



# General Assembly

Distr.: General  
9 February 2024

Original: English

## Seventy-eighth session

Agenda item 143

### Report on the activities of the Office of Internal Oversight Services

## Audit of acquisition of aviation services in United Nations peace operations

### Report of the Office of Internal Oversight Services

#### *Summary*

The General Assembly, in its resolution [72/266 B](#) of 5 July 2018, requested the Secretary-General to entrust the Office of Internal Oversight Services (OIOS) with continuing to monitor United Nations procurement and report thereon biennially. Pursuant to that resolution, OIOS conducted an audit of acquisition of aviation services in peace operations at United Nations Headquarters in New York and selected field missions. The audit assessed the adequacy and effectiveness of activities and controls in the acquisition of these services.

Aviation services are key enablers for peace operations deployed across vast territories with lengthy logistical lines and difficult terrains. They provide peace operations with mobility, support and information to implement mandates, including for troop rotation, special military operations, medical/casualty evacuations and passenger and cargo transportation.

During the audit period from 1 January 2019 to 30 June 2023, the Secretariat acquired commercial and military aviation services valued at \$2.3 billion. The audit concluded that there was an adequate process in place for the Organization to communicate its needs for military aviation services and for Member States to respond. However, the efficiency and effectiveness of the management of acquisition of commercial and military aviation services can be further enhanced with more strategic and integrated planning, including assessing the benefits of investing in aviation infrastructure and finding the best mix of commercial and military aircraft to be deployed. Despite targeted outreach to commercial air operators and the addition of new vendors, most of the solicitation exercises reviewed by OIOS during the audit attracted between four and six vendor responses. However, implementation of the first phase of a new concept of non-exclusive aircraft charter agreements for utility helicopter services, which eliminated the need to conduct separate procurement



exercises for each field mission, showed potential for more favourable vendor response rates. The Office of Supply Chain Management in the Department of Operational Support was considering adopting this new concept for the acquisition of other types of aircraft after an assessment of the implementation results.

Commercial evaluation criteria for vendor registration that were introduced during the pandemic did not adequately measure vendors' financial capacity and needed to be reassessed. In addition, the process for technical evaluation of prospective vendors for registration and of submitted bids for contract awards required strengthening. In addition to reviewing the appropriate utilization of the request for proposal solicitation method to achieve the best value for money, a more granular analysis of aircraft utilization by destination and of passenger and cargo performance indicators would allow the Department of Operational Support to validate missions' requirements. Furthermore, there was a need to ensure that safety risks pertaining to military aviation units were adequately assessed during assessment and predeployment visits.

OIOS made six recommendations to the Department of Operational Support and two recommendations to the Department of Peace Operations to address issues identified in the audit. Both departments accepted the recommendations and initiated actions to implement them, as indicated in the annex to the present report.

## I. Background

1. The General Assembly, in its resolution [72/266](#) B of 5 July 2018, requested the Secretary-General to entrust the Office of Internal Oversight Services (OIOS) with continuing to monitor United Nations procurement and report thereon biennially. In accordance with the plan to implement the resolution, OIOS conducted an audit of acquisition of aviation services in peace operations at United Nations Headquarters in New York and selected field missions.

2. Aviation services<sup>1</sup> are key enablers for peace operations that are deployed across vast territories with lengthy logistical lines and difficult terrains. They cover two main aircraft types: commercial aircraft acquired from companies through long- and short-term charters or procurement contracts; and military aircraft acquired from Member States through letters of assist. Aviation assets are used for troop rotation, special military operations, aeromedical evacuations and passenger and cargo transportation.

3. During the period from January 2019 to June 2023, the Secretariat entered into 265 commercial contracts valued at \$1.5 billion and 362 letters of assist<sup>2</sup> valued at \$848 million. Table 1 shows the yearly award of aviation contracts and letters of assist with troop-contributing countries.

Table 1  
**Value of commercial aviation contracts and letters of assist established from January 2019 to June 2023**

(Millions of United States dollars)

Contract type	Not-to-exceed values					Total
	2019	2020	2021	2022	2023	
Commercial	258	755	288	144	70	1 515
Letter of assist	99	218	264	125	142	848
<b>Total</b>	<b>357</b>	<b>973</b>	<b>552</b>	<b>269</b>	<b>212</b>	<b>2 363</b>

Source: Umoja report, air charter contracts and letters of assist.

4. As at 30 June 2023, there were 163 aircraft in the Secretariat, as shown in table 2.

Table 2  
**Fleet size per mission as at 30 June 2023**

Mission	Commercial		Military		Total
	Fixed wing	Rotary wing	Fixed wing	Rotary wing	
MINUSMA	6	11	1	13	31
MONUSCO	5	3	5	16	29
UNSOS	7	11	—	7	25
UNMISS	6	13	—	5	24
MINUSCA	4	1	—	12	17

<sup>1</sup> “Aviation services” and “aviation assets” are used interchangeably in the United Nations Aviation Manual.

<sup>2</sup> Including costs of military aviation assets and airlift for troop movements/contingent-owned equipment.

<i>Mission</i>	<i>Commercial</i>		<i>Military</i>		<i>Total</i>
	<i>Fixed wing</i>	<i>Rotary wing</i>	<i>Fixed wing</i>	<i>Rotary wing</i>	
UNISFA	2	6	–	2	10
UNIFIL	–	–	–	6	6
Other	13	5	–	3	21
<b>Total</b>	<b>43</b>	<b>50</b>	<b>6</b>	<b>64</b>	<b>163</b>

Source: Electronic monthly aviation report.

*Abbreviations:* MINUSCA, United Nations Multidimensional Integrated Stabilization Mission in the Central African Republic; MINUSMA, United Nations Multidimensional Integrated Stabilization Mission in Mali; MONUSCO, United Nations Organization Stabilization Mission in the Democratic Republic of the Congo; UNIFIL, United Nations Interim Force in Lebanon; UNISFA, United Nations Interim Security Force for Abyei; UNMISS, United Nations Mission in South Sudan; UNSOS, United Nations Support Office in Somalia.

5. Several organizational units are responsible for different aspects of the acquisition process, as follows:

(a) The Office of Supply Chain Management of the Department of Operational Support, for supply chain planning, vendor registration, procurement, logistical support, aviation safety and uniformed capabilities support;

(b) The Office of Military Affairs of the Department of Peace Operations, for the deployment of the most appropriate and effective military capability to the missions;

(c) The Headquarters Committee on Contracts in the Department of Management Strategy, Policy and Compliance, to ensure that procurement actions are conducted in compliance with relevant guidance;

(d) Directors or Chiefs of Mission Support and Chief Aviation Officers, for proper acquisition planning for and utilization and operation of aviation assets. Missions are not authorized to arrange for any aviation services directly, except in emergencies after coordination with the Office of Supply Chain Management.

6. The Department of Operational Support and the Department of Peace Operations developed the United Nations Aviation Standards for Peacekeeping and Humanitarian Air Transport Operations together with the World Food Programme to establish common aviation standards for peacekeeping and humanitarian air transport operations in line with the International Civil Aviation Organization (ICAO) standards. Both departments also developed aviation manuals to guide the acquisition and use of commercial and military aviation assets.

