



ICAO

International Civil Aviation Organization

WORKING PAPER

ICAO Asia and Pacific (APAC)

Twenty-Sixth Meeting of the Meteorology Sub-Group
(MET SG/26)

Online, 1 to 5 August 2022

Agenda Item 6: Research, development and other initiatives

SADIS UPDATE

(Presented by the SADIS Provider)

SUMMARY

This paper provides an update on changes to the WAFC London operated Secure Aviation Data Information System (SADIS).

1. INTRODUCTION

1.1 This paper reports on SADIS operational matters as well as recent and upcoming changes in the provision of data on SADIS. These changes have been agreed through the ICAO Met Panel Meteorological Operations Group (MOG) at its annual meetings.

2. Operational SADIS matters

2.1 SADIS Efficacy Survey

The annual SADIS efficacy survey for 2022 commenced on 1 July 2022 and users will be notified of it by SADIS administrative messages and via an ICAO letter to focal points. The survey can also be accessed here: <https://response.questback.com/metoffice/djx2p1sq0o>. The SADIS provider would like to thank those who responded last year, and would like to encourage all SADIS users to participate in the 2022 Survey.

2.2 SADIS Data Catalogue

2.2.1 A catalogue of data usually present on SADIS has been created (from data obtained during the February 2022 monitoring period) so that missing TAF and METAR data can be more easily identified. The latest edition of the catalogue is hosted within the documentation section on the SADIS server, and the WG-MOG public webpage (<https://www.icao.int/airnavigation/METP/Pages/Public-Documents.aspx>).

2.2.2 If a SADIS user identifies that some METAR or TAF data is absent, the list should be consulted to see if it is usually present before reporting it to the SADIS Manager (sadis.manager@metoffice.gov.uk). There are two courses of action:

- The aerodrome is listed: the SADIS manager will raise the issue with ROC London who will investigate and work with the other ROCs to try and restore the data.
- If the aerodrome is not listed: the data feeds will be checked to see if the data is available however it may be necessary for the SADIS user to contact the State in question to ask for it to be disseminated internationally.

2.3 **SADIS Workstation Evaluations**

2.3.1 The SADIS provider has put together a SADIS evaluation guide which users can use to evaluate their own systems. The intention of this guide is to assist users in identifying problems with their SADIS data visualization system/software by clearly showing what constitutes an acceptable standard. Users can then feed back any “non-compliance” issues to their software provider.

2.3.2 The new guide is called the ‘SADIS Workstation Evaluation Guide’ and is hosted in the documentation folder on SADIS as well as here: <https://www.icao.int/airnavigation/METP/Pages/Public-Documents.aspx>

2.3.3 Individual SADIS Workstation evaluations can still be carried out by the SADIS provider if required, however this work will be chargeable. Please contact the SADIS to discuss costs and an evaluation schedule should this be required.

3. **Recent changes to SADIS**

3.1 **IWXXM format data**

3.1.1 On 5 November 2020, ICAO Annex 3 - *Meteorological Service for International Air Navigation* made it mandatory for States to produce their METARs, TAFs, SIGMETs, AIRMETs, VAA and TCAs in IWXXM format (ICAO Meteorological Information Exchange Model).

3.1.2 IWXXM data is available on SADIS for States served by ROC London, ROC Toulouse, ROC Vienna and ROC Moscow. In due course data for other parts of the world will be added once the inter-regional connections are established, but this activity is taking much longer than expected.

3.2 **0.25 degree WAFS hazard data**

3.2.1 On 5 November 2020, improved WAFS data sets were introduced in line with changes listed in ICAO Annex 3 Amendment 79. Training material is available here: <https://www.metoffice.gov.uk/services/transport/aviation/regulated/wafs-2023>

3.2.2 The existing Turbulence Potential, Icing Potential and 1.25 degree cumulonimbus fields are no longer listed in ICAO Annex 3, but will continue to be published on SADIS until November 2023. They have not been changed or updated in any way. The in-cloud turbulence field has already been retired.

3.2.3 SADIS users are strongly encouraged to migrate their services from the old 1.25 degree hazard data sets to the new 0.25 degree versions as soon as possible.

4. Upcoming SADIS upgrades

4.1 Both WAFCs have been working to define the next generation WAFS provision, which will bring an upgrade in the horizontal, vertical and temporal resolution to all WAFS gridded data sets.

4.2 Increasing the resolution of the data is going to have a huge impact on the volume of data available, and therefore a new SADIS delivery mechanism will be built. The new “SADIS API¹” service will be SWIM² compliant and will be based on the Open Geospatial Consortium Environmental Data Retrieval³ API. It will offer users the ability to customize their downloads so that it is possible to take only the data that is required operationally. It will be possible for users to choose which region to download data for (a set of 8 fixed regions will be provide, as well as global data) as well to specify which vertical levels and which forecast time-steps of data are required. This should make managing the volume of data easier for downstream users.

4.3 OPMET data will also be made available via API and users will be able to choose which specific data they would like.

4.4 The WAFS gridded data API and OPMET API’s are expected to become operational in November 2023. As soon as a beta version is available users will be invited to try out the new services and encouraged to provide the SADIS provider with feedback.

4.5 The upgrade to the WAFS Significant Weather (SIGWX) forecasts will follow in 2024 (date to be confirmed). Test IWXXM data sets have been made available and are available here: <https://www.metoffice.gov.uk/services/transport/aviation/regulated/wafs-sigwx-test-data> and SADIS users are encouraged to try to visualize them.

4.6 The existing SADIS FTP server will continue to run until November 2028, however it will not host the upgraded WAFS gridded or SIGWX data sets.

4.7 <https://www.metoffice.gov.uk/services/transport/aviation/regulated/wafs-2023> contains further information on the upcoming changes and the SADIS manager (sadis.manager@metoffice.gov.uk) is happy to answer any questions relating to the planned changes.

5. CONCLUSION

¹ https://en.wikipedia.org/wiki/Application_programming_interface

² <https://www.eurocontrol.int/concept/system-wide-information-management>

³ <https://ogcapi.ogc.org/edr/>

5.1 Significant changes to SADIS are coming over the next two years and users will need to make updates to their systems in order to be able to benefit from it. The group is invited to consider formulating the following action:

Draft Action Met-SG26/xx – 0.25 degree WAFS hazard data

SADIS and WIFS users should integrate the 0.25-degree WAFS hazard data (cumulonimbus, icing and turbulence) into their systems and software prior to November 2023 if they have not already done so.

6. ACTION BY THE MEETING

6.1 The meeting is invited to:

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