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Environmental Management Handbook

for Military Commanders in UN Peace Operations

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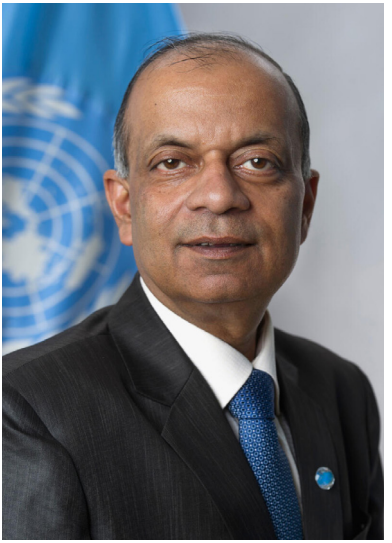
FOREWORD

The Action for Peacekeeping initiative launched by the UN Secretary-General in 2018 aimed to enhance peacekeeping performance at all levels in a collective manner. It reaffirmed that United Nations military, police, and civilian staff all have a responsibility to act. As a part of this global initiative, the importance of environmental performance is recognized, and we have committed ourselves to sound environmental management by implementing the DPKO/DFS Environmental Policy for UN Field Missions, and to support environmentally responsible solutions to our operations and mandate delivery.

This first edition of the United Nations Environmental Management Handbook for Military Commanders in UN Peace Operations was developed in line with the strategic vision to "deploy responsible missions that achieve maximum efficiency in their use of natural resources and operate at minimum risk to people, societies and ecosystems; contributing to a positive impact on these wherever possible".

The handbook provides practical guidance for commanders when planning and implementing environmental management actions in peace operations throughout the mission lifecycle. The guidance is organized across five pillars: energy, water and wastewater, solid waste, wider impact, and management systems. It also presents roles and responsibilities that reflect the cross-cutting nature of environmental management, as well as good practices already being applied in the field.

We encourage military commanders to use this handbook to improve environmental performance and risk management in a timely and effective manner. United Nations peace operations continue to operate in some of the world's most dangerous and fragile places. It is imperative that we work together to ensure that we do no harm, lead by example, and build a positive legacy.



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PREFACE

The last decade has witnessed significant changes in UN military peacekeeping activities, characterized by increased demand for peacekeeping missions, a fluid operational environment, and expanded peacekeeping mandates from the Security Council. As part of the shared commitments of UN Peacekeeping Operations under the Declaration of Action for Peacekeeping, we are committed to sound environmental management and supporting environmentally responsible solutions. The United Nations will implement the DPKO/DFS Environmental Policy for UN field missions to improve upon its environmental management in support of our operations and mandate delivery (Action for Peacekeeping, Declaration of Shared Commitments on UN Peacekeeping Operations, [2018] para. 23).

The military component must remember to mitigate the negative environmental impacts of military operations and to protect the health and safety of deployed forces, other UN staff,

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and local communities. While the presence of peacekeepers to perform military tasks in UN field missions, including force protection, remains a priority for the maintenance of peace and security, we must work together to reduce and manage the mission's environmental footprint.

It is important for commanders to have the necessary tools to incorporate environmental considerations throughout the lifecycle of the mission. Failure to integrate environmental considerations into operational and tactical level planning increases the risks to the health and safety of military personnel and civilians as well as posing a risk to the environment of the host country. The implications of underperformance are serious, particularly in light of the vulnerability of the ecosystems and societies within which these operations are deployed.

It is the responsibility of every commander to ensure that all military personnel follow good practices and procedures that prevent undue harm to the community and the environment, and to improve our environmental performance.

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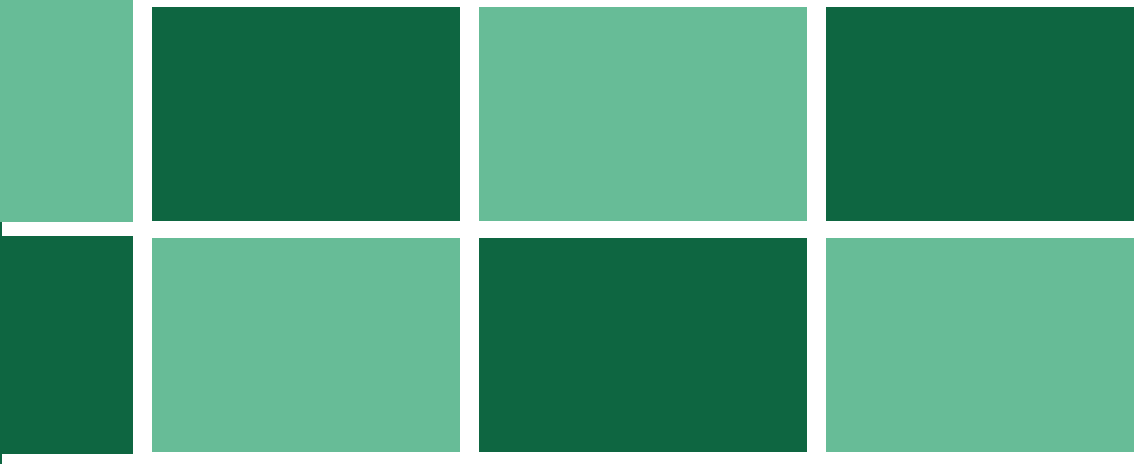
PURPOSE