## II. Audit objective, scope and methodology

7. The objective of the audit was to assess the adequacy and effectiveness of activities and controls in the acquisition of commercial and military aviation services.

8. OIOS conducted the audit at Headquarters from December 2022 to September 2023. The audit covered the period from 1 January 2019 to 30 June 2023. The audit covered higher- and medium-risk areas related to: (a) planning for acquisition of aviation services; (b) outreach activities, vendor registration and implementation of the procurement process for commercial aviation services; and (c) assessment of Member State readiness to provide military aviation services, including safety considerations and aircraft available days for acquisition of military aviation services.

The audit scope excluded unmanned aerial vehicles and intelligence, surveillance and reconnaissance aircraft.

9. The audit methodology included the following: (a) interviews of key personnel at Headquarters and in four field missions;<sup>3</sup> (b) review of relevant documentation; (c) analysis and reconciliation of data across data sources, including Umoja and the aviation information management system, procurement toolkit, iAviationSafety system and contract performance reporting tool; and (d) detailed review of 23 procurement actions (15 long-term contracts and 8 short-term cargo contracts) valued at \$236 million and 8 letters of assist valued at \$175 million.

10. The audit was conducted in accordance with the International Standards for the Professional Practice of Internal Auditing.

### III. Audit results

#### A. Planning for acquisition of aviation services

##### 1. Need for integrated planning to determine the optimal mix of commercial and military aircraft capabilities

11. Missions outline commercial aviation service requirements in statements of work for review by the Office of Supply Chain Management and inclusion in solicitation documents, while military capability studies conducted by the Office of Military Affairs serve as the basis for identifying requirements for military aviation services. The Department of Operational Support and the Department of Peace Operations identified several improvement initiatives as part of aviation category management, including the need for early integrated planning involving the Office of Supply Chain Management, the Office of Military Affairs and missions to determine the best mix of commercial and military aircraft capabilities. This initiative is at the development stage. OIOS observed that variations between flight hour costs of commercial and military aircraft presented opportunities for potential cost savings, as indicated below.

##### (a) Considering flight hour costs under commercial contracts when determining demand for military aviation services

12. The cost structure of a military aircraft (Mi-17) obtained under letter of assist compared with a similar commercial aircraft (Mi-8MTV)<sup>4</sup> is shown in table 3. OIOS review of 10 letters of assist and 11 commercial contracts involving such aircraft indicated that the actual flight cost per hour for the commercial aircraft was 27 per cent lower than under letters of assist (\$3,303 vs. \$4,194). This was without considering additional reimbursement costs to which troop-contributing countries were entitled under letters of assist and memorandums of understanding, such as for positioning and de-positioning of aircraft when they were moved by the troop-contributing country, actual cost for firing ammunitions, and troop costs. Higher costs under letters of assist were justified due to risks associated with operating military aircraft in danger zones and the built-in equipment and capabilities.

13. However, analysis of tasking for all Mi-17 assets showed that only 13 per cent related to military operations, such as patrol and observations, and the remaining 87 per cent were tasked for passenger movement (45 per cent), cargo (23 per cent) and aeromedical evacuation and other tasks (19 per cent). Field missions needed to review

<sup>3</sup> UNMISS, MINUSCA, MINUSMA and MONUSCO.

<sup>4</sup> The Mi-8MTV is a commercial version of the Mi-17, and the base structure (excluding arms) of the helicopter is the same.

whether commercial utility helicopters could be utilized for non-military tasks with potential cost savings, taking into consideration operational and security contexts and the main purpose and operating framework of military aircraft. The Department of Peace Operations commented that military aircraft in general had fewer restrictions and afforded missions more flexibility, for example for night flights.

Table 3

**Comparative annual cost of letter of assist and commercial contract per helicopter**

(United States dollars)

<i>Details</i>	<i>Contract type</i>	
	<i>Letter of assist</i>	<i>Commercial</i>
Model offered	Mi-17	Mi-8MTV
Fixed cost: One-time and base cost	20 308	2 106 528
Variable cost: Hourly rate	4 150	298
Number of flight hours operated (A)	454	701
<b>Total cost (B)</b>	<b>1 904 408</b>	<b>2 315 426</b>
<b>Actual cost per hour (B)/(A)</b>	<b>4 194</b>	<b>3 303</b>

**(b) Reviewing hourly flight cost for commercial helicopter with specialized capabilities against military aircraft when planning demand for commercial aviation services**

14. MINUSMA<sup>5</sup> required commercial rotary-wing aircraft with specialized capabilities (search and rescue, night vision imaging system, forward-looking infrared cameras, ballistic protection) for one region. The hourly flight cost for military aircraft and commercial aircraft with specialized capabilities was \$6,000 and \$8,628, respectively. An analysis of tasking between September 2022 and June 2023, when both aircraft types were in use in the Mission, indicated that 51 patrol and observation tasks (43 per cent) were conducted by military helicopters and 69 patrol and observation tasks (57 per cent) by commercial helicopters out of 120 operations. This translated to 8 monthly flight hours for the military helicopter and 47 flight hours for the more expensive commercial helicopters with specialized capabilities. Field missions needed to assess whether using military air assets in danger zones was more cost-effective than having commercial air assets with specialized capabilities.

**(c) Reviewing availability of military assets when planning demand for commercial aviation services**

15. OIOS review showed that demand planning for commercial aviation services did not always consider spare capacities of available military aircraft. For example, UNIFIL had six Bell-212 military helicopters under letter of assist, and each helicopter had low utilization, averaging 14.6 hours per month. UNIFIL also required one commercial helicopter, which operated, on average, 36.3 hours monthly in the same location. The hourly cost was \$2,200 and \$4,640 for military and commercial aircraft, respectively. The cost of the commercial aircraft for the audit period was \$10.6 million for 1,635 total flight hours.

<sup>5</sup> The Security Council, in its resolution [2690 \(2023\)](#), decided to terminate the mandate of MINUSMA as of 30 June 2023.

16. Despite the availability of military helicopters with a lower hourly cost, the commercial helicopter supported military tasks by conducting 1,291 out of 3,766 patrol and observation tasks and transporting 12,700 out of 23,631 military passengers. The Organization could have saved around \$7 million if UNIFIL had used military helicopters with low utilization instead of acquiring the additional commercial helicopter. After withdrawal of the commercial helicopter in 2023 due to the significant safety concern identified by ICAO, the Force's requirements were met by military helicopters. The Office of Supply Chain Management stated that the commercial helicopter had a larger capacity for passenger and cargo transport and that the Force might still require a larger helicopter.

17. The Office of Military Affairs commented that missions were free to use underutilized military aviation capacity if they were more cost-effective, in line with efforts to optimize available aviation assets.

#### **Recommendation 1**

**The Department of Peace Operations should, in consultation with the Department of Operational Support and taking into consideration mandate delivery, associated costs and operational and security context, remind field missions: (a) to monitor tasking data to identify opportunities for optimal utilization of military and commercial aviation services; and (b) to periodically review the best mix of commercial and military aircraft when planning demand for aviation services.**

*Comments of the Department of Peace Operations.* The Department accepted recommendation 1.

