



INTERNAL AUDIT DIVISION

REPORT 2017/051

Audit of the aviation safety programme
in the African Union-United Nations
Hybrid Operation in Darfur

There was a need to effectively address
issues identified and related
recommendations by the Aviation Safety
Council

16 June 2017
Assignment No. AP2016/634/06

Audit of the aviation safety programme in the African Union-United Nations Hybrid Operation in Darfur

EXECUTIVE SUMMARY

The objective of the audit was to assess the adequacy and effectiveness of governance, risk management and control processes over the management of the aviation safety programme in the African Union-United Nations Hybrid Operation in Darfur (UNAMID). The audit covered the period from 1 July 2014 to 30 June 2016 and included: (a) oversight of aviation safety activities; (b) structure and staffing of the Aviation Safety Unit; and (c) aviation safety assistance visits and surveys.

UNAMID had used appropriate tools to assess its aviation safety risks. However, the Mission needed to effectively address issues identified and related recommendations by the Aviation Safety Council, and assess the training needs of staff in the Aviation Safety Unit and make appropriate budgetary provision to address these needs.

OIOS made three recommendations. To address issues identified in the audit, UNAMID needed to:

- Ensure that issues identified and related recommendations by the Aviation Safety Council are effectively followed up and addressed;
- Adequately assess the staffing requirements of the Aviation Safety Unit and make appropriate budgetary provision to meet these requirements; and
- Adequately assess the training needs of staff in the Aviation Safety Unit and make appropriate budgetary provision to address these needs.

UNAMID accepted the recommendations, one recommendation was addressed through the reduction of the aircraft fleet and action has been initiated action to implement the remaining two.

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Audit of the aviation safety programme in the African Union-United Nations Hybrid Operation in Darfur

I. BACKGROUND

1. The Office of Internal Oversight Services (OIOS) conducted an audit of the aviation safety programme in the African Union-United Nations Hybrid Operation in Darfur (UNAMID).
2. The UNAMID Director of Mission Support has the overall responsibility for safe, efficient and cost-effective aviation operations in the Mission. The Aviation Safety Unit, which reports to the Director of Mission Support, is responsible for: (a) monitoring and implementing aviation safety measures; (b) providing timely advice and recommendations on all aviation safety related matters; and (c) promoting aviation safety awareness and accident prevention in UNAMID. The Unit is headed by a staff at the P-4 level that is supported by 10 staff.
3. As at 31 December 2016, UNAMID had 23 aircraft including 18 helicopters and 5 fixed wings. UNAMID operates from 38 locations, including 6 runways, 13 helicopter landing sites, 4 airstrips and 15 helipads throughout Darfur, and the airports at Khartoum and Port Sudan.
4. The Unit did not have a separate budget for staff costs as this was included in the budget of the Office of Mission Support. However, the Unit had budgets for training, i.e., \$102,602 for 2014/15 and \$67,172 for 2015/16, which were included in the Mission's travel budget.
5. Comments provided by UANMID are incorporated in italics.

II. AUDIT OBJECTIVE, SCOPE AND METHODOLOGY

6. The objective of the audit was to assess the adequacy and effectiveness of governance, risk management and control processes over the management of the aviation safety programme in UNAMID.
7. This audit was included in the 2016 risk-based work plan of OIOS due to operational, financial, safety and security risks related to air operations in UNAMID.
8. OIOS conducted this audit from August to December 2016. The audit covered the period from 1 July 2014 to 30 June 2016. Based on an activity-level risk assessment, the audit covered higher and medium risk areas relating to key aspects of implementation and management of the aviation safety programme including: (a) oversight of aviation safety activities; (b) aviation risk management; (c) staffing of the Aviation Safety Unit and training; (d) aviation accident and emergency response planning, and (e) aviation safety assistance visits and surveys.
9. The audit methodology included: (a) interviews of key personnel, (b) review of relevant documentation, (c) analytical reviews of data, and (d) field visits to 11 of 38 of the frequently used airfields in Darfur.

III. OVERALL CONCLUSION

10. UNAMID had used appropriate tools to assess its aviation safety risks. However, UNAMID needed to: (a) take effective follow-up measures to address safety issues identified and related recommendations by the Aviation Safety Council, and (b) adequately assess the training needs of staff in the Aviation Safety Unit and make appropriate budgetary provision to address these needs.

IV. AUDIT RESULTS

A. Oversight of aviation safety activities

There was a need to effectively address issues identified by the Mission Aviation Safety Council

11. The Department of Field Support (DFS) Aviation Safety Manual (the Manual) requires the Mission Aviation Safety Council (MASC) to meet quarterly to: (a) review and supervise the aviation operational risk management process; (b) discuss risk mitigation strategies related to aviation operations and allocate resources for their implementation; and (c) make safety recommendations to keep the consequences of identified and potential hazards at or below acceptable level.