This handbook is designed for commanders in the military component of UN peace operations. It focuses on the roles and responsibilities linked with the military component. It also serves to generate awareness and understanding of environmental management and the UN measures against neglectful practices which harm local ecosystems, societies, and consequently impede the capacity of the UN to leave a positive legacy in the host country. The handbook was developed to provide guidance for the military commanders on their environmental management responsibilities, relevant environmental requirements, good practices and standards towards achieving the objectives of the DOS Environment Strategy for Field Missions (2017-2023), and compliance with the DPKO/DFS Environmental Policy for UN Field Missions (2009). The handbook also highlights the environmental degradation preventive measures which should be integrated into the planning and execution of any military operation. This handbook does not carry an obligation of compliance

but complements other guidance on proper environmental management.

This handbook does not reflect the official policies or doctrine of any nation but complements the relevant UN guidance materials on environmental and waste management practices. The handbook should be used in conjunction with the relevant environmental guidance of the specific mission where the military unit/camp operates. It serves as a reference for developing mission-specific environmental standard operating procedures (SOPs) which will be tailored to host country specific environmental conditions and legal frameworks (if any). The pocket-size awareness card for peacekeepers should be used to complement this handbook. See Annex C for more details on the duties of peacekeepers in reducing the environmental footprint of field missions.

1 Environmental Management Lifecycle



1.1 Planning Considerations

Environmental management planning, risk identification, and risk management are critical for preventing irreparable damage to the environment which can degrade or complicate the achievement of mission objectives. Unit deployments in peacekeeping operations are characterized by phases of varying duration. These phases are defined as planning, pre-deployment, deployment, redeployment/rotation, shaping and transitions, repatriation/drawdown, and liquidation. Figure 1 (pg. 16) shows the cyclical nature of these phases and the respective actions that are conducted during each phase. Different phases may overlap since the accomplishment of tasks is not on a linear timeline. This cycle is maintained through the mission's overall planning and coordination and guides Troop Contributing Countries (TCCs) and their respective commanders on environmental management considerations for any peacekeeping operation. When planning for deployment, TCCs should consider the environmental consequences of any course of action because of its potential effect on the environment.

Environmental management standards and obligations are set out in a range of UN mandates, rules, policies, procedures and guidelines, as well as national (host country) laws and regulations.

The **Mission Concept** is a guidance statement through which Headquarters and mission leadership articulate strategic direction for mandate implementation in support of the overall political objectives. The Mission Concept articulates this strategic guidance for mandate implementation in the context of a broad and longer-term vision. It guides the elaboration of component concepts, such as the Military Concept of Operations, the Police Concept of Operations and Support Concept.

The **Mission Plan** serves as a planning and management tool for senior mission management to translate the strategic guidance in the Mission Concept into a concrete plan spanning all priority areas of the mission's work. It also helps senior management direct the mission's components, organizational units, and field offices to align, coordinate and synchronize their activities around short- to medium-term strategic priorities and long-term strategic objectives. The Mission Plan ensures clarity in operational direction, prioritization and sequencing of mission tasks, integration, coherence and synergy between all parts of the mission. It also incorporates cross-cutting strategies (such as protection of civilians, human rights, gender or other thematic strategies such as environmental issues and others).

As demonstrated in Figure 1, it is fundamental to ensure environmental considerations are incorporated into each phase of the planning process. During the initial planning for a peacekeeping operation, an environmental review should be performed by the Integrated Task Force in collaboration with environmental staff from the Mission Support Environmental Unit, the UN Department of Operational Support, or the Environmental Technical Support Unit (ETSU) of the UN Global Service Centre (UNGSC) in Brindisi, Italy.