*Comments of OIOS.* Recommendation 1 remains open pending receipt of evidence of actions implemented to optimize the utilization and mix of military and commercial aviation services.

## **2. Need to assess potential cost savings from improvement of aviation infrastructure**

18. The availability and quality of aviation infrastructure such as runways are crucial in logistics planning and in demand requirements for aviation services. Poor infrastructure may require specific types of aircraft and increase the cost of aviation services. Recent OIOS audits of air operations in two missions (MONUSCO and UNMISS) identified systemic gaps including inadequate and poor conditions of runways and helicopter landing sites. The audit of air operations in UNMISS (OIOS report No. 2022/086) indicated that poor runway conditions prevented the operation of fixed-wing aircraft, negatively affecting troop rotations and transportation of mission personnel, especially during the rainy season, and resulting in increased costs from operating rotary-wing aircraft. To implement the OIOS recommendation, UNMISS conducted a cost-benefit analysis, estimating that it would need \$21 million to construct a runway and apron with asphalt for Bentiu, compared with the current annual maintenance cost of \$1.2 million for labour and material. The Mission indicated that it would take 17 years to recoup investment for asphaltting. However, OIOS noted that the analysis was incomplete because the Mission did not factor in: (a) the difference in cost between fixed- and rotary-wing aircraft contracts; (b) the fuel cost and flight time using rotary-wing aircraft with less passenger and cargo capacity, which requires more trips; and (c) the impact on mandate delivery during six months of rainy season, which results in frequent flight cancellations.

19. Actions taken by MINUSMA with support from the Office of Supply Chain Management to address infrastructure challenges could serve as a blueprint for other missions. MINUSMA initiated the construction of an airstrip and related facilities in Kidal, Mali, to allow military and commercial aircraft to operate more effectively and safely. The Sector North regional office in Kidal had supported one of the key operational areas in the Mission; however, that location could be reached only by helicopter, with logistical support provided from Gao and Tessalit, 286 and 206 km away from Kidal, respectively. To facilitate the operation of flights by medium- to large-sized fixed-wing aircraft directly to and from Kidal, MINUSMA began construction of a 1.8-km airstrip in September 2019 and conducted test flights for both military and commercial aircraft between February and March 2023. As shown in table 4, this had the potential for generating cost savings of up to \$40 million during the period under review, as a typical medium-sized fixed-wing aircraft can carry four more passengers and 2,000 kg more cargo, can fly a longer distance and has much less stringent weather limitations than a medium-sized helicopter.

Table 4

**Capacity and cost of medium helicopters vs. medium fixed-wing aircraft, January 2019–June 2023**

(United States dollars)

	<i>Without airstrip (actual)</i>	<i>With airstrip (scenario)</i>
Type of air asset	Medium helicopter	Medium fixed wing
Passenger capacity	20	24
Cargo capacity (kg)	4 000	6 000
Total contract cost	53 640 542	8 401 898 <sup>a</sup>
Construction cost of dirt airstrip	–	5 500 000
<b>Total</b>	<b>53 640 542</b>	<b>13 901 898</b>
<b>Possible cost savings</b>		<b>39 738 644</b>

Source: Kidal airfield project report and procurement files.

<sup>a</sup> Calculated based on average cost of four contracts for medium propeller fixed-wing aircraft, established in audit scope.

20. As noted in figure I below, there are more registered air operators for fixed-wing than rotary aircraft, which can contribute to improving competition and the best value. In addition to possible cost savings and improved operations, investing in aviation infrastructure would benefit host countries when the mandate for peace operations ends. However, such investments require missions to consider the financial implications, the operating environment, including security situation, the project duration and the logistical challenges of bringing materials and equipment to remote locations and predict the duration of missions' mandates, which are commonly reviewed and renewed by the Security Council annually.

**Recommendation 2**

**The Department of Operational Support should remind field missions, through the Controller's budget instructions, to conduct cost-benefit analysis for aviation infrastructure projects as part of acquisition planning for aviation services, taking into account quantitative and qualitative factors.**



*Comments of the Department of Operational Support.* The Department accepted recommendation 2.

*Comments of OIOS.* Recommendation 2 remains open pending receipt of instructions to field missions to conduct cost-benefit analysis for aviation infrastructure projects during acquisition planning for aviation services.

## **B. Acquisition of commercial aviation services**

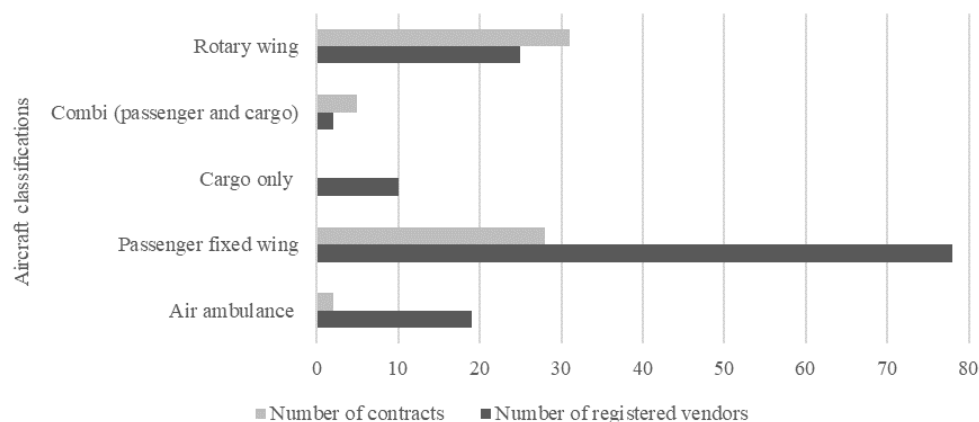
### **1. Strategy to expand international competition and vendor diversity was evolving**

21. The United Nations Secretariat aims to foster effective international competition and obtain responses to bid solicitation exercises from as many different vendors as possible. As part of its outreach activities, the Office of Supply Chain Management invites all registered air operators in the relevant categories to participate in bid solicitation exercises, including those that are not registered for the required aircraft type. The purpose of this is to educate the market about the needs of United Nations peace operations and provide it with information for decision-making on acquiring new aircraft types. The Office also implemented an aviation vendor registration and outreach strategy in 2020, including revising the technical and financial registration criteria. In 2022, it attended five aviation expos and organized nine business seminars for air transport in the Africa, Middle East and Asia-Pacific regions, which were attended by around 250 air operators. Nevertheless, out of a sample of procurement cases reviewed by OIOS for fixed- and rotary-wing aircraft, most solicitation exercises attracted between four and six vendor responses during the audit period. According to the Office of Supply Chain Management, the effect of recent outreach activities will become visible over time.

22. During the audit period, 82 new vendors had completed the registration process, including vendors from 23 new applicant countries. This was partly negated in June 2022 following a significant safety concern identified by ICAO pertaining to the airworthiness of aircraft provided by one of the top five countries in the master vendor list that remains unresolved. This resulted in the removal of 11 vendors with 23 aircraft types from the master vendor list, and missions were expected to cease business with those vendors except for special operational requirements. This affected field missions' operations, as there were 22 contracts with the affected Member State at the time of the ICAO significant safety concern.

