



Office of Internal Oversight Services

## **INTERNAL AUDIT DIVISION**

# **AUDIT REPORT**

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## **Fuel Management in UNIFIL**

**The Mission lacks effective internal control mechanisms over the management of fuel**

**12 May 2009**

**Assignment No. AP2008/672/06**

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United Nations  Nations Unies

INTEROFFICE MEMORANDUM

MEMORANDUM INTERIEUR

OFFICE OF INTERNAL OVERSIGHT SERVICES · BUREAU DES SERVICES DE CONTRÔLE INTERNE  
INTERNAL AUDIT DIVISION · DIVISION DE L'AUDIT INTERNE

TO: Major General Claudio Graziano  
A: Force Commander and Head of Mission  
UNIFIL

DATE: 12 May 2009

REFERENCE: IAD: 09-02414

FROM: Fatoumata Ndiaye, Acting Director  
DE: Internal Audit Division, OIOS



SUBJECT: **Assignment No. AP2008/672/06 – Audit of Fuel Management**

OBJET:

1. I am pleased to present the report on the above-mentioned audit.
2. Based on your comments, we are pleased to inform you that we will close recommendations 2, 3, 4, 6, 9 and 10 in the OIOS recommendations database as indicated in Annex 1. In order for us to close the outstanding recommendations, we request that you provide us with the additional information as discussed in the text of the report and also summarized in Annex 1.
3. Please note that OIOS will report on the progress made to implement its recommendations, particularly those designated as high risk (i.e., recommendations 5, 6, 7 and 9, in its annual report to the General Assembly and semi-annual report to the Secretary-General.

cc: Mr. Girish Sinha, Director of Mission Support, UNIFIL  
Mr. Swatantra Goolsarran, Executive Secretary, UN Board of Auditors  
Ms. Maria Gomez Troncoso, Officer-in-Charge, Joint Inspection Unit Secretariat  
Mr. Seth Adza, Chief, Audit Response Team, Department of Field Support  
Mr. Moses Bamuwamye, Chief, Oversight Support Unit, Department of Management  
Mr. Byung-Kun Min, Programme Officer, OIOS  
Ms. Eleanor T. Burns, Chief, Peacekeeping Audit Service, OIOS

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## INTERNAL AUDIT DIVISION

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### **FUNCTION**

*“The Office shall, in accordance with the relevant provisions of the Financial Regulations and Rules of the United Nations examine, review and appraise the use of financial resources of the United Nations in order to guarantee the implementation of programmes and legislative mandates, ascertain compliance of programme managers with the financial and administrative regulations and rules, as well as with the approved recommendations of external oversight bodies, undertake management audits, reviews and surveys to improve the structure of the Organization and its responsiveness to the requirements of programmes and legislative mandates, and monitor the effectiveness of the systems of internal control of the Organization” (General Assembly Resolution 48/218 B).*

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## **EXECUTIVE SUMMARY**

### **Fuel Management in UNIFIL**

OIOS conducted an audit of fuel management in the United Nations Interim Force in Lebanon (UNIFIL). The overall objective of the audit was to assess the adequacy and effectiveness of internal controls over fuel management. The audit was conducted in accordance with the International Standards for the Professional Practice of Internal Auditing.

UNIFIL's internal controls over the measuring and monitoring of fuel consumption and physical access controls to fuel storage facilities are deficient. As a result losses of fuel by theft or misuse may not be detected. OIOS also found that:

- For planning and budgetary purposes, as well as for the allocation of fuel and monitoring of its use, there is not a complete list of fuel consuming assets;
- Two of the standard operating procedures are not sufficiently specific to guide responsible staff in carrying out their functions and in controlling and monitoring fuel activities;
- A review of 12 fuel reports on inspections carried out by the Fuel Unit's Fraud Prevention Cell revealed that there were material discrepancies in the balances reported. While most of the variances were subsequently explained to OIOS, no record had been maintained of these variances. Moreover, when the Unit requested amendments to records, there is no follow-up to ensure the request for changes had been made and the errors found corrected;
- There are inadequate monitoring systems to ensure data entered into the Mission Electronic Fuel Accounting System is complete and accurate; and
- The Mission's system of internal control pertaining to the security of fuel storage facilities is inadequate. All locations visited had little control over access to the fuel storage facilities.

