



INTERNAL AUDIT DIVISION

REPORT 2019/075

**Audit of implementation of
environmental action plan in the
United Nations Organizational
Stabilization Mission in the
Democratic Republic of the Congo**

**The Mission needed to improve
implementation of its environmental action
plan to minimize risk to personnel, local
communities and ecosystems**

**22 August 2019
Assignment No. AP2018/620/07**

Audit of the environmental action plan in the United Nations Organization Stabilization Mission in the Democratic Republic of the Congo

EXECUTIVE SUMMARY

The Office of Internal Oversight Services (OIOS) conducted an audit of implementation of the environmental action plan in the United Nations Organization Stabilization Mission in the Democratic Republic of the Congo (MONUSCO). The objective of the audit was to assess the adequacy and effectiveness of the Mission's environmental action plan (MEAP) and systems in ensuring efficient and effective use of natural resources and minimizing risks to personnel, local communities and ecosystems. The audit covered the period from 1 January 2018 to 28 February 2019 and included a review of the five pillars of MEAP comprising environmental management system, water and wastewater, solid waste, energy management and wider impact.

The Mission had established an environmental management system and developed environmental action plans as required. However, the Mission needed to improve the implementation of its environmental action plan to minimize risks to personnel, local communities and ecosystems.

OIOS made 10 recommendations. To address issues identified in the audit, MONUSCO needed to:

- Expedite recruitment for environmental posts and assess the adequacy of environmental management expertise available in the Mission;
- Implement quality assurance measures and oversight of environmental data compilation to ensure accuracy and completeness of MEAP performance data;
- Develop a mechanism to monitor timely implementation of all environmental recommendations;
- Ensure all military and police personnel are trained on the Mission's environmental policies and practices;
- Develop a water supply concept and conservation programme, and monitor water abstraction and consumption;
- Ensure effective functioning of its environmental infrastructure and maintain sufficient spare parts for necessary repairs;
- Ensure that cleaning contractors train their staff on the Mission's environmental policies and improve monitoring of contractors' solid waste disposal practices and sites;
- Regularly maintain its waste oil containment infrastructure and safely dispose of hazardous waste;
- Develop an energy management plan, connect its sites to the national grid where possible, and measure generators' energy consumption and gradually right size and synchronize them; and
- Implement adequate coordination mechanisms for effective site pre-closure activities.

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

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Audit of implementation of the environmental action plan in the United Nations Organization Stabilization Mission in the Democratic Republic of the Congo

I. BACKGROUND

1. The Office of Internal Oversight Services (OIOS) conducted an audit of implementation of the environmental action plan in the United Nations Organization Stabilization Mission in the Democratic Republic of the Congo (MONUSCO).
2. In line with the environmental strategy of the Department of Operational Support (DOS), MONUSCO developed its Mission-wide Environmental Action Plan (MEAP) to assess and monitor its environmental activities to reduce risks and improve efficiency in the use of natural resources. MEAP consists of five pillars: environmental management system; water and wastewater; solid waste; energy management; and wider impact.
3. The Environmental Protection Unit (EPU) of MONUSCO is responsible for coordinating with the Special Representative of the Secretary-General (SRSG), Director of Mission Support (DMS), Force Commander, Police Commissioner and other managers to review the implementation status and performance of MEAP against established indicators on a regular basis. The Unit is headed by a Chief Environmental Officer at the P-4 level who reports to the DMS. The Unit has six authorized posts consisting of one international and three national staff and two United Nations volunteers. The operational budgets of the Unit for financial years 2017/18 and 2018/19 were \$600,000 and \$1.3 million, respectively.
4. MONUSCO has 15,575 military, 1,441 police and 4,155 civilian staff, and 171 sites consisting of 131 military and police camp sites and 40 civilian sites (located in 16 civilian offices). The Mission is supported with 1,669 generators for provision of energy and 4,344 vehicles for transportation of personnel resulting in a significant ecological footprint.
5. Comments provided by MONUSCO are incorporated in italics.

II. AUDIT OBJECTIVE, SCOPE AND METHODOLOGY

6. The objective of the audit was to assess the adequacy and effectiveness of MONUSCO's environmental action plan and systems to ensure efficient use of natural resources and minimize risks to personnel, local communities and ecosystems.
7. This audit was included in the 2018 risk-based work plan of OIOS due to the risk that potential weaknesses in environmental practices could have an adverse impact on the environment, health of local population and the Mission's personnel, operations and reputation.
8. OIOS conducted this audit in March and April 2019. The audit covered the period from 1 January 2018 to 28 February 2019. Based on an activity-level risk assessment, the audit covered higher and medium risk areas in the implementation of the environmental action plan, which included the five pillars of the MEAP.
9. The audit methodology included: (a) interviews of key personnel; (b) reviews of relevant documentation; (c) analytical reviews of data; and (d) site visits to Mission locations in Goma, Bunia, Bukavu and Kalemie.

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

III. AUDIT RESULTS

A. Environmental management system

Implementation of environmental activities needed improvement

11. For the overall management of environmental risks, MONUSCO had established an environmental management system (EMS). This included environmental policies and standard operating procedures on non-hazardous solid waste, medical waste, water and wastewater, and site inspections as well as standard operating procedures on analyzing mission activities with significant environmental impact and associated risks and opportunities. However, MONUSCO was yet to develop procedures for energy management and wider impact pillars.

12. MONUSCO also established a Mission Environmental Committee (MEC) comprising members from the civilian, military and police components that met quarterly to deliberate on environmental issues. However, despite holding regular meetings, MEC did not follow up on 11 of the 15 recommendations arising from its meetings. For example, in its meeting on 24 January 2018, the Committee requested the Engineering Section to develop a mechanism to measure and monitor generator power consumption, but the Section did not implement this recommendation and there was no follow up by the Committee in subsequent meetings. Inadequate monitoring of environmental recommendations is discussed later in this report.

