



**INTERNATIONAL CIVIL AVIATION ORGANIZATION
ASIA AND PACIFIC OFFICE**

**REPORT OF THE CONJOINT SESSION OF THE
THIRTEENTH MEETING OF THE ASIA/PACIFIC
REGIONAL OPERATIONAL METEOROLOGICAL (OPMET)
BULLETIN EXCHANGE WORKING GROUP
(ROBEX WG/13)**

AND

**FIFTH MEETING OF THE ASIA/PACIFIC METEOROLOGICAL
HAZARDS TASK FORCE
(MET/H TF/5)**

**18 March 2015
Seoul, Republic of Korea**

The views expressed in this Report should be taken as those of
the Meeting and not the Organization.

Approved by the Meeting
and published by the ICAO Asia and Pacific Office, Bangkok

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1. Introduction

1.1 The conjoint session of the Thirteenth Meeting of the Asia/Pacific Regional OPMET¹ Bulletin Exchange Working Group (ROBEX WG/13) and the Fifth Meeting of the Meteorological Hazards Task Force (MET/H TF/5) was hosted by the Korea Aviation Meteorological Agency/Korea Meteorological Administration, at the GLAD Hotel, Seoul, Republic of Korea, on 18 March 2015, to discuss items of interest to both groups.

1.2 This Report contains discussion and outcomes from the conjoint session of ROBEX WG/13 and MET/H TF/5 and, as such, is complimentary information to the discussion and outcomes covered in the separate reports from ROBEX WG/13 and MET/H TF/5, which were held from 16 to 17 March 2015 and 19 to 20 March 2015, respectively, at the same location as above.

2. Attendance

2.1 The conjoint session (also referred to in this Report as ‘the meeting’) was attended by forty (40) experts from Australia, Bangladesh, Bhutan, Cambodia, China, Hong Kong China, Indonesia, Japan, Malaysia, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam, the International Air Transport Association (IATA), the International Federation of Air Line Pilot’s Associations (IFALPA) and the International Civil Aviation Organization (ICAO). The List of Participants is provided in **Appendix A** to this Report.

3. Officer and Secretariat

3.1 Mr. Tim Hailes and Mr. P.W. Chan presided as Co-Chairs of the meeting.

3.2 Mr. Peter Dunda, Regional Officer Aeronautical Meteorology, ICAO Asia and Pacific Office, acted as the Secretariat for the meeting.

4. Language and Documentation

4.1 The conjoint session of ROBEX WG/13 and MET/H TF/5 met as a plenary throughout the meeting. The working language of the meeting was English inclusive of all documentation and this Report. A total of eight (8) Working Papers (WPs) and six (6) Information Papers (IPs) were considered by the meeting. The list of WPs/IPs is attached at **Appendix B** to this Report.

5. Draft Conclusions, Draft Decisions and Decisions of the conjoint session of ROBEX WG/13 and MET/H TF/5 – Definition

5.1 The conjoint session of ROBEX WG/13 and MET/H TF/5 recorded the outcomes of its discussions in the form of Draft Conclusions, Draft Decisions and Decisions within the following definitions:

- a) **Draft Conclusions** (for further consideration and action by APANPIRG) deal with matters that, according to APANPIRG terms of reference, require the attention of States, or action by the ICAO in accordance with established procedures;
- b) **Draft Decisions** (for further consideration and action by APANPIRG) deal with the matters of concern only to APANPIRG and its contributory bodies; and

¹ Operational meteorological (information)

- c) **Decisions** of the conjoint session of the ROBEX WG and MET/H TF relate solely to matters dealing with the internal working arrangements of the two groups.

5.2 List of Draft Conclusions and Decisions

List of Draft Conclusions from the conjoint session of ROBEX WG/13 and MET/H TF/5

There were no Draft Conclusions recorded by the conjoint session of ROBEX WG/13 and MET/H TF/5.

List of Draft Decisions from the conjoint session of ROBEX WG/13 and MET/H TF/5

There were no Draft Decisions recorded by the conjoint session of ROBEX WG/13 and MET/H TF/5.