12. A review of the minutes of the meetings indicated that UNAMID had established a MASC with appropriate terms of references. The MASC met eight times during the audit period and discussed risk mitigation strategies related to aviation operations and made 78 safety recommendations.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

14. The above occurred because the Mission had not established a mechanism to follow up on issues discussed and did not take adequate measures to ensure that members of the MASC regularly attended its meetings. As a result, there was a risk that the Mission did not thoroughly evaluate its aviation safety risks to mitigate the effect of actual or potential hazards and the occurrence of accidents.

(1) UNAMID should take adequate measures to ensure that issues identified and related recommendations by the Aviation Safety Council are promptly and effectively followed up and addressed.

UNAMID accepted recommendation 1 and stated that it had instituted a robust follow-up mechanism to ensure that issues identified at the Aviation Safety Council meetings were immediately reported to the respective self-accounting units to address action items and to provide feedback to the MASC. Furthermore, the Director of Mission Support had established a maximum timeline of 21 days for self-accounting units to address the issues identified and to provide feedback, in addition to weekly follow-ups by the Aviation Safety Unit. Recommendation 1 remains open pending receipt of evidence that the newly instituted follow-up mechanisms are being implemented consistently.

B. Structure and staffing of the Aviation Safety Unit

Staffing of the Aviation Safety Unit

15. The Manual requires UNAMID to establish an Aviation Safety Unit that is: independent of the Aviation Section; has direct access to the executive decision-making levels and staffed with a minimum of six staff including five professional one field service or national staff.

16. A review of the structure and staffing of the Mission's Aviation Safety Unit indicated that the Unit was part of the Office of the Director of Mission Support and was thus independent of the Aviation Section. The Head of the Unit reported to the Director and also had direct line of communication with the Aviation Safety Unit of the Logistics Support Division of DFS. However, the Unit was understaffed as it had four of the five professional posts with aviation safety expertise.

17. The above occurred because UNAMID did not adequately assess the staffing requirements of the Unit and make appropriate budgetary provision to meet these requirements. As a result, there was a reduced capacity in the Mission to conduct effective aviation safety surveys, performance evaluations and quarterly risk assessments.

(2) UNAMID should adequately assess the staffing requirements of the Aviation Safety Unit and make appropriate budgetary provision to meet these requirements.

UNAMID accepted recommendation 2 and stated that it had reduced the number of aircraft to 20 as at 31 May 2017; therefore, there was no need to augment the staffing levels of the Aviation Safety Unit. UNAMID also advised it that further reductions in the air fleet was expected due to the

ongoing restructuring/drawdown of the Mission. Based on the action taken by UNAMID, recommendation two has been closed.

There was a need to provide the required aviation safety training

18. The Manual requires UNAMID to provide sufficient funds to enable 50 per cent of the aviation safety staff to attend training courses each year. The Manual also requires aviation safety staff to identify and attend internal and external training courses.

19. A review of aviation safety staff training records indicated that the staff did not attend all the required training courses. For example, the Chief Aviation Safety Officer did not attend the recommended training on aviation safety technical reporting, airside safety awareness, aviation emergency response planning and transportation of dangerous goods. Similarly, aviation safety officers did not attend most of the recommended training, including the critical training on aviation safety technical reporting.

20. The above resulted because UNAMID did not adequately assess the training needs of staff in the Aviation Safety Unit and make appropriate budgetary provision to address these needs. The absence of a well-planned and implemented aviation safety training programme for the staff exposed the Mission to the risk of ineffective aviation safety management.

(3) UNAMID should adequately assess the training needs of staff in the Aviation Safety Unit and make appropriate budgetary provision to address these needs.

UNAMID accepted recommendation 2 and stated that it had initiated action for staff to attend online courses on aviation safety. Recommendation 2 remains open pending receipt of evidence that the Aviation Safety Unit staff had attended the courses approved by the Mission.

C. Aviation safety assistance visits and surveys

The Mission had taken action to resolve identified technical deficiencies in aircraft

21. The Manual requires UNAMID to: provide feedback to the Logistics Support Division, DFS on identified technical condition of aircraft, quality of the operators' performance, compliance with the terms of contract and other United Nations requirements; and immediately report the findings from aircraft inspection, performance evaluation and carrier assessment to the Aviation Safety and Air Transportation at the United Nations Headquarters, and address the issues of concern with the air operators.