13. The Mission developed annual MEAPs for 2017/18 and 2018/19 to guide the management of planned environmental activities and to report on progress made in this respect. The MEAPs included: (a) goals, objectives and targets to reduce environmental impact and to comply with legal requirements; (b) steps to monitor and measure progress in achieving objectives and to ensure staff environmental awareness and competence; and (c) requirements for periodic review and progress update of EMS. However, as of the report date, only 33 of the 56 activities in the MEAP of 2017/18 that were required to be completed by June 2019 had been completed.

14. The absence of procedures on energy and wider impact, and the slow implementation of MEAP were due to inadequate capacity resulting from delays in the recruitment of environmental positions. For instance, the post of the Chief Water and Sanitation in the Engineering Section had been vacant since 2017, and two new posts in EPU that had been approved for 2018/19 had not been filled at the time of the audit. MONUSCO had also not assessed the adequacy of its waste management capacity or taken necessary action such as providing human and financial resources.

(1) MONUSCO should: (a) expedite recruitment for environmental posts; and (b) assess the adequacy of environmental management capacity of the Mission and provide necessary human and financial resources to fill the identified requirements.

MONUSCO accepted recommendation 1 and stated that the recruitment of an Environmental Affairs Officer and two Environmental Affairs Assistants was underway, and it would assess the adequacy of the environmental management capacity in the 2020/21 budget, taking into consideration that the Mission is drawing down. Recommendation 1 remains open pending confirmation that the vacant environmental posts are filled and evidence that the environmental management capacity of the Mission is assessed, and necessary actions are taken.

Need to improve accuracy and completeness of environmental performance data

15. MONUSCO is required to submit complete and accurate performance data to the Environmental Technical Support Unit (ETSU) of DOS, which provides technical support to the Mission in the implementation of its environmental objectives.

16. OIOS review of MEAP data from July 2017 to December 2018 indicated that the Mission had reported its progress on the implementation of the MEAP to ETSU within the agreed timelines. The figures reported for vehicles and generators were determined accurate and were based on actual number of vehicles and generators held by the Transport and Engineering Sections. However, most environmental performance data submitted was based on estimates and were incomplete. For example, the Mission did not: (a) collect actual electricity production data (in kilowatt hours) from generator control panels or analog counters for 139 of the 171 sites but estimated their data based on the population per site; (b) record the total fuel consumed by generators and vehicles although it received the complete data per location from the Fuel Unit's electronic Fuel Management System; and (c) measure solid waste generated in sites and water abstraction from lakes and rivers.

17. The above occurred because the Office of the Director of Mission Support did not implement quality assurance measures and oversight to ensure completeness and accuracy of performance data, which undermined management's ability to make informed decisions on environmental matters.

(2) MONUSCO should implement quality assurance measures and oversight of environmental data compilation to ensure accuracy and completeness of the Mission's environmental performance data.

MONUSCO accepted recommendation 2 and stated that EPU was not present in several Mission locations owing to the size of the country, and therefore it had developed a reporting template to be completed by field operation managers on a monthly basis to facilitate real-time data collection, analysis and processing. EPU would monitor timely compliance of the template by field operation managers. Recommendation 2 remains open pending receipt of evidence of the measures implemented to ensure accuracy and completeness of Mission's environmental performance data.

Need to monitor implementation of recommendations from environmental inspections

18. MONUSCO is required to conduct site inspections at least annually depending on the assessed risk. The Mission is also required to implement recommendations issued by ETSU as part of its technical support and assessment in fulfilling the Missions' environmental mandates.

19. During its two technical assessment visits to MONUSCO in November 2017 and March 2018, ETSU identified weaknesses in environmental management and practices and issued 38 recommendations. However, the Office of the Director of Mission Support did not implement the recommendations in a timely manner, and as of June 2019, 16 were outstanding, including for the Mission to: (a) develop an energy plan as soon as possible; (b) prepare a contingency plan to respond to incinerator breakdowns by the end of 2018; (c) provide corrective actions to address issues with disposal of X-ray waste by March 2018; and (d) recruit a Waste Management Officer by June 2019.

20. EPU also conducted environmental site inspections and shared recommendations with relevant parties such as the Force Commander, the Police Commissioner and Office of the Director of Mission Support for implementation. However, EPU did not maintain a complete repository of all site inspection reports and was not systematically monitoring implementation status of the recommendations it made.

Therefore, although the MEAP reported that 154 inspections had been conducted in 2018, there were only 40 inspection reports available in the central database. EPU stated that some reports were retained in the environmental officers' personal computers and emails, and not finalized even though the inspections had taken place. OIOS review of the 40 available inspection reports showed that 55 of the 95 recommendations made in the reports had not yet been addressed. These included recommendations to improve the handling of waste oil to prevent ground contamination in Bunia and for a contingent in Manono to refrain from using firewood to cook.

21. The above happened due to lack of: (a) adequate capacity in EPU as mentioned above, and (b) mechanisms to track and monitor the status and thus implementation of all environmental recommendations. This impacted on the effective implementation of the MEAP.

(3) MONUSCO should develop a mechanism to monitor timely implementation of all environmental recommendations to mitigate environmental risks and enhance the implementation of the environmental management system.

MONUSCO accepted recommendation 3 and stated that it had developed a tracking database to monitor timely implementation of environmental recommendations. The database would be populated with current pending actions and promptly updated with future recommendations with target implementation dates. Recommendation 3 remains open pending receipt of evidence that the Mission has implemented a mechanism to monitor implementation of environmental recommendations.