List of Decisions from the conjoint session of ROBEX WG/13 and MET/H TF/5

Decision (ROBEX WG/13-MET/H TF/5)/1 – Distribution of documentation for VAAC back-up tests

That, the distribution list for the VAAC back-up test State letter invitations and supporting documentation be reviewed and updated, as necessary, to facilitate the participation of all intended operational units in future VAAC back-up tests.

Decision (ROBEX WG/13-MET/H TF/5)/2 – MWO and ACC location and AFTN address list(s) for VAAC back-up tests

That, the list(s) of MWO and ACC locations and AFTN addresses used by VAACs in VAAC back-up tests be reviewed and updated, as necessary, to facilitate the participation of all intended operational units in future VAAC back-up tests, including those in the area of responsibility of VAAC Wellington.

Decision (ROBEX WG/13-MET/H TF/5)/3 – Follow-up with States/MWOs on SIGMET tests

That, the detailed data in Appendices 1 and 2 in WP/C2, Tables 1 and 2 in WP/C3 and Tables 1 and 2 in WP/C4 be used to highlight problems in test-SIGMET issuance to the States/MWOs concerned in order to facilitate improved participation-rates and resolution of errors in SIGMET tests.

Decision (ROBEX WG/13-MET/H TF/5)/4 – SIGMET workshop in Japan

That, in order to facilitate improved issuance of SIGMET in the Asia/Pacific, the feasibility of a collaborative effort, between ICAO, Japan and the WMO, with respect to a possible SIGMET workshop (in 2016), be further investigated.

Decision (ROBEX WG/13-MET/H TF/5)/5 – Draft Regional SIGMET Guide updates

That, the draft Regional SIGMET Guide including the additional changes provided in the revised Attachments 1 and 2 in WP/C5 be adopted and forwarded to the ad-hoc group comprising Australia (Rapporteur), Hong Kong-China, Japan and New Zealand, to ensure completeness before the final approval process and dissemination to States for use as Regional guidance.

Decision (ROBEX WG/13-MET/H TF/5)/6 – Use of social media sites for sharing VONA information

That, the feasibility of the use of social media sites to make the VONA information accessible to users be further investigated.

Decision (ROBEX WG/13-MET/H TF/5)/7 – Review guidance for tropical cyclone advisory and SIGMET information

That, an ad-hoc group, comprising Australia (rapporteur), Hong Kong-China and Japan (note: Secretariat to invite India), in consultation with IATA and/or IFALPA, develop a working paper for MET SG/19 (highlighting the issues raised in WP/C8 and WP/C5) with proposal(s) for the improvement of guidance material supporting clarity and consistency of information within tropical cyclone advisory and SIGMET messages in the Region.

Decision (ROBEX WG/13-MET/H TF/5)/8 – Promote the implementation of special air-reports

That, consideration be given to the promotion of the issuance of special air-reports to support information sharing, especially with respect to hazardous phenomena, in a consistent manner as required throughout the Region.

Agenda Item 1: VAAC back-up tests

1.1 The meeting reviewed the outcomes from a back-up test conducted between the volcanic ash advisory centre (VAAC) Tokyo and VAAC Darwin on 22 October 2014 and noted the outcomes from the test including recommendations by Australia and Japan aimed at improving the VAAC back-up process and the communication between VAACs, promoting the implementation of the international airways volcano watch (IAVW) and updating the addresses used to disseminate volcanic ash advisory information to aeronautical fixed telecommunications network (AFTN) recipients. Further details are given in IP/C1 presented by Australia and Japan.

1.2 With respect to the somewhat poor response rate from intended participating units to the back-up test messages sent by the VAACs concerned (Attachment 4 to IP/C1 refers), the meeting noted that (as pointed out by Hong Kong, China in a comparison of State letter emails from 2012 and 2014) the email distribution list for the ICAO State letter of invitation for participants in the back-up test had fewer addresses than a similar letter for VAAC back-up test in 2012, and this may have contributed to the lower participation rate in 2014.

