



*International Civil Aviation Organization*

**The Eleventh Meeting of the MIDANPIRG AIM Sub-Group  
(AIM SG/11)**

*(Amman, Jordan, 22 – 23 January 2025)*

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**Agenda Item 4: AIM Planning and Implementation in the MID Region**

**AERONAUTICAL INFORMATION SERVICES (AIS) IN SUDAN DURING THE HANDOVER  
AND RESUMPTION OF OPERATIONS**

*(Presented by Sudan)*

**SUMMARY**

Following the recent conflict in Sudan which posed significant challenges to the aviation sector, particularly in the handover process and the resumption of operations of Sudan AIM. This presentation aims to share Sudan's experience, and the valuable lessons learned during this critical period.

Action by the meeting is at paragraph 3.

**REFERENCES**

- ICAO Annex 11 to the Convention on International Civil Aviation, Air Traffic Services,

**1. INTRODUCTION**

1.1 The Convention on International Civil Aviation, Annex 11, Air Traffic Services, Chapter 2.32 states inter alia that, “Air Traffic Services authorities shall develop and promulgate contingency plans for implementation in the event of disruption, or potential disruption, of air traffic services and related supporting services in the airspace for which they are responsible for the provision of such services”.

1.2 The provision of A11, 2.32 is further explained at Attachment C to Annex 11, which provides inter alia that, “contingency plans are intended to provide alternative facilities and services to those provided for in the regional air navigation plan when those facilities and services are temporarily not available. Contingency arrangements are therefore temporary in nature [...]”.

1.3 ICAO Doc 8126, AIS manual, indicates that the AIS should have a contingency plan in place which is a complete, high-level loss of service or disaster recovery strategy. It requires dependable data backup, restoration and recovery procedures to prevent data loss and to cope with hardware failures, operating system failures and application unavailability.

1.4 A system outage or failure of any duration may have an impact on the timely delivery of the Aeronautical Information with consequent impact on safety, capacity, economy and efficiency of flight. It is therefore, necessary that that an adequate contingency plans are in place to deal with such occurrences.

1.5 In this context, the recent conflict in Sudan posed significant challenges to the aviation sector, particularly in the handover process and the resumption of operations of AIS. This WP aims to share Sudan's experience and the valuable lessons learned during this critical period.

## 2. DISCUSSION

2.1 The conflict in Sudan led to a complete halt in aviation operations, causing severe disruptions. The handover process involved complex coordination among various stakeholders to ensure a smooth transition and resumption of services.

2.2 The conflict revealed significant vulnerabilities in the country's air navigation system. A key issue was the lack of an alternative air navigation center to serve as a backup in case of disruptions. Compounding this challenge was the proximity of the existing air navigation center and Khartoum Airport to military areas, which became targets during the conflict. Additionally, emergency plans were not designed to address the scale of a full-blown war, leaving the system ill-prepared for such an unprecedented crisis. Training programs for personnel also lacked components on disaster management and responding to unexpected events of this magnitude, further highlighting the need for enhanced preparedness and resilience.

2.3 A key lesson from the recent conflict in Sudan, include:

### *(1) Effective Communication:*

Clear and continuous communication between all involved parties was crucial for the success of the handover.

Establishing a dedicated communication channel with the Middle East Regional Office, the Egyptian Civil Aviation Authority, and the Egyptian National Air Navigation Services Company helped us by issuing NOTAMs on behalf of Sudan.

### *(2) Coordination with Local Authorities:*

Close coordination with local authorities ensured compliance with regulations and facilitated the resumption of operations after explaining the role of the aviation sector and the response of national companies.

### *(3) Resource Management:*

The role of senior management in managing available resources effectively was vital in overcoming the challenges posed by the conflict.

### *(4) Training and Preparedness:*

Continuous training and preparedness for employees played a crucial role in handling unexpected situations and ensuring the continuity of operations after outlining a work scenario involving the creation of an alternative air navigation center, restoring communications, and resuming air traffic management and AIS services.

2.4 Resuming AIS operations presented a complex set of challenges that required careful assessment and strategic planning, which involve:

### *(1) Establishing a Communication Unit:*

- Initially, creating a communication unit (IAT) and connecting it with the AFTN.

- Reviewing and adjusting the unit to meet operational requirements (ICAO New FPL) and related ATS messages.
- Reviewing the completeness of NOTAM format.
- Creating addresses from *ICAO doc. 7910*.
- Referring to *ICAO doc. 7383* to identify the entities and areas that should exchange NOTAMs with, extracting and organizing addresses. (*this doc. Still not updated*)
- Conducting necessary tests (FPL & NOTAM test) with some regional countries, then distribution areas (Euro-control, Cairo, Jeddah, and Karachi).
- Connecting the unit with MET services.
- Connecting the unit with SAR services.
- Referring to the FAA website for the latest NOTAMs and checklists.
- Finally, actual operation and resumption of sending and receiving all the messages, including the coordination to issue NOTAMs that were previously issued from Egypt, transferring the issuance to Sudan, for which we extend our thanks again.

(2) *Publications:*

- Retrieving the latest complete version of the AIP.
- Retrieving the last two amendments (AMDT 01/23 & 02/23).
- Restoring the official e-Mail.
- Publishing AICs series (A&B) for internal and external distribution, including:
  - Issuing the AIRAC for 2025.
  - Renewing subscriptions for relevant companies and entities (**free subscription for contracting states**).
- The website has not yet been restored (currently being addressed with relevant entities).

2.5 The importance of digital transformation and secure cloud storage, along with a shared data unit and applying SWIM, becomes evident to ensure the continuity of services and data protection.

2.6 Senior management is currently working on building a complete air navigation center to meet safe operational requirements, requiring joint efforts from everyone.

2.7 Additionally, the senior management is working on activating and operating air navigation systems to secure the opening of new air traffic service routes.

2.8 Currently, Kassala and Dongola airports operating, which has helped in transporting humanitarian aid and passengers, reducing travel time from three days to an hour and a half or less. Three more airports are on the way, and we hope to fully open Khartoum FIR soon."

2.9 The experience of AIS Sudan during the handover and resumption of operations highlights the importance of effective communication, coordination, resource management, training, and regional and local community engagement. These lessons can serve as valuable insights for other countries facing or potentially facing similar challenges and incorporating them into emergency plans.

### 3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) Take note of the challenges and lessons learned during the conflict in Sudan;
- b) Discuss any related matters as deemed appropriate, including strategies for infrastructure resilience and contingency planning;
- c) Identify and share best practices for managing AIS operations in crisis situations; and
- d) Propose training initiatives focused on disaster management and emergency response for AIS personnel.

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