



# **INTERNAL AUDIT DIVISION**

## **REPORT 2021/028**

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### **Audit of supply chain management in the United Nations Disengagement Observer Force**

**Improvements were needed in demand  
planning and timeliness of inbound deliveries**

**22 June 2021**

**Assignment No. AP2019-670-01**

# **Audit of supply chain management in the United Nations Disengagement Observer Force**

## **EXECUTIVE SUMMARY**

The Office of Internal Oversight Services (OIOS) conducted an audit of supply chain management in the United Nations Disengagement Observer Force (UNDOF). The objective of the audit was to assess whether the Mission had implemented efficient and effective mechanisms for a well-managed and agile supply chain. The audit covered the period from July 2019 to December 2020 and included: (a) demand planning activities; (b) sourcing activities; (c) delivery activities; (d) inventory management; and (e) risk management.

UNDOF made efforts to implement a relative stable procurement strategy with no accelerated end of year procurement and took steps to ensure the accuracy of inventory records. However, UNDOF needed to enhance the accuracy and reliability of its demand and delivery plans by actively coordinating its supply chain planning activities and promoting collaboration among the Acquisition Planning Unit, technical sections and the United Nations Global Service Centre.

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

- Develop and implement an action plan for the Acquisition Planning Unit to provide additional guidance to technical sections in forecasting the Mission's requirements for goods and services and preparing gross and net demand plans;
- Develop Mission-specific supply chain key performance indicators to measure and monitor deviations between actual and forecasted acquisitions; and
- Analyze reasons for delays in the completion of inbound deliveries and take action to minimize them by, for example, proactively engaging with vendors, imposing liquidated damages and implementing the Instant Feedback System.

UNDOF accepted the recommendations and has initiated action to implement them.

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# Audit of supply chain management in the United Nations Disengagement Observer Force

## I. BACKGROUND

1. The Office of Internal Oversight Services (OIOS) conducted an audit of supply chain management (SCM) in the United Nations Disengagement Observer Force (UNDOF).
2. UNDOF is headquartered at Camp Faouar in the Golan Heights and has an authorized strength of 1,250 military troops and 143 civilian staff comprising 56 international and 87 national staff. Forty-four international and 75 national staff are currently stationed in Camp Faouar (Bravo-side), while 12 international and 12 national staff are at the operational base in Camp Zouani (Alpha-side).
3. The Mission's SCM is governed by the Department of Operational Support (DOS) Supply Chain Management Blueprint (2017) and Supply Chain Planning Operational Guidance (2018). Additional guidance is provided in the Procurement and Centralized Warehouse Operations in the Field Manuals.
4. The SCM pillar is headed by the Chief, SCM at the P-5 level and divided into five units, namely, Contracts Management, Acquisition Plans and Requisitioning Unit, Procurement, Movement Control, Integrated Warehouse, and Property Management. Each Unit is headed by a staff at the field service level. The Chief, SCM reports to the Chief of Mission Support. From the 2019/20 financial year, there were 50 budgeted posts for the SCM pillar comprising one P-5, 13 field service and 36 national staff.
5. The approved budgets for the financial years 2018/19, 2019/20 and 2020/21 were \$60.3 million \$74 million and \$64.2 million, respectively as specified in Table 1. The increase in the 2019/20 budget was for the rehabilitation and reoccupation of military positions that were abandoned during the Syrian civil war.

**Table 1: UNDOF budget and expenses (\$ million)**

| <b>Budget</b>        | <b>Budget<br/>2018/19</b> | <b>Budget<br/>2019/20</b> | <b>Appropriated<br/>2019/20</b> | <b>Expensed<br/>2019/20</b> | <b>Budget<br/>2020/21</b> |
|----------------------|---------------------------|---------------------------|---------------------------------|-----------------------------|---------------------------|
| Military contingents | 32.574                    | 39.785                    | 39.285                          | 31.944                      | 37.786                    |
| Civilian personnel   | 14.351                    | 15.557                    | 15.557                          | 14.503                      | 16.374                    |
| Operational costs    | 13.368                    | 14.749                    | 14.567                          | 14.444                      | 10.077                    |
| <b>TOTAL</b>         | <b>60.295</b>             | <b>70.092</b>             | <b>69.409</b>                   | <b>60.891</b>               | <b>64.239</b>             |

6. Comments provided by UNDOF are incorporated in italics.

## II. AUDIT OBJECTIVE, SCOPE AND METHODOLOGY

7. The objective of the audit was to assess whether the Mission had implemented efficient and effective mechanisms for a well-managed and agile supply chain.
8. This audit was included in the 2020 risk-based work plan of OIOS due to the importance of effective management of the supply chain for the implementation of the UNDOF mandate.
9. OIOS conducted this audit from August 2020 to March 2021. The audit covered the period from July 2019 to December 2020. Based on an activity-level risk assessment, the audit covered higher and medium risks areas in supply chain management, which included: (a) demand planning activities; (b) sourcing activities; (c) delivery activities; (d) inventory management; and (e) risk management.

