



ICAO

*International Civil Aviation Organization*

**WORKING PAPER**

**Eleventh Meeting of the Meteorological Services Working Group (MET/S WG/11)**

Virtual meeting, 24 to 26 March 2021

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**Agenda Item 2: Review of follow-up from previous meetings**

**FOLLOW-UP ACTION FROM APANPIRG/31**

(Presented by the Secretariat)

**SUMMARY**

This paper presents a summary of outcomes from the Thirty-First Meeting of the Asia and Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/31), which are of direct relevance to the work plan of the Meteorology Sub-Group (MET SG) and Meteorological Services Working Group (MET/S WG). The meeting will consider further actions for MET/S WG, as necessary, to support the work of APANPIRG and MET SG, including a proposal to update the MET/S WG work plan.

**1. INTRODUCTION**

1.1 The ICAO Asia and Pacific (APAC) Office hosted the Thirty-First Meeting of the Asia and Pacific (APAC) Air Navigation Planning and Implementation Regional Group (APANPIRG/31) as a virtual meeting from Bangkok, Thailand from 14 to 16 December 2020.

1.2 The meeting will review a summary of relevant outcomes from APANPIRG/31 and consider further actions for the Meteorological Services Working Group (MET/S WG), as necessary, to support the work of the Meteorology Sub-Group (MET SG) and APANPIRG.

**2. DISCUSSION**

2.1 The report from APANPIRG/31, and all related meeting documentation, is available at the ICAO APAC Office website ([www.icao.int/apac](http://www.icao.int/apac)>Meetings>Meeting List-2020>APANPIRG/31).

APANPIRG/31 – Conclusions and Decisions

2.2 APANPIRG/31 adopted seventeen (17) Conclusions, which deal with matters that require the attention of States or actions by ICAO, and three (3) Decisions, which deal with matters of concern only to the APANPIRG and its contributory bodies.

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2.3 Of these, APANPIRG/31 adopted the following three (3) Conclusions and one (1) Decision, which are based on the four (4) Draft Conclusions and the one (1) Draft Decision formulated by the MET SG/24:

- APANPIRG/31 Decision 31/16 – *Updates to Terms of Reference and Work Plan of MET SG*
- APANPIRG/31 Conclusion 31/17 – *0.25 Degree WAFS Hazard Data*
- APANPIRG/31 Conclusion 31/18 – *Implementation of IWXXM*
- APANPIRG/31 Conclusion 31/19 – *Update of Information in APANPIRG Air Navigation Deficiencies Reporting Form*

2.4 For reference, a full copy of the above listed APANPIRG/31 Conclusions and Decision is provided at the **Appendix A** to this paper.

Updates to Terms of Reference and Work Plan of MET SG

2.5 With the adoption of APANPIRG/31 Decision 31/16 – *Updates to Terms of Reference and Work Plan of MET SG* (based on Draft Decision MET SG/24-17), the meeting should consider the need for consequential updates to the MET/S WG terms of reference and work plan to reflect the requirement for an annual (quarterly) schedule of coordination meetings for the Chairs of MET SG and its contributory working groups (including MET/S WG).

0.25 Degree WAFS Hazard Data

2.6 With the adoption of APANPIRG/31 Conclusion 31/17 – *0.25 Degree WAFS Hazard Data* (based on Draft Conclusion MET SG/24-06), the meeting might consider proposing updates, as necessary, to the MET/S WG work plan to support SADIS user States with the necessary systems changes to integrate the new 0.25 degree WAFS hazard data into their SADIS user systems and software.

Implementation of IWXXM

2.7 The adoption of APANPIRG/31 Conclusion 31/18 – *Implementation of IWXXM* (based on Draft Conclusion MET SG/24-10), is discussed further by the Meteorological Information Exchange Working Group (MET/IE WG) in a separate paper, MET/IE WG/19, WP/04 – *Follow-Up Action from APANPIRG/31*.

Update of Information in APANPIRG Air Navigation Deficiencies Reporting Form

2.8 With the adoption of APANPIRG/31 Conclusion 31/19 – *Update of Information in APANPIRG Air Navigation Deficiencies Reporting Form* (which subsumes Draft Conclusion MET SG/24-04), APANPIRG removed from the open list the air navigation deficiency, AP-MET-01, concerning aerodrome meteorological observations or reports at Honiara (AGGH), Solomon Islands. In addition, APANPIRG urged States/Administrations to establish action plans with defined target dates for resolution of air navigation deficiencies, update the status of the corrective action taken and report progress in the *Reporting Form of Air Navigation Deficiencies*, and update contact details of a Focal Point to coordinate actions to resolve the APANPIRG air navigation deficiencies.