Need to ensure that all military and police contingents are trained on environmental activities

22. MONUSCO is required to create awareness among mission personnel on environmental issues and practices.

23. In June 2017, MONUSCO circulated its Mission-wide environmental policy to all Mission personnel and since 2018, has regularly sent environmental awareness broadcasts to all staff to increase awareness among the civilian, police and military components. EPU briefed all new civilian staff, military and police staff officers during their induction. However, military and police contingents deployed directly to the field were not briefed. In addition, 29 of 69 (44 per cent) environmental focal points of police and military components had not been trained on monitoring and reporting on environmental practices. This was because senior police and military leadership had not adequately communicated the importance of training and briefing contingents on environmental good practices that they needed to adopt at sites, thus increasing environmental risks.

(4) MONUSCO should implement procedures to ensure that all military and police contingents are briefed and trained on the Mission's environmental policies and practices.

MONUSCO accepted recommendation 4 and stated that all military and police contingents received briefing on environmental policies, procedures and practices during induction which were reinforced during annual environmental inspections and through regular awareness/sensitization conducted by EPU. For military contingents, the briefing and training had been merged with inspections carried out by EPU. For the formed police units deployed directly to the field, EPU trained the trainers of the police internal training unit and focal points in sectors and sub-sectors and formed police units to ensure implementation of environmental recommendations. Additionally, the police component with EPU had planned training for all focal points who would then be responsible for conducting weekly awareness sessions on environmental procedures and practices

in their respective duty locations. Recommendation 4 remains open pending receipt of evidence that relevant procedures were developed and that all military and police contingents were briefed and trained on the Mission's environmental procedures and practices.

B. Water and wastewater

MONUSCO monitored its water consumption but needed to implement a water supply concept and conservation programme

24. The Mission is required to establish a water supply concept and conservation programme to provide strategic and operational direction, including measures for monitoring its water abstraction and consumption, conserving water and mitigating environmental risks.

25. MONUSCO regularly monitored and reported on its water demand and consumption in all sites. However, it was unable to monitor water abstraction from lakes and rivers, including Lake Kivu, because it had not installed meters to measure surface water abstraction.

26. To minimize water use, OIOS noted that in all sites visited, the Mission installed toilets with dual/low flushing systems. It had also constructed water harvesting and storage facilities in one location and planned for similar facilities in other locations to complement open water sources and water from national water supply services.

27. However, the Mission had not developed a water supply concept and water conservation programme due to a lack of capacity. As a result, the Mission's daily water consumption averaged 254 litres per person, exceeding the DOS recommended rate of between 80 to 120 litres per person. The Mission explained that it was also supporting local communities with drinking water but acknowledged that its average water consumption was high.

(5) MONUSCO should develop a water supply concept and conservation programme to provide strategic and operational direction, including measures for monitoring its water abstraction and consumption, as well as implementing procedures to conserve water and mitigate environment risks.

MONUSCO accepted recommendation 5 and stated that the Engineering Section had put in place a water abstraction/collection and reporting system and been working on improving the accuracy of data recording and reporting. The Section had started to record, verify and report on water abstraction/collection from field locations. A water supply and conservation concept was being formulated, focusing on water harvesting, re-use, modifications of existing sanitation facilities and water metering. Water use and conservation concept would be developed by September 2019. In addition, the selection process for the water and sanitation experts was underway. Recommendation 5 remains open pending receipt of evidence that the Mission has an approved water supply concept and conservation programme and procedures.

Need to ensure that wastewater is properly contained and treated

28. To mitigate environmental and health risks, the Mission is required to install and maintain wastewater treatment plants at Mission's camps/sites to treat its wastewater; conduct laboratory testing of its effluent; and regularly inspect pipes, tanks, wastewater treatment systems and wastewater disposal sites.

29. MONUSCO installed 26 wastewater treatment plants that were operated by trained technicians and was in the process of installing four additional treatment plants, which adequately covered all the priority sites. In addition, MONUSCO regularly and appropriately tested its wastewater effluents, including total suspended solids and chemical oxygen demand in all sites except in Bukavu for a period of four months due to the absence of a Chief of Water and Sanitation to monitor the newly recruited Field Water and Sanitation Officer in Bukavu.

30. In 2018, MONUSCO conducted a risk assessment for the management of wastewater at all its sites and prepared a risk mitigation plan to reduce the identified risk of possible pollution of water sources because of potential hydrological connections between surface and ground water in three sites. However, there was a delay of more than nine months to improve the infrastructure at two of the three sites that were assessed as posing significant risk. In addition, MONUSCO had not decommissioned a sewage disposal facility in Bunia as recommended by EPU to minimize the risk of contamination due to the porous soils and unlined sewage disposal pit/facility.

31. OIOS further observed that: (a) in 26 sites, untreated greywater flowed from the soak pits and unconnected water infrastructures such as bathroom showers and kitchen taps in contingent compounds; (b) 7 military sites had make-shift pits that did not meet requirements such as toilets that were not connected to septic tanks due to lack of training of contingents on environmental practices; and (c) 15 sites did not have proper oil containment as oil-contaminated water flowed from the car maintenance areas to other parts of the compounds. In 6 of the 39 military sites visited, untreated blackwater leaked from: faulty pipes and cracks in septic tanks due to delay in maintenance and repairs of wastewater infrastructure; and septic tanks overflowed into the compounds due to lack of spare parts to repair faulty sewage trucks. For example, two of the three sewage trucks in Bunia were non-operational, with one of the trucks having been at the workshop pending repair for more than a year. Another two trucks in Bukavu had been in the transport workshop for repair for over six months.

32. The above occurred due to a lengthy procurement process to identify and award construction contracts, which delayed the maintenance and repairs of wastewater infrastructure. As a result: (a) the Mission could not complete structural improvements at the 30 sites within the financial year 2018/19 as planned; and (b) the Engineering Section's ongoing environmental projects to upgrade wastewater infrastructures had been delayed. The delays in improving sanitation and wastewater management infrastructures resulted in continued exposure by Mission personnel and the local population to health and safety risks.

