



SAFE SKIES.  
**SUSTAINABLE  
FUTURE.**

## ESAF Regional Aeronautical Meteorology Seminar

Hilton Garden Inn Windhoek, Namibia  
*4-6 June 2024*



# AMT ASBU Implementation in the ESAF Region

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ICAO ESAF Regional Seminar on Aeronautical Meteorology  
*Building capacity & strengthening collaboration*

Windhoek, Namibia, 4-6 June 2024

## Presentation Overview

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# Recent weather events affecting aviation in the Region

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## Volcanic Ash\_ Nyiragongo Volcano (DRC) affecting neighboring ESAF States\_ May/June 2021



PRIME

### Lava reaches Goma airport in DR Congo after volcanic eruption

Sunday, May 23, 2021



Strong emanations of glowing light coming out of the crater were visible from Goma, while a smell of sulfur was perceptible in the city, located on the southern flank of the volcano, on the shores of Lake Kivu. PHOTO/AFP



A lava flow reached the airport of the Democratic Republic of Congo's eastern city of Goma early Sunday after the eruption of the Mount Nyiragongo volcano, an official said.

<https://www.icao.int/WACAF/Documents/Meetings/2021/AFI%20ATM%20Contingency%20plan/S2.2%20Management%20of%20the%20Mount%20Nyiragongo%20volcanic%20contingency.pdf>

<https://www.monitor.co.ug/uganda/news/lava-reaches-goma-airport-in-dr-congo-after-volcanic-eruption-3410788>



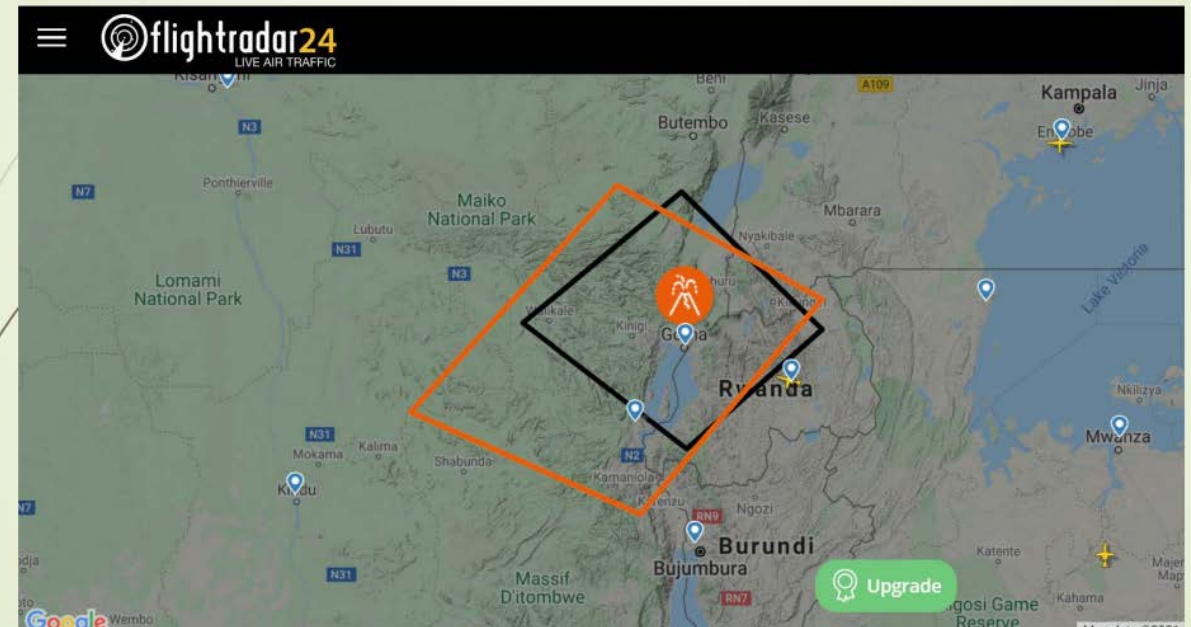
ICAO

<https://www.icao.int/Documents/Meetings/S...> PDF

### Expérience de la RDC sur le plan de contingence

22 May 2021 — Nyiragongo volcanic eruption. By Eldonny ... ACCs/FICs affected by the movement of the volcanic ash shall ensure that ... **Cancelled flights** ...