10. The audit methodology included: (a) interview with key personnel, (b) review of relevant documentation, (c) analytical review of data, and (d) sample testing.

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

### III. AUDIT RESULTS

#### A. Demand planning activities

##### Need to improve the demand planning process

12. Technical sections such as Medical, Transport, Field Technology, and Engineering and Facilities Management are responsible for estimating their requirements for goods and services (demand planning) as guided by DOS. Thereafter, these sections upload the demand data into the Demand and Acquisition Planning (DAP) tool, a web-based application designed to facilitate collection, review, and aggregation of annual demand plans of peace operations.

13. A review of UNDOF's 2019/20 and 2020/21 demand plans showed that they had not been based on the established demand planning process. DOS requires missions to forecast their gross demand based on the size of their clientele base, estimated level of activity, asset replacement requirements and other considerations. The gross demand is adjusted to arrive at the net demand, considering factors such as current inventory and consumption patterns<sup>1</sup>. However, none of the technical sections used any forecasting model or adequate historical data to determine their gross demand. Instead, the sections placed heavy reliance on previous year's budget figures or other unconventional bases to estimate future requirements. For instance, to estimate requirements for information and communication technology and motor vehicle spare parts, the Field Technology Section used a factor of 2 per cent of its total assets (in use and in inventory), while the Ground Transport Section used 2 per cent of the total value of all light passenger vehicles in the Mission. The Mission could not provide sufficient basis for the use of 2 per cent as it was not correlated to past consumption or any other metric. Assumptions used in arriving at demand requirements were not adequately documented and justified. Moreover, the Acquisition Planning Unit did not provide adequate guidance to technical sections.

14. Consequently, the Mission experienced stockouts and in some cases was carrying excess inventory in the warehouse although it had not declared any as excess stock. For instance, stock items as at June 2020 showed that out of total inventory of \$2.3 million, \$1.1 million or 48 per cent of stock had not been used in the year and \$753,000 or 33 per cent of items had a stock coverage ratio of more than one year, while only \$425,000 or 19 per cent had the desired coverage ratio of up to one year of stock.

**(1) UNDOF should develop and implement an action plan for the Acquisition Planning Unit to provide additional guidance to technical sections in forecasting the Mission's requirements for goods and services and preparing gross and net demand plans.**

*UNDOF accepted recommendation 1 and stated that there were limitations with the current DAP tool, as it was not linked to Umoja and did not have capabilities to determine critical parameters such as*

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<sup>1</sup> The Annual **Gross Demand** Plan represents the local entity's overall requirements for goods and services for the ensuing fiscal year. Gross demand is unconstrained and based on the actual operational requirements of the local entities. The Annual **Net Demand** Plan represents the local entity's net requirements for goods and services for the ensuing fiscal year. It derives from the Annual Gross Demand Plan less the projected holdings calculated based on the current inventory, the consumption rate as well as the ongoing procurement.

historical consumption, stock levels and procurement lead time. The Umoja Extension 2 demand and supply network planning (DP/SNP) solution, scheduled for roll-out in 2022, is expected to have the capability to resolve this known issue. The Acquisition Planning Unit will provide interim guidance prior to the deployment of the DP/SNP solution. Recommendation 1 remains open pending receipt of evidence of action taken to improve demand planning, including implementation of the Umoja Extension 2 DP/SNP solution.

Need to improve monitoring of implementation of the demand plan

15. UNDOF held integrated business planning (IBP) meetings with the United Nations Global Service Centre (UNGSC) monthly prior to the onset of the COVID-19 pandemic, but only once in the period February to December 2020. The IBP meetings are a collaborative forum to review the status of implementation and execution of demand, sourcing, acquisition and delivery plans. To complement these meetings, the Acquisition Planning Unit held quarterly local IBP meetings with technical sections to review implementation of their acquisition plans.

16. However, the monitoring was not robust enough to timely identify potential bottlenecks in the implementation of the acquisition plan. The Acquisition Planning Unit did not independently corroborate implementation status provided by technical sections on planned acquisitions with budget figures in Umoja. Moreover, deviations between the demand and acquisition plans and actual purchases were not discussed and studied in greater detail at the local and global IBP meetings. The Mission had not developed key performance indicators (KPIs) to measure the reliability and accuracy of demand forecasting by analyzing actual and planned acquisitions and making necessary adjustments in a continuous manner. There remained a need to determine the reasons for deviations and implement measures to ensure they are justified.