23. There was also a need to expand further the number of vendors offering certain aircraft classifications, such as rotary-wing and combi (passenger and cargo) aircraft, which were in high demand by missions. As shown in figure I, there was a disproportionate number of vendors providing these aircraft classifications compared with the number of contracts currently in force. For example, following the ICAO significant safety concern and deregistration of some of the vendors, the Office of Supply Chain Management had 25 registered vendors for rotary-wing aircraft against 31 contracts, a 1:1.24 ratio as at 30 June 2023. Similarly, the ratio for combi aircraft was 1:2.5, that is, two registered vendors against five contracts. The ratio for passenger fixed-wing aircraft was 1:0.36, that is, 78 registered vendors against 28 contracts, which allowed for more diversity and flexibility.

**Figure I**  
**Number of registered vendors and contracts as at 30 June 2023**



*Source:* Electronic monthly aviation report and master vendor list.

24. The Office of Supply Chain Management had conducted targeted outreach to three major vendors of strategic rotary aircraft with one completed registration and to nine vendors of large cargo aircraft with capacity of 19 tons or more. It had also held registration kick-off meetings with 45 rotary aircraft operators, 11 of which subsequently registered, and 13 cargo aircraft operators, 4 of which subsequently registered. The Office's analyses showed that, over the past three years, there had been an increasing trend towards awarding contracts to more recently registered vendors, with 53 per cent of contracts established in 2022 awarded to vendors registered between 2020 and 2022.

25. The Office of Supply Chain Management introduced several initiatives to address the ICAO significant safety concern, including non-exclusive aircraft charter agreements to meet immediate needs in 10 missions to replace aircraft reserve services for utility helicopters. In November 2022, the Office invited 57 rotary aircraft operators to bid on "aircraft segment 1", for a capacity of 8 to 15 passengers, or "aircraft segment 2", for 16 or more passengers. The goal of the invitation to bid was to award at least five contracts per mission per aircraft segment and to award contracts to technically compliant bidders within 50 per cent of the lowest cost offer per mission per segment.

26. A total of 23 vendors from 16 countries submitted bids, a 40 per cent response rate. After bid evaluations, 14 vendors were awarded non-exclusive aircraft charter agreements for aircraft reserve services with a not-to-exceed value of \$67.7 million each for a maximum of four years after review by the Headquarters Committee on Contracts. Of the 14 vendors, 7 were newly registered. Service contracts against the non-exclusive aircraft charter agreements for aircraft reserve services will be awarded based on offers obtained through secondary bidding exercises from the reserve fleet vendors, at rates not exceeding those established under reserve fleet contracts.

27. The arrangement will be conducted in three phases to replace over 22 utility helicopter services. The first phase and related secondary bidding was conducted in July 2023. The Office of Supply Chain Management is considering adopting the new concept for the acquisition of aviation services for other aircraft types after the results of the secondary bidding are assessed. Since secondary bidding and the implementation of the reserve fleet contracts is outside the scope of this audit, OIOS will review the procurement and contract management of non-exclusive aircraft charter agreements for aircraft reserve services in future audits.

## **2. Vendor registration arrangements needed strengthening**

28. Prior to participating in solicitations, prospective air operators are required to register at level 2 (for contracts above \$500,000) in the United Nations Global Marketplace, a procurement portal that United Nations system organizations use for vendor registration and circulation of procurement information. They are also required to register in the air operator vendor registration system. In addition to registering 82 new vendors during the period under review, the Office of Supply Chain Management removed 47 vendors due to the ICAO significant safety concern and failure to submit updated financial information, among other reasons. As at 30 June 2023, the Office had 108 registered vendors with 311 aircraft types.

29. Vendor registration in the air operator vendor registration system requires technical evaluation of air operators' operational management and aviation control systems and commercial evaluation of their financial position to ensure their suitability to participate in United Nations bidding processes for air charter agreements. These detailed reviews at the vendor registration stage enable the Office of Supply Chain Management to reduce the time needed to technically evaluate bids submitted in response to solicitation exercises by focusing the evaluations on the suitability of offered aviation assets against technical criteria stipulated in the statement of work.

### **(a) Inadequate records management of technical evaluation for vendor registration**

30. The Office of Supply Chain Management conducted technical evaluations based on its established technical and operational evaluation criteria and applied the four-eyes principle, which requires a review of documentation by two staff members to ensure adequate due diligence. Due to the coronavirus disease (COVID-19) pandemic, the Office implemented expedited technical and operational evaluation criteria in April 2020.

31. A review of technical evaluations of eight vendors showed inadequate records management, which limited OIOS ability to conclude whether the technical evaluation process of the Office of Supply Chain Management was effective. OIOS was not able to review key documents, such as the air transport licence, continuing airworthiness management organization approval certificate and operations specifications. In some instances, technical evaluation results were not fully supported due to missing checklists confirming completion of the review against the technical and operational evaluation criteria. The Office of Supply Chain Management commented that records of air operators that had been technically cleared before 2020 consisted mainly of paper files and were not easily retrievable. It stated that it had since initiated a restructuring of its technical records management system and currently maintained records electronically.

32. OIOS further noted that the expedited technical and operational evaluation criteria, which were used to register 29 vendors with 83 aircraft types in support of continued operations during the COVID-19 pandemic, changed documentation submittal procedures, documentation to be provided, and the required joint on-site flight service vendor audit. The Office of Supply Chain Management commented that these changes could be made because of the compensating stringent review and monitoring of air operators by their respective civil aviation authorities. However, after expiration of the expedited technical and operational evaluation criteria in March 2022, the Office reinstated the documentation requirements in the latest edition of the technical and operational evaluation criteria. It needed to assess what evaluation criteria could be waived permanently and the extent of reliance that could be placed on the procedures of civil aviation authorities. This would reduce the time and resources used to register vendors.

33. The technical evaluation function for vendor registration entails a review of both quality and safety arrangements in line with the technical and operational evaluation criteria and guidance outlined in the Aviation Manual. However, the capacity to conduct technical evaluations in the Office of Supply Chain Management was limited, as there was only one full-time staff member responsible for the technical evaluation of air operators in the Aviation Safety Section and one additional staff member in the Air Transport Service who performed this function as part of other duties. In 2021 and 2022, it took an average of 74 days to complete technical evaluation for new aircraft of new air operators. The Office commented that technical vendor registration could be completed only when the vendor provided full documentation, and was beyond its control. Furthermore, during the period under review, the two staff members responsible for this function had other competing priorities, including addressing the ICAO significant safety concern, amending the United Nations Aviation Standards for Peacekeeping and Humanitarian Air Transport Operations and implementing category management.

34. In addition, effective 1 July 2023, the technical evaluation function was reassigned to the Enabling and Outreach Service, which did not have aviation safety expertise to review and monitor the activities. As technical evaluation during the registration of air operators is a complex process, sometimes requiring on-site visits to vendors, it needed to be supervised by staff with the necessary technical skills.