OIOS has made a number of recommendations to address the issues identified to further strengthen existing control and contribute to improved fuel management in UNIFIL. OIOS was pleased to note that immediate action was taken to address the recommendations made.

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## I. INTRODUCTION

1. The Office of Internal Oversight Services (OIOS) conducted an audit of fuel management in the United Nations Interim Force in Lebanon (UNIFIL). The audit was conducted in accordance with the International Standards for the Professional Practice of Internal Auditing.

2. Following the expansion of UNIFIL's mandate in the 2006-2007 fiscal year, the requirement for fuel increased significantly. Table 1 provides UNIFIL's 2006-2007 and 2007-2008 budgeted and actual fuel volumes.

**Table 1: UNIFIL's 2006-2007 and 2007-2008 budgeted and actual fuel volumes**

Fiscal Year	Fuel consumption (litres)			
	Diesel		Aviation	
	Budget	Actual	Budget	Actual
2006-07	13,902,000	19,426,000	563,000	587,000
2007-08	30,274,000	26,733,000	992,000	1,187,000

3. Table 2 shows the Mission's expenditures for petrol, oil and lubricants (POL) for the fiscal years 2006-2007 and 2007-2008.

**Table 2: UNIFIL Fuel Expenditure**

Fuel consuming assets	Expenditures			
	2006-07	%	2007-08	%
Generators	7,057,707	57	15,587,481	69
Ground Transportation	4,647,504	38	5,984,673	27
Air Transportation	660,416	5	993,412	4
<b>Total:</b>	<b>12,365,627</b>	<b>100</b>	<b>22,565,566</b>	<b>100</b>

4. Within UNIFIL's Supply Section, the Fuel Unit is responsible for the accounting and the monitoring of POL. The Polish Logistics Fuel Platoon supports the Fuel Unit with receipt, storage and distribution of fuel, as well as the maintenance of specific Mission fuel reserves. The Fuel Unit works in close cooperation with UNIFIL's Integrated Support Services.

5. Comments made by UNIFIL are shown in *italics*.

## II. AUDIT OBJECTIVES

6. The main objectives of the audit were to assess the adequacy and effectiveness of internal controls over fuel management and compliance with UN regulations, rules and standard operating procedures (SOPs).

## III. AUDIT SCOPE AND METHODOLOGY

7. The audit covered the period 1 July 2007 to 30 June 2008. It included a review of the: (a) requisitioning and delivery of fuel to contingents and other locations; (b) compliance with contract terms regarding delivery, price, payments, performance bonds and taxation; (c) receipt, inspection and

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distribution of POL; (d) monitoring of fuel consumption; and (e) procedures for accounting and reporting of fuel by contingents.

8. The audit methodology comprised a review of files and relevant documents, analysis of data and interviews with key personnel.

## **IV. AUDIT FINDINGS AND RECOMMENDATIONS**

### **A. Fuel consumption budget**

#### Fuel budgeting process

9. UNIFIL's fuel budgeting process does not identify the Mission's operational fuel needs based on the number of fuel consuming assets. Instead the Fuel Unit uses the previous year's actual fuel expenditure as a baseline and adds a five per cent increase for any anticipated operational changes. While this can be a useful benchmark, it has resulted in unrealistic budgets being established for contingent-owned equipment (COE). For example, for the French contingent the actual consumption was about 280,000 litres against a budget of about 450,000 litres. Moreover, contingent's budgetary requirements were in excess of actual requirements in all cases, except one and the variances were often significant.

10. In a changing environment, it is important that the fuel budgeting process captures up-to-date information on fuel consuming assets to ensure appropriate budget estimates.