17. For instance, the below deviations were noted but not adequately reviewed and analyzed:

**Table 2: Deviations in implementation of acquisition plan for financial year 2019/20**

| Approved Budget                       |     | Approved Acquisition Plan |            |            | Procured (Source: Umoja) |                       |            |            |
|---------------------------------------|-----|---------------------------|------------|------------|--------------------------|-----------------------|------------|------------|
| Amount                                | No. | Item                      | Unit cost  | Total cost | No.                      | Item                  | Unit cost  | Total cost |
| <b>Engineering: Generators</b>        |     |                           |            |            |                          |                       |            |            |
|                                       | -   |                           |            |            | 1                        | Gen Set PV Diesel Hyb | \$ 191,165 | \$ 191,165 |
|                                       | -   |                           |            |            | 1                        | Gen Set PV Diesel Hyb | \$ 191,166 | \$ 191,166 |
|                                       | 2   | 75KVA                     | \$ 35,000  | \$ 70,000  | 4                        | 75Kva                 | \$ 16,838  | \$ 67,352  |
|                                       | 2   | 160KVA                    | \$ 60,000  | \$ 120,000 | 4                        | 125Kva                | \$ 24,600  | \$ 98,400  |
| \$ 60,000                             |     |                           |            | \$ 190,000 |                          |                       |            | \$ 553,984 |
| <b>Engineering: Prefab</b>            |     |                           |            |            |                          |                       |            |            |
|                                       | 8   | Accommodation             | \$ 50,000  | \$ 400,000 | 16                       | Accommodation         | \$ 34,258  | \$ 548,132 |
|                                       | 6   | Ablution                  | \$ 20,000  | \$ 120,000 | 20                       | Ablution              | Multiple   | \$ 198,918 |
| \$ 520,000                            |     |                           |            | \$ 520,000 |                          |                       |            | \$ 747,050 |
| <b>Transport: Vehicles</b>            |     |                           |            |            |                          |                       |            |            |
|                                       | 4   | Light passenger veh.      | \$ 23,800  | \$ 95,200  | 1                        | Light passenger veh.  | \$ 26,200  | \$ 26,200  |
|                                       | 2   | Special purpose veh.      | \$ 144,215 | \$ 288,430 | 1                        | Special purpose veh.  | \$ 105,605 | \$ 105,605 |
| \$ 383,630                            |     |                           |            | \$ 383,630 |                          |                       |            | \$ 134,805 |
| <b>CITS: Laptop/Desktop Computers</b> |     |                           |            |            |                          |                       |            |            |
|                                       | 54  | Desktop                   | \$978      | \$ 52,812  | 67                       | Desktop               | Multiple   | \$ 60,818  |
|                                       | -   | Laptop                    |            | \$ -       | 45                       | Laptop                | Multiple   | \$ 44,130  |
| \$ 52,812                             |     |                           |            | \$ 52,812  |                          |                       |            | \$ 104,948 |

Source: Umoja Enterprise Core Component

18. Both the 2019/20 and 2020/21 budgets were submitted to the Department of Management Strategy, Policy and Compliance in November of the preceding year, while the demand plan was submitted to UNGSC the following January. This implies that the budget was finalized prior to the finalization of the demand plan, which should have served as a basis for budget preparation. Accurate demand plans enable the Mission to formulate more realistic budgets that adequately support the Mission’s mandated operations and avoid overstocking and reduce wastage of resources. To address this, DOS launched the 2021/22 demand plan cycle in September 2020. Nevertheless, UNDOF needed to improve the accuracy of demands plans to enhance other supply chain planning activities, including delivery planning, discussed further in part C below.

**(2) UNDOF should develop Mission-specific supply chain key performance indicators to measure and monitor deviations between actual and forecasted acquisitions.**

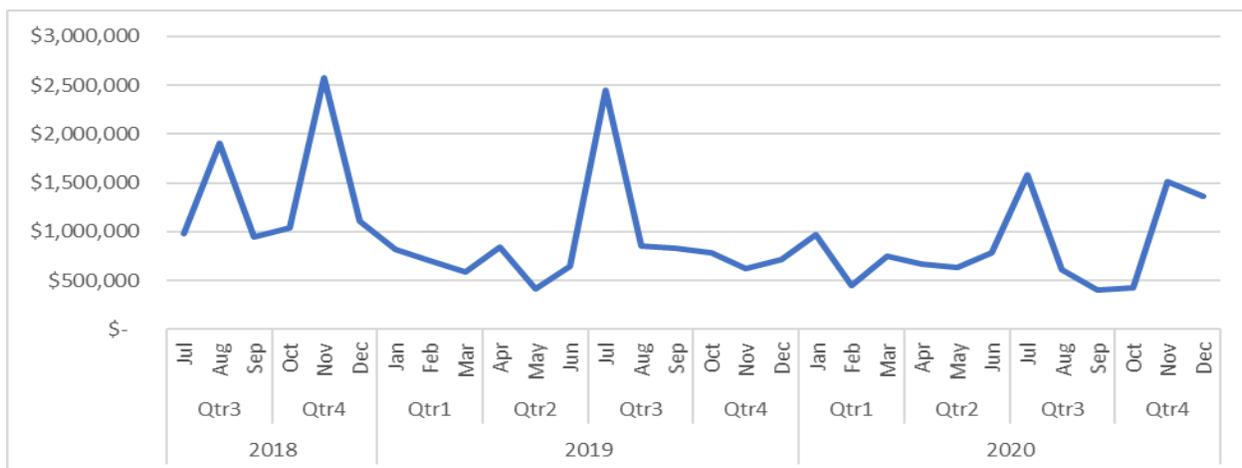
*UNDOF accepted recommendation 2 and stated that DOS had already established standard KPIs to be used by relevant entities. UNDOF would develop a plan to adopt/implement some of the relevant KPIs. Recommendation 2 remains open pending receipt of evidence that UNDOF had developed and was monitoring KPIs on the accuracy of its acquisition planning.*

