



International Civil Aviation Organization

**NINETEENTH MEETING OF THE METEOROLOGY SUB-GROUP
(MET SG/19) OF APANPIRG**

Bangkok, Thailand, 3 – 6 August 2015

Agenda Item 5: Air Navigation Deficiencies in the MET field

IMPROVEMENT OF SIGMET AVAILABILITY IN THE APAC REGION

(Presented by the Rapporteur, MET/H TF, Ad Hoc Group, SIGMET Deficiencies)

SUMMARY

This paper presents a report on a regional initiative to investigate and implement measures to improve the availability of SIGMET information in the Region.

1. INTRODUCTION

1.1 Reported deficiencies in SIGMET information in the Asia Pacific (APAC) Region are recorded in the APANPIRG database of air navigation deficiencies, which indicates that, inter alia: (a) the requirements for issuance and proper dissemination of SIGMET, including SIGMET for volcanic ash, have not been fully implemented in Papua New Guinea (PNG) (ref: AP-MET-08; recorded in 2003); and (b) there is a lack of SIGMET issued for the Port Moresby, Honiara, and Nauru FIRs (ref: AP-MET-22, AP-MET-23 and AP-MET-24; recorded in 2011).

1.2 From the global perspective, and also in view of long-standing SIGMET implementation deficiencies in some States, the ICAO Meteorology Divisional Meeting (MET/14), held in Montreal, Canada, 7 to 18 July 2014, recommended that a regional hazardous weather advisory framework should be implemented expeditiously and requested that an appropriate ICAO expert group, in close coordination with the World Meteorological Organization (WMO), be tasked to develop a regional advisory system for specific en-route hazardous meteorological conditions especially in those States where notable SIGMET-related deficiencies persist (MET/14 Recommendation 2/9).

1.3 In view of the MET/14 recommendation above, and given the urgent need to address the safety issues related to non-issuance of SIGMET by some States within the APAC region, MET SG/18 (Beijing, China, 18 to 21 August 2014) concluded that preparatory action to investigate options and implement viable solutions to reduce SIGMET deficiencies in the APAC Region should be progressed as a matter of urgency. In particular, it was noted that there was a need to improve the availability of SIGMET information for the Port Moresby, Honiara and Nauru FIRs.

1.4 METSG/18 requested the Meteorological Hazards Task Force (MET/H TF) to conduct an investigation into options for addressing the above matter. MET/H TF added the task to its work plan and established an ad-hoc group comprising Australia, China, Japan, Indonesia and New Zealand (Rapporteur), to focus specifically on the task.

2. DISCUSSION

2.1 In October 2014, the Ad Hoc Group (the “Group”) developed and implemented a work plan. A key task under the plan involved the Group, with the assistance of the APAC Office, undertaking consultation with PNG, Solomon Islands and Nauru in an effort to establish the situation in each State regarding the issuance of SIGMET information, and to determine whether any bilateral arrangements were in place for the issuance of such information.

2.1 The consultation was carried out between November 2014 and January 2015, and identified that;

2.1.1 PNG had participated in the SIGMET tests conducted on 5, 12 and 19 November 2014. This had involved PNG issuing test SIGMETs for the Port Moresby, Honiara and Nauru FIRs. The Solomon Islands had also issued test SIGMETs for the Honiara FIR. It was pleasing to note that this was the first time PNG and the Solomon Islands had participated in the annual SIGMET tests.

2.1.2 PNG was issuing SIGMETs routinely for the Port Moresby and Honiara FIRs, but not for the Nauru FIR.

2.1.3 The SIGMETs issued by PNG contained formatting errors and were not generally compliant with Annex 3 or the Asia Pacific Regional SIGMET Guide.

2.1.4 Dissemination of SIGMETs issued by PNG was not consistent with that recommended in the Regional SIGMET Guide.

2.1.5 A check of SIGMETs issued by PNG and received by selected States over a two-month period (December 2014 and January 2015) noted inconsistencies in the number of SIGMETs received. For example, over the two-month period, 73 SIGMETs were received in Australia, 11 were received in New Zealand and none were received at the SADIS gateway.