#### **Recommendation 1**

**(1) The UNIFIL Office of Mission Support should obtain complete information on fuel consuming assets to ensure that the requirement for petroleum, oil and lubricants is based on operational requirements.**

11. *The UNIFIL Office of Mission Support accepted recommendation 1 and stated that the Chief, Fuel Unit has agreed with Chiefs of the COE and the Transport Sections for a timely exchange of all data on equipment. This will include improved access to Galileo and the Business Object records to ensure that all vehicle and generator assets continue to be correctly identified for future fuel budgets. Recommendation 1 remains open pending verification that adequate data on fuel consuming assets has been used to determine budgetary requirements.*

### **B. Policies and procedures**

#### Fuel Unit's standard operating procedures are still in draft

12. The DPKO Fuel Operations Manual requires peacekeeping missions to develop and maintain mission specific policies and SOPs on fuel management.

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While draft SOPs were available and assessed as adequate to guide and direct staff, they had not yet been finalized. Also, OIOS identified deficiencies in SOPs 8 (fuel inspections) and 9 (fuel fraud inspections), which warranted revision.

13. Considering the high risk of loss associated with fuel, it is essential that adequate procedures are established to ensure staff are aware of their responsibilities and can be held accountable for them.

#### **Recommendation 2**

**(2) The UNIFIL Office of Mission Support should prioritize the finalization of fuel standard operating procedures (SOPs) and revise SOPs 8 and 9 in order to adequately guide and direct staff.**

14. *The UNIFIL Office of Mission Support accepted recommendation 2 and stated that the SOPs have been finalized and SOPs 8 and 9 have been revised. Moreover, an additional SOP (SOP 10) on the application of Mission Electronic Fuel Accounting System (MEFAS) has been established.* OIOS reviewed the revised and new SOPs and assessed that they were sufficiently adequate to guide staff. Based on the action taken by UNIFIL, recommendation 2 has been closed.

#### Non-compliance with SOPs by contingents

15. SOPs are provided to the Contingent Logistical Officer (CLO) of each contingent upon arrival at the Mission. Additionally, the Fuel Unit's Fraud Prevention Cell provides basic training on fuel management.

16. Four contingents were visited to assess their compliance with the SOPs. The following internal control weaknesses were found:

- Contingents were not recording the daily fuel quantity consumed by generators. One contingent was estimating consumption by multiplying the number of hours the generator was running by a pre-calculated consumption standard rate.
- Contingents were not conducting fuel dips at the start and close of each day to monitor opening and closing balances. This was only done when fuel was delivered. Therefore, contingents were reporting a theoretical fuel balance on their monthly returns, and discrepancies in balances were only identified when they were independently checked by the Fuel Unit.

17. Contingents' failure to comply with the SOPs may result in losses of fuel through theft or misuse going undetected.

#### **Recommendation 3**

**(3) The UNIFIL Office of Mission Support should remind contingents of their responsibilities to maintain**

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**adequate and complete records for managing and controlling fuel to ensure compliance with the standard operating procedures.**

18. *The UNIFIL Office of Mission Support accepted recommendation 3 and stated that the Fuel Unit has embarked on training to educate and remind contingents to record actual fuel consumed by assets. They have also amended the daily fuel report to include a space to record the dip readings. OIOS reviewed the training material and the amended daily fuel report and based on this, recommendation 3 has been closed.*

Non-compliance with fuel inspection procedures

19. OIOS reviewed 12 fuel reports on inspections carried out by the Fuel Unit's Fraud Prevention Cell during the period 2007-2008. Six inspections revealed some material discrepancies between the physical stock quantities and the contingent records, as shown in Table 3.

**Table 3: Discrepancies between fuel records and physical quantities**

Contingent & Location	Date of Inspection	Loss/ (Excess) in Litres
French Battalion Deir Keifa	31/08/2007	(7,127)
Italian Battalion Shama	17/08/2007	5,541
Qatarcoy Battalion Al -Tiri	06/08/2007	(7,792)
Spanish Battalion Ebel El Saqi	20/09/2007	(10,558)
Finnirish Batttalion Marjeyoun / Blat	13/09/2007	9,162
Indonesian Battalion Adchit Al Kousa	26/09/2007	4,875

20. OIOS was informed that the variances resulted from either recording the wrong dipstick measurement conversions or excesses arising from changes in temperature. However, these explanations and justifications for discrepancies, which in some instances were high, were not documented.