### **Recommendation 3**

**The Department of Operational Support should strengthen the technical evaluation process for registration of air operators, by: (a) implementing adequate records management and retention procedures; (b) reviewing technical evaluation criteria that can be waived; and (c) assessing the capacity of the technical evaluation function to ensure an adequate technical supervision mechanism.**

*Comments of the Department of Operational Support.* The Department accepted recommendation 3 and stated that it would: (a) review and update the records management system to provide effective, robust and traceable management of technical vendor data; (b) review and analyse technical and operational evaluation criteria to avoid duplication of work and update the criteria accordingly; and (c) assess the capacity of the technical vendor registration function.

*Comments of OIOS.* Recommendation 3 remains open pending receipt of evidence that the records management system has been updated, technical and operational evaluation criteria revised and capacity of the technical vendor registration function and its supervision assessed.

### **(b) Commercial evaluation criteria for vendor registration needed to be reassessed**

35. In January 2022, the Office of Supply Chain Management implemented new commercial evaluation criteria and scorecard methodology for registered and prospective air operators that included four financial criteria and three qualitative criteria. The methodology did not adequately measure vendors' financial capacity, as the vendors could pass the commercial evaluation solely on qualitative criteria without any consideration of the financial metrics. Three out of five prospective air operators qualified on this basis, including one with low profitability and liquidity scores. According to the Office, new commercial evaluation criteria were implemented during the pandemic, when many air operators faced operational and financial challenges due to border closures and restrictions on travel.

#### **Recommendation 4**

**The Department of Operational Support should reassess its commercial evaluation criteria for registration of air operators to place appropriate emphasis on metrics that measure the financial strength of air operators, following the conclusion of the COVID-19 emergency.**

*Comments of the Department of Operational Support.* The Department accepted recommendation 4.

*Comments of OIOS.* Recommendation 4 remains open pending receipt of evidence of the revised commercial evaluation criteria for registration of air operators.

### **3. Effectiveness in implementing United Nations procurement procedures**

#### **(a) Developing statement of work based on data analysis**

36. Statements of work should be prepared based on an analysis of historical information such as passengers and cargo per flight to indicate the right aircraft size and flight hours, together with future operational requirements to address logistical needs and specific movement specifications. The Air Transport Service reviews and analyses mission mandates, support plans, concepts of operations and technical justifications for aviation assets requested. The Service also examines historical utilization of dedicated aircraft reported monthly through the electronic monthly aviation report.

37. While cognizant that the goal of the Organization's air operations is service delivery and that operational imperatives and other contextual factors have an impact on aircraft utilization, OIOS noted a trend of low occupancy rates, which should be monitored for potential cost savings and consideration in the preparation of statements of work. OIOS reviewed passenger tasks for all contracts active between 1 January 2019 and 30 June 2023, except for aeromedical evacuation tasks, against maximum passenger capacity of the aircraft. As shown in table 5, in 2019 there were seven contracts with passenger occupancy rates below 30 per cent. This increased to 13 and 15 contracts in 2020 and 2021, respectively, due to the pandemic. However, the situation did not significantly improve in 2022 or the first six months of 2023, when the number of contracts with passenger occupancy rates below 30 per cent decreased to 13 and 12, respectively. Table 5 provides not-to-exceed values of contracts active between 1 January 2019 and 30 June 2023 and the related occupancy rates.

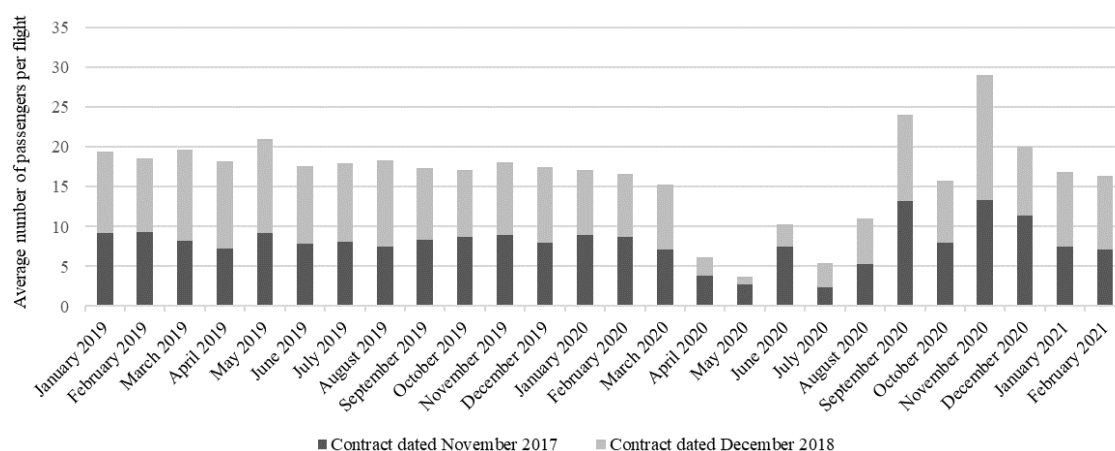
Table 5  
**Passenger occupancy rates and average values of contracts, 1 January 2019–30 June 2023<sup>6</sup>**

Passenger occupancy rates (percentage)	Number of contracts					Average not-to-exceed value (millions of United States dollars)
	2019	2020	2021	2022	2023	
0–30	7	13	15	13	12	93
31–60	41	43	48	45	30	520
61–90	23	17	17	21	15	254
90 and above	6	6	4	4	7	106
<b>Total</b>	<b>77</b>	<b>79</b>	<b>84</b>	<b>83</b>	<b>64</b>	<b>973</b>

Source: Electronic monthly aviation report.

38. There was also inadequate assessment of aviation needs for downsizing missions. For example, the African Union-United Nations Hybrid Operation in Darfur (UNAMID) could have achieved potential savings of \$8.5 million with a proper reassessment of its aviation needs. UNAMID had one contract dated 30 November 2017 that covered two helicopters with a capacity of 20 passengers each. It also replaced an expired contract in December 2018 that provided two additional helicopters, also with a capacity of 20 passengers each, for a not-to-exceed value of \$12.6 million. The cumulative passenger capacity for four helicopters under two contracts was 80 passengers. However, an analysis of passenger tasks from January 2019 to February 2021 indicated that there was no need for the second contract. As shown in figure II, all passenger tasks could have been met by the two helicopters contracted in November 2017, except for three months, when they could have been covered by five additional helicopters available in the same location. Although the Office of Supply Chain Management requested a reduction of flight hours for existing contracts, which were amended in December 2018, this had minimal impact on expenditures due to the high fixed costs inherent in commercial contracts, as discussed below.