(6) MONUSCO should: (a) maintain sufficient spare parts to ensure that its sewage trucks are repaired and maintained when needed; and (b) expedite procurement processes to ensure that environmental infrastructures are upgraded in a timely manner so that they are effectively functioning.

MONUSCO accepted recommendation 6 and stated that its Transport Section maintained spare parts per truck based on the Standard Cost Ratio Manual guidelines which were for monthly maintenance but not for necessary major repairs. To reduce the dependency on the sewage trucks and its mobility to remote areas, the Engineering Section would develop scope of works for the provision of sewage disposal facility services for solicitation exercise to begin. The service contract for large sites in Kinshasa and Bukavu was awarded in April 2019 and the procurement process for upgrading sanitation facilities in 28 locations was underway. Recommendation 6 remains open pending receipt of evidence that sewage trucks and environmental infrastructures are effectively functioning.

C. Solid waste

Need to monitor contractors' waste disposal activities

33. MONUSCO is required to develop and implement a waste management plan to properly control and reduce waste and its impact on the environment.

34. MONUSCO developed a waste management plan that required the Mission to segregate waste according to their characteristics, collect and dispose of solid waste in approved and secured disposal sites, and compost biodegradable waste. MONUSCO procured and distributed over 15,000 garbage bins to all its sites for segregation of paper, biodegradable materials, plastic and other items at source as required. Cleaning contractors were required to follow the United Nations environmental policies. However, the cleaning personnel did not segregate garbage from the various bins due to limited awareness of waste segregation.

35. Additionally, OIOS noted that the Mission was not effectively managing its solid waste in 23 of the 39 sites. For example: (a) military contingents in four sites dumped unsegregated waste on the ground instead of in garbage bins; (b) four other military contingents did not have designated waste collection points with solid waste scattered in their compounds, attracting vermin and hampering the contractors' ability to collect it; and (c) pits for dumping waste in another four military contingent sites were situated outside their compounds in the land belonging to the neighboring local communities, which could result in reputational damage to the Mission. The poor practices were attributed to inadequate training of the contingent environmental focal points.

36. Inspection of 4 of 15 solid waste disposal sites used by the waste disposal contractors, showed that the sites were duly approved by local authorities, and waste was segregated, and biodegradable waste composited at the contractor's site in Goma. However, in Bukavu and Bunia sites, waste was not segregated, and the sites were not secured resulting in the local population gaining access to scavenge for items. In the Bukavu disposal site, the contractor burned the waste in open-air. These poor practices continued due to inadequate monitoring by MONUSCO of contractors' waste disposal activities, as the contractor sites were only inspected once a year, before renewing their contracts. As a result, there was reputational risk to the Mission and health and safety risks to Mission personnel and local communities.

(7) MONUSCO should take measures to ensure that the cleaning contractors train their staff on the Mission environmental policies and improve monitoring of the contractors' solid waste disposal practices and sites to ensure disposal of waste in an environmentally friendly manner.

MONUSCO accepted recommendation 7 and stated that the Engineering Section would provide technical guidance to personnel and contractors responsible for solid waste disposal and ensure that contractors train their staff. Additionally, it was in the process of recruiting a facilities management expert who would manage its waste management systems in close coordination with EPU to improve existing conditions. Recommendation 7 remains open pending receipt of evidence that the Mission had implemented effective measures to monitor the contractors' solid waste disposal practices and sites.

Need to improve handling and disposal of hazardous waste

37. The Mission is required to properly segregate hazardous waste such as used batteries, tires, petroleum oil and lubricants, scrap metals and electronic items prior to disposing of them in an environmentally friendly manner to mitigate environmental and reputational risks.

38. Interviews with the Property Disposal Unit and inspection of 39 sites showed that the Mission had properly segregated its hazardous waste and engaged contractors to collect toner printer cartridges and used petroleum, oil and lubricant products from MONUSCO sites as per contractual requirements. However, MONUSCO was yet to dispose of:

- Fourteen tons of electronic waste that included computers, printers and monitors as it could not find contractors within the Mission area capable of disposing of such waste. In March 2019, the Mission and ETSU jointly conducted assessment visits of prospective companies in a neighboring country and initiated a procurement process which was still ongoing at the time of the audit;
- Four tons of sodium carbonates (from water purification) received from contingents as the Mission was yet to obtain a cost-effective way for their disposal; and
- Other accumulated waste comprising 0.8 tons of used batteries, 10.8 tons of used tires and 87 tons of scrap metal due to the delay by the contractors to collect these items.

39. In addition, due to lack of regular maintenance of waste oil containment infrastructure and noncompliance with the Mission's guidelines for constructing concrete slabs, there was soil contamination as: (a) in 16 sites, the concrete generator platforms did not have oil collection points; (b) in 9 sites, oil drums and jerrycans containing used oil were kept on bare ground in open air; and (c) in 2 sites, generator oil collection points were filled to capacity with waste oil overflowing to the ground.

40. During site inspections, OIOS observed that the Mission was segregating its medical waste and handing it over to qualified personnel for incineration. To dispose of medical waste, the Mission had 22 (4 industrial and 18 portable) incinerators, and all, except for one industrial incinerator, were operational at the time of the audit. A review of training records indicated that MONUSCO trained 17 personnel in January 2016 on operation and maintenance of incinerators who subsequently trained other personnel. However, a review of incinerators inventory listing showed that the Mission had no spare parts on hand for the portable incinerators. This occurred because of inadequate planning and inventory management as the Mission had been focusing on restocking spare parts only for the industrial incinerators. As a result, MONUSCO may not be able to properly manage medical waste in case of breakdown of portable incinerators.