1.3 To address the issue discussed above, and in order to facilitate distribution of relevant documentation to the intended participants and improve the participation-rate of operational units in future VAAC back-up tests, the meeting adopted the following Decision:

Decision (ROBEX WG/13-MET/H TF/5)/1 – Distribution of documentation for VAAC back-up tests

That, the distribution list for the VAAC back-up test State letter invitations and supporting documentation be reviewed and updated, as necessary, to facilitate the participation of all intended operational units in future VAAC back-up tests.

1.4 The meeting also noted that lists of the meteorological watch office (MWO) and area control centre (ACC) locations and corresponding AFTN addresses were collated as a collaborative effort involving the Secretariat, VAACs and States to guide VAACs on the dissemination of volcanic ash advisory information specifically during the VAAC back-up test. Further details are provided in WP/C1 presented by the Secretariat.

1.5 Although the meeting noted that it is a VAAC Provider State's responsibility to ensure advisory information is issued to MWOs and ACCs serving flight information regions in its area of responsibility which may be affected [by volcanic ash cloud], with respect to the usefulness of the information in WP/C1 the meeting agreed that the Secretariat should continue to coordinate with VAACs and States as part of the VAAC back-up test preparations to ensure the correct AFTN addresses are used for the participating MWOs and ACCs in VAAC back-up tests.

1.6 Furthermore, in view of the outstanding need to follow-up on action related to VAAC back-up tests involving VAAC Wellington (Attachment to MET/H TF/5 WP/2; agreed action 4/13 refers), the meeting also agreed that the coordination and development of lists detailing the MWO and ACC locations and AFTN address (for dissemination of messages as part of the VAAC back-up tests) should be extended to include the MWOs/ACCs concerned in the VAAC Wellington's area of responsibility. The meeting, therefore, adopted the following Decision:

Decision (ROBEX WG/13-MET/H TF/5)/2 – MWO and ACC location and AFTN address list(s) for VAAC back-up tests

That, the list(s) of MWO and ACC locations and AFTN addresses used by VAACs in VAAC back-up tests be reviewed and updated, as necessary, to facilitate the participation of all intended operational units in future VAAC back-up tests, including those in the area of responsibility of VAAC Wellington.

Agenda Item 2: SIGMET and advisory informationSIGMET tests

2.1 The meeting reviewed analyses of data collected by the five Asia/Pacific regional OPMET data banks (RODBs), Bangkok, Brisbane, Tokyo, Singapore and Nadi, during the 2014 Asia/Pacific SIGMET tests conducted on:

- 5 November 2014 – [WC] SIGMET test for tropical cyclone;
- 12 November 2014 – [WV] SIGMET test for volcanic ash; and
- 19 November 2014 – [WS] SIGMET test for phenomena other than tropical cyclone and volcanic ash.

Further details are provided in WP/C2 and WP/C3 presented by Singapore and Japan; the designated SIGMET test focal points.

2.2 The meeting was pleased to note that the data presented by Singapore and Japan in WP/C2 and WP/C3 showed the overall participation-rate of Asia/Pacific States concerned in the SIGMET tests had increased considerably on the previous year, i.e.:

- 83% of States participated in [WC] SIGMET test in 2014 (up by 11%);
- 85% of States participated in [WV] SIGMET test in 2014 (up by 19%); and
- 76% of States participated in [WS] SIGMET test in 2014 (up by 10%).

2.3 Significantly, for the first time since Asia/Pacific SIGMET tests were first conducted in 2006, test-SIGMET messages were received at the RODBs for the flight information regions (FIRs) in the area of responsibility of Nauru, Papua New Guinea and the Solomon Islands, i.e.:

- Nauru FIR – [WS] test-SIGMET received (but not [WC] and [WV] test-SIGMET);
- Port Moresby FIR – [WC] and [WV] test-SIGMET received (but not [WS] test-SIGMET); and
- Honiara FIR – [WC], [WV] and [WS] test-SIGMET received.

The meeting noted that test-SIGMET for Nauru FIR was issued by Port Moresby MWO on behalf of Nauru.