## B. Sourcing activities

The Mission conducted a large volume of procurement in the first quarter as required

19. A review of all purchase orders raised during the period July 2018 to March 2021 valued at \$36.7 million indicated that there was no accelerated end of year procurement to utilize unspent budget. Procurement efforts were concentrated around July/August, after the approval of the budget, and November to ensure goods are received on time before the winter season of January/February.

**Figure 1: Distribution of purchase orders over July 2018 to March 2021**



Source: Umoja BI, Purchase Order Analysis Area

The Mission was monitoring optimal utilization of systems contracts

20. To achieve organization-wide efficiency and effectiveness through better pricing and economies of scale, missions are required to utilize systems contracts where available. A review of all purchase orders showed that UNDOF sourced 69 per cent of its contracted procurement for 2019/20 through the utilization of systems contracts. Table 3 shows a steady improvement in utilization of systems contracts from the financial year 2015/16 to 2019/20.

**Table 3: Value contracts by year (in millions of dollars)**

|  | 2015/16 | 2016/17 | 2017/18 | 2018/19 | 2019/20 |
|--|---------|---------|---------|---------|---------|
| <b>Local contract</b>                    | 4.140   | 5.369   | 5.713   | 3.272   | 3.456   |
| <b>Systems contract</b>                  | 4.396   | 5.459   | 6.389   | 6.954   | 7.694   |
| <b>Percentage local/systems contract</b> | 51.5%   | 50.4%   | 52.8%   | 68.0%   | 69.0%   |

Source: Umoja BI, Purchase Order Analysis Area

21. The value of local contracts for 2019/20 included those awarded under local procurement authority totaling \$1.4 million (12.5 per cent), where UNGSC had authorized the Mission to not utilize systems contracts. This included authorization to locally procure goods where the systems contract vendor is subject to United States trade restrictions on Syria. Had this Mission-specific situation not occurred, the utilization of systems contracts would have been 81.5 per cent. It is anticipated that the rate of utilization of systems contract would increase during 2020/21 since the Mission had completed its engineering projects related to the reoccupation of abandoned military positions. As the Mission justified the use of local procurement instead of existing systems contract and was monitoring to increase utilization of existing systems contracts, OIOS did not make a recommendation on this issue.

#### Exceptions to the Financial Rules were applied appropriately

22. During 2019/20, UNDOF invoked exceptions to formal methods of solicitations under Financial Rule (FR) 105.16 on 165 purchase orders totaling \$4 million or 29 per cent of total purchases as shown in Table 4. This was done after the Mission determined that applying formal methods of solicitation would not be in the best interest of the United Nations.

**Table 4: Methods of solicitation between July 2019 and December 2020 (in millions of dollars)**

| Financial Rule                             |   | 2019/20          |            | 2020/21         |            |
|--|---|------------------|------------|-----------------|------------|
|  |   | Amount           | POs        | Amount          | POs        |
| <b>221 Procurement Section</b>             |   |                  |            |                 |            |
| <b>105.15</b>                              | <b>Regular procurement</b>                                |                  |            |                 |            |
| (a)  | Invitation to bid   | \$ 1.950         | 66         | \$ 0.801        | 40         |
| (b)  | Request for proposal                                      | \$ 6.441         | 51         | \$ 3.038        | 42         |
| (c)  | Bid rejected  | \$ 0.406         | 10         | \$ 2.288        | 14         |
|  | <b>105.15 Total</b>                                       | <b>\$ 8.797</b>  | <b>127</b> | <b>\$ 6.128</b> | <b>96</b>  |
| <b>105.16</b>                              | <b>Exceptions to regular procurement</b>                  |                  |            |                 |            |
| (a)(i)                                     | No competitive market                                     | \$ 0.800         | 17         | \$ 0.357        | 16         |
| (a)(ii)                                    | Need to standardize requirement                           | \$ 2.047         | 76         | \$ 0.268        | 40         |
| (a)(iii)                                   | Cooperation with other organizations                      | \$ 0.002         | 1          | \$ 0.031        | 8          |
| (a)(iv)                                    | Continuation of previous procurement                      | \$ 0.023         | 2          | \$ 0.009        | 1          |
| (a)(ix)                                    | Formal solicitation will not produce satisfactory results | \$ 0.263         | 5          | -               | -          |
| (a)(vi)                                    | Lease or purchase of property                             | \$ 0.201         | 1          | -               | -          |
| (a)(vii)                                   | Exigence  | \$ 0.016         | 1          | \$ 0.185        | 2          |
| (a)(x)                                     | Amount below threshold for formal solicitation            | \$ 0.658         | 62         | \$ 0.466        | 59         |
|  | <b>105.16 Total</b>                                       | <b>\$ 4.010</b>  | <b>165</b> | <b>\$ 1.316</b> | <b>126</b> |
| <b>221 Procurement Section Subtotal</b>    |   | <b>\$ 12.804</b> | <b>292</b> | <b>\$ 7.443</b> | <b>222</b> |
| <b>222 Low Value Acquisitions Subtotal</b> |   | <b>\$ 1.075</b>  | <b>162</b> | <b>\$ 0.572</b> | <b>94</b>  |
| <b>Total</b>                               |   | <b>\$ 13.879</b> | <b>454</b> | <b>\$ 8.015</b> | <b>316</b> |