21. Moreover, one of the contingents had adjusted the consumption of fuel by vehicles over a one week period altering the physical quantities. While the Fuel Unit subsequently requested the contingent to reverse the amendment, there was no record of how the contingent adjusted fuel consumption or whether they had implemented the Fuel Unit's request. A lack of adequate follow-up by the Fuel Unit on the variances found and on the recommendations and requests made to contingents may result in inadequate action being taken to correct errors. This may render the monitoring process ineffective.

**Recommendation 4**

**(4) The UNIFIL Office of Mission Support should establish procedures to document and properly account for all fuel variances noted at the time of a fuel inspection. These procedures should include a requirement to verify whether recommendations made at the time of the inspection have been implemented.**

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22. *The UNIFIL Office of Mission Support accepted recommendation 4 and stated that all contingent inspections and follow ups will in the future be reviewed by the Chief, Fuel Unit and the Commanding Officer.* OIOS reviewed four inspection reports and noted that fuel inspections and follow-ups were adequately documented. Based on the action taken, recommendation 4 has been closed.

### **C. Fuel management**

#### Fuel consuming assets

23. There was no reconciliation between the list of fuel consuming assets in MEFAS to the COE database and the Galileo system. As a result, there was no assurance that only eligible equipment was using UN provided fuel, increasing the risk of misappropriation of fuel.

#### **Recommendation 5**

**(5) The UNIFIL Office of Mission Support should regularly update fuel consuming assets in the Mission's Electronic Fuel Accounting System and periodically reconcile the data with that in Galileo and the Contingent-Owned Equipment database to obtain assurance as to the completeness and accuracy of assets provided with fuel.**

24. *The UNIFIL Office of Mission Support accepted recommendation 5 and stated that it now reconciles official MEFAS records of assets against COE records, and the Galileo record.* Recommendation 5 remains open pending verification of the reconciliation between the data recorded in MEFAS, Galileo and the COE database.

#### Fuel contract management

25. The fuel contract between UNIFIL and Mediterranean Oil Shipping and Transport Company (MEDCO) quoted a variable price of Aviation fuel (Jet A-1) for helicopter refueling based on the average daily price of High PLATTS Jet FOB Mediterranean for the month preceding the actual delivery and the fixed price portion as \$73 per 1,000 liters.

26. A review of 25 of the 237 invoices received in 2007-2008 noted five exceptions, as follows:

- There were discrepancies between the contracted price and that charged by MEDCO. An amount of \$12,000 was recoverable, which was subsequently requested from the vendor.
- The price proposal attached to the fuel contract did not agree with the fixed prices quoted in the final contract. OIOS brought this discrepancy to the attention of UNIFIL, and as a result, the Procurement Section has initiated the process to amend the fuel contract.

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27. Inadequate attention was not being given to the verification of vendor's invoices against the prices quoted in the contract. However, as a result of OIOS' observation, reconciliation was done and the accounts were corrected. Furthermore, a checklist has been designed based on the new MEDCO contract to ensure future errors will be identified. Considering the action already taken by UNIFIL, no recommendation has been made.

#### **D. Fuel consumption monitoring**

##### Procedures for monitoring fuel consumption were not adequate

28. Samples of log sheets from four contingents were compared to the daily and monthly fuel returns submitted by them. A number of discrepancies were found rendering the reports unreliable and questionable the integrity of the data entered into MEFAS. Moreover, there was a lack of segregation of duties, as the CLO is responsible for preparing fuel receipts and issuance reports, and for entering data into MEFAS. There were no independent checks or supervisory review of the data entered. As a result there is a risk that errors will continue to go undetected.

##### **Recommendation 6**

**(6) The UNIFIL Office of Mission Support should strengthen internal controls to ensure data entered into the Mission Electronic Fuel Accounting System is complete and accurate.**

29. *The UNIFIL Office of Mission Support accepted recommendation 6 and stated that the Fuel Unit now compares manual reports from the formal fuel inspection activity to MEFAS.* Based on the action taken by UNIFIL, recommendation 6 has been closed.