2.4 With respect to the above, the meeting acknowledged the coordination work conducted by the ad-hoc group tasked (by the MET/H TF) to help improve SIGMET issuance in the Honiara, Nauru and Port Moresby FIRs (note: this was also discussed in MET/H TF/5 IP/2 and paragraph 2.3 of the Report on MET/H TF/5).

2.5 Furthermore, the meeting noted that currently in the Asia/Pacific Air Navigation Plan, Facilities and Services Implementation Document (FASID), Tables MET 1B, 3A and 3B indicate that MWOs are not operational in Nauru and the Solomon Islands and that arrangement is made for issuance of SIGMET by Port Moresby MWO (on behalf of Nauru and the Solomon Islands). In view of the SIGMET test results discussed above, which indicated that test-SIGMET messages were sent by Honiara MWO for Honiara FIR, the meeting noted that a future amendment of FASID Tables MET 1B, 3A and 3B would be necessary to reflect changes with respect to the status of implementation of MWO services from Honiara.

2.6 In contrast to the increased participation by States in SIGMET tests discussed above, the meeting noted that the results presented in WP/C2 indicates the average rate of reception of the [WS] test-SIGMET messages across all five RODBs was 92%, and across the three EUR ROCs² was 85%; representing a six percent (6%) decrease on the previous year. Furthermore, the reception-rate was different across the five RODBs for the [WS] test-SIGMET messages: ranging from 87% at Nadi to 100% at Singapore. The meeting noted that, although the reason for the variation was not explained in the analysis (in WP/C2), the provisions in the Regional SIGMET Guide and the ROBEX scheme, which require the dissemination of all SIGMET messages from the MWOs to all five RODBs, are intended to ensure uniform availability of the SIGMET messages for end users.

2.7 In order to address the inconsistencies in test-SIGMET availability at RODBs, as noted above, and in order to resolve other SIGMET-test-related issues such as the non-participation of some MWOs in the SIGMET tests and format errors in some test-SIGMET messages, the meeting agreed that the detailed data in Appendices 1 and 2 to WP/C2, and Tables 1 and 2 to WP/C3, would be useful to highlight particular problems in the issuance of SIGMET by States/MWOs concerned and to facilitate targeted assistance towards the resolution of format errors and dissemination problems. The meeting also noted that no [WV] test-SIGMET messages were received from the nine (9) MWOs in the Russian Federation (as anticipated in accordance with the SIGMET test procedures) and agreed that, in addition to the above, targeted coordination should be employed to improve participation in future SIGMET tests by the Russian Federation.

2.8 The meeting also reviewed a summary of both the 2014 and 2013 SIGMET test errors, which was based on the SIGMET test focal points' reports and prepared and presented by the Secretariat in WP/C4 to assist with the promulgation of information on SIGMET test errors to States and to facilitate the resolution of deficiencies in SIGMET issuance. Noting that the tabulated presentation of SIGMET test errors in Tables 1 and 2 in WP/C4 showed repetition of SIGMET test errors at some locations from one year to the next, the meeting agreed that the information presented should be promulgated to States concerned to facilitate the resolution of errors. However, to avoid possible confusion to the recipients, the meeting cautioned that only the results from the most recent SIGMET test (i.e., in Table 1 of WP/C4) should be highlighted to States in cases where the SIGMET test errors were not also present in the previous year (i.e., in Table 2 of WP/C4).

² European (EUR) Regional OPMET Centres (ROCs): London, Toulouse and Vienna

2.9 In view of the discussions above, the meeting formulated the following Decision:

Decision (ROBEX WG/13-MET/H TF/5)/3 – Follow-up with States/MWOs on SIGMET tests

That, the detailed data in Appendices 1 and 2 in WP/C2, Tables 1 and 2 in WP/C3 and Tables 1 and 2 in WP/C4 be used to highlight problems in test-SIGMET issuance to the States/MWOs concerned in order to facilitate improved participation-rates and resolution of errors in SIGMET tests.