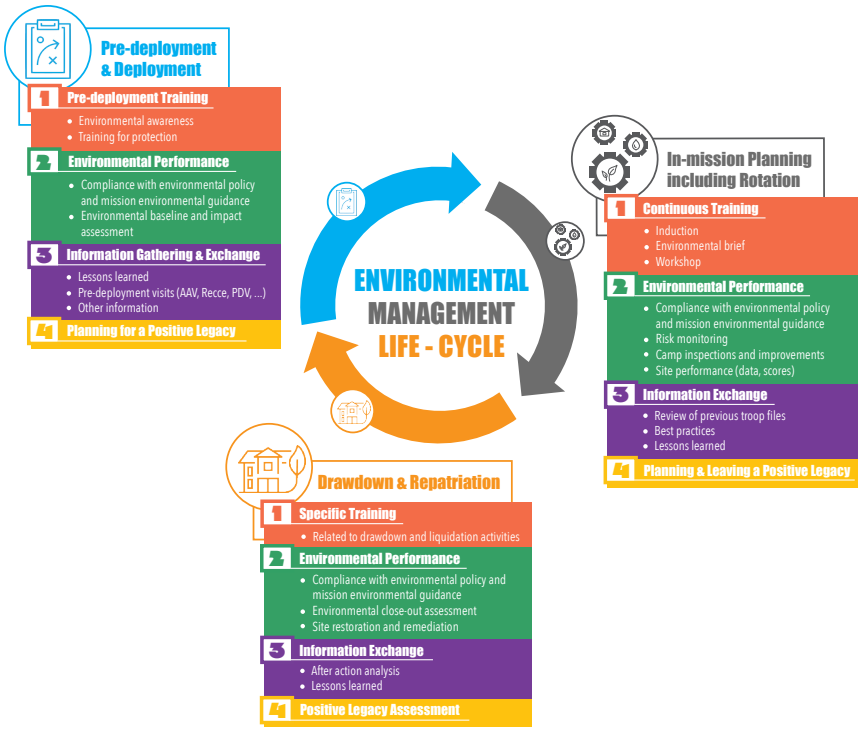


FIGURE 1

The Environmental Management Life Cycle for the Military Component

Commanders should be guided by the overarching DPKO/DFS Environmental Policy for UN Field Missions (2009.06), the Waste Management Policy for UN Field Missions (2018.14), and the Environment Strategy for Field Missions (2017-2023) of the UN Department of Operational Support which provides the vision "to deploy responsible missions that achieve maximum efficiency in their use of natural resources and operate at minimum risk to people, societies and ecosystems; contributing to a positive impact on these wherever possible". It is mandatory to use and reference mission-specific environmental guidance, standards, policies, and SOPs.

The Statement of Unit Requirements (SUR) templates issued by the Office of Military Affairs (OMA) on 9 March 2020, encourages TCCs to deploy equipment which supports efforts to reduce the overall environmental footprint of military units (also included in the Manual on Policies and Procedures concerning the Reimbursement and Control of Contingent-Owned Equipment of Troop/Police Contributors participating in Peacekeeping Missions [COE Manual]). The COE Manual further states that site energy plans must be developed for both existing and planned sites based upon energy assessment and forecasts.

Memorandums of Understanding (MOU) state that TCCs should ensure that all members of the national contingent conduct themselves in an environmentally conscientious manner and observe all UN rules and regulations. Failure to comply with the latter could result to possible misconduct.

1.2 Pre-deployment

Expectations are for commanders at the Force Headquarters (FHQ), Sectors and Units to begin environmental management planning by reviewing the lessons identified regarding environmental aspects from previous or existing missions. They may gather environmental information from various sources to capture the considerations needed for planning and decision-making processes for future operations. Some examples of environmental information are:

- Best Practices and Lessons Learned/Lessons Identified from existing missions
- A comprehensive terrain analysis to identify environmentally sensitive aspects, e.g., waterways and biodiversity (plants and animals)
- Previous mission's after-action review/analysis
- Data from Geographic Information Systems (e.g., public GIS, or mission GIS team)
- Legal aspects such as global commitments and regional conventions/regulations [*Commanders and the military environmental advisers should check the applicability of national, regional, international, convention, and other relevant regulations*]

- Environmental Impact Assessment (EIA) and/ or Environmental Baseline Survey (EBS) reports pertaining to the field location or specific area where a military unit will be deployed (available from the Mission Support Environmental Unit , if completed) Information from the United Nations Country Team (UNCT), in particular the United Nations Environmental Programme (UNEP) as well as with Non-Governmental Organizations (NGOs)
- Information from host country environmental agencies through relevant mission contact points, experts or representatives and military personnel of the countries present in the mission
- Information publicly available on the internet, newspapers, UN Dag Hammarskjöld Library resources and others

For military commanders at all levels, environmental awareness should be focused on how neglect of environmental and sanitary protection can affect the execution of the mission, and training should address elements such as:

- Understanding of the terrain from an environmental perspective within the Area of Operation: Pre-deployment training should also include information on how to reduce fossil fuel emissions and damage to the terrain during operations and base occupation
- Environmental risk and health aspects
- Environmental laws, policies and responsibilities related to the mission (once the theatre for deployment is known)

- Financial resources and provisions in the environmental area
- Commanders' responsibility to put environmental policies into action
- Familiarization of environmental aspects with a special focus on waste and wastewater management

During the pre-deployment planning and training phase, the TCC shall notify the officers who are appointed as the contingent or unit environmental focal points accordingly. These sector/regional military environmental advisers/focal points are in charge of instructing and/or ensuring each military contingent designates a focal point for environmental and waste management. These military environmental adviser/focal points should possess the appropriate training on environmental aspects.

More so, TCCs should appoint or designate military environment focal points for each unit to deal with environmental issues within the military component at unit/camp level[1]. The unit/camp military environment and waste focal point may be the unit manager or someone reporting to him/her. The unit/camp military environment and waste focal point should, to the extent possible, be of similar rank to the unit logistic officer and report directly to the unit/camp commander. Refer to the related paragraph in Section 4 of this handbook for the roles and responsibilities of the unit military environment and waste focal point.