(8) MONUSCO should improve handling and disposal of hazardous waste by: (a) conducting regular maintenance of its waste oil containment infrastructure; (b) safely and timely disposing of accumulated hazardous waste; and (c) maintaining adequate stock of spare parts for incinerators.

MONUSCO accepted recommendation 8 and stated that the Engineering Section would carry out assessment of existing conditions of waste oil containment infrastructure and initiate construction of oil water separators for all locations. The Property Disposal Unit/Supply Chain Management had commenced actions to ensure safe disposal of electronic waste in the Mission by establishing a commercial contract. Accumulated hazardous waste would be disposed of using appropriate process before 31 December 2019 and the procurement process for the purchase of spare parts for all

incinerators was underway to be completed by October 2019. Recommendation 8 remains open pending receipt of evidence of regular maintenance of waste oil containment infrastructures, disposal of accumulated hazardous waste and sufficient stock level of spare parts stock for incinerators.

D. Energy management

Need to develop an energy management plan and improve energy efficiency

41. MONUSCO is required to conduct comprehensive energy production and consumption analyses at key sites and establish a mission-specific energy management plan to effectively and efficiently manage its energy demand.

42. MONUSCO had conducted comprehensive energy production/consumption analyses at 14 of its 171 sites, and these 11 sites were connected to the electricity grid. The Mission also installed energy consumption meters at these locations. In the remaining 157 sites that depended on generators for electricity, the Mission had pre-installed manual meters to measure energy production, but there was no process in place for measuring consumption as meters to measure energy consumption from generators had not been procured for all sites. MONUSCO had not yet developed an energy management plan to prioritize its energy demand as recommended by ETSU in March 2018. The Engineering Section informed OIOS that it started preparing the plan in May 2019.

43. Additionally, the Mission is required to minimize its greenhouse gas emissions while ensuring enough power for operations. To reduce energy consumption, MONUSCO installed light-emitting diode security lights in Mission compounds and solar panels at two sites in Goma. To reduce greenhouse gas emissions, the Mission initiated a project to connect five sites to the hydropower grid, but the project was delayed by one year due to a lengthy procurement process.

44. MONUSCO is also required to right size and synchronize its generators to improve energy efficiency. The Mission had right sized and synchronized only 78 of 1,669 of its generators due to lack of resources required to synchronize generators at all sites. As a result, there was no assurance that the Mission efficiently managed its energy demand to reduce greenhouse gas emissions.

(9) MONUSCO should: (a) develop an energy management plan; (b) where possible, connect its sites to hydroelectric grid; and (c) allocate appropriate resources to procure and install meters on all generators to measure energy consumption and gradually right size and synchronize its generators.

MONUSCO accepted recommendation 9 and stated that a draft energy management plan was being discussed among stakeholders and expected to be finalized by September 2019. Currently, 19 sites were connected to the hydroelectric grid. Hydroelectric grid connections in Bukavu was included in the 2019/20 budget. Installation of solar power was underway in Goma to reduce the use of conventional generators and reduce greenhouse gas emissions, and the use of energy efficient electrical appliances and energy efficient constructions would be put in place and applied effective from 2019/20. Additionally, financial resources for installation of meters on all generators to measure energy consumption had been included in the 2019/20 budget and the Electrical Unit' workplan. Recommendation 9 remains open pending receipt of (a) the Mission's energy management plan, (b) document showing sites and target timeline to be connected to hydroelectric grid, and (c) evidence that meters have been installed to all generators and generators have been synchronized and right sized.

E. Wider impact

The Mission effectively assessed its projects and sites for environmental impact and actively engaged with local communities for their environmental concerns

45. MONUSCO is required to: assess potential environmental impact of all projects; conduct baseline studies for all new sites; and engage with communities and integrate their concerns and priorities related to the environmental impact of the Mission.

46. MONUSCO conducted environmental impact assessments for all 12 projects implemented during the audit period. The Mission also conducted environmental screening of all seven non-major projects and environmental baseline studies on new sites constructed, and implemented all recommendations arising from these assessments.

47. To manage community issues and to allow dialogue on environmental concerns related to its operations, the Mission drafted procedures for an environmental grievance mechanism and was taking appropriate measures to address local communities' grievances. For example, in January 2018, MEC discussed complaints of local communities with regards to the foul smell emanating from burning of bitumen when asphaltting MONUSCO compounds and roads, and the use of firewood in burning bitumen. The Mission planned to procure a bitumen burner to replace the use of fire wood and sensitize communities that bitumen substances arising from burning of bitumen were non-toxic. Additionally, MONUSCO, through its two community violence reduction projects, analyzed environmental impact of charcoal trade and illegal fishing on the environment. OIOS concluded that MONUSCO had implemented measures to assess environmental impact of its projects and address environmental concerns of local communities relating to the Mission's operations.

Need to improve control over environmental clearance certificates issued for vacated sites

48. MONUSCO is required to restore, as much as possible, all vacated Mission sites to their original environmental condition and properly document activities conducted to restore vacated sites and issue environmental clearance certificates.

49. Due to troop movements, MONUSCO vacated 23 sites during the audit period. EPU conducted pre-closure inspections of 10 sites and issued pre-closure inspection reports for all of them. The Mission documented the environmental pre-closure reports, as per the DOS guidelines, and implemented the recommended site restoration activities prior to issuing environmental clearance certificates for these sites. By April 2019, the Mission had handed over 5 of the 10 sites to their owners. However, OIOS noted that MONUSCO had also handed over four other sites where pre-closure inspections had not been conducted. This occurred because of inadequate coordination between the Engineering Section, Mission Support Centre and EPU that were involved in sites closures. For example, when EPU conducted pre-closure assessment of a field office on 19 April 2019, it noted that the Engineering Section had already issued the head of the field office with an environmental clearance certificate without informing and coordinating with EPU to ensure proper site cleanup.