SIGMET workshop

2.10 With respect to initiatives to facilitate the improvement of the issuance of SIGMET in the Asia/Pacific, Japan advised that it was considering hosting a SIGMET workshop (possibly in 2016) to assist States with the issuance of SIGMET. The meeting agreed that it would be helpful for Japan to coordinate with the ROBEX WG and MET/H TF concerning such a SIGMET workshop, particularly with respect to any opportunities for collaboration on a conjoint event with participation by WMO (RA II and RA V)³ members. To this end the meeting adopted the following Decision:

Decision (ROBEX WG/13-MET/H TF/5)/4 – SIGMET workshop in Japan

That, in order to facilitate improved issuance of SIGMET in the Asia/Pacific, the feasibility of a collaborative effort, between ICAO, Japan and the WMO, with respect to a possible SIGMET workshop (in 2016), be further investigated.

SIGMET improvements

2.11 The meeting also noted that the planned changes to OPMET bulletins generated by RODB Brisbane (discussed previously in ROBEX WG/13 IP/2 and in paragraphs 4.3 and 4.4 of the ROBEX WG/13 Report) is expected to improve the compliance of priority codes in SIGMET messages from Australia and, therefore, should reduce or eliminate errors in priority codes of test-SIGMET messages from Australia – such as those indicated in Tables 1 and 2 in WP/C4.

Review SIGMET Guide

2.12 The meeting reviewed the draft amendment to the Asia/Pacific Regional SIGMET Guide, which is based on the template provided by the Meteorological Warnings Study Group (METWSG) (Inter-Office Memorandum Ref: AN 10/22 refers), and incorporates the recommendations made by the conjoint session of ROBEX WG/12 and MET/H TF/4 (agreed action ROBEX/12 [MET/H TF/4] – 12/10 [4/1], 12/11 [4/2] and 12/14 [4/5] refer). Further details are provided in WP/C5 presented by the Secretariat.

2.13 During its review of WP/C5, the meeting proposed and agreed to several additional changes to incorporate in the draft Regional SIGMET Guide material: these are provided in the revised Attachments 1 and 2 to WP/C5. The meeting agreed that the revised draft Regional SIGMET Guide should be given a final review by the ad-hoc group (formed at the previous meeting in 2014, comprising Australia (Rapporteur), Hong Kong-China, Japan, New Zealand and the Secretariat) to ensure completeness of the agreed changes before the final approval process and dissemination to States for use as Regional guidance and, therefore, adopted the following Decision:

³ Regional Association II - Asia, and Regional Association V - South-West Pacific

Decision (ROBEX WG/13-MET/H TF/5)/5 – Draft Regional SIGMET Guide updates

That, the draft Regional SIGMET Guide including the additional changes provided in the revised Attachments 1 and 2 in WP/C5 be adopted and forwarded to the ad-hoc group comprising Australia (Rapporteur), Hong Kong-China, Japan and New Zealand, to ensure completeness before the final approval process and dissemination to States for use as Regional guidance.

2.14 With respect to the above, the Secretariat notified the meeting that, in accordance with the APANPIRG Procedural Handbook – Part V, *1. Procedure for the endorsement and application of Asia/Pacific regional guidance materials in various air navigation fields*, such guidance material (as the Regional SIGMET Guide) should be examined by the APANPIRG States and included in APANPIRG reports. However, with regard to cases where regional guidance material prepared by APANPIRG contributory bodies needs to be dealt more speedily, the material may be circulated to States for appropriate action following consultation with the APANPIRG Chairperson and examination by ICAO Headquarters.

Advisory information

2.15 The meeting noted the VAAC Darwin Management Report, which addresses the main features of the IAVW operations, highlights recent developments and challenges and future, planned developments. Further details are provided in WP/C6 presented by Australia.

2.16 With respect to the implementation activities related to the IAVW reported in section 3 of WP/C6, Hong Kong, China acknowledged Australia's ongoing contributions including engagement with volcano observatories, other VAACs, meteorological agencies, airlines and the scientific community, as well as active membership of the ICAO International Airways Volcano Watch Operations Group (IAVWOPSG).