Figure II  
**Average number of passengers per flight for two UNAMID contracts, January 2019–February 2021**



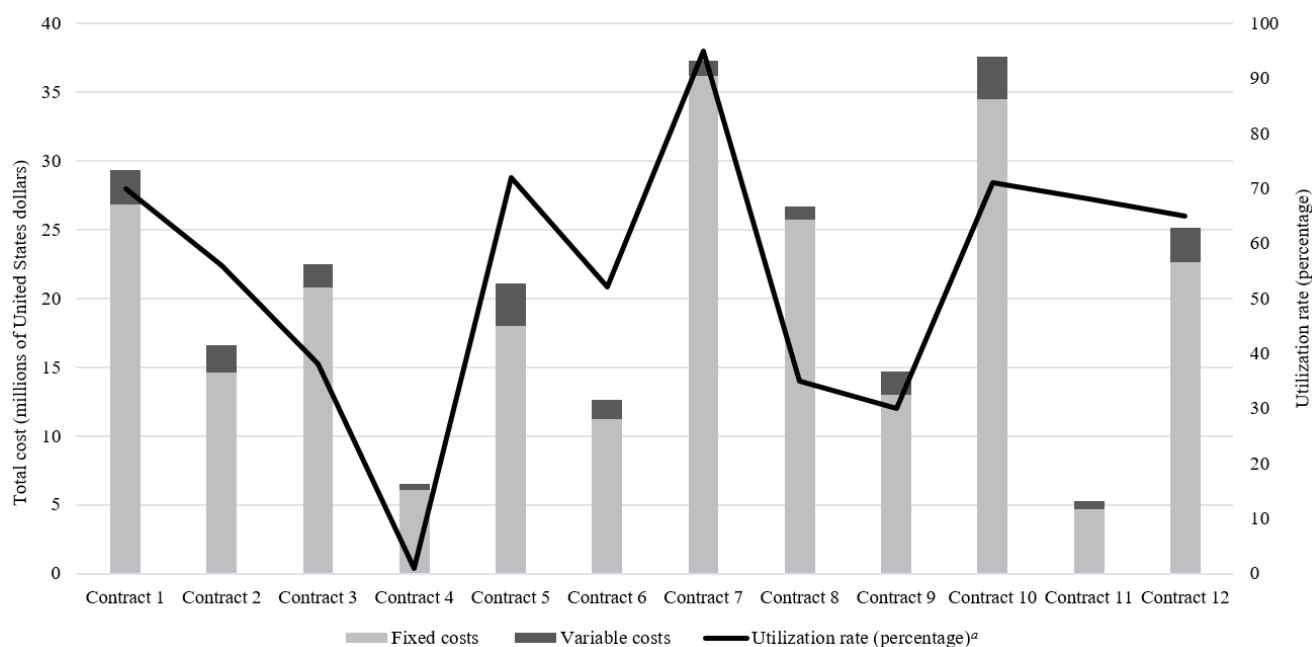
Source: Electronic monthly aviation report.

<sup>6</sup> The Office of Supply Chain Management provided three examples of larger aircraft being selected because they were cheaper than the smaller aircraft required in the statement of work, indicating that passenger occupancy in these cases would be lower.

39. Underutilization of aviation assets due to low occupancy rates or underutilized flight hours is costly due to the inherent high fixed costs in the contracts. In 12 of the 15 contracts reviewed, fixed costs<sup>7</sup> amounted to more than 85 per cent of the total bid cost, as shown in figure III and table 6. This resulted in payments close to the contracted amounts even though there were significant variations between anticipated occupancy rates and flight hours and those used.

40. In terms of flight hours, 4 out of 15 contracts had flight hour utilization rates<sup>8</sup> between 0 and 50 per cent, including one with a 1 per cent utilization rate (17 flight hours in 30 months vs. 1,700 in the contract). More realistic estimation of flight hours and passenger occupancy by field missions would lead to acquisition of air assets with capacity more in line with the requirements. The Office of Supply Chain Management commented that the relationship between flight hours and aircraft capability requirement was not linear. Certain capabilities were required irrespective of use, depending on the situation on the ground.

Figure III  
Fixed costs component in commercial bids and utilization rates



Source: Procurement files and electronic monthly aviation report.

<sup>a</sup> Flight hours apportioned until the period ending 30 June 2023.

<sup>7</sup> Fixed costs consist of: (a) one-time costs (positioning/de-positioning/painting); and (b) annual operating costs (base costs, crew, accommodation, meals, transport).

<sup>8</sup> The utilization rate is computed as the ratio of actual flight hours to estimated flight hours apportioned over the contract utilization period.

Table 6  
Fixed costs component in commercial bids and utilization rates

	<i>Estimated flight hours per annum</i>	<i>Utilization rate<sup>a</sup> (percentage)</i>	<i>Winning bid amount (millions of United States dollars)</i>			<i>Fixed costs ratio (percentage)</i>
			<i>Fixed costs</i>	<i>Variable costs</i>	<i>Total</i>	
Contract 1	1 200	70	26.8	2.5	29.3	91
Contract 2	960	56	14.6	2.0	16.6	88
Contract 3	1 200	38	20.8	1.7	22.5	93
Contract 4	620	1	6.1	0.4	6.5	94
Contract 5	1 200	72	18.0	3.1	21.1	85
Contract 6	960	52	11.2	1.4	12.6	89
Contract 7	720	95	36.2	1.1	37.3	97
Contract 8	720	35	25.7	1.0	26.7	96
Contract 9	960	30	13.0	1.7	14.7	88
Contract 10	600	71	34.5	3.1	37.6	92
Contract 11	600	68	4.7	0.6	5.3	89
Contract 12	840	65	22.6	2.5	25.1	90

Source: Procurement files and electronic monthly aviation report.

<sup>a</sup> Flight hours apportioned until the period ending 30 June 2023.

41. The Office of Supply Chain Management also stated that it did not have an adequate management tool to validate missions' aviation requirements for commercial aviation services because the electronic monthly aviation report was used primarily for budgeting and payment purposes and did not: (a) provide information on the number of passengers per flight; or (b) incorporate contextual factors such as areas of operation, distance, field elevation, availability of diversion airfields, prevailing weather conditions, airport infrastructure, navigational aids, fuel availability and missions' decision to task an aircraft type, whether fully occupied or not. According to the Office, the existing aviation information management system was functional to some extent but did not provide granular data to support comprehensive aircraft utilization analysis at the aggregate level.

42. The Office of Supply Chain Management further indicated that it provided comments on missions' resourcing priorities, including fleet composition, utilization pattern and rate, changes in assets and flight hours and needs assessment during downsizing and liquidation, if requested by missions. However, due to the implementation of the delegation of authority, this practice had become less common, as full responsibility and authority over the resources rested with missions.

#### Recommendation 5

The Department of Operational Support should take steps to enhance the aviation information system and improve the capability to monitor trends such as passenger occupancy data and flight hours and validate missions' aviation requirements for commercial aviation services, taking into consideration the operational environment.



*Comments of the Department of Operational Support.* The Department accepted recommendation 5 and stated that it was working on a project to improve the aviation management system, from planning and scheduling to operational tracking and reporting.

*Comments of OIOS.* Recommendation 5 remains open pending receipt of evidence of implementation of the enhanced aviation information system.

**(b) Request for proposal solicitation method not sufficiently used**

43. In April 2014, the Procurement Division announced a transition in the solicitation method for long-term aircraft charter from the invitation to bid to the request for proposal. Invitations to bid define the minimum requirements to be met, and bids are assessed based on pass/fail criteria in the statement of work. On the other hand, proposals in response to requests for proposal allow air operators to provide the Organization with solutions that best address operational requirements based on their logistical expertise, which are then evaluated against mandatory criteria and weighted and ranked.