1 See Paragraph 7.28 of the generic model of the MOU in Chapter 9 of the COE Manual /72/288 states that "National contingents will appoint where requested by the Force Commander officials to serve as environment focal points".

During the pre-deployment phase, TCC officers appointed to take charge of environmental issues in conjunction with the medical team shall plan for the environmental training requirements for military personnel. They will ensure that personnel participate in pre-deployment modules that include environmental health and natural resources management training (as per Core Pre-Deployment Training Material (CPTM) Module 3.5)[2]. This kind of pre-deployment training promotes the understanding and reinforces the responsibility that military personnel need to act in an environmentally conscious manner. While the CPTM encompasses generic environmental topics, TCC training should be complemented by mission-focused training devoted to mission-specific environmental guidance. This could take place at the pre-deployment stage before deployment (e.g., sharing guidance during Recce visits) and/or during the in-mission induction training.

The unit/camp environmental focal points should be trained on the following:

- Area of responsibility general environmental risk management, operational efficiency and conservation of natural resources
- Environmental education methodologies for military units

Once the theatre or Areas of Responsibilities (AOR) for deployment is known:

- Mission-specific information related to the environment (to be provided by the mission at the request of the TCC)

2 Core Pre Deployment Training Material (CPTM) Module 3.5 refers to environment and natural resources at https://research.un.org/revisedcptm2017/Module3

- Actions supporting the Environmental Action Planning and Performance
- Liaison with other environment focal points of other contingents already deployed (if possible, before deployment or just upon arrival in the mission)

Complementary to pre-deployment training actions, preliminary environmental review related to operational plans is normally comprised of the following:

- Understanding of traditional or local environmental frameworks governing the environmental protection in the AOR
- Identifying the relevant aspects and limitations for environmental management
- Determining "who, what, when, where, why, and how" for environmental management
- Development and prioritization of environmental protection actions, considering natural resources and the environmental standards being enforced

1.3 Deployment

It is important that, once deployed, all military personnel should conduct operations while upholding their responsibility to deal with environmental issues that relate to their mission's presence and operations. Commanders may request a mission organigramme to better understand how to channel environmental related matters and concerns upon arrival in the mission or during the induction training.

Some key elements to observe while in-mission are listed below (not exhaustive). Commanders shall ensure that military personnel under their authority observe the following:

- The "Do no Harm" principle is every individual's responsibility and is executed as directed by sub-commanders.
- The environment of the host country is respected, and UN environmental and waste management policies and procedures, including mission-specific policies and standards are followed.
- There is awareness of the cultural, religious and historical sites, and behavior is in accordance with local practices.
- Mission-specific induction courses and workshops on environmental management

as well as environmental briefings organized by military environment focal points and the environment team from mission support (including a session on Host Country Environmental Policy and Regulations) are attended.

- All environmental incidents are reported to the mission environmental unit or mission support environmental focal points immediately and are recorded for lessons learned in active deployments and future rotations.
- Environmental footprints are minimized, leaving a positive legacy whenever possible, e.g. native tree planting, activities in conjunction with the local communities, etc.
- Risk assessments and risk mitigation are carried out, mainly for water, wastewater and solid waste management.
- Spill kits are available, and units are trained in their use.
- Mission Support Environment officers engage with the TCCs environmental focal points to become familiar with the host country environmental policy and regulations.

During the deployment phase, and under the Force Commanders leadership, a comprehensive network of military environmental focal points has to be established at HQ, sector and unit levels. Nominated military personnel (may be double-hatted) in operational HQs should be aware of how to merge environmental aims/targets with operational planning.

The Force HQ Environmental Focal Point is recruited by the Force Generation Service of the UN Office of Military Affairs. This focal point is generally located in the FHQ U-4 branch structure or seconded within the civilian mission support environmental unit depending on the mission's structure[3]. The roles and responsibilities of the Force HQ Environmental Adviser/Focal Point are listed in detail under Section 4 of this handbook.

At sector level, the sector commander will appoint one of the SHQ staff officers as the sector/region military environmental adviser/focal point, to coordinate environmental issues at sector level as per the UN terms of reference on related roles and responsibilities given in Section 4 of this handbook.

Sector and unit commanders shall coordinate and ensure that military personnel from all units (e.g. aviation, engineers, infantry, maritime) participate in the various environmental training opportunities delivered in the mission, such as:

- environmental induction upon arrival in the mission, generally delivered as part of a generic induction training package under the guidance of the mission training unit and facilitated by the mission support environmental officer and/or the HQ military environmental adviser
- environmental briefings associated with unit environmental inspections and led by either the mission support environmental officer, the HQ military environmental adviser or the unit military environmental and waste focal point

3 Force Headquarters Handbook, November 2014

- thematic environmental trainings (e.g. dedicated training to enhance the unit military environmental and waste focal point awareness and responsibilities), generally led by the mission support environmental officer and/or the HQ military environmental adviser
- training-of-trainer courses for unit environmental officers (as available)
- any other in-mission training opportunities related to risk management, operational efficiency and natural resources conservation
- mission-specific environmental training, mainly for commanders and sub-commanders (Company, Platoon, Sections, Teams) on how to incorporate environmental issues into daily framework operations

Unit commanders are to monitor and ensure that environmental and health awareness issues are understood by all personnel. The use of posters with pictorial illustrations is recommended. It is advised to consult with the Mission Support Environmental Unit or equivalent, to seek available awareness material, such as the 'Duties of peacekeepers for reducing the environmental footprint of field missions'- foldable card (see Annex C).

