



(Lima, Peru, from 18 to 22 September 2017)

Agenda Item 4: Improvements of MET services in accordance with the new operational requirements in support of ATM

Summary of Recent and Forthcoming Developments to the WAFS

(Presented by WAFC Provider States)

SUMMARY

This paper reports out on the progress of World Area Forecast System (WAFS). Some of these developments have had a direct impact on end users. The WAFCs are also planning developments to the WAFS for implementation in future years and these are highlighted in this paper for the consideration of the group.

1. INTRODUCTION

1.1 This paper reports on the recent progress of the WAFS. Since 2015 there have been three meetings of the Meteorological Operations Working Group (WG-MOG) relating to WAFS/SADIS. Users of WAFS are encouraged to review the 'Reference Documents' links for WAFS on the WG-MOG public webpage, accessible here: <http://www.icao.int/airnavigation/METP/MOG/Pages/default.aspx>

2. RECENT DEVELOPMENTS

2.1 Provision of additional flight levels to WAFS Upper Air Forecasts

In accordance with Amendment 77 to ICAO Annex 3; both WAFCs commenced production and distribution of data for 3 additional flight levels as part of their WAFS gridded upper air forecast datasets. The extra levels are FL080 (750hPa); FL210 (450hPa); and FL480 (125hPa). Implementation was effective from the 1200 UTC model availability on 9 November 2016.

***Action:** Note this information. Contact your SADIS/WIFS Workstation provider to ensure that software was updated to benefit from the additional vertical levels.*

2.2 Purposeful delay of WAFC SIGWX forecast data by one hour, once each year by each WAFC during scheduled WAFC SIGWX backup events.

In accordance with WG-MOG/3 Decision 3/1, both WAFCs were invited, once per year during one of the scheduled WAFC backup events, to purposefully delay the issuance of data by one hour. This was intended to introduce more realism into the backup events, since during real backup events data may be delayed by up to two hours.

To comply with WG-MOG/3 Decision 3/1, WAFC London implemented the delay during the backup event on 11 January 2017. Further, as required by the Decision, WAFC London and WAFC Washington notified users of the delay via SADIS and WIFS administrative messages.

WAFC London can report that no users reported any adverse impact with regard to the delay, in part due to the prior notification provided.

WAFC Washington implemented a similar delay in July 2017.

Action: *Note this information. Users are encouraged to always monitor SADIS and WIFS administrative messages in order to be aware of such matters. Also, regularly review the schedule of WAFC backup events here: <http://www.icao.int/airnavigation/METP/MOG/Pages/WAFS.aspx> (Forthcoming and Historical Record of WAFC Backup Tests).*

3. FORTHCOMING DEVELOPMENTS

3.1 Developments to WAFS in relation to the Aviation System Block Upgrades schedule.

The WAFCs are developing plans to enhance the WAFS consistent with the schedule expressed at the Meteorology Divisional Meeting (7-18 July 2014, Montréal, Canada), and consequently aligned with the Aviation System Block Upgrade schedule.

The WAFCs will present mature proposals for consideration by the METP at its third meeting (anticipated latter half of 2018).

4. STANDING ARRANGEMENTS

4.1 Inclusion of WAFS GRIB2 CAT and CB Cloud verification data on the 'WAFC London Performance Indicators' page

Verification data for harmonized WAFS gridded upper air forecasts for Clear Air Turbulence (CAT) potential and Cumulonimbus (CB) cloud forecasts is available from the "WAFC London Performance Indicators" webpage: <http://www.metoffice.gov.uk/aviation/responsibilities/icao>. The verification data should be used in conjunction with the guidance material available here: <http://www.icao.int/airnavigation/METP/MOG/Pages/WAFS.aspx>

Suggested action: *It is recommended that this information be consulted regularly in order to obtain the most benefit from these forecast fields.*

4.2 Inclusion of WAFS GRIB2 ICING verification data on the WAFC Washington website.

Verification data for harmonized WAFS gridded upper air forecasts for Icing potential is available from the WAFC Washington webpage: <http://www.emc.ncep.noaa.gov/gmb/icao/>. The verification data should be used in conjunction with the guidance material available here: <http://www.icao.int/airnavigation/METP/MOG/Pages/WAFS.aspx>

Suggested action: *It is recommended that this information be consulted regularly in order to obtain the most benefit from these forecast fields.*

4.3 **WAFS SIGWX BUFR Edition**

The WAFC Providers will continue to issue SIGWX forecasts in BUFR format using BUFR Edition 3. There are no current plans to migrate to BUFR Edition 4.

***Suggested action:** Note this information and ensure that your systems remain compatible with the BUFR Edition 3 for decoding of SIGWX BUFR. Note also that the SIGWX forecasts in PNG form will continue to be issued until further notice.*

4.4 **WAFC backup tests**

The WAFC Provider States have continued to test their SIGWX backup procedures in the event that one WAFC is unable to produce SIGWX forecasts in the BUFR-code and PNG-chart format. Routine backup tests are conducted quarterly, with the results posted on the MOG website in the document Forthcoming and Historical Record of WAFC Backup Tests' available via URL: <https://www.icao.int/airnavigation/METP/MOG/Pages/WAFS.aspx>

Tests during the period of this report have been successful.

Forthcoming backup tests are outlined in the same document. Notification of WAFC backup tests is promulgated on the SADIS broadcasts in advance, by way of administrative messages.

In addition, WAFC backup procedures are outlined in the 'WAFC Backup Procedures' document available from the same URL.

***Suggested action:** Note this information and regularly visit the WAFC Reference documents on the WG-MOG website to obtain information pertaining to WAFC backup tests and procedures.*

4.5 **Access to Internet based services (SADIS FTP/WIFS).**

The policies regarding the development of clear guidelines with regard to the accessing of data from SADIS FTP and from WIFS were endorsed by WAFSOPSG¹, SADISOPSG² and SCRAG³. These guidelines are now used by the MET Panel's MOG SADIS/WIFS work stream.

***Suggested action:** Note this information. Users are encouraged to establish and regularly test backup accounts with the alternative provider to be used in the rare event that their normal service (SADIS FTP or WIFS, as specified by Regional Air Navigation Plan) is unavailable. <http://www.icao.int/safety/meteorology/sadisopsg/SADIS%20User%20Guide/Obtaining%20access%20to%20WIFS%20as%20a%20backup%20to%20SADIS%20FTP.pdf> It is the user's responsibility to apply for and arrange backup accounts.*

5. ACTION BY THE MEETING

The meeting is invited to:

- a) note the information contained in this paper; and
- b) discuss any relevant matters as appropriate.

1 World Area Forecast System Operations Group, dissolved 2015

2 Satellite Distribution System Operations Group, dissolved 2015

3 SADIS Cost Recovery Administrative Group