##### UNIFIL has no fuel consumption analysis system

30. Peacekeeping missions use the UN ground fuel requirement calculator to derive a standard fuel consumption rate per 100km/per hour. As MEFAS does not analyze fuel consumption using the same standard, the Fuel Unit manually calculates fuel consumption rates. However, the basis for their calculation was incorrect, and major variances resulted. Despite the large variances, no investigation was undertaken, even though the Fuel Unit mentioned in their monitoring schedule that they 'need to verify' these differences.

##### **Recommendation 7**

**(7) The UNIFIL Office of Mission Support should establish an appropriate fuel consumption analysis system that compares the actual fuel consumption with the standard as per the UN ground fuel requirement calculator.**

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31. *The UNIFIL Office of Mission Support accepted recommendation 7 and stated that the Fuel Unit will use MEFAS' discrepancy report for analyzing consumption. The Unit will undertake frequent and personal on-site investigations whenever significant divergence is noted. Recommendation 7 remains open pending verification that adequate procedures, including follow-up has been implemented by the Fuel Unit.*

UNIFIL has no fuel consumption standards for generators

32. The Mission does not have fuel consumption standards for generators as a basis for calculating expected fuel consumption. Instead the Mission compares actual consumption with the total expected consumption as per the Mission's budget for fuel. It has already been established that this is not a correct basis to monitor actual consumption, as there is not a sound basis for budgeting for fuel.

33. Of the four contingent locations visited by OIOS, only one was using a standard based on the contingent's assumed weekly usage to calculate actual fuel consumed by generators. The lack of standards to measure actual fuel consumption by assets renders the fuel consumption monitoring system ineffective. It means there is no benchmark against which to measure the consumption of fuel by generator, and as a result there is a risk that losses may not be identified.

**Recommendation 8**

**(8) The UNIFIL Office of Mission Support should establish standards to measure fuel consumption by generators, and require contingents to record actual fuel consumption.**

34. *The UNIFIL Office of Mission Support accepted recommendation 8 and stated that contingents are now required to record actual fuel consumption on the revised daily fuel reports for generators. Recommendation 8 remains open pending verification that adequate standards are developed and actual usage of fuel by generator is measured against these standards, with appropriate action taken.*

Other issues

35. The fuel consumption monitoring capabilities of the CarLog system was not effectively used. At the time of the audit, only 784 of the 1,036 UNIFIL vehicles were fitted with CarLog. For those vehicles with CarLog installed, drivers are not inputting adequate data to render any analysis as useful. While UNIFIL has reminded drivers to properly use CarLog, this has been largely ineffective. Nonetheless, the Mission will continue to issue regular bulletins to remind staff of their responsibilities. In addition, UNIFIL have posted the requirement in every vehicle and at all refueling points the requirements expected by drivers. Based on the action already taken, no recommendation has been made.

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36. A number of control weaknesses were also found during the audit and brought to the attention of the responsible officials. Action was initiated by UNIFIL to improve procedures and strengthen internal controls.

## **E. Health, Safety and Security**

### Lack of adequate access controls to fuel storage sites and fuel tanks

37. Section 10.2.8 of the DPKO Fuel Operations Manual considers the security of fuel facilities as paramount not only because of its strategic importance to the UN mission, but also for reasons of theft and fire hazard.

38. The controls surrounding the physical security and access to fuel storage and fuel tanks were inadequate in all the sites visited. This greatly increases the risk of loss through pilferage or misappropriation. From a review of four locations, it was observed that: (a) fuel tanks were not equipped with locks and not properly safeguarded; (b) pipes delivering fuel from the tank to the generators were above ground and could easily be disconnected, diverted or misappropriated; and (c) a fuel leakage was not reported to the Fuel Unit posing a safety, health and environmental hazard.