Unit commanders must ensure that environmental awareness for their entire unit emphasizes:

- individual and unit-level responsibilities for environmental management
- relevant mission-specific Standard Operating Procedures

- specific training (e.g. wastewater risk assessment, waste risk assessment, site energy assessment, environmentally sensitive areas, cultural and historical heritage, natural resources and spill clean-up)

Unit commanders also need to understand the local environmental challenges in their areas of responsibility and to assess the potential impacts of the unit deployment on the local environment and plan accordingly.

During the deployment phase, depending on the mission circumstances, unit commanders shall be guided by the following expectations:

- Ensure uniformed personnel attend site environment inductions/briefings performed by Mission Support Environmental Unit or equivalent.
- Support mission environmental inspections generally led by the Mission Support Environmental Unit or equivalent, and occasionally jointly done with COE inspections and support data collection for environmental management, when required by the Mission Support component.
- Ensure, within its capability and capacity, environmental inspection recommendations are implemented by the indicated deadline, allocating the necessary supplies when needed.
- Inform Force Engineering and Force Medical personnel of any changes to the surrounding environmental conditions in order to make

informed decisions toward the adoption of changed protective standards, procedures, and equipment. All reports on environmental incidents and mitigating actions taken should be reported and documented.

- Ensure that military personnel under their command respect the environment and relevant environmental laws of the host country and comply with United Nations environmental and waste management policies and procedures, including Mission environmental standards, policies and SOPs on waste management, water and wastewater management, energy management, pollution prevention, and other environmental aspects.
- Support the military environmental focal point's roles and responsibilities in preventing and mitigating risks linked to solid waste and wastewater management, in coordination with Mission Support.
- Ensure that the troops under their command report and record any environmental incidents through their chain of command to the Mission Support Environmental Unit or Mission Support focal points when it occurs.
- Reporting of environmental incidents are essential, and there will be no repercussions when reporting. These reports are essential for providing early warning to leadership and for strengthening accountability (ref. UN Whistle Blower Protection: ST/SGB/2005/21).

1.4 Rotation

In preparation for a military unit rotation, commanders at all levels shall ensure, whenever possible, that respective Military Environmental Focal Points prepare to hand over key information and responsibilities to his/her replacement. It is important that the TCC commanders plan the overlap of incoming and out-going Military Environmental Adviser/Focal Point deployments for a sufficient amount of time. Overlap allows the handover of environmental management files, documents, logs, and personnel to discuss any significant environmental issues and lessons learned relevant to their areas of responsibility.

1.5 Repatriation/Drawdown & Liquidation

In chapter 9 of the COE manual, under the generic model of the Memorandum of Understanding (MOU), it is specified in Article 7, para 7.28 that "*National contingents undertake that they will 'do no harm' to the local environment (including wild plants and animals) and, upon departure, will leave the premises and physical environment in the condition in which it was provided to them*". This requirement to remediate will drive the environmental process for mission or site closure with shared responsibility between national contingents and the UN through Mission Support.

Once the decision to close a mission, camp, or repatriate a unit is determined, planning should be immediately initiated. The process of assessing the environmental conditions of the unit is inherent in the process of transferring the area and closing the unit or mission. At this phase of the operation's life cycle process, it is paramount that commanders compile documentation and identification of lessons identified/learned from the military operations.

Furthermore, the Force Commander shall prepare to transfer the lessons identified/learned to his/her successor or the FHQ Best Practices Unit in case of a complete mission drawdown.

Unit commanders should liaise with the environmental unit or equivalent in Mission Support and with the military force headquarters environmental adviser/focal point to organize a site pre-closure environmental assessment visit. During this liaison, a checklist of remedial actions to undertake will be developed with a related timeframe for implementation and associated responsibilities and decision points (i.e. TCC responsibility, mission engineering responsibility, financial implications, resource needs, intermediate visits, etc.). A final visit should be organized with the Mission Support Environmental Unit to confirm the remediation plan is complete, including an inspection by an individual with proper environmental management credentials. All these items will be incorporated into the final report on the management of environmental issues pertaining to the closing phase of bases and units and related external infrastructure if applicable (e.g., fuel farm, shooting range, aircraft hangar, wastewater treatment facilities), as per the current UN guidance at the time of the closure.