Source: Umoja BI, Purchase Order Analysis Area

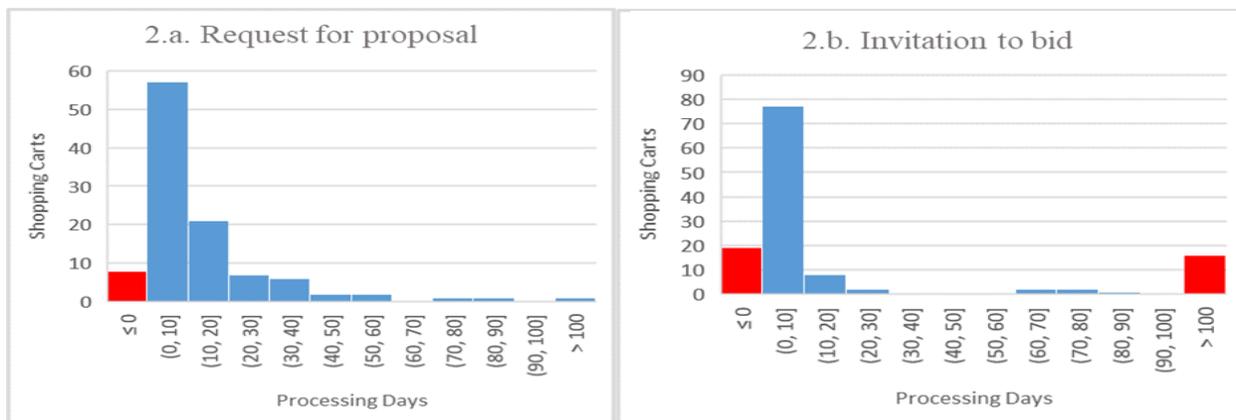
23. Concerning the need for standardized requirement, FR 105.16(a)(ii), solicitations included \$551,742 for generator spare parts and \$453,353 for standardized network and communication equipment.

The maximum amount for an individual purchase order recorded under FR 105.16(a)(x) was \$54,914, which was below the threshold for formal solicitation. OIOS concluded exceptions were properly applied.

Timelines from shopping cart creation to purchase order approval were adequate

24. An analysis of all invitations to bid and requests for proposal during the audit period, indicated both solicitation methods were mostly processed within 30 to 40 days as shown in Figure 2. However, for 16 shopping carts totaling \$179,500, it took the Mission over 100 days to complete the invitation to bid process. The delays mainly concerned engineering electrical and plumbing (\$165,680) for rehabilitation of positions where it was not possible to identify the exact requirements (material and work) at the start of the sourcing. These represented less than 2 per cent of the total value of the goods and services procured. Therefore, OIOS did not make a recommendation and concluded that the processing times for shopping carts and purchase orders were adequate.

**Figure 2: Processing times (days) of invitations to bid / requests for proposal**  
Processing days: days from creation of shopping cart to approval of purchase order



Source: Umoja BI, Purchase Order Analysis Area<sup>2</sup>

The Mission's utilization of low value acquisitions was adequate

25. Technical sections can procure goods and services directly up to a limit of \$10,000 if there are no existing contracts and for goods and services requirements that are non-recurring. The Mission raised 491 low value acquisitions (LVAs) amounting to \$1.6 million during the audit period.

26. A review of 56 LVAs valued at \$445,000 indicated LVAs were used for Mission or location specific procurements, purchases related to engineering projects or purchases where existing contracts did not meet the Mission's requirements. These included LVAs for spare parts for vehicles and generators. Although multiple systems contracts existed for combustion engine spare parts, these contracts were manufacturer specific and were not efficient to use to procure small orders for a variety of brands of equipment and vehicles. In 15 cases valued at \$276,637, LVAs were used to procure items from existing vendors; however, the items procured were not included in relevant contract catalogues. There were no significant cases noted where LVAs were used to acquire recurring items for which there were existing contracts or to split purchases. Therefore, OIOS concluded that controls on the utilization of LVAs were adequate.

<sup>2</sup> Negative processing days (≤ 0 in figure 2) indicate the shopping cart creation date was after purchase order approval date. These are instances where requirements changed, and a new/additional shopping cart was created for additional costs and assigned to an already existing purchase order. These changes are recorded in the purchase order and require renewed approval.