2.9 In view of the above, the meeting might consider proposing updates, as necessary, to the MET/S WG work plan to further support States with the resolution of APANPIRG air navigation deficiencies in the MET field.

APAC Regional Air Navigation Plan (ANP), Volume III

2.10 APANPIRG/31 did not adopt a specific Conclusion based on the MET SG/24 Draft Conclusion MET SG/24-02: *APAC Regional Air Navigation Plan (ANP), Volume III*, which proposed that APANPIRG establish a cross-cutting, ANP, Volume III, Task Force to coordinate the development of a proposal for amendment to the APAC ANP, Volume III, to deal with MET-specific content together with, and not in isolation from, other content in the ANP, Volume III. Rather, APANPIRG/31 suggested that MET SG should progress with its development of a proposal for amendment to the ANP, Volume III, to deal with the MET-specific requirements and to continue to coordinate this work, as necessary, with the other (APANPIRG) Sub-Groups.

2.11 In view of the above, the meeting might consider proposing updates, as necessary, to the MET/S WG work plan to further support MET SG with development of MET-specific requirements in the ANP, Volume III.

**3. ACTION BY THE MEETING**

3.1 This paper invites the meeting to:

- a) Review the outcomes from APANPIRG/31, as discussed above and presented at the **Appendix A** to this paper, and consider further actions for the MET/S WG, as necessary, to support the follow-up work from APANPIRG/31;
- b) Propose appropriate updates, as necessary, to the MET/S WG terms of reference and work plan to:
  - Reflect the requirement for an annual (quarterly) schedule of coordination meetings for the Chairs of MET SG and its contributory working groups (including MET/S WG);
  - Further support SADIS user States with the necessary systems changes to integrate the new 0.25 degree WAFS hazard data into their SADIS user systems and software.;
  - Further support States with the resolution of APANPIRG air navigation deficiencies in the MET field; and
  - Further support MET SG with development of MET-specific requirements in the ANP, Volume III.

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**APPENDIX A**

**APANPIRG/31 Conclusions and Decision** (based on Draft Conclusions and Draft Decision formulated by MET SG/24)

<b>Decision APANPIRG/31/16:</b> <i>Updates to terms of reference and work plan of MET SG</i>	
<b>What:</b> That, APANPIRG approve the updated terms of reference and work plan document for MET SG at the <b>Appendix A to the (APANPIRG/31) Report on Agenda Item 3.5.</b>	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
<b>Why:</b> To ensure alignment of the work of the MET SG and its contributory bodies.	Follow-up: <input type="checkbox"/> Required from States
<b>When:</b> 16-Dec-20	<b>Status:</b> Adopted by PIRG
<b>Who:</b> <input type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input checked="" type="checkbox"/> Other: MET WGs	

<b>Conclusion APANPIRG/31/17:</b> <i>0.25 degree WAFS hazard data</i>	
<b>What:</b> That SADIS user States urgently make the necessary systems changes to integrate the new 0.25 degree WAFS hazard data into their SADIS user systems and software	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
<b>Why:</b> To benefit from the new 0.25 degree WAFS data and prepare for the retirement of the existing Turbulence Potential, Icing Potential and 1.25 degree cumulonimbus fields (not before November 2022) and the in-cloud turbulence field	Follow-up: <input type="checkbox"/> Required from States
<b>When:</b> 16-Dec-20	<b>Status:</b> Adopted by PIRG
<b>Who:</b> <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:	

<b>Conclusion APANPIRG/31/18:</b> <i>Implementation of IWXXM</i>	
<b>What:</b> That, to support the dissemination by States of the required meteorological information in IWXXM GML form, in accordance with Amendment 79 to Annex 3, Member States/Special Administrative Regions, in particular those which host the designated APAC Regional OPMET Centres (ROCs) and Regional OPMET Databanks (RODBs), that have not already done so, urgently complete the necessary steps including the following: a) For the generation and dissemination of required meteorological information in IWXXM GML form to the local	Expected impact: <input type="checkbox"/> Political / Global <input checked="" type="checkbox"/> Inter-regional <input checked="" type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical

<p>ROC to manage the onward dissemination within the Region, use only IWXXM Version 3 (or a later version);</p> <ul style="list-style-type: none"><li>b) To support the exchange of IWXXM formatted data, implement the Air Traffic Services Message Handling System (AMHS) with File Transfer Body Part (FTBP) and the Interpersonal Message Heading Extension (IHE) and include support for AMHS message exchange of a maximum size of 4-MB for IWXXM formatted messages with maximum size of 2-MB for FTBP;</li><li>c) To support the exchange of the required meteorological information in both IWXXM GML form and traditional alphanumeric code (TAC) form, ensure there is adequate capacity in the operational Aeronautical Fixed Service (AFS) links;</li><li>d) When ingesting FTBP messages, as a minimum, utilize appropriate malware and anti-virus precautions; and</li><li>e) For any requirements States have for further technical assistance to achieve compliance with the Annex 3 requirements for disseminating meteorological information in IWXXM GML form and/or differences that exist between the national regulations or practices and the above Annex 3 provisions, inform ICAO via the appropriate channels.</li></ul>	
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<p><b>Why:</b></p> <p>a) Amendment 79 to Annex 3 specifies that, applicable 5 November 2020, States shall disseminate specific meteorological information (i.e., METAR/SPECI, TAF, SIGMET, AIRMET and volcanic ash, tropical cyclone and space weather advisory information) in IWXXM GML form;</p> <p>b) ICAO Doc 10003 – <i>Manual on the Digital Exchange of Aeronautical Meteorological Information</i>, stipulates that, to meet the requirements of Amendment 79 to Annex 3, only Version 3 of IWXXM formatted data, or later, shall be exchanged on operational networks from 5 November 2020;</p> <p>c) IWXXM GML form is far more verbose than the existing TAC format and, as a result, compression is required. However, to support the exchange of compressed IWXXM files, AMHS links with FTBP and IHE are required;</p> <p>d) In accordance with Annex 3, States shall disseminate both IWXXM and TAC data over the AFS in parallel and, given the significant increase in data volumes, operational links will, therefore, require adequate capacity to support both data sets; and</p> <p>e) The regional and global exchange of the required meteorological information in IWXXM GML form depends on the ROCs and RODBs being capable of exchanging IWXXM formatted messages.</p>	<p>Follow-up:      <input checked="" type="checkbox"/> Required from States</p>
<p>When:            16-Dec-20</p>	<p>Status:            Adopted by PIRG</p>
<p>Who:              <input type="checkbox"/> Sub groups   <input checked="" type="checkbox"/> APAC States   <input type="checkbox"/> ICAO APAC RO   <input type="checkbox"/> ICAO HQ   <input type="checkbox"/> Other:</p>	

<p><b>Conclusion APANPIRG/31/19 – Update of Information in APANPIRG Air Navigation Deficiencies Reporting Form</b></p>	
<p>That,</p> <p>1) ICAO to update the APANPIRG Air Navigation Database to reflect the information as presented in <b>Appendices A to D</b> to (APANPIRG/31) Report on Agenda Item 4.</p> <p>2) States/Administrations be urged to:</p> <p>a) establish action plan with defined target dates for resolution of deficiencies, update the status on the corrective action taken and report progress in the Reporting Form of Air Navigation Deficiencies identified in ATM and Airspace Safety, AOP, CNS and</p>	<p><b>Expected impact:</b></p> <p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input type="checkbox"/> Inter -Regional</p> <p><input checked="" type="checkbox"/> Ops/Technical</p>

<p>MET fields as detailed in <b>Appendices A to D</b> to the (APANPIRG/31) <b>WP/14</b>; and</p> <p>b) update contact details of a Focal Point to coordinate actions to resolve the Deficiencies.</p>	
<p><b>Why:</b> The resolution of air navigation deficiencies in the ATM and Airspace Safety, AOP, CNS and MET fields (in the APANPIRG database) have lacked satisfactory progress over several years, due in part to inadequate information in the Reporting Form, e.g., infrequent updates and lack of concise and concrete Corrective Action Plans with defined target dates</p>	<p>Follow-up: <input checked="" type="checkbox"/>Required from States</p>
<p><b>When:</b> official reports providing full details of the corrective actions taken where deficiencies have been resolved be reported to sub-groups in 2021.</p>	<p><b>Status:</b> Adopted by PIRG</p>
<p>Who: <input checked="" type="checkbox"/>Sub groups <input checked="" type="checkbox"/>APAC States <input checked="" type="checkbox"/>ICAO APAC RO <input type="checkbox"/>ICAO HQ <input type="checkbox"/>Other</p>	

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