In coordination with the Mission Support Environment Unit, sector and unit commanders are responsible, with the support of their respective military environmental focal points, for the following:

- Updating the hazardous materials and hazardous waste inventory developed during the deployment phase at least 60 days prior to closure or liquidation. Include, if applicable, an inventory of all shipping containers, any legacy waste (e.g., x-ray chemicals).
- Sorting all hazardous materials including e-waste and expired pharmaceuticals by category and ensure they are stored properly. The Material Safety Data Sheets (MSDS) must be placed

in a conspicuous area for all required storage containers, buckets, vessels, bags, drums, etc. This should be a regular activity begun during the deployment phase, but is particularly important prior to, and during, drawdown.

- Updating the list of hazardous substance storage areas (e.g. water treatment labs, incinerator ash pits, and encapsulation units), engine maintenance, battery workshops, fuel storage, and all areas where environmentally sensitive operations occurred.
- Ensuring proper registration and transportation of all hazardous waste, either back to the troop/unit country, locally to a specialty contractor, or to the mission for final disposal unit/site of waste / goods. This should be coordinated by the Mission Support Environment Unit, after signing an authorization issued by the concerned Member State, or senior national representative on behalf of the TCC.
- Ensuring the sector/unit environment focal point coordinates with the logistics unit for the collection of hazardous waste for treatment and disposal, in accordance with the Mission Support directives and indicated processes.
- Identifying and marking areas of soil contamination and spills of hazardous waste for example, those of petroleum, oil and lubricants (POL). During the pre-closure environmental assessment visit, it will be determined whether the various spills require soil remediation and the associated process, roles and responsibilities required to begin that process.
- Preparing a record of all cleaning measures/

remedial actions requested during the pre-closure assessment visit and hand it over to the Mission Support Environment Unit (e.g., cleaned septic tanks, underground vaults).

- Placing all used oil and fuel waste into the final disposal units at the designated storage areas in the unit. The unit's military environmental and waste focal point should coordinate with the Mission Support Environment Unit and fuel unit for the collection of the used POL for treatment and proper disposal. Records of all POL collected by or delivered to the contractor should be retained.
- Draining all fuel from heaters (if applicable) and prepare it for transportation in special containers.
- Liaising with the Logistic Unit and Mission Support Environmental Unit or Property Disposal Unit on the procedures for removing freon from air conditioners.
- Disposing expired ammunition and removing any used ammunition cartridges in line with the UN Manual on Ammunition Management (January 2020).
- Ensuring that the camp is thoroughly cleaned, grasses cut, and all surroundings are left well vegetated when possible (e.g. replacement planting). All areas with man-made work or construction are restored to their original aesthetic conditions. Disused/legacy materials such as construction waste (prefabs) and rubbles, concrete blocks are removed, and site must be completely restored.

2 Cross-cutting Areas

2.1 Wider Impact

Objective: To increase the level to which missions account for their deployments' environmental impact and leave a positive legacy.

Approach: Military planning at all levels (HQ, sectors and units) should be updated and include do-no-harm provisions in relation to wildlife, cultural, religious and historical heritage, and other areas in coordination with the Mission Support Environmental Unit. Commanders at all levels shall stress the importance of conducting operations in a way that prevents risk, including reputational risk, through, inter alia, appropriate behavior and measures.

The concept of a long-term, positive legacy is an integral part of the entire mission's lifecycle, from inception to implementation and from drawdown to closure.

Commanders at all levels shall identify operations, projects, and activities that can leave a positive impact in the long term. Examples of projects that can leave a long-term, positive impact are large-scale native species tree planting or engaging in regular community outreach activities such as environmental clean-up and education on environmental protection.

Good practices on Wider Impact:

- **Not attacking or using** places of cultural, religious, historical and/or architectural value or the immediate surrounding areas for purposes which might expose them to destruction or damage.
- **Not attacking, destroying, removing or rendering** useless objects indispensable to the survival of the civilian population, such as food stuffs, agricultural lands, livestock, and drinking water installations and supplies; such actions are prohibited in accordance with the Secretary-General's Bulletin on the Observance by United Nations Forces of International Humanitarian Law. Directions to that effect should be issued and incorporated into induction briefings.
- **Promote compliance with** international environmental treaties and provide capacity development support to Host State counterparts (including community outreach programmes).
- **Leave a positive legacy** whenever possible (e.g., tree planting, soil conditioning and erosion management, local community awareness raising, etc.).
- When planning and conducting patrols, **every consideration shall be given** to upholding the principle of do no harm; for example, avoiding environmentally sensitive terrain, including waterways and the beds of lakes and rivers to

the largest extent possible.

- The DPKO/DFS Environmental Policy for UN Field Missions prohibits the following:
  - To bring any plant/seeds from country of origin which is not endemic to the country of deployment, and vice versa (invasive non-native or foreign species)
  - To acquire wild plants and animals, live or dead
  - To use firewood or charcoal for cooking purposes
  - To keep stray dogs and cats in units by feeding them or improperly storing food waste
  - To keep domesticated animals and/or pets
  - To cut down existing trees without authorization
  - To take part in deforestation and biodiversity loss
- Encourage engagement with local communities about the value of natural resources and their preservation.