2.17 Hong Kong, China also expressed support for Australia's initiatives with respect to sharing operationally relevant volcanic ash related information, such as the volcano observatory notice for aviation (VONA), via the Internet or social media sites and suggested that VAACs in the Region could make the VONA information accessible to users in the same manner (using social media sites). In view of the above suggestion, the meeting adopted the following Decision:

Decision (ROBEX WG/13-MET/H TF/5)/6 – Use of social media sites for sharing VONA information

That, the feasibility of the use of social media sites to make the VONA information accessible to users be further investigated.

Volcanic ash exercises

2.18 The meeting noted outcomes of the volcanic ash exercise (known as VOLKAM14) conducted in Kamchatka (far-east of Russian Federation) in 2014 and the objectives of the subsequent exercise, VOLKAM15, to be conducted on 15-16 April 2015. The meeting noted that the VOLKAM exercises are initiatives of the ICAO EUR/NAT Region involving inter-Regional collaboration with Japan focusing on volcanic ash scenarios in the northwest Pacific region. Further details are provided in IP/C2 presented by Japan.

2.19 In relation to the information above, the meeting noted the recent outcome of APANPIRG/25, Decision 25/45, which led to the establishment of a volcanic ash exercises steering

group in the Asia/Pacific and to conduct a volcanic ash exercise/s in the Asia/Pacific Region in 2015. This issue is further discussed in the Report of MET/H TF/5 in paragraph 4.2.

VAAC coordination (Anchorage/Tokyo)

2.20 The meeting also noted the ongoing efforts between Japan and the United States to enhance the handover procedures for volcanic ash advisory service between VAAC Anchorage and VAAC Tokyo and the associated use of the Collaborative Decision Analyses and Forecast (CDAF). Further details are provided in IP/C3 presented by Japan.

Regional guidance for tropical cyclone advisory and SIGMET information

2.21 The meeting reviewed an overview of a number of apparent inconsistencies or shortcomings in the available guidance for implementation of tropical cyclone advisory and SIGMET information identified and presented in WP/C8 by Australia. These include:

- Information on the radius and vertical extent of cumulonimbus cloud associated with a tropical cyclone, which is provided in a SIGMET message but not provided in an associated tropical cyclone advisory message;
- Information on the change in intensity of a tropical cyclone, which is given explicitly in a SIGMET message (e.g., INTSF, WKN or NC) but can only be inferred from (i.e., is not explicitly given in) an associated tropical cyclone advisory message;
- The time of origin (DTG⁴) of a tropical cyclone advisory message is the issue time (in accordance with Annex 3 Table A2-2) whereas it was generally understood (by the meeting) that the Tropical Cyclone Advisory Centres (TCACs) currently take this to mean the observation time (noting also that in the volcanic ash advisory message there is provision for separate DTGs to denote the issuance time and observation time);
- The description of the position of a tropical cyclone at the end of the validity of a SIGMET when the SIGMET end time does not coincide with a forecast time/position given in a corresponding tropical cyclone advisory message; and
- [WC] SIGMET messages in situations where the area of frequent cumulonimbus cloud is displaced significantly from the centre of a tropical cyclone (and often confined to just one sector of the cyclone).

2.22 In order to facilitate improved clarity and consistency of information within tropical cyclone advisory and SIGMET messages in the Region, the meeting agreed on the need to review the available guidance and provisions in view of the issues raised above.

2.23 In relation to the provision of tropical cyclone advisory information, the meeting noted that TCAC Tokyo is considering changing the issuance of tropical cyclone advisory information to intervals of 3 hours – to better support the provision of [WC] SIGMET information, which is issued at intervals of 3 hours when tropical cyclones affect the congested airspace over Japan or are rapidly moving into the vicinity of Japan. Further details are in IP/C5.