50. Inadequate controls over issuance of environmental clearance certificates did not enable the Mission to ensure that all remedial actions and mitigation measures had been completed and the site was accepted to be in a satisfactory environmental condition to be handed over to the landowner or the host government.

(10) MONUSCO should implement adequate coordination mechanisms for the Engineering Section, Mission Support Centre and Environmental Protection Unit to ensure effective pre-closure inspections and implementation of all site restoration recommendations prior to issuing the environmental clearance certificates.

MONUSCO accepted recommendation 10 and stated that the Mission Supported Center had coordinated the site closure programmes and implemented mechanisms to effectively coordinate with the Engineering Section and EPU to ensure pre-closure inspections and restoration of sites prior to issuing environmental clearance certificates. This was exercised during the recent closure of eight field offices and it would benefit from the lessons learned from these recent closures. Recommendation 10 remains open pending receipt of evidence that the Mission developed a coordination mechanism and its pre-closure inspections of newly vacated sites were effectively coordinated.

IV. ACKNOWLEDGEMENT

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

(Signed) Eleanor T. Burns
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STATUS OF AUDIT RECOMMENDATIONS

Audit of implementation of the environmental action plan in the United Nations Organization Stabilization Mission in the Democratic Republic of the Congo

Rec. no.	Recommendation	Critical ¹ / Important ²	C/ O ³	Actions needed to close recommendation	Implementation date ⁴
1	MONUSCO should: (a) expedite recruitment for environmental posts; and (b) assess the adequacy of environmental management capacity of the Mission and provide necessary human and financial resources to fill the identified requirements.	Important	O	Confirmation that the vacant environmental posts are filled and evidence that the environmental management capacity of the Mission is assessed, and necessary actions are taken.	30 December 2020
2	MONUSCO should implement quality assurance measures and oversight of environmental data compilation to ensure accuracy and completeness of the Mission's environmental performance data.	Important	O	Receipt of evidence of the measures implemented to ensure accuracy and completeness of Mission's environmental performance data.	31 December 2019
3	MONUSCO should develop a mechanism to monitor timely implementation of all environmental recommendations to mitigate environmental risks and enhance the implementation of the environmental management system.	Important	O	Receipt of evidence that the Mission has implemented a mechanism to monitor implementation of environmental recommendations.	31 December 2019
4	MONUSCO should implement procedures to ensure that all military and police contingents are briefed and trained on the Mission's environmental policies and practices.	Important	O	Receipt of evidence that relevant procedures were developed and that all military and police contingents were briefed and trained on the Mission's environmental procedures and practices.	31 December 2019
5	MONUSCO should develop a water supply concept and conservation programme to provide strategic and operational direction, including measures for monitoring its water abstraction and consumption, as well as implementing procedures to conserve water and mitigate environment risks.	Important	O	Receipt of evidence that the Mission has an approved water supply concept and conservation programme and procedures.	31 December 2019

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

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

³ C = closed, O = open

⁴ Date provided by MONUSCO in response to recommendations.

STATUS OF AUDIT RECOMMENDATIONS

Audit of implementation of the environmental action plan in the United Nations Organization Stabilization Mission in the Democratic Republic of the Congo

Rec. no.	Recommendation	Critical/ Important ²	C/ O ³	Actions needed to close recommendation	Implementation date ⁴
6	MONUSCO should: (a) maintain sufficient spare parts to ensure that its sewage trucks are repaired and maintained when needed; and (b) expedite procurement processes to ensure that environmental infrastructures are upgraded in a timely manner so that they are effectively functioning.	Important	O	Receipt of evidence that sewage trucks and environmental infrastructure are effectively functioning.	30 June 2020
7	MONUSCO should take measures to ensure that the cleaning contractors train their staff on the Mission environmental policies and improve monitoring of the contractors' solid waste disposal practices and sites to ensure disposal of waste in an environmentally friendly manner.	Important	O	Receipt of evidence that MONUSCO has implemented effective measures to monitor the contractors' solid waste disposal practices and sites.	30 June 2020
8	MONUSCO should improve handling and disposal of hazardous waste by: (a) conducting regular maintenance of its waste oil containment infrastructure; (b) safely and timely disposing of accumulated hazardous waste; and (c) maintaining adequate stock of spare parts for incinerators.	Important	O	Receipt of evidence of regular maintenance of waste oil containment infrastructures, disposal of accumulated hazardous waste and sufficient stock level of spare parts stock for incinerators.	31 March 2020
9	MONUSCO should: (a) develop an energy management plan; (b) where possible, connect its sites to hydroelectric grid; and (c) allocate appropriate resources to procure and install meters on all generators to measure energy consumption and gradually right size and synchronize its generators.	Important	O	Receipt of (a) the Mission's energy management plan, (b) document showing sites and target timeline to be connected to hydroelectric grid, and (c) evidence that meters have been installed to all generators and generators have been synchronized and right sized.	30 June 2020
10	MONUSCO should implement adequate coordination mechanisms for the Engineering Section, Mission Support Centre and Environmental Protection Unit to ensure effective pre-closure inspections and implementation of all site restoration recommendations prior to issuing the environmental clearance certificates.	Important	O	Receipt of evidence that the Mission developed a coordination mechanism and its pre-closure inspections of newly vacated sites were effectively coordinated.	30 August 2019

APPENDIX I

Management Response



INTEROFFICE MEMORANDUM

02 August 2019
Ref: SRSG.466.2019

To: Mr. Daeyoung Park, Chief
Peacekeeping Audit Services
Internal Audit Division, OIOS

From: *for* Leila Zerrougui 
Special Representative of the Secretary - General

**Subject: Mission Response to Draft Report on the audit the implementation of the
environmental action plan in MONUSCO (Assignment No.
AP2018/620/07)**

1. Your interoffice memorandum reference OIOS-2019-17 dated 20 July 2019 refers.
2. Attached please find the Mission's response in respect of the recommendations in the Draft Report of the subject audit. Supporting documents will be provided to the Resident Audit Team only.