2.1.6 Previous advice to the APAC Office had indicated that there was a bilateral arrangement between PNG and the Solomon Islands and Nauru for the issuance of SIGMETs by PNG for the Honiara and Nauru FIRs. However, while PNG, the Solomon Islands and Nauru believed such an arrangement existed, no evidence could be found to confirm this.

2.1.7 The Solomon Islands indicated a willingness to take responsibility for issuing SIGMETs routinely for the Honiara FIR, and requested advice concerning the process they should follow to implement this.

2.1.8 Nauru had not designated a Meteorological Authority or established a local meteorological office or meteorological watch office and therefore was not able to issue SIGMETs for the Nauru FIR.

2.2 Follow up action by the Group during January and February 2015 included the following;

2.2.1 PNG – was provided with advice and guidance on formatting SIGMETs to comply with Annex 3, and they were invited to review the list of AFTN addresses used to disseminate SIGMETs.

2.2.2 Solomon Islands – the APAC Office assisted the Solomon Is with advice on taking responsibility for the issuance of SIGMETs for the Honiara FIR, including the procedures for advising ICAO and PNG of their plans.

2.2.3 Nauru – the APAC Office, at the request of the Group, sent a formal letter to Nauru in November 2014, advising of the requirement to designate a Meteorological Authority. It was hoped that Nauru would subsequently designate a Meteorological Authority. However, it was not anticipated that Nauru would be able to establish a meteorological watch office in the foreseeable future due to a lack of trained meteorological personnel and facilities. On this basis it was felt that once Nauru had designated a Meteorological Authority, the APAC Office would be able to offer advice to Nauru about how they could request another State to provide SIGMETs for the Nauru FIR on their behalf.

2.3 Progress Report - March 2015

2.3.1 A progress report covering the work of Group was presented at the Conjoint session of ROBEX WG/13 & MET/H TF/5 (Seoul, Republic of Korea, 18 March 2015), and the meeting concluded that the work of the Group should continue and the Work Plan updated accordingly.

2.4 Updated Work Plan - July 2015

2.4.1 An updated Work Plan is provided in the Attachment to this paper and a brief summary of outcomes from the work of the Group to date is outlined below;

2.4.1.1 PNG and Solomon Islands – both are now issuing SIGMETs routinely for the Port Moresby and Honiara FIRs respectively. However, some formatting and dissemination issues need to be addressed (refer to 2.5).

2.4.1.2 A formal MOU was signed between PNG and the Solomon Islands on 18 April 2015 for a handover of responsibility from PNG to the Solomon Islands for issuing SIGMETs for the Honiara FIR. The handover was advised by NOTAM and also advised to the APAC Office. The handover occurred on 15 May 2015.

2.4.1.3 Several attempts have been made to encourage Nauru to designate a Meteorological Authority for Nauru. This has involved efforts by the APAC Office, the Australian Bureau of Meteorology, Airservices Australia and the Rapporteur of the MET/H TF, Ad Hoc Group, but unfortunately this has not yet resulted in Nauru designating a Meteorological Authority. However, Airservices Australia plans to visit Nauru in the near future and they have kindly offered to seek information on the provision of meteorological services in Nauru, including the designation of a Meteorological Authority.

2.5 Outstanding Issues

2.5.1 It is not known whether SIGMETs issued by PNG and the Solomon Islands are being disseminated in accordance with the Asia Pacific Regional SIGMET Guide. Therefore, it is proposed that a period of monitoring should be carried out to determine the status of SIGMET dissemination by PNG and the Solomon Islands.

2.5.2 Options for assisting PNG and the Solomon Islands to address SIGMET formatting errors should be considered. This could involve local workshops arranged jointly by ICAO and WMO, or possibly by inviting PNG and the Solomon Islands to participate in a future Asia Pacific regional SIGMET Workshop. There may be other options as well.

2.5.3 Further efforts need to be made to encourage Nauru to designate a Meteorological Authority for Nauru. In the event that Nauru designates a Meteorological Authority, it is likely they would require assistance to arrange for another State to provide SIGMETs for the Nauru FIR. This could be by means of a bilateral arrangement.