2.24 The meeting noted the proposed increase in frequency of issuance of tropical cyclone

⁴ Date-time group (coded)

advisory information, as discussed in IP/C5, would lead to the increased possibility of requiring the use of a tropical cyclone advisory number higher than the number 99, which is the current maximum number (by default) allowed based on Annex 3 Table A2-2 specification that the advisory number shall be limited to two (2) digits. Japan indicated it would consider raising the issue in an appropriate global forum, such as via the newly established Meteorology Panel, for further consideration of a suitable solution, which may include a proposal for an appropriate provision to be included in a future Annex 3 Amendment. The meeting agreed that this issue further exemplified the need to review the available guidance and provisions for information within tropical cyclone advisory and SIGMET messages in the Region, raised earlier in the discussion above, and, therefore, formulated the following Decision:

Decision (ROBEX WG/13-MET/H TF/5)/7 – Review guidance for tropical cyclone advisory and SIGMET information

That, an ad-hoc group, comprising Australia (rapporteur), Hong Kong-China and Japan (note: Secretariat to invite India), in consultation with IATA and/or IFALPA, develop a working paper for MET SG/19 (highlighting the issues raised in WP/C8 and IP/C5) with proposal(s) for the improvement of guidance material supporting clarity and consistency of information within tropical cyclone advisory and SIGMET messages in the Region.

Implementation of TCG (TCAC Tokyo)

2.25 The meeting noted Japan's plans for TCAC Tokyo to implement tropical cyclone advisory information in graphical format (i.e., TCG) in accordance with the specifications provided in Annex 3, Appendix 1, and that TCG from Japan would be issued commencing August 2015 using the portable network graphics (PNG) format. Further details are provided in IP/C4.

Special air-reports

2.26 The meeting reviewed a presentation, based on the severe turbulence encounter of flight AA280 over Japan in December 2014, highlighting the importance of accurate en-route weather information for hazardous conditions and the sharing of information among aviation stakeholders to improve safety of operations. Further details are provided in WP/C7.

2.27 With respect to the information in WP/C7, the meeting noted the relative abundance of air-reports received over Japan at around the time of the incident compared with the general perception that air-reports are less frequently received in other parts of the Region. In view of the importance of air-reports towards operational safety, as illustrated in the discussion above, the meeting adopted the following Decision:

Decision (ROBEX WG/13-MET/H TF/5)/8 – Promote the implementation of special air-reports

That, consideration be given to the promotion of the issuance of special air-reports to support information sharing, especially with respect to hazardous phenomena, in a consistent manner as required throughout the Region.

The implementation of special air-reports was also discussed later in paragraph 7.1 of the Report on MET/H TF/5.

Agenda Item 3: Future work programme

3.1 The meeting noted that the work programmes of the ROBEX WG and MET/H TF were normally reviewed and updated during the separate meetings (of the two groups) and would be contained in Appendix C to the Reports from ROBEX WG/13 and MET/H TF/5, respectively.

Agenda Item 4: Any other businessTask List

4.1 The meeting agreed to the task list from the conjoint session of ROBEX WG/13 and MET/H TF/5 included as **Appendix C** to this Report.

**Thirteenth Meeting of the Asia/Pacific Regional OPMET Bulletin Exchange Working Group
(ROBEX WG/13) and Fifth Meeting of the Asia/Pacific
Meteorological Hazards Task Force (MET/H TF/5)**

(Seoul, Republic of Korea, 16 – 20 March 2015)

Appendix A to the Report

LIST OF PARTICIPANTS

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International Civil Aviation Organization
**CONJOINT SESSION OF THE THIRTEENTH MEETING OF ASIA AND
PACIFIC REGIONAL OPERATIONAL METEOROLOGICAL (OPMET)
BULLETIN EXCHANGE WORKING GROUP (ROBEX WG/13) AND**
**THE FIFTH MEETING OF ASIA/PACIFIC METEOROLOGICAL
HAZARDS TASK FORCE (MET/H TF/5)**