22. During the period under review, the DFS Safety Assessment Team conducted only one of the two annual required visits to UNAMID between 10 and 15 December 2014. As a result, there was inadequate safety oversight of the Mission's air assets by the DFS Safety Assessment Team; thus, serious safety concerns relating to the air operator's performance were not adequately addressed. Discussions with the DFS Safety Assessment Team in the Aviation Safety Section indicated that visits were not conducted as planned due to lack of travel resources and available staffing, and delays in obtaining travel visas. The Team was in the process of planning a safety assessment visit to UNAMID in 2017. In light of the explanation and as DFS was taking steps to address gaps in Mission assessment visits in response to a previous OIOS recommendation in 2016, OIOS does not make a recommendation in this regard.

23. A review of the aircraft inspection checklists prepared by UNAMID while evaluating the conditions of helicopters and the data in the Aviation Inspection and Recommendation Module indicated

that the following technical deficiencies identified by the Mission were not addressed by the air operator in a timely manner partly due to delays in receiving feedback from DFS:



- Deteriorated conditions, e.g., the cabin was equipped with metallic frame that were hazardous in the event of emergency, of helicopters that was first identified and reported in May 2014;
- Contractual issues related to another air operator that were first identified and reported in April 2014; and
- Lack of the required Enhanced Ground Proximity Warning System and a functional Global Positioning System for a helicopter that was first identified and reported in February 2016.

24. Discussion with the Air Transport Section in DFS and review of various correspondences with concerned air operators indicated that actions were being taken, in coordination with the Procurement Division, to ensure that technical deficiencies were addressed by these air operators in accordance with the terms of their contracts.

25. Delays in addressing technical deficiencies increased the risk of accidents. For example, after safety concerns were identified in 2014, an MI-8 MTV helicopter had a forced landing due to a hydraulic malfunction and leakage and rupturing of the hose that caused a reduction of pressure of the main hydraulic system; and another MI-8 crashed on 16 August 2015 due to a technical problem. At the time of the audit, aircraft providers had corrected the defects and the Mission's Air Safety Section and Technical Compliance certified that the recommended actions had been completed. Based on the action taken, no recommendation was made at this time.

The Mission had used appropriate tools to assess its aviation safety risks

26. DFS policy on Aviation Risk Management (ARM) requires UNAMID to undertake a risk management process and conduct all aviation activities in a 'low risk' regime or implement risk mitigation measures if the activities cannot be implemented in a 'low risk' regime. The ARM also requires UNAMID to establish: (a) an Aviation Risk Assessment Team (ARAT) to continue with the risk assessment process; and (b) a Senior Level Committee (SLC) to perform an overall review of the ARM process by ARAT and make recommendations to the Director of Mission Support on whether the aviation activity should be conducted.

27. Discussions with staff of the Aviation Safety Unit, field visits to 11 of 38 frequently used airfields and review of the risk assessment indicated that UNAMID had: established a functioning ARAT and SLC, developed comprehensive ARM standard operating procedures in July 2014, and integrated ARM procedures in aviation related activities as indicated below:

- The Movement Control Section and Aviation Section had performed the required weekly assessment using the Air Passenger Terminal Hazard Identification Form at the main airports. In addition, the Mission had implemented controls to identify passenger and cargo handling hazards during check-in and loading processes;

- The Aviation Section used the Flight Following Hazard Identification Form to assess and validate the status of the flight following components for the safe operations of the flights and the Helicopter Landing Sites and Ramp Daily Hazard Identification form to assess the status of helicopter landing sites and ramps;

- Other than one case where the aviation activity was assessed as “very high” risk, all the other activities were conducted at either “low or medium” risk regime. For the only case on 24 January 2016 when the risk had been assessed at above ‘very high’ level, the ARAT and SLC met and reviewed the case as required and the Mission made decisions based on these assessments; and

- The Flight Planning Risk Management Form was duly completed to identify hazards, evaluate risk, analyzed risk mitigation options, decided risk mitigation measures and implemented them.

28. OIOS concluded that UNAMID had used appropriate tools to assess its aviation safety risks.

V. ACKNOWLEDGEMENT

29. OIOS wishes to express its appreciation to the management and staff of UNAMID for the assistance and cooperation extended to the auditors during this assignment.

