



ICAO

INTERNATIONAL CIVIL AVIATION ORGANIZATION

A UN SPECIALIZED AGENCY

*Workshop on the Implementation
of Amendment 82 to Annex 3 to
Chicago Convention and the PANS-
MET*

(Praia, Cabo Verde, 30 March – 3 April 2026)



Session 3: Operational and institutional impacts

PPT3.1. - Migration to the New WAFS Gridded Data Sets in compliance with Amendment 82

ICAO, WACAF Office

Overview

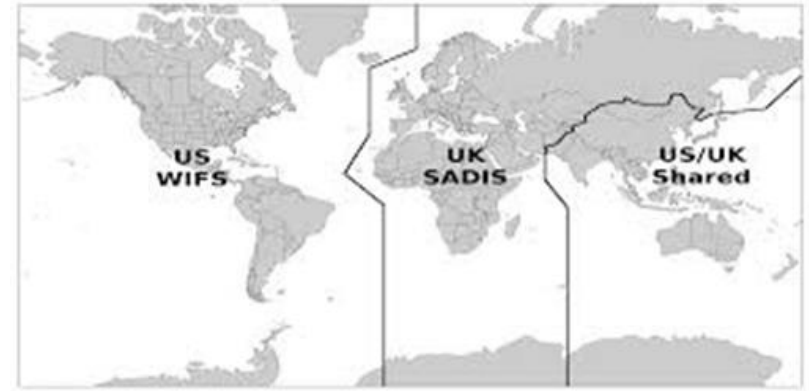
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Introduction

- **The WAFS changes** introduced by Amendment 82 to Annex 3 of the Chicago Convention **are applicable as of November 2025.**
- Amendment 82 to Annex **3 restructured Annex 3** to facilitate the migration of the provision of aeronautical meteorological information from a "**product-centric**" to an "**information-based environment**" under the system-wide information management (**SWIM**), and the **evolution of the provision of aeronautical meteorological service in line with the Global Air Navigation Plan (GANP).**
- **WAFC London** and **WAFC Washington** have worked closely together to develop the **next generation of SADIS** (*Secure Aviation Data Information Service*) (operated by WAFC London) and WIFS (the backup to SADIS operated by NOAA).
- Both systems are **SWIM compliant** and use the Open Geospatial Consortium (OGC) Environmental Data Retrieval (OGC-EDR) API framework <https://ogcapi.ogc.org/edr/>.

SADIS – SADIS FTP

- SADIS has been operated by the **UK Met Office System** in various versions since 1994.
- Originally it used a satellite, then switched to use the **internet (ftp)**.
- SADIS FTP is not able to handle the **huge increase in data volume** that comes with the **new WAFS gridded data sets**
- SADIS FTP also isn't (and can't be made to be) **SWIM compliant** in line with ICAO recommendations.
- **SADIS API** is the newest generation of **SADIS**. It is twinned with the **WIFS API** (operated by **WAFS Washington**).



A3 Chap. 3 STD 3.1.1 Un État contractant qui a accepté l'obligation de mettre en œuvre un centre mondial de prévisions de zone (CMPZ) dans le cadre du SMPZ prendra les dispositions nécessaires pour que ce centre :

a) élabore des prévisions mondiales aux points de grille portant :

.....
AFI eANP Vol I, Part V, Section 2. GENERAL REGIONAL REQUIREMENTS

World area forecast system (WAFS) and meteorological offices
§ 2.1 In the Africa-Indian Ocean Region, WAFS **London** has been designated as the centre for the operation of the aeronautical fixed service satellite distribution system / WAFS Internet File Service (SADIS and/or WIFS) and the Internet-based Secure SADIS FTP service.

Basic-ANP, Vol I § 8.8: Each State should make the necessary arrangements to receive and make full operational use of WAFS products issued by WAFS London. FASID Table MET 7 provides the status of authorized access by SADIS users to the satellite broadcast and location of the operational VSATs. [APIRG/12, Con. 12/32]

SADIS API

- Became **operational in March 2024** for the **WAFS Gridded and OPMET data**
- Became **operational on 8 April 2025** for **WAFS SIGWX**
- Conforms to the **Open Geospatial Consortium (OGC)** Environmental Retrieval API standards
<https://ogcapi.org/edr/>
- The WIFS API functions in **exactly the same way** and is **the backup system**



WAFS GRIDDED DATA UPGRADE

- Annex 3 Amendment 82, introduces higher resolution WAFS data into the regulations on **27 November 2025**.
- **W AFC’s delivered this capability in February/March 2024.**

New 0.25-degree data sets:

Forecast Timesteps:
T+06 to T+24 at 1-hourly intervals
T+27 to T+48 at 3-hourly intervals ¹
T+54 to T+120 at 6-hourly intervals ²
<i>¹Icing, Turbulence and Cumulonimbus stops at T+48</i>
<i>²W AFC London data past T+66 is only produced for the 00Z and 12Z model runs</i>

Wind U/V - 56 vertical levels from FL050 to FL600
Temperature - 56 vertical levels from FL050 to FL600
Geospatial Height - 56 vertical levels from FL050 to FL600
Relative Humidity - 14 vertical levels from FL050 to FL180
Tropopause height and Tropopause temperature
Max wind height, and max wind u/v
Icing Severity - 26 vertical levels from FL050 to FL300
Turbulence Severity - 36 vertical levels from FL100 to FL450
Cumulonimbus Extent, Base and Top

WAFS SIGWX UPGRADE

- Annex 3 Amendment 82, introduces higher resolution WAFS data into the SARPS in November 2025.
- WAFC's delivered this in February/March 2024.

1.25-degree data sets maintained for those who need them:

Forecast Timesteps:
T+06 to T+36 at 3-hourly intervals

Wind U/V - 17 vertical levels from FL050 to FL600
Temperature - 17 vertical levels from FL050 to FL600
Geospatial Height - 17 vertical levels from FL050 to FL600
Relative Humidity - 5 vertical levels from FL050 to FL180
Tropopause height and Tropopause temperature
Max wind height, and max wind u/v

- Annex 3 Amendment 82 also introduces new **multi-timestep WAFS SIGWX forecasts into the SARPS in November 2025.**
- **WAFCs delivered this on 8 April 2025.**
- Multi-timestep SIGWX:
 - T+6 to T+48 at 3-hourly intervals
 - New IWXXM format
 - No briefing charts provided by the WAFCs.

Where to get the data - SADIS

- New SADIS API
 - ◇ Contains the **full, new, higher resolution** WAFS data sets
 - ◇ Contains the **new multi-timestep WAFS SIGWX** forecasts

Full details can be found in **the SADIS API User guide** which details the **full set of WAFS gridded data** available.



SADIS API - USER GUIDE

First Edition — February 2024

*Prepared by the ICAO Meteorological Panel Meteorological Operations Working Group
(WG MOG)*

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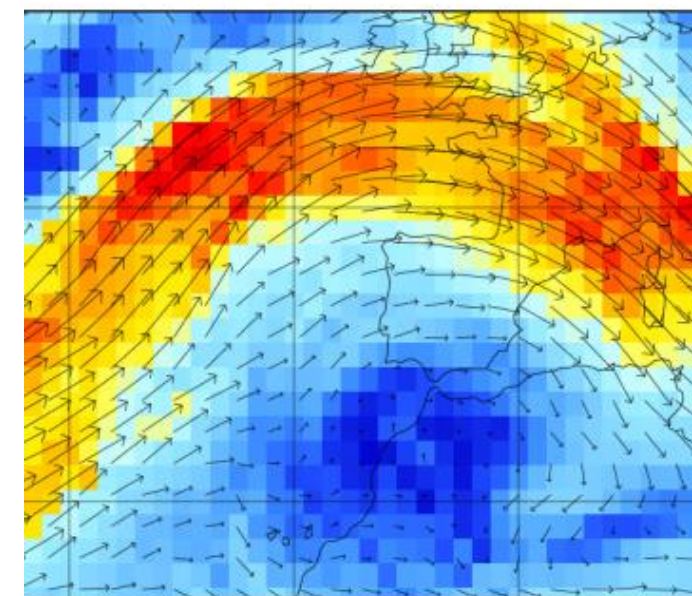
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Original SADIS FTP

- Contains the **1.25-degree WAFS gridded data sets** and a **limited set** of 0.25 degree hazard data (fewer levels and timesteps).
- Contains the **T+24 SIGWX forecast charts** and **BUFR data**
- **Will be retired in November 2028.**

1.25 degree resolution

wind vector @ FL300 (300hPa)



$\text{Sqrt}((\text{u-component of wind @ Isobaric surface})^2 + (\text{v-component of wind @ Isobaric surface})^2)$



Data Min = 1.3, Max = 109.0

- **To access the SADIS API, users, including previous SADIS FTP users, must:**
 1. Review the [service summary](#). Find full details in the [SADIS API Services user terms and conditions](#) and [SADIS API Licence Agreement](#)
 2. Register your acceptance of the SADIS User Licence Agreement, [click here to access the form](#)
 3. Email the [SADIS manager](#) to start the registration process



To SADIS Users

- The SADIS user States /Organizations make plans to upgrade their systems to be able to :
 - ◇ Receive and visualize the higher resolution WAFS gridded data sets and new IWXXM SIGWX data sets ;and
 - ◇ Use the new SADIS API.



Thank You!