Seoul, Republic of Korea, 18 March 2015

LIST OF WORKING AND INFORMATION PAPERS

WP/IP No.	Agenda Item	Subject	Presented by
WORKING PAPERS			
WP/C1	2	MWO/ACC Locations/ AFTN Addresses for VAA Information	Secretariat
WP/C2	2	Review of WS SIGMET Test 10	Singapore RODB
WP/C3	2	Progress with SIGMET Tests – WC and WV	Japan
WP/C4	2	SIGMET Test Errors	Secretariat
WP/C5	2	SIGMET Guide Updates	Secretariat
WP/C6	2	Darwin VAAC Management Report	Australia
WP/C7	2	Importance of Accurate en-route Weather Information and Collaborative Information Sharing	Japan
WP/C8	2	Tropical Cyclone Advisories and SIGMETS	Australia
INFORMATION PAPERS			
IP/C1	1	Mutual Back-up Operations between VAACS Tokyo and Darwin	Japan and Australia
IP/C2	2	Report of VOLKAM 14 and AIM of VOLKAM 15	Japan
IP/C3	2	Enhancement in Handover Procedures and Collaborative Decision Analyses and Forecast (CDAF) with VAAC Anchorage	Japan
IP/C4	2	Graphical Tropical Cyclone Advisory – TCAC Tokyo	Japan
IP/C5	2	Advisory Number of TCA	Japan
IP/C6		Order of Discussion	Secretariat

CONJOINT SESSION OF ROBEX WG/13 AND MET/H TF/5
Task List

Appendix C to the Report

(last updated – 18 March 2015)

ACTION ITEM	DESCRIPTION	TIME FRAME	RESPONSIBLE PARTY	STATUS	REMARKS
1	Review and update, as necessary, the distribution list for the VAAC back-up test State letter invitations and supporting documentation.	June 2015	Secretariat in consultation with VAACs and States	To commence	Related to Decision (ROBEX WG/13-MET/H TF/5)/1
2	Review and update the lists of AFTN addresses used for MWOs and ACCs in VAAC back-up tests, including in VAAC Wellington's area of responsibility.	June 2015	Secretariat in consultation with VAACs and States	To commence	Related to Decision (ROBEX WG/13-MET/H TF/5)/2
3	Promulgate the detailed data in Appendices 1 and 2 to WP/C2, Tables 1 and 2 in WP/C3 and Tables 1 and 2 in WP/C4 to highlight problems in test SIGMET issuance to the States/MWOs concerned.	June 2015	Secretariat	To commence	Related to Decision (ROBEX WG/13-MET/H TF/5)/3
4	Investigate and report (to MET SG/19) on the feasibility of collaboration between ICAO, Japan and WMO with respect to a proposed SIGMET workshop (hosted by Japan in 2016) to facilitate improved issuance of SIGMET in the Asia/Pacific.	July 2015	Secretariat in consultation with Japan	To commence	Related to Decision (ROBEX WG/13-MET/H TF/5)/4
5	Review the draft Regional SIGMET Guide provided in the revised Attachments 1 and 2 in WP/C5 then submit for final approval process and dissemination to States for use as Regional guidance.	June 2015	Secretariat and ad hoc group comprising Australia (Rapporteur), Hong Kong-China, Japan and New Zealand	In progress	Related to Decision (ROBEX WG/13-MET/H TF/5)/5
6	Further investigate the feasibility of the use of social media sites to make the VONA information accessible to users.	June 2015	Secretariat in consultation with VAACs	To commence	Related to Decision (ROBEX WG/13-MET/H TF/5)/6

ACTION ITEM	DESCRIPTION	TIME FRAME	RESPONSIBLE PARTY	STATUS	REMARKS
7	Develop a working paper for MET SG/19 (highlighting the issues raised in WP/C8 and IP/C5) with proposal(s) for the improvement of guidance supporting clarity and consistency of information within tropical cyclone advisory and SIGMET messages in the Region.	July 2015	Ad hoc group, comprising Australia (rapporteur), Hong Kong-China and Japan (note: Secretariat to invite India), in consultation with IATA and/or IFALPA	To commence	Related to Decision (ROBEX WG/13-MET/H TF/5)/7
8	Consider the promotion of the issuance of special air-reports to support information sharing, especially with respect to hazardous phenomena, in a consistent manner as required throughout the Region.	June 2015	Secretariat in consultation with IFALPA	To commence	Related to Decision (ROBEX WG/13-MET/H TF/5)/8