(Signed) Eleanor T. Burns
Director, Internal Audit Division
Office of Internal Oversight Services

STATUS OF AUDIT RECOMMENDATIONS

Audit of the aviation safety programme in the African Union-United Nations Hybrid Operation in Darfur

Rec. no.	Recommendation	Critical ¹ / Important ²	C/ O ³	Actions needed to close recommendation	Implementation date ⁴
1	UNAMID should take adequate measures to ensure that issues identified and related recommendations by the Aviation Safety Council are promptly and effectively follow-up and addressed.	Important	O	Receipt of evidence that the newly instituted follow-up mechanisms are being implemented consistently.	30 June 2017
2	UNAMID should adequately assess the staffing requirements of the Aviation Safety Unit and make appropriate budgetary provision to meet these requirements.	Important	C	Action taken	Implemented
3	UNAMID should adequately assess the training needs of staff in the Aviation Safety Unit and make appropriate budgetary provision to address these needs.	Important	O	Receipt of evidence of the Aviation Safety Unit staff has attended the courses approved by the Mission.	31 December 2017

¹ Critical recommendations address critical and/or pervasive deficiencies in governance, risk management or control processes, such that reasonable assurance cannot be provided with regard to the achievement of control and/or business objectives under review.

² Important recommendations address important (but not critical or pervasive) deficiencies in governance, risk management or control processes, such that reasonable assurance may be at risk regarding the achievement of control and/or business objectives under review.

³ C = closed, O = open

⁴ Date provided by UNAMID in response to recommendations.

APPENDIX I

Management Response

AFRICAN UNION

الاتحاد الأفريقي



UNAMID



UNITED NATIONS

الأمم المتحدة

African Union – United Nations Hybrid Operation in Darfur

Office of the Joint Special Representative

4 June 2017

To: Mr. Bolton Tarleh Nyema, Chief
Peacekeeping Audit Service
Internal Audit Division, OIOS

From: Jeremiah Mamabolo, Joint Special Representative
UNAMID

Subject: **Draft report on an audit of aviation safety programme in the African Union-United Nations Hybrid Operation in Darfur (Assignment No. AP2016/634/06)**

1. With reference to your memorandum of 14 May 2017, on the captioned-subject matter, please find attached revised UNAMID's response (Appendix I) to the draft report for your consideration.

2. I further confirm on the factual accuracy of the report.

Thank you.

cc: Ms. Victoria Browning, Director, Mission Support Division, UNAMID
Mr. Danny Kaye, Officer-in-Charge, Aviation Safety Unit, UNAMID
Mr. Khaled Kassab, Chief, Aviation Section, UNAMID
Ms. Dorothy Choto, Audit Focal Point, UNAMID
Mr. Alexandre Etocke, Chief Resident Auditor, UNAMID
Ms. Cynthia Avena-Castillo, Professional Practices Section, Internal Audit Division, OIOS

Management Response
Audit of aviation safety programme in the African Union-United Nations Hybrid Operation in Darfur

Rec. no.	Recommendation	Critical ¹ / Important ²	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
1	UNAMID should take adequate measures to ensure that issues identified and related recommendations of the Aviation Safety Council are promptly and effectively follow-up and addressed.	Important	Yes	Director of Mission Support	30 June 2017	<p>UNAMID has established procedures that ensure that issues identified at the Aviation Safety Council Meeting (ASCM) are immediately advised to the respective self-accounting units to address action items and also to provide feedback to the ASCM.</p> <p>The Director of Mission Support has further established a maximum timeline of 21 days for self-accounting units to address and also provide feedback, in addition to weekly follow-up by Aviation Safety Unit.</p>
2	UNAMID should adequately assess the staffing requirements of the Aviation Safety Unit and make appropriate budgetary provision to meet these requirements.	Important	Yes	Director of Mission Support	31 May 2017	<p>Since the audit, the number of aircraft in the mission has reduced to 20, matching the number of professionals required for Aviation Safety Unit as stipulated in the Aviation Safety Manual.</p> <p>The Mission envisage a further decrease in the number of air assets due to the trending mission drawdown. Therefore, an increase in staffing is not justifiable at the moment.</p>

¹ Critical recommendations address critical and/or pervasive deficiencies in governance, risk management or control processes, such that reasonable assurance cannot be provided with regard to the achievement of control and/or business objectives under review.

² Important recommendations address important (but not critical or pervasive) deficiencies in governance, risk management or control processes, such that reasonable assurance may be at risk regarding the achievement of control and/or business objectives under review.

Management Response
Audit of aviation safety programme in the African Union-United Nations Hybrid Operation in Darfur

Rec. no.	Recommendation	Critical ¹ / Important ²	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
3	UNAMID should adequately assess the training needs of staff in the Aviation Safety Unit and make appropriate budgetary provision to address these needs.	Important	Yes	Chief Aviation Safety Officer	31 December 2017	Mission accepts the recommendation and has initiated action to conduct all recommended courses for Aviation Safety staff as detailed out in the attached memorandum dated 24 May 2017.