#### **Recommendations 9 and 10**

##### **The UNIFIL Office of Mission Support should:**

**(11) Strengthen the security around the fuel storage facilities by implementing security measures that restrict physical access by unauthorized personnel to fuel storage facilities in order to reduce the risk of the loss of fuel; and**

**(12) Establish control mechanisms to identify and report non-compliance with safety, health and environmental standards prescribed in the standard operating procedures.**

39. *The UNIFIL Office of Mission Support accepted recommendation 9 and stated that action had been taken to improve security access to fuel storage facilities.* OIOS inspected one storage site at Naquora and found that appropriate action had been taken to safeguard fuel. Based on this, recommendation 9 has been closed.

40. *The UNIFIL Office of Mission Support accepted recommendation 10 and stated that a survey of all Mission fuel storage sites was conducted in February 2009 for the purpose of safety and health environment.* Based on a review of two inspection reports, recommendation 10 has been closed.

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## **V. ACKNOWLEDGEMENT**

41. We wish to express our appreciation to the Management and staff of UNIFIL for the assistance and cooperation extended to the auditors during this assignment.

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## STATUS OF AUDIT RECOMMENDATIONS

Recom. no.	Recommendation	Risk category	Risk rating	C/O <sup>1</sup>	Actions needed to close recommendation	Implementation date <sup>2</sup>
1	The UNIFIL Office of Mission Support should obtain complete information on fuel consuming assets to ensure that the requirement for petroleum, oil and lubricants is based on operational requirements.	Compliance	Medium	O	Evidence showing that adequate data on fuel consuming assets has been used to determine budgetary requirements.	Not provided
2	The UNIFIL Office of Mission Support should prioritize the finalization of fuel standard operating procedures (SOPs) and revise SOPs 8 and 9 in order to adequately guide and direct staff.	Operational	Medium	C	Action Complete	Implemented
3	The UNIFIL Office of Mission Support should remind contingents of their responsibilities to maintain adequate and complete records for managing and controlling fuel to ensure compliance with the standard operating procedures.	Compliance	Medium	C	Action Complete	Implemented
4	The UNIFIL Office of Mission Support should establish procedures to document and properly account for all fuel variances noted at the time of a fuel inspection. These procedures should include a requirement to verify whether recommendations made at the time of the inspection have been implemented.	Operational	Medium	C	Action Complete	Implemented
5	The UNIFIL Office of Mission Support should regularly update fuel consuming assets in the Mission's Electronic Fuel Accounting System and periodically reconcile the data with that in Galileo and the Contingent-Owned Equipment database to obtain assurance as to the completeness	Operational	High	O	Evidence showing the reconciliation done between the data recorded in MEFAS, Galileo and the COE database	Not provided

Recom. no.	Recommendation	Risk category	Risk rating	C/ O <sup>1</sup>	Actions needed to close recommendation	Implementation date <sup>2</sup>
6	and accuracy of assets provided with fuel. The UNIFIL Office of Mission Support should strengthen internal controls to ensure data entered into the Mission Electronic Fuel Accounting System is complete and accurate.	Compliance	High	C	Action Complete	Implemented
7	The UNIFIL Office of Mission Support should establish an appropriate fuel consumption analysis system that compares the actual fuel consumption with the standard as per the UN ground fuel requirement calculator.	Operational	High	O	Evidence that adequate procedures, including follow up has been implemented by the Fuel Unit.	Not provided
8	The UNIFIL Office of Mission Support should establish standards to measure fuel consumption by generators, and require contingents to record actual fuel consumption.	Operational	Medium	O	Evidence showing that adequate standards are developed and actual usage of fuel is measured against these standards, with appropriate action taken.	Not provided
9	The UNIFIL Office of Mission Support should strengthen the security around the fuel storage facilities by implementing security measures that restrict physical access by unauthorized personnel to facilities to reduce the risk of the loss of fuel.	Operational	High	C	Action Complete	Implemented
10	The UNIFIL Office of Mission Support should establish control mechanisms to identify and report non-compliance with safety, health and environmental standards prescribed in the standard operating procedures.	Compliance	Medium	C	Action Complete	Implemented

1. C = closed, O = open
2. Date provided by UNIFIL in response to recommendations.