSPS21	NZKL	NZZO	FF	WSPS21	NZKL	270205	NZKL	NZZO	02:06	02:05	02:05	02:06	02:05	02:07
PAKISTAN	KARACHI	OPKC	WSPK31	OPKC	OPKR	FF	WSPK31	OPKC	270200	OPKC	OPKR	02:00	02:00	02:00	02:00	02:00	02:00
	LAHORE	OPLA	WSPK31	OPLA	OPLR	FF	WSPK31	OPLA	270201	OPLA	OPLR	02:01	02:01	02:01	02:01	02:01	02:01
PAPUA NEW GUINEA	PORT MORESBY	AYPY	WSNG20	AYPY	AYPM												
PHILIPPINES	MANILA	RPLL	WSPH31	RPLL	RPHI	FF	WSPH31	RPLL	270201	RPLL	RPHI	02:01	02:01	02:01	02:01	02:01	02:02
REPUBLIC OF KOREA	INCHEON	RKSI	WSKO31	RKSI	RKRR	FF	WSKO31	RKSI	270201	RKSI	RKRR	02:03	02:03	02:03	02:03	02:01	02:03
SINGAPORE	SINGAPORE	WSSS	WSSR20	WSSS	WSJC	FF	WSSR20	WSSS	270205	WSSS	WSJC	02:06	02:05	02:05	02:05	02:05	02:05
SOLOMON ISLANDS	HONIARA	AGGH	WSSO20	AGGH	AGGG	FF	WSSO20	AGGH	270200	AGGH	AGGG	02:01		02:00	02:31	02:00	02:02
SRI LANKA	COLOMBO	VCBI	WSSB31	VCBI	VCBI	FF	WSSB31	VCBI	270212	VCBI	VCCF	02:13	02:12	02:12	02:12	02:12	02:13
THAILAND	BANGKOK	VTBS	WSTH31	VTBS	VTBB	FF	WSTH31	VTBS	270200	VTBS	VTBB	02:00	02:00	02:00	02:00	02:00	02:00
UNITED STATES	HONOLULU	PHFO	WSPA01-13	PHFO	KZAK	GG	WSPA11	PHFO	270200	PHFO	KZAK	02:00	02:00	02:00	02:00		02:01
VIET NAM	GIA LAM	VVGL	WSVS31	VVGL	VVHN	FF	WSVS31	VVGL	270203	VVGL	VVHN	02:04	02:01	02:02	02:01	02:03	02:02
	GIA LAM	VVGL	WSVS31	VVGL	VVHM	FF	WSVS31	VVGL	270201	VVGL	VVHM	02:02	02:04	02:04	02:02		02:04