2.6 Conclusion

2.6.1 The work of the Ad Hoc Group, together with the assistance of the APAC Office, has resulted in good progress towards the improvement of SIGMET availability in the APAC Region. However, further work is still required as noted in 2.5 and 3.1.

3. ACTION BY THE MEETING

3.1 The meeting is invited to;

- a) Note the information provided in this paper;
- b) Consider options for monitoring the dissemination of SIGMETs by PNG and the Solomon Islands;
- c) Consider options for assisting PNG and the Solomon Islands to address SIGMET formatting errors;
- d) Consider what additional efforts could be made to encourage Nauru to designate a Meteorological Authority; and
- e) Discuss any other relevant matters.

ATTACHMENT

ICAO APAC METEOROLOGICAL HAZARDS TASK FORCE (MET/H TF), Ad Hoc Group, SIGMET Deficiencies

**Work Plan
 (Updated: 3 July 2015)**

1. AD HOC GROUP		
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2. DESCRIPTION	
Objective	To reduce SIGMET deficiencies in the APAC Region.
Benefits	Improve pre-flight planning and in-flight safety by optimizing flight routes with respect to hazardous weather phenomena.
Terms of Reference	Assist the MET/H TF in identifying viable options and implementation strategies to reduce SIGMET deficiencies in the APAC Region.
Work Programme	<ul style="list-style-type: none"> • Review SIGMET deficiencies in the APAC region; • Identify options to eliminate/reduce deficiencies; • Agree on options and implement as appropriate; and • Monitor SIGMET issuance and remove deficiencies where appropriate.

3. COMMUNICATION STRATEGIES				
Description	Target Audience	Delivery Method	Frequency	Responsibility
Work Plan	Ad Hoc Group members	Email	As required	Rapporteur
General correspondence	Ad Hoc Group members	Email	As required	Ad Hoc Group members
Status & milestone reports	ICAO Secretariat and Ad Hoc Group members	Email	As required	Rapporteur
Ad Hoc Group Report	MET/H TF and METSG	Working/Information Paper	MET SG/19 – August 2015	Rapporteur

4. WORK PLAN			
Task/Milestone	Accountability	Review Dates	Status
Task 1: Assist the ICAO Secretariat to identify the States/FIRs where SIGMET deficiencies still exist.	Rapporteur	May 2015	Completed Three States/FIRs identified. Papua New Guinea (PNG) (Port Moresby FIR), Solomon Is (Honiara FIR) and Nauru (Nauru FIR)
Task 2: Assist the ICAO Secretariat in the facilitation of discussion of viable options with relevant states.	Ad Hoc Group	May 2015 Jul 2015	The ICAO Secretariat, with the assistance of the Ad Hoc Group, provided advice to PNG and the Solomon Is concerning the procedures for SIGMET issuance and the requirements for notification in the Regional Air Navigation Plan (FASID). Nauru – the ICAO Regional Office provided Nauru with formal letters in November 2014

		Sep 2015	and February 2015 setting out the process for designating a Met Authority. A response has yet to be received from Nauru. Airservices Australia plans to visit Nauru in July or August 2015, and has offered to seek information on the provision of meteorological services in Nauru and the designation of a Meteorological Authority.
Task 3: Monitor the implementation of the solution/s to remove deficiencies.	Ad Hoc Group	May 2015 Jul 2015 Sep 2015	PNG issuing SIGMETs for the Port Moresby FIR. Solomon Is commenced issuing SIGMETs for the Honiara FIR from 15 May 2015. Nauru – refer to Task 2. Monitoring of SIGMET issuance by PNG and Solomon Is to be conducted during September to confirm correct dissemination and formatting.
Task 4: Monitor global development of the establishment of a regional advisory system for hazardous weather	Ad Hoc Group	On going	
Task 5: Report progress to MET SG/19	Rapporteur	August 2015	
<i>Milestone 4: Reduction in SIGMET deficiencies</i>	<i>States</i>	2016	