Affected area on June 2<sup>nd</sup>, 2021 at 03:00UTC





# Recent weather events affecting aviation in the Region

## Tropical Storm Eleanor- February 2024

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The screenshot shows the AML website header with the logo, navigation links for CAREERS and PROCUREMENT, a search bar, and three award medals (ASQ 2019, World Travel Awards Winner 2019, and World Airport Winner SKYRAX 2018). The main content area features a dark blue banner with the text "SEVERE TROPICAL STORM ELEANOR, TEMPORARY CLOSURE AIRPORT DUE TO CYCLONE WARNING CLASS 3". Below the banner, the text reads: "on 22 February 2024. Further to the issue of a Cyclone Warning Class 3 (Three) by the Mauritius Meteorological Services in connection with the severe tropical storm Eleanor, Airports of Mauritius Co. Ltd (AML) wishes to inform intending passengers and the general public that SSR International airport will be temporarily closed on Thursday 22 February 2024 as from 07:30 (Local Time), until further notice. Intending passengers are advised to contact their respective airlines for further information on the status of their flight and not to proceed to the airport, unless receiving confirmation of the revised departure time. AML apologises for any inconvenience caused and reassures the public that it intends to resume its activities as soon as possible." The left sidebar contains a menu with links: ALL IN ONE FORM, HOME, COVID-19 INFO, SSR INTERNATIONAL (expanded), AIRFIELD OPERATIONS, TERMINAL OPERATIONS, SAFETY & SECURITY, AIRPORT CHARGES, FACTS & FIGURES, LEGISLATIONS, ON-GOING & FUTURE PROJECTS, USEFUL LINKS, and BUSINESS.

## Travel alert issued as severe tropical cyclone shuts Mauritius airport



By Phil Davies | February 22, 2024, 08:01



The international airport in Mauritius has been shut and flights cancelled amid severe tropical storm warning.

<https://airportsofmauritius.aero/index.php/press/532-severe-tropical-storm-eleanor-temporary-closure-airport-due-to-cyclone-warning-class-3>

<https://travelweekly.co.uk/news/air/travel-alert-issued-as-severe-tropical-cyclone-shuts-mauritius-airport>

# Recent weather events affecting aviation in the Region

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Heavy rains leading to flooding- April 2024

## KQ Diverts Flights At JKIA Over Heavy Rains, Poor Visibility

By Nimrod Taabu

Published on: April 28, 2024 09:18 (EAT)

NT



<https://nation.africa/kenya/business/why-kenya-airways-diverted-flights-at-jkia--4606012>

<https://www.citizen.digital/news/kq-diverts-flights-at-jkia-over-heavy-rains-poor-visibility-n341210>



## Why Kenya Airways diverted flights at JKIA

Sunday, April 28, 2024



Kenya Airways Boeing 787-8 Dreamliner aircraft.

File



By Hilary Kimuyu  
Nation Media Group

Kenya Airways (KQ) diverted flights to other airports on Saturday night due to heavy rains and poor visibility at Jomo Kenyatta International Airport (JKIA).



# Recent weather events affecting aviation in the Region

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AIRLINE NEWS

## Qatar Airways Confirms That Flight to Kilimanjaro Was Rocked By 'Severe Turbulence' Leaving Cabin in Disarray



BY MATEUSZ MASZCZYNSKI  
7TH MAY 2024



Flight QR1499 departed Doha at around 3 am on Friday morning for what should have been a routine five-hour flight to Kilimanjaro in Tanzania.



The 14-year-old Airbus A330 aircraft, which has been loaned to Qatar Airways from Oman Air, was overflying Somalia en route to Tanzania when the aircraft encountered severe turbulence. The airline says the seat belt sign was on at the time.



Qatar Airways has confirmed that one of its planes was rocked by 'severe turbulence' during a flight from Doha to Kilimanjaro on Friday after photos emerged on social media showing the cabin of the aircraft in disarray with damage to overhead panels and dropped oxygen masks.

<https://www.paddleyourownkanoo.com/2024/05/07/qatar-airways-confirms-that-flight-to-kilimanjaro-was-rocked-by-severe-turbulence-leaving-cabin-in-disarray/>

What is ASBU implementation in the eyes of the users of MET Information (Pilots, ATC)?