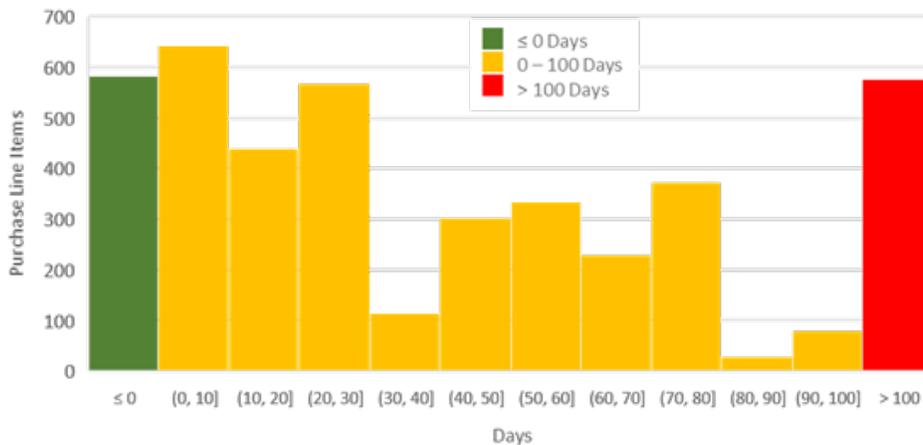
## C. Delivery activities

27. The efficiency and effectiveness of the delivery activities of UNDOF as measured by the upstream and downstream indices showed mixed performance. Upstream<sup>3</sup> activities were measured by responsiveness index and reliability index, while downstream activities were measured by delivery responsiveness and deliver reliability as explained below.

### a. Upstream responsiveness needed improvement

28. A review of all 328 purchase orders raised during the audit period involving 4,236 product line items valued at \$6.9 million indicated significant delays in the delivery of goods as shown in Figure 3 where: (i) 14 per cent of the product line items (583 out of 4,236) were delivered before the required date; (ii) 71 per cent were received between 30 and 100 days after the due date; and (iii) 15 per cent of ordered goods arrived in the Mission after a delay of more than 100 days. There were late deliveries on all types of procurement – systems contracts, local contracts and purchase orders without a contract. The delays were also noted by the Board of Auditors, which identified some purchase orders were delivered way past the delivery date by 111 to 235 days.

**Figure 3: Analysis of goods required versus goods received dates**



Source: Umoja BI, Purchase Order Analysis Area, only purchase orders for goods received during June 2019 and December 2020 as per Umoja Material Movement reports

29. Although the Mission had established a tracking system in January 2020 to monitor delivery due date for individual purchase orders, it was not properly monitoring its KPIs, thus not analyzing reasons for delays to take action to reduce them. For example, the Mission had not implemented measures to proactively engage with vendors to ensure timely delivery. Although liquidated damages are to be used as an incentive for supplier to deliver on time, the Mission only imposed liquidated damages totaling \$10,933 on five purchase orders between July 2018 and June 2020. As a result, deliveries were delayed, and stockouts have occurred.

30. In February 2021, the Office of Supply Chain Management (OSCM) in DOS implemented an online Instant Feedback System (IFS) to provide real-time electronic feedback on contract performance of vendors providing goods and services to peacekeeping missions. UNDOF needed to implement IFS to

<sup>3</sup> Upstream activities refer to those activities for freight or transportation of goods from the manufacturer/vendor to the United Nations, while downstream refer to processes for the delivery of goods from the United Nations warehouse or inventory to the end user.

strengthen the relationship with its vendors, improve their performance, promote timely corrective action and increase accountability.

**(3) UNDOF should further analyze reasons for delays in the completion of inbound deliveries and take action to minimize them by, for example, proactively engaging with vendors, imposing liquidated damages and implementing the Instant Feedback System.**

*UNDOF accepted recommendation 3 and stated that it had already enhanced the process to ensure goods are delivered on time for efficient and effective mandate implementation. Following a recommendation from the Board of Auditors, the role of expediting deliveries was reassigned from the Movement Control Unit to the Procurement Unit effective January 2021. Recommendation 3 remains open pending receipt of evidence of improvement in the delivery of goods and actions taken to address delays.*

b. Downstream responsiveness was adequate

31. A review of the Mission's downstream activities over the audit period showed that UNDOF had an average total downstream timeline<sup>4</sup> of 4.65 days consisting of reservation timeline of 0.5 days, goods issue timeline of 2.3 days and warehouse timeline (picking) of 1.85 days<sup>5</sup>. In terms of deliver reliability index as measured by perfect time, quantity and order fulfilment, UNDOF achieved 100 per cent for perfect quantity. However, only 32 per cent of orders were delivered to the destination by the requested delivery date. During the audit, lower figures were observed (perfect time of as low as 17 per cent) as downstream activities had been heavily influenced by COVID-19 measures. International supply chain staff were required to work from home and therefore unable to execute physical tasks such as receiving and inspection and issuance of stocks. These tasks were as much as possible executed by national and military staff; however, the administrative processing of certain activities was delayed. Given the unprecedented pandemic situation and considering the backlog had been resolved after the return of international staff to the workplace, OIOS did not make a recommendation.