44. In an external consultant study dated 30 October 2020, the conclusion was that the request for proposal method for acquisition of aviation services better reflected the United Nations procurement principles. In the consultant study, it was further recommended that the vendor management process and data and analytics capabilities be enhanced and vendors be monitored during contract execution to enable capacity adjustments, among other recommendations. Since the conclusion of the consultancy, however, there has been no solicitation for long-term aviation services using a request for proposal; instead, an invitation to bid was used. The Office of Supply Chain Management commented that using the request for proposal method was a complex and resource-driven exercise, as it required more effort to prepare a statement of work (e.g. granular logistics data were required to establish and assign costs to the requirements), define technical evaluation criteria and conduct technical evaluations, which would also result in longer procurement. OIOS also noted that missions were not submitting aviation requirements to the Office of Supply Chain Management in a timely manner to allow for solicitations using the request for proposal method. In 15 solicitations reviewed, requirements were received on average 3.6 months before the service was needed. Reliance on invitations to bid may hinder cost-saving opportunities and finding best solutions for the Organization. The Office further commented that it had put in place mechanisms to initiate timely procurement actions, including regular monitoring of the contract portfolio and expiry dates and communicating them to the missions, reminding missions to submit timely statements of work.

**Recommendation 6**

**The Department of Operational Support should initiate relevant activities in accordance with the external consultant study, including utilizing the request for proposal method where appropriate to source air transportation solutions that provide the best value.**

*Comments of the Department of Operational Support.* The Department accepted recommendation 6 subject to implementation of recommendation 5.

*Comments of OIOS.* Recommendation 6 remains open pending receipt of evidence of utilization of the request for proposal method where appropriate to source air transportation solutions.

**(c) Inadequate review and approval of technical evaluation of bids**

45. A technical evaluation committee consisting of at least two members from the Air Transport Service conducts technical evaluations to assess vendors' offers based on predefined technical evaluation criteria. The results are detailed in a technical evaluation report, including any safety concerns.

46. OIOS reviewed 15 solicitations and identified five cases where bids were assessed as acceptable even though relevant information was not provided, or where bids were rejected without adequate justification. Missing information included incomplete or inadequate details on pilot experience for the offered aircraft type and evidence that a selected air operator for a standby aircraft charter agreement<sup>9</sup> for aeromedical evacuation could operate in all the required locations. In addition, one air operator was assessed as technically unacceptable due to the inability of its offered aircraft to load the vehicle that required transporting, despite the air operator providing a photograph of the vehicle loaded in the cargo cabin of the aircraft. The Office of Supply Chain Management commented that the mission confirmed, based on physical examination, that the aircraft was unable to load the vehicle. However, the Office could not provide evidence of the examination conducted by the mission. The commercial offer of the winning vendor was higher by \$21 million, or 167 per cent, than that of the disqualified air operator.

47. Furthermore, past performance of existing or returning air operators should also be assessed as part of the technical evaluation. Around 27 of 175 contracts (or 15 per cent) were awarded to the same vendor providing services with the same aircraft type in the same mission. However, there was no evidence of performance assessments at the end of the previous contracts in 19 of the 27 cases. This posed a risk of continued engagement of vendors with poor performance. For example, a long-term charter agreement was renewed for MINUSMA in November 2020 without finalization of the performance evaluation, although in a partially complete evaluation the air operator's performance had been assessed as unsatisfactory for technical reasons such as malfunction of the electrical control system and flaps control and due to poor standards of maintenance. The Office of Supply Chain Management commented that missions communicated vendor performance issues to it for resolution and that the missions were responsible for conducting end-of-contract performance evaluations and uploading evaluation reports in the contract performance reporting tool. However, it is the Office's responsibility to ensure satisfactory vendor performance before contract award.

**Recommendation 7**

**The Department of Operational Support should provide guidance to technical evaluation teams on documenting justifications for the results of technical evaluation based on the statement of work requirements.**

*Comments of the Department of Operational Support.* The Department accepted recommendation 7.

*Comments of OIOS.* Recommendation 7 remains open pending receipt of guidance to technical evaluation teams.

<sup>9</sup> A system contact arrangement that does not involve a separate and iterative formal solicitation process for each mission.

**(d) Short-term cargo aviation services considerations**

48. The Office of Supply Chain Management engaged with four brokerage companies to provide short-term cargo aviation services during the audit period. However, the use of brokers posed safety and reputational risks to the Organization because brokers often did not provide the tail number of the offered aircraft to enable the Office to review the safety record of air operators engaged by brokers. However, at the time of writing, a working group in the Office was finalizing a requirement for brokers to submit tail numbers of proposed aircraft.

49. OIOS reviewed 8 of 47 short-term aviation cargo contracts valued at \$54.2 million and noted that cargo aviation services were required, on average, within 38 days from the date of request due to urgent requirements. Establishing standby aircraft charter agreements for these services would help to facilitate their acquisition within the short turnaround time in which they are usually required. This concept proved to be useful for aeromedical evacuations during the pandemic, as it provided the Organization with immediate availability of aviation services to support mission requirements. The Office of Supply Chain Management conducted two standby aircraft charter agreement solicitations using invitations to bid, one of which was for a large fixed-wing cargo aircraft. Procurement was incomplete due to the ineligibility of bidders because of the ICAO significant safety concern. The second solicitation was for a medium fixed-wing aircraft, which was reissued because there was no response to the first invitation to bid, and the procurement is currently in the technical evaluation stage. Given the efforts of the Office, OIOS does not raise a recommendation.

**C. Acquisition of military aviation services**

**1. Adequate process in place for communicating military aviation services requirements**

50. New requirements for military aviation services are included in quarterly uniformed capability requirements for United Nations peacekeeping and disseminated to Member States through various methods. The Office of Military Affairs assesses and ranks troop-contributing country capabilities and readiness to meet Member State pledges for uniformed capability requirements through assessment and advisory visits. This process was adequate to provide a transparent mechanism for the Organization to communicate its needs and for Member States to respond. As at 30 June 2023, there were 24 pledges for aviation-related capabilities from 17 countries.

**2. Predeployment visits did not fully assess safety risk**

51. The Office of Military Affairs conducts two formal visits to troop-contributing countries to ensure readiness and preparedness before the deployment of their military aviation units. Assessment and advisory visits are conducted to obtain an understanding of the ability and readiness of troop-contributing countries wishing to contribute and, after letter of assist negotiations, predeployment visits are conducted to verify military aviation assets in accordance with the letter of assist. During the visits, the Office's teams are expected to assess potential safety issues and verify the flight safety programme. OIOS review indicated that unavailability of equipment critical for air operations and aviation safety were not consistently addressed in predeployment visit verifications. This led to a ground proximity warning system not being deployed in MINUSMA and a weather radar and a traffic collision avoidance

system<sup>10</sup> not being deployed or included in the letter of assist for MINUSCA. OIOS also noted that a traffic collision avoidance system was included as a requirement in only one out of five statements of user requirement reviewed.