- **Implementation enhances the provision and use of meteorological information in aviation**
- **Enhanced aviation safety:**
  - pilots can reduce the risk of encountering hazardous weather conditions, contributing to overall flight safety.
- **Better communication**
  - AMET ASBU promotes standardized formats and requirements for exchanging meteorological information,
    - easier for pilots to access and interpret weather data from different sources.
- **Better informed decision-making**
  - Provision of more accurate and timely weather information.
    - Useful for making decisions on route selection, flight planning and potential weather hazards.
- **More efficient air traffic flow management:**
  - flight paths adjusted based on real-time weather updates.
  - **reducing delays and improving on-time performance**
- **Optimised flight paths:**
  - avoid turbulence, thunderstorms, and other adverse conditions.
  - results in smoother flights, reduced fuel consumption, and lower carbon emissions.



- **Safer flights**

- reduces the risk of encountering e.g. turbulence or other hazardous conditions.
- more secure and comfortable travel experience for passengers.
- smoother journey for passengers, minimizing discomfort and potential anxiety.

- **Reduced delays and cancellations**

- Improved weather forecasting and optimized flight paths
- minimize disruptions caused by adverse weather conditions.
- fewer delays and cancellations, ensuring passengers reach their destinations on time.

# ICAO Aeronautical Meteorology (AMET)

A component for the Aviation System Block Upgrades (ASBUs)

## MULTILAYER STRUCTURE OF THE GANP

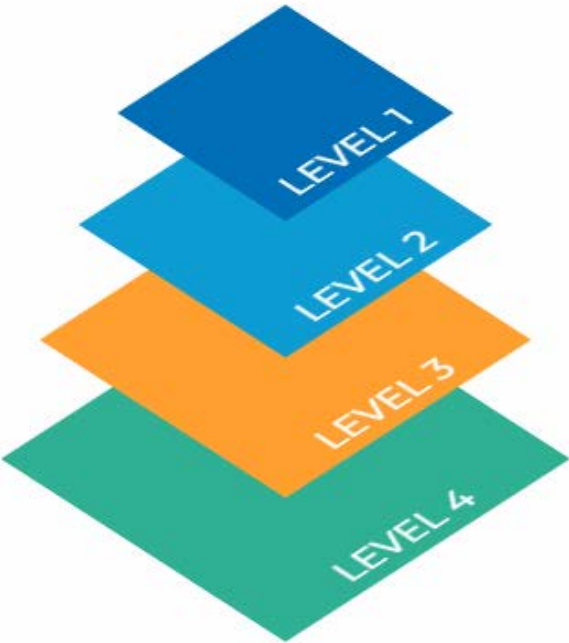
Click a level to navigate

GLOBAL STRATEGIC

GLOBAL TECHNICAL

REGIONAL

NATIONAL



**GLOBAL TECHNICAL**

Supports technical managers in planning the implementation of basic air navigation services and new operational improvements in a cost-effective manner.

**ASBUs & PF**

**AN-SPA**

**BBBs**



Global Air Navigation Plan



Aviation System Block Upgrades

**REGIONAL**

Addresses regional and sub-regional needs aligned with the global objectives.