2.2 Environmental Management System (EMS)

Objective: To implement an environmental management system that is effective at achieving progress towards a common environmental goal.

Approach: An environmental performance and risk management framework, following the principles of appropriate organizational and industry standards, is in place globally at the mission level and for each site in each mission. All personnel must contribute to the site's, mission's, and ultimately, the UN's environmental performance. Uniformed personnel have an important role to play in achieving environmental compliance, minimizing risks, and using resources efficiently.

All personnel should assess tasks and activities being undertaken for potential environmental impacts using the STOP principles:

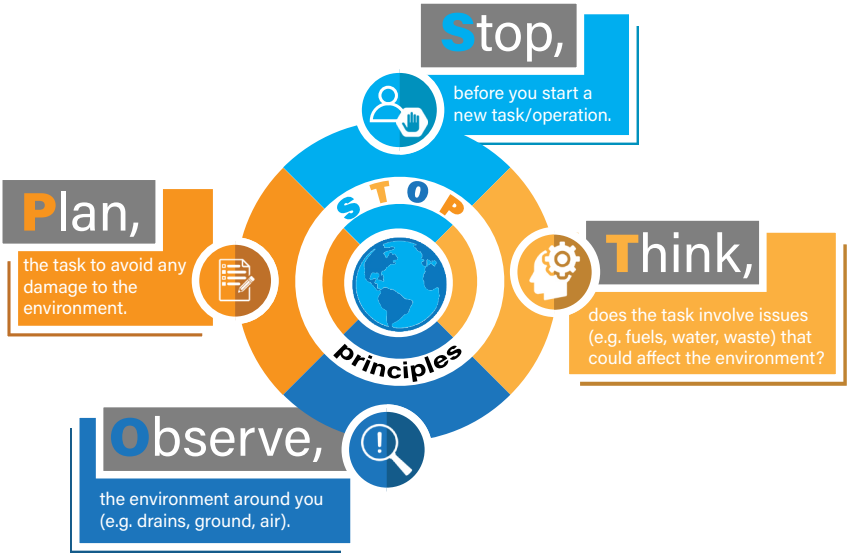


FIGURE 2

The STOP principles

Each unit commander is accountable for ensuring environmental issues are dealt with quickly, efficiently and within UN regulations when they arise, including the implementation of recommendations from regular environmental unit inspections conducted by the Environmental Unit of the mission. Also, commanders are expected to ensure that their unit's environmental data is provided when requested by Mission Support. Further, Mission Support will provide advice on the precise type of data, format, frequency etc., because this information is essential to manage a reliable EMS for decision-making purposes. An example of a template sheet for unit data collection can be found in Annex E.

Overall, commanders are also expected to demonstrate leadership and champion environmentally responsible behavior. They are expected to understand the key environmental risks in their area of operation and emplace the

appropriate operational controls and measures that should be undertaken by the contingent to mitigate those risks. These operational controls and measures should be developed with the support of the Mission Support Environmental Unit of the mission.

Also, expectations are that unit and sector commanders will have emergency procedures established to deal with incidents (such as a fuel spill). The unit should periodically conduct practice drills testing the emergency procedures (minimum twice during deployment): first, within the initial three months of deployment, and the second, approximately six months after the first drill.

Good practices on the Environmental Management System:

- Support your Environmental Focal Points at unit, sector/region, and mission level, and collaborate with your mission's Environment Team in Mission Support.
- Actively participate in your on-site unit briefings and environmental site inspections conducted by your mission's Environment Team.
- Do your part in implementing the recommendations of the environmental site inspections at your unit.
- Learn about the mission Environment Action Planning and Performance[4] system and the Environmental Management Scorecard and

4 iSeek article on what is Environmental Action Planning and Performance: https://iseek-external.un.org/article/introducing-eapp-environmental-action-planning-and-prevention

understand the risks to the environment.

- Attend and pay attention during your in-mission induction briefing on environmental management and ask questions to the trainers.
- Apply what you learned in the Environment and Natural Resources module of your Pre-Deployment Training.
- Participate in environmental workshops for TCC/PCC/MSD personnel when possible.
- Join UN environmental events and awareness campaigns.
- Where requested, help with data collection for measuring environmental performance and risk management.

3 AREAS OF FOCUS

3.1 Energy Management

Objective: To reduce energy waste through efficiencies, increase the proportion of energy used that is produced from renewables, and to reduce the level of pollution created by peace operations.

As stated in the Statement of Unit Requirements (SUR), "*The TCC is encouraged to deploy equipment which supports efforts to reduce the environmental footprint of its operations including more energy efficient generators, renewable energy power generation and environmental enhancements to accommodate and conduct themselves in an environmentally conscious manner, as stated in the COE Manual. The Unit is expected to comply with mission site energy plans and fuel management policies where these are in place.*"

It is worth recalling that the COE Manual[5] provides financial incentives to TCC/PCCs related to environmental enhancements on energy:

5 Manual on Policies and Procedures concerning the Reimbursement and Control of Contingent-Owned Equipment of Troop/Police Contributors participating in Peacekeeping Missions (31 August 2020).

- A reimbursement supplement of five percent is available for energy efficient accommodation items that provide for double roofing or wall shading, added thermal insulation, and energy-efficient air conditioning and/or heating systems[6].
- Options are available for reimbursable generators including a premium rate for energy generation that complies with the International Organization for Standard (ISO) no. 8528, including solar/photovoltaic systems and generators that allow for the four standard ratings for continuous operations, prime rating, limited-time, and emergency standby power[7].

The COE Manual, regarding generators under major equipment[8], also includes key requirements for synchronized generator banks, including loading factors and generator configurations and design through the development of site energy plans, to further support energy efficiencies in power production.

It is the responsibility of all military personnel to optimize the mission's use of energy with the aim to minimize the mission's greenhouse gas emissions. Commanders are encouraged to ensure responsible energy use (energy efficiency and energy conservation) as well as increasing awareness among their troops.

For information on the overall mission energy strategy, they

6 Ibid., See Chapter 3, Annex B.
7 Ibid., See Chapter 8, Annex A.
8 Ibid., See Chapter 3, Annex A, Appendix 3.

should refer to the mission's Energy Infrastructure Management Plan (EIMP). For each specific unit, reference should be made to the site energy assessment at their deployed location. Wherever such an assessment is not on record, or is out-of-date, every effort shall be made to engage with Mission Support Engineering to ensure alignment with, and full support of, the mission's EIMP. The COE Manual provides site energy plans/ assessments and generator right-sizing expectations with consideration of the UN Environment Policy for Field Missions and the EIMP[9] .

Commanders at all levels are required to support mission initiatives to monitor energy production and/or consumption at the site-level by providing meter readings whenever required and/or by facilitating 'smart' installation of systems such as energy meters capable of remote sensing to the Field Remote Infrastructure Management (FRIM) platform[10].

9 Site energy plans will be developed for both existing and planned sites, based upon energy assessments and forecasts. The core of such plans will be the design of an optimized diesel-generation solution for each site, which may consist of an individual generator for the smallest of sites and a bank of two or more generators for other sites. Renewable energy solutions will be integrated into the plans where appropriate. Appropriate backup generation capacity will be included in the design to allow for scheduled and unscheduled outages of the main (prime power) generator units. A core principle of the energy plan will be appropriate sizing of the generator or generators to match the variable demand and avoid low-load operation (ISO 8528-2-5.3).
For contingents deploying generators meeting the ISO 8528 standard, site energy assessments will be conducted to ensure compliance with site energy plans. Contingents will enable site access and safeguard the supplied monitoring equipment in order to receive reimbursement at the prime power, limited-time running and emergency standby power rates. Energy assessments will be provided in draft form for review by the contingent commander.

10 https://iseek-external.un.org/content/ungsc-workshop-rsce-marks-beginning-unite-frim-africa
https://unitednations.sharepoint.com/sites/OICT/SitePages/Unite-FRIM--IoT-for-field-missions.aspx

Good practices on conserving energy and minimizing greenhouse gas emissions

- Avoid vehicle idling as much as possible.
- Avoid unnecessary driving. Where practical, walk, bike or carpool instead of driving alone.
- Patrol planning is recommended.
- Avoid using ozone depleting substances in Air Conditioning (AC) units.
- Ensure power production and consumption points have meters for measuring power production and consumption.
- Support Mission Support in providing electricity meter consumption readings for remote sites. Ensure that AC unit temperature is not set below 23 degrees Celsius in hot climates. Close doors and windows when running AC units and ensure the AC is shut down when leaving the room, as much as possible. The use of fans and natural ventilation is highly recommended.
- Maintain records of energy production/ consumption and use the data to manage demand and to promote energy awareness.
- Always turn off unnecessary lights when leaving the room. If there are other unoccupied spaces with lights on, turn them off as well. During the day, if there is enough light in your surroundings, turn off the lights.
- Limit hot water use and request solar water

heaters, where possible.

- Optimize power production: ensure the right size and synchronize generators, consider alternative energy supplies.
- Conduct/support feasibility studies when building outposts powered by solar energy and engage with Mission Support to evaluate opportunities to connect to renewable grids where possible.
- Improve energy efficiency in work or living areas. Increase shading, add insulation, install double roofing, plant trees, use kitchen appliances efficiently, etc.
- Ensure electricity distribution cables are properly buried and insulated.
- Install containment basins/platforms with berms and sufficient capacity under all fuel tanks and drums, fuel collection points and generators (including in the design an oil-water separator and a roof, if possible.) to avoid soil contamination and water pollution.
- Perform manufacturer specified routine maintenance of diesel generators and maintain required oil levels to guarantee good working conditions (efficiency related).
- Use Light Emitting Diode (LED) instead of fluorescent tubes for lighting rooms, and wherever and whenever