## **D. Inventory management**

### Inventory counts were ongoing, and roll-out of Umoja Extension 2 was expected to improve management of stock levels

32. One of the key elements that facilitates accurate demand planning is the reliability, accuracy and visibility of missions' actual inventory holdings. The Centralized Warehouse Manual requires cycle counts to be conducted based on the ABC classification category, whereby the Mission needed to count fast moving items quarterly, medium moving items twice a year and slow-moving items yearly. According to Umoja inventory records, as at 31 December 2020, the Mission had total stock holdings valued at \$4.4 million. Mission management explained that physical count was being conducted consistently and it aimed for 100 per cent inventory count during the financial year. As of 31 December 2020, 54 per cent of the total inventory had been counted even though measures implemented to address the COVID-19 pandemic had limited the number of staff physically present in the Mission locations. For the same reason, OIOS could not conduct sample physical verification of the Mission's inventory.

<sup>4</sup> Downstream time refers to time taken from when a reservation is placed to the delivery of the goods or inventory to the end user.

<sup>5</sup> Reservation Time: Time from receipt of user request to reservation approval (goods are reserved but still in warehouse). Warehouse Time: Time from receipt of reservation till goods ready for issue/shipping (picking, packing). Goods issue time: Time from goods ready to ship/issue to goods shipped/issue.

33. Stock level control and inventory management as per the Centralized Warehouse Manual requires different stock levels (minimum, maximum, safety) for every stock item to be defined based on current stock holdings, consumption history and projected procurement lead times. The reorder point indicates the stock level at which the reorder of an article should be initiated. It is based on averages of procurement lead time and demand and the safety stock level. The latter is calculated using a statistical formula to account for deviations in these averages:

**Reorder Point:** Average demand per unit in X time \* lead time + **Safety Stock**

**Safety Stock** =  $z * \sqrt{(std. dev of demand^2 * avg lead time^2) + (st. dev of lead time^2 * avg. demand per unit)}$

34. A review of inventory records for fast moving items indicated stockouts on 58 out of 232 items. This occurred because of lack of proper stock management based on realistic average demand and lead times at the product level. Category managers were expected to compute stock levels manually, however, these calculations require insight into demand forecast and procurement lead times. As this information was not maintained, calculations for these stock levels might not be accurate. The Mission indicated that it used a “rule of thumb” to calculate the required stock levels. As a result, there was no assurance that stockouts will not reoccur.

35. As part of the ongoing roll-out of Umoja Extension 2 DP/SNP solution, OSCM was introducing functionalities for supply chain planning. This would enhance advance planning capabilities through the provision of insights into historical data, data-driven forecasting, real time information across other Umoja modules and what-if scenarios. Supply network planning is also expected to provide better analytical tools for supply fulfilment strategies as well as improve inventory management. This included implementing stock level metrics, including safety stock, minimum stock and reorder point stock levels as required by the Centralized Warehouse Manual. UNDOF has engaged with OSCM to ensure successful deployment of the solution by April 2022. Therefore, OIOS does not make a recommendation.

## **D. Risk management**

The Mission was reviewing supply chain risks related to unique events

36. UNDOF continued to review the risks that it faces in implementing its mandate and developed risk treatment and response plans for high and medium rated risks. The Mission appointed a risk management focal point, who reports to the Head of Mission and Force Commander through the Chief of Mission Support, to support risk management and compliance activities. UNDOF assessed risks and developed contingency plans including implementing an additional supply chain route through Jordan.

37. However, the supply chain contingency planning did not identify appropriate actions to respond to other unexpected events including stockouts and other unique events resulting in severe disruptions to the supply chain, as envisaged in the SCM Blueprint. The outbreak of the COVID-19 pandemic showed the importance of developing contingency plans to maintain business continuity, build supply chain resiliency, and deal with future crises in the wake of increasing supply chain volatility and evolving situations in the Mission. Although risks were identified under business continuity related to pandemics and major supply chain disruptions, they were rated as low. Therefore, risk treatment and response plans were not developed as these were only done for high and medium risks.

38. UNDOF, in consultation with the Department of Management Strategy, Policy and Compliance, has since started a review of operational, financial and reputational risks associated with unique events such as the COVID-19 pandemic with a view of including those additional risks in its risk register. Therefore, OIOS is not making a recommendation.

#### **IV. ACKNOWLEDGEMENT**

39. OIOS wishes to express its appreciation to the management and staff of UNDOF 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 supply chain management in the United Nations Disengagement Observer Force

| Rec. no. | Recommendation   | Critical <sup>6</sup> /<br>Important <sup>7</sup> | C/<br>O <sup>8</sup> | Actions needed to close recommendation   | Implementation date <sup>9</sup> |
|----------|--|---|----------------------|--|----------------------------------|
| 1        | UNDOF should develop and implement an action plan for the Acquisition Planning Unit to provide additional guidance to technical sections in forecasting the Mission's requirements for goods and services and preparing gross and net demand plans.    | Important   | O                    | Receipt of evidence of action taken to improve demand planning, including implementation of the Umoja Extension 2 DP/SNP solution. | 31 May 2022                      |
| 2        | UNDOF should develop Mission-specific supply chain key performance indicators to measure and monitor deviations between actual and forecasted acquisitions.  | Important   | O                    | Receipt of evidence that UNDOF had developed and was monitoring KPIs on the accuracy of its acquisition planning.                  | 31 July 2021                     |
| 3        | UNDOF should further analyze reasons for delays in the completion of inbound deliveries and take action to minimize them by, for example, proactively engaging with vendors, imposing liquidated damages and implementing the Instant Feedback System. | Important   | O                    | Receipt of evidence of improvement in the delivery of goods and actions taken to address delays.                                   | 31 July 2021                     |

<sup>6</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>7</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.

<sup>8</sup> Please note the value C denotes closed recommendations whereas O refers to open recommendations.

<sup>9</sup> Date provided by UNDOF in response to recommendations.

# **APPENDIX I**

## **Management Response**

  
**UNITED NATIONS      NATIONS UNIES**

**DISENGAGEMENT OBSERVER FORCE**

Office of the Head of Mission and Force Commander  
UNDOF Headquarters, Camp Faouar

**INTER - OFFICE MEMORENDUM**

REF: DOF/FC/100/2021

DATE: 12 Jun 2021

TO: Eleanor T. Burns, Director  
DE: Internal Audit Division, OIOS

FROM: Lt Gen Ishwar Hamal, Head of Mission and Force Commander  
A: UNDOF



SUBJECT: **UNDOF response on draft report on an audit of supply chain management in**  
OBJET: **the United Nations Disengagement Observer Force (Assignment No. AP2019/670/01)**

1. Reference is made to the interoffice memorandum OIOS-2021-0844 dated 9 June 2021 concerning the Office of Internal Oversight Services (OIOS) Evaluation of Organizational Culture in Peacekeeping Operations.
2. We appreciate the efforts made in developing the draft report and accept the Draft Report recommendations.
3. Please find attached the above-mentioned report with our comments on improvements needed in demand planning and timeliness of inbound deliveries, including an action plan with target dates and the titles of the individuals responsible for implementing the recommendations in Appendix I.

Thank you.

CC: Mr. Bernard Lee, UNDOF  
Mr. Henry Nuamah, UNDOF  
Ms. Joyce May Faith Mulinde, UNDOF

## Management Response

## Audit of supply chain management in the United Nations Disengagement Observer Force

| Rec. no. | Recommendation  | Critical <sup>1</sup> /<br>Important <sup>2</sup> | Accepted?<br>(Yes/No) | Title of responsible individual | Implementation date | Client comments  |
|----------|---|---|-----------------------|---------------------------------|---------------------|--|
| 1        | UNDOF should develop and implement an action plan for the Acquisition Planning Unit to provide additional guidance to the technical sections in forecasting the Mission's requirements for goods and services and preparing gross and net demand plans. | Important   | Yes                   | Chief SCM                       | Jan - May 2022      | UNDOF agrees with this recommendation. However, there are limitations in reaction to the current Demand and Acquisition Planning tool. The DAP is not linked to Umoja and does not have the capabilities to determine historical consumption, stock levels, procurement lead time, etc., which are critical parameters. The upcoming roll out of the Umoja Extension 2 (UE2) Demand Planning and Supply Network Planning (DP/SNP is expected to have the capability to resolve this known issue. Go live is anticipated between January and May 2022. The ACMU will however, provide an interim guidance prior to the deployment of EU2. |
| 2        | UNDOF should develop Mission-specific supply chain key performance indicators to measure and monitor deviations between actual and forecasted acquisitions.   | Important   | Yes                   | Chief SCM                       | July 2021           | UNDOF agrees with this recommendation. DOS has already established standard KPIs to be used by relevant UN entities. UNDOF will develop a plan to adopt/ implement some of the relevant Key Performance Indicators (KPIs).   |

<sup>1</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>2</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.

Management Response

Audit of supply chain management in the United Nations Disengagement Observer Force

|   |  |           |     |           |                                   |  |
|---|--|-----------|-----|-----------|-----------------------------------|--|
|   |  |           |     |           |                                   |  |
| 3 | UNDOF should further analyze reasons for delays in the completion of inbound deliveries and take action to minimize them by, for example, proactively engaging with vendors, imposing liquidated damages and implementing the Instant Feedback System. | Important | Yes | Chief SCM | Already Implemented, January 2021 | UNDOF agrees with this recommendation. The Mission received the same recommendation in the 2020/21 BOA. UNDOF has already enhanced the already existing expediting process to ensure goods are delivered on time for an efficient and effective mandate implementation, Following the BOA recommendation, expediting function was reassigned from Movcon to Procurement as a solution. |