**AFI ANP**

**APAC ANP**

**EUR ANP**

**MID ANP**

**NAM ANP**

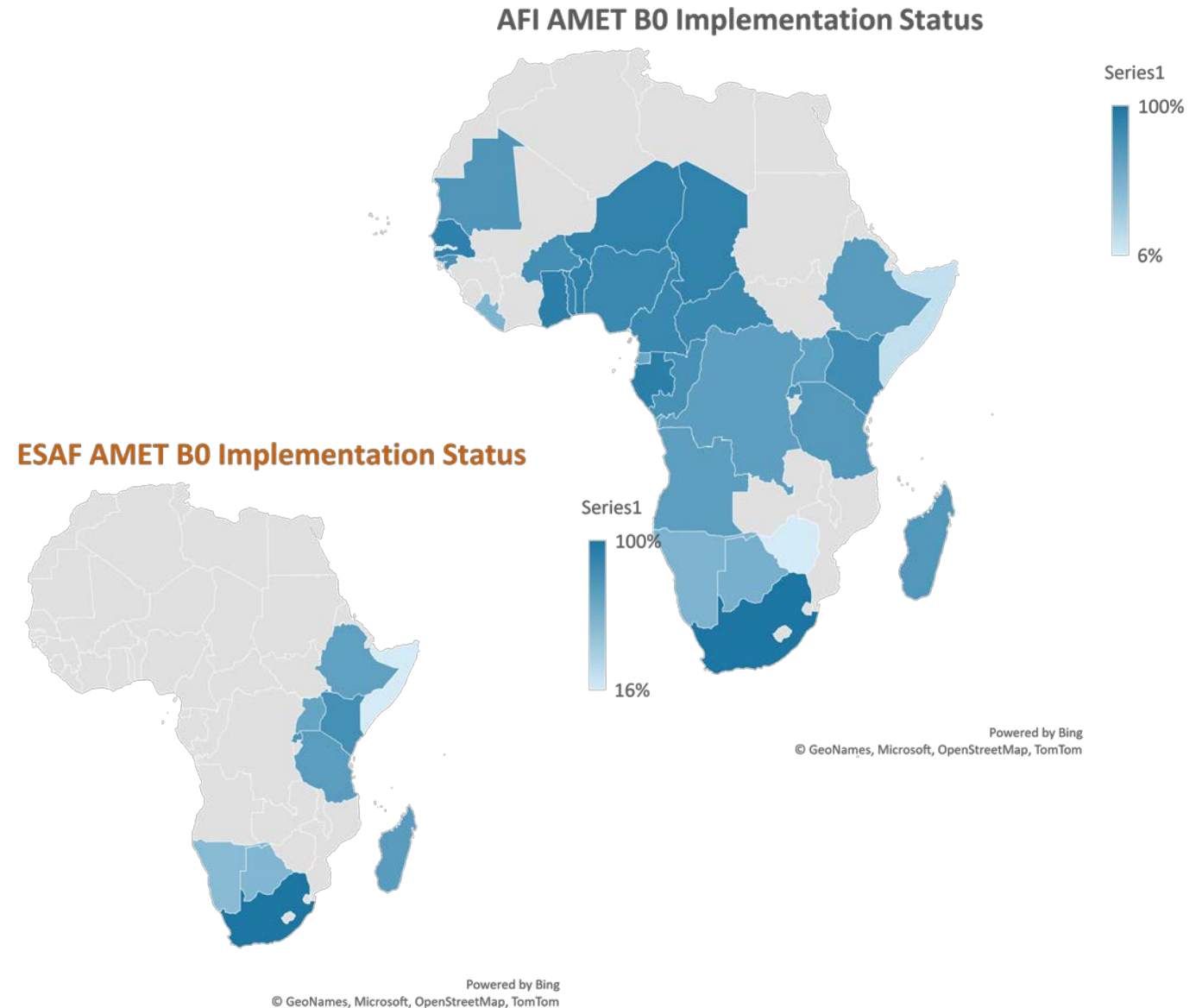
**NAT ANP**

**CARSAM ANP**

# AFI AMET B0 Implementation Status

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- Questionnaire submitted to States
  - Excel format
- PTCs collected and analysed the information
- Challenges
  - Less than 50% of ESAF States responded
  - Some data did not include all airports as indicated in the AFI eANP
  - Inadequate collaboration between CAAs and MET Service Providers (MSPs)





# New ESAF Dashboard for reporting of ASBU Implementation


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In progress under iSTARS


The ESAF Office is one of the Organization's implementation arms accredited to 24 States in the Eastern and Southern Sub Regions of Africa. Its corporate mission is to closely liaise with the States, appropriate organizations, and regional civil aviation bodies, to promote ICAO policies, decisions, standards and recommended practices and air navigation plans, and provide assistance whenever possible.

## Dashboards


Click on the Images below to access the dashboards.