52. The Office of Military Affairs commented that the United Nations accepted some deviations from statements of user requirement if they did not present serious operational shortcomings and shortfalls. In addition, some missions, such as MINUSMA, provided military aviation units with the necessary equipment and access to systems, such as the satellite tracking system.

53. Aviation safety officers, either from the Office of Supply Chain Management or from the mission, were not part of the visiting teams in 10 (6 assessment and advisory visits and 4 predeployment visits) out of 14 visits reviewed due to the unavailability of staff or travel funds. This increased the risk of military aircraft subsequently failing to meet key safety requirements. The quarterly aviation safety occurrences and hazards review by the Department of Operational Support reported 14 accidents and 25 serious incidents related to the operation of military aviation assets for the period from January 2019 to 30 June 2023. Therefore, the assessment of safety risks and the availability of essential equipment are critical during the assessment and advisory visit and predeployment visit. The Department of Peace Operations commented that technical experts from the Office were always invited and that predeployment visits were funded by the missions' budgets. The Department of Operational Support commented that, when it was not possible to include aviation safety officers in the visits, an aviation expert from the Air Transport Service conducted the aviation safety assessment. However, efforts should be made to include aviation safety experts either from the Office or from field missions in assessment and advisory visits and predeployment visits.

#### **Recommendation 8**

**The Department of Peace Operations should, in coordination with the Department of Operational Support and field missions, take measures to include technical experts in assessment and advisory and predeployment visits to improve their effectiveness.**

*Comments of the Department of Peace Operations.* The Department accepted recommendation 8 and stated that it would issue guidance to implement the recommendation.

*Comments of OIOS.* Recommendation 8 remains open pending receipt of guidance for inclusion of technical experts in assessment and advisory visits and predeployment visits.

### **3. Issue of excessive aircraft “not available” days was being addressed**

54. The letters of assist signed between the United Nations and troop-contributing countries for the provision of military aviation assets specify the agreed effective operation dates. The units have an allowance for “not available” days of approximately eight days each month for maintenance and crew rest. An analysis of data for “not available” days in nine missions for 63 letters of assist during the audit period indicated that 70 per cent of aviation assets did not meet the availability requirement of 23 days (21 days in February) per month at least once. This included 68 assets that were not available for 347 months out of 4,202 available months (or

<sup>10</sup> An aircraft collision avoidance system designed to reduce the likelihood of a mid-air collision between aircraft.

8 per cent) for all assets. Unavailability of military aircraft may affect mission operations. The audit of air operations in UNMISS (OIOS report No. 2022/086) indicated that, for military aircraft, unavailability totalled 756 days; however, the Mission ensured that the required minimum number of aircraft was always available for tasking to minimize operational disruptions. According to the terms of letters of assist, troop-contributing countries are paid on actual hours flown in addition to the stipulated fixed costs. In October 2022, the military performance evaluation task force in the Office of Military Affairs, in coordination with the Air Transport Service, rolled out military aviation unit performance standards (task, standards and indicators) to missions in accordance with the United Nations Peacekeeping Missions Military Aviation Unit Manual. Availability and serviceability of military air assets, ground service and special equipment are covered as part of the assessment. Therefore, OIOS does not raise a recommendation thereon.

## Annex

## Management response to the recommendations of the Office of Internal Oversight Services

<i>Recommendation</i>	<i>Critical<sup>a</sup>/Important<sup>b</sup></i>	<i>Accepted?</i>	<i>Title of responsible individual</i>	<i>Implementation date</i>	<i>Comments</i>
<b>Recommendation 1</b> The Department of Peace Operations should, in consultation with the Department of Operational Support and taking into consideration mandate delivery, associated costs and operational and security context, remind field missions: (a) to monitor tasking data to identify opportunities for optimal utilization of military and commercial aviation services; and (b) to periodically review the best mix of commercial and military aircraft when planning demand for aviation services.	Important	Yes	Military Adviser	31 March 2026	The Department of Peace Operations, in consultation with the Department of Operational Support, will take the necessary action to implement the recommendation.
<b>Recommendation 2</b> The Department of Operational Support should remind field missions, through the Controller's budget instructions, to conduct cost-benefit analysis for aviation infrastructure projects as part of acquisition planning for aviation services, taking into account quantitative and qualitative factors.	Important	Yes	Chief, Air Transport Service	31 March 2025	The Department of Operational Support will take the necessary action to implement the recommendation.
<b>Recommendation 3</b> The Department of Operational Support should strengthen the technical evaluation process for registration of air operators, by: (a) implementing adequate records management and retention procedures; (b) reviewing technical evaluation criteria that can be waived; and (c) assessing the capacity of the technical evaluation function to ensure an adequate technical supervision mechanism.	Important	Yes	Chief, EOS	31 March 2026	The comments of the Department of Operational Support are reflected in the report.
<b>Recommendation 4</b> The Department of Operational Support should reassess its commercial evaluation criteria for registration of air operators to place appropriate emphasis on metrics that measure the financial strength of air operators, following the conclusion of the COVID-19 emergency.	Important	Yes	Chief, Enabling and Outreach Service	31 March 2025	The comments of the Department of Operational Support are reflected in the report.

<i>Recommendation</i>	<i>Critical<sup>a</sup>/Important<sup>b</sup></i>	<i>Accepted?</i>	<i>Title of responsible individual</i>	<i>Implementation date</i>	<i>Comments</i>
<b>Recommendation 5</b>  The Department of Operational Support should take steps to enhance the aviation information system and improve the capability to monitor trends such as passenger occupancy data and flight hours and validate missions' aviation requirements for commercial aviation services, taking into consideration the operational environment.	Important	Yes	Chief, Air Transport Service	31 March 2026	The comments of the Department of Operational Support are reflected in the report.
<b>Recommendation 6</b>  The Department of Operational Support should initiate relevant activities in accordance with the external consultant study, including utilizing the request for proposal method where appropriate to source air transportation solutions that provide the best value.	Important	Yes	Assistant Secretary-General for Supply Chain Management	31 March 2027	Subject to the implementation of recommendation 5 above.
<b>Recommendation 7</b>  The Department of Operational Support should provide guidance to technical evaluation teams on documenting justifications for the results of technical evaluation based on the statement of work requirements.	Important	Yes	Assistant Secretary-General for Supply Chain Management	31 March 2026	The comments of the Department of Operational Support are reflected in the report.
<b>Recommendation 8</b>  The Department of Peace Operations should, in coordination with the Department of Operational Support and field missions, take measures to include technical experts in assessment and advisory and predeployment visits to improve their effectiveness.	Important	Yes	Military Adviser	31 March 2026	The Department of Peace Operations, in coordination with the Department of Operational Support and field missions, will issue guidance to implement the recommendation.

<sup>a</sup> Critical recommendations address those risk issues that require immediate management attention. Failure to take action could have a critical or significant adverse impact on the Organization.

<sup>b</sup> Important recommendations address those risk issues that require timely management attention. Failure to take action could have a high or moderate adverse impact on the Organization.