Kind regards.

Cc Mr. Ebrima Ceesay, Director, Mission Support Division
Mr. Amadu Timbilla, Chief, Supply Chain Management Services
Mr. Azzam Ayyat, Officer-in-Charge, Service Delivery Services
Ms. Jennifer Bangirana, Officer-in-Charge, Environmental Protection Unit
Lt. General Elias Rodrigues Martins Filho, Force Commander
General Awale Abdounasir, Police Commissioner
Mr. Daniel Maier, Senior Planning Officer
Ms. Judith Atiagaga, Mission Audit Focal Point
Mr. James Okwakol, Chief Resident Auditor for MONUSCO, OIOS
Ms. Cynthia Avena-Castillo, Professional Practices Section, Internal Audit Division, OIOS

Attachment: Appendix I - Management Response

Management Response

Audit of implementation of the environmental action plan in the United Nations Organization Stabilization Mission in the Democratic Republic of the Congo

Rec. no.	Recommendation	Critical ¹ / Important ²	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
1	MONUSCO should: (a) expedite recruitment for environmental posts; and (b) assess the adequacy of environmental management capacity of the Mission and provide necessary human and financial resources to fill the identified requirements.	Important	Yes	Director of Mission Support	30 December 2020	(a) The Recruitment of an Environmental Affairs Officer P4 and two Environmental Affairs Assistants (GL-5) is underway. Applications for the Environmental Assistants have been received and are being processed by Human Resources Section. Recruitment for the Environmental Affairs Officer P4 level has been finalized and candidate has been identified. (b) The Mission environmental management capacity will be assessed, and additional requirements will be included in the 2020/2021 budget. However, we should be cognizant that the Mission is in a draw down process and the requirement for additional capacity may not be granted by member states.
2	MONUSCO should implement quality assurance measures and oversight of environmental data compilation to ensure accuracy and completeness of the Mission's environmental performance data.	Important	Yes	Chief, Environmental Protection Unit	31 December 2019	Owing to the size of the country and the fact that the Mission is deployed in several locations without Environmental Protection Unit presence in these locations, an environmental reporting template was developed and circulated to all Field Operation Managers (FOMs) on July 10, 2019 for submission of environmental data on a monthly basis. This will facilitate real-time data collection, analysis & processing for further improvement where required. Timely responses by all FOMs will be monitored by Environmental Protection Unit for compliance.

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

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

Management Response

Audit of implementation of the environmental action plan in the United Nations Organization Stabilization Mission in the Democratic Republic of the Congo

Rec. no.	Recommendation	Critical/ Important ²	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
3	MONUSCO should develop a mechanism to monitor timely implementation of all environmental recommendations to mitigate environmental risks and enhance the implementation of the environmental management system.	Important	Yes	Chief, Environmental Protection Unit	31 December 2019	To monitor timely implementation, a tracking database has been developed for this purpose. This database will be populated with current pending actions and will be updated promptly for future recommendations with regular follow up for updates from respective action parties and target implementation dates.
4	MONUSCO should implement procedures to ensure that all military and police contingents are briefed and trained on the Mission's environmental policies and practices.	Important	Yes	Force, Police and Chief Environmental Protection Unit	31 December 2019	<p>All military and police contingents receive a briefing on environmental policies, procedures and practices at point of induction. These messages are reinforced during the annual environmental inspections and through the regular awareness/sensitization conducted by Environmental Protection Unit (EPU).</p> <p>For Military Contingents, the briefing and training on the Mission's environmental policies and practices is already implemented and ongoing. The training has been merged with environmental inspections being carried out by the Environmental Protection Unit on a periodic basis. The inspection/training schedule so formulated for the financial year 2017/2018 is attached as Appendix I.</p> <p>For Formed Police Units (FPUs) deployed directly to the field and Police (UNPOL) Sectors/Sub Sectors, the EPU trains the trainers of the police internal training unit, as well as the FP from all Sectors, Sub Sectors, and FPUs (18 UNPOLs), so that they can ensure the recommendations of the EPU are implemented in</p>

Management Response

Audit of implementation of the environmental action plan in the United Nations Organization Stabilization Mission in the Democratic Republic of the Congo

Rec. no.	Recommendation	Critical ¹ / Important ²	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
						the field. In addition, the UNPOL together with the EPU have jointly planned training for all focal points, who will in turn be responsible for conducting weekly awareness sessions on environmental procedures and practices of the Mission in their respective duty stations. In this respect, the EPU requests the military and Police contingents to nominate environmental focal points who then receive the necessary training and periodic briefings for onward cascading.
5	MONUSCO should develop a water supply concept and conservation programme to provide strategic and operational direction, including measures for monitoring its water abstraction and consumption, as well as implementing procedures to conserve water and mitigate environment risks.	Important	Yes	Chief Engineer	31 December 2019	The Mission Engineering Section already has a water abstraction/collection and reporting system in place and is working on improving the accuracy of data recording and reporting. Engineering Section has started to record, verify and report water abstraction/collection and consumption from field locations. In addition, the Mission water supply and conservation concept is being formulated by focusing on water harvesting, re-use, modifications of existing sanitation facilities and water metering. Water use and conservation concept will be developed by September 2019. In addition, the selection process for water and sanitation experts is underway.
6	MONUSCO should: (a) maintain sufficient spare parts to ensure that its sewage trucks are repaired and maintained when needed; and (b) expedite procurement processes to ensure that environmental infrastructures are upgraded in a	Important	Yes	Office of Chief Service Delivery to coordinate	30 June 2020	(a) Transport Section maintains sufficient spare parts per truck based on the guidelines provided in the Standard Cost Ratio Manual (SCRM) which are sufficient for planned maintenance per month per year and not for major repairs which are often caused by rough road terrain to Temporary Operating Bases and Contingent