Safety-USOAP



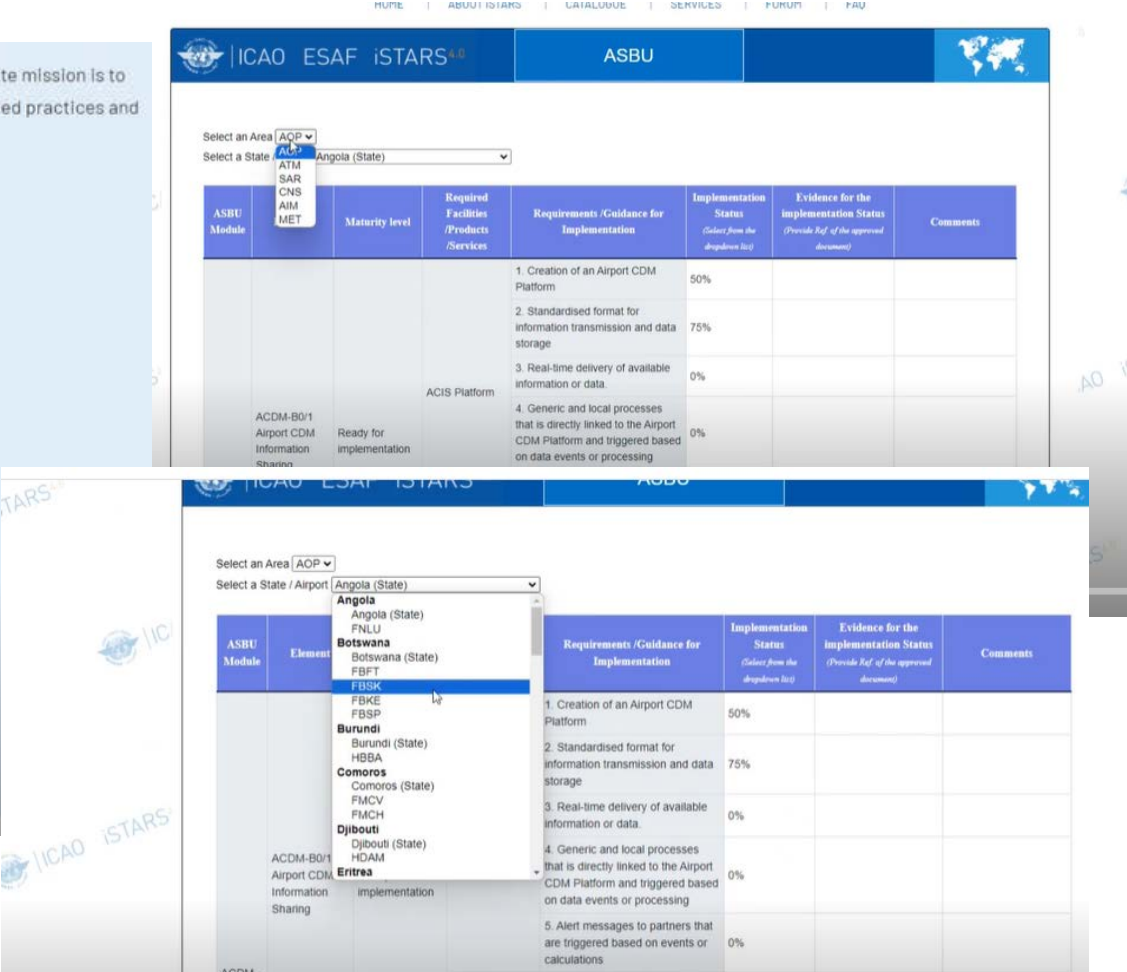
Environment



ASBU



ASBU Management



ASBU Module	Maturity level	Required Facilities /Products /Services	Requirements /Guidance for Implementation	Implementation Status (Select from the dropdown list)	Evidence for the Implementation Status (Provide Ref. of the approved documents)	Comments
ACDM-B0/1 Airport CDM Information Sharing	Ready for implementation	ACIS Platform	1. Creation of an Airport CDM Platform 2. Standardised format for information transmission and data storage 3. Real-time delivery of available information or data 4. Generic and local processes that is directly linked to the Airport CDM Platform and triggered based on data events or processing	50% 75% 0% 0%		
ACDM-						

ASBU Module	Element	Requirements /Guidance for Implementation	Implementation Status (Select from the dropdown list)	Evidence for the Implementation Status (Provide Ref. of the approved documents)	Comments
ACDM-B0/1 Airport CDM Information Sharing	Angola Angola (State) FNLU Botswana Botswana (State) FBFT FBSP Burundi Burundi (State) HBBA Comoros Comoros (State) FMCH FMCH Djibouti Djibouti (State) HDAM Eritrea	1. Creation of an Airport CDM Platform 2. Standardised format for information transmission and data storage 3. Real-time delivery of available information or data 4. Generic and local processes that is directly linked to the Airport CDM Platform and triggered based on data events or processing 5. Alert messages to partners that are triggered based on events or calculations	50% 75% 0% 0% 0%		

Requesting interested State Focal Points to register their interest to test the Dashboard around July

- Email details to RO MET/ENV

- AMET aims to enhance the provision and use of meteorological information in aviation
- Implementation of AMET ASBU
  - step towards modernizing aeronautical meteorology and enhancing the safety, efficiency, and environmental sustainability of aviation operations.
  - The associated new technologies, standardizing data formats, and improved communication and collaboration between meteorological service providers and aviation users are designed to achieve the benefits under the GANP and its ASBU framework.
- For Users of MET Information
  - Results in improved situational awareness, optimized flight paths, enhanced safety, and ultimately, a more comfortable and efficient flying experience for passengers



# Questions?

<https://www.icao.int/airnavigation/Pages/default.aspx>





Thank You!