Management Response

Audit of implementation of the environmental action plan in the United Nations Organization Stabilization Mission in the Democratic Republic of the Congo

Rec. no.	Recommendation	Critical/ ¹ / Important ²	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
	timely manner so that they are effectively functioning.					<p>Operating Bases. Major repairs due to major breakdowns require major spare parts/components usually not readily available within the region and which may cost more and take long lead times to obtain. To reduce the dependency on the sewage trucks and their mobility to remote areas, Engineering Section is developing a Scope of Work for the provision of sewage disposal facility services for Beni, Bukavu, Kalemie, Uvira and Goma regions and Shopping Carts will be created by August 2019 for solicitation exercise to begin. The solicitation of this requirement will adhere to strict environmental policies and practices, and this will be included in the contracts.</p> <p>(b) The service contract for significant sites in Kinshasa and Bukavu was awarded in April 2019. In addition, the construction of sanitation facilities in 28 locations is under procurement process.</p>
7	MONUSCO should take measures to ensure that the cleaning contractors train their staff on the Mission environmental policies and improve monitoring of the contractors' solid waste disposal practices and sites to ensure disposal of waste in an environmentally friendly manner.	Important	Yes	Chief Engineering Section	30 June 2020	Engineering Section will provide technical guidance to personnel and contractors responsible for solid waste disposal and ensure the implementation of the contractors' responsibilities regarding its training obligations of their own staff. In addition, the Mission is recruiting a Facility Management Expert who will handle the MONUSCO waste management systems in close coordination with Environmental Protection Unit in an effort to improve the existing conditions.

Management Response

Audit of implementation of the environmental action plan in the United Nations Organization Stabilization Mission in the Democratic Republic of the Congo

Rec. no.	Recommendation	Critical/ Important ²	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
8	MONUSCO should improve handling and disposal of hazardous waste by: (a) conducting regular maintenance of its waste oil containment infrastructure; (b) safely and timely disposing of accumulated hazardous waste; and (c) maintaining adequate stock of spare parts for incinerators.	Important	Yes	Chief Property Disposal Unit (b); Chief Engineering Section (a and c)	31 March 2020	<p>a) The Engineering Section will carry out the assessment of existing conditions and initiate the construction of oil water separators for all mission locations.</p> <p>(b) Property Disposal Unit of the Supply Chain Management (PDU/SCM) has commenced action to ensure the safe disposal of electronic waste in the mission by establishing a commercial contract. A market survey for electronic waste management has been conducted and completed, but the Statement of Works for the international bidding exercise is still under process and will be submitted to Procurement Section upon completion to proceed with the procurement process. In addition, for the four (4) tons of Sodium Carbonate accumulated hazard waste in the mission, these will be disposed using Neutralization process by battery acid before 31 December 2019.</p> <p>(c) The procurement process for the purchase of spare parts for all MONUSCO industrial incinerators is underway and is expected to be concluded by October 2019.</p>
9	MONUSCO should: (a) develop an energy management plan; (b) where possible, connect its sites to hydroelectricity; and (c) allocate appropriate resources to procure and install meters to all generators to	Important	Yes	Chief Engineer	30 June 2020	<p>(a) An Energy Management Plan is currently under preparation and discussion among all stakeholders and is expected to come into effect by September 2019.</p> <p>(b) Currently, 19 MONUSCO sites are connected to the hydropower grid. Hydropower</p>

Management Response

Audit of implementation of the environmental action plan in the United Nations Organization Stabilization Mission in the Democratic Republic of the Congo

Rec. no.	Recommendation	Critical ¹ / Important ²	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
	measure energy consumption and gradually right size and synchronize its generators.					<p>grid connections in Bukavu sites is included in the 2019/2020 budget for implementation. In addition to the above grid connection, MONUSCO has installed 350 kW solar power in Goma RVA land and 350 kW is under installation in Goma Bravo and Lava compounds, expected to be completed in August 2019 to reduce the use of conventional Generators and greenhouse gas emissions. The use of energy efficient electrical appliances and energy efficient constructions are put in place and applied strictly effective from budget year 2019/2020.</p> <p>(c) In addition, financial resources for continued installation of meters on all generators to measure energy consumption have been allocated in the budget for financial year 2019/20 under “Acquisition of generators and electrical equipment”. Electrical Unit within the Engineering Section has also included in its 2019/20 work plan the need to prioritize sites and equipment (generators) mission-wide and initiate the solicitation process for the meters/equipment required.</p>
10	MONUSCO should implement adequate coordination mechanisms for the Engineering Section, Mission Support Centre and Environmental Protection Unit to ensure effective pre-closure inspections and implementation of all site restoration	Important	Yes	Chief, Mission Support Centre	Immediate	The Mission Support Center (MSC) has coordinated the site closure programs and implemented adequate coordination mechanisms with Engineering Section and Environmental Protection Unit to ensure due process is followed with effective pre-closure inspections and implementation of all site restoration recommendations prior to issuing the

Management Response

Audit of implementation of the environmental action plan in the United Nations Organization Stabilization Mission in the Democratic Republic of the Congo

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	recommendations prior to issuing the environmental clearance certificates.					environmental clearance certificates. This has been the case in the most recent closure of the 8 field offices and the same will continue for the future and will benefit from lessons learned with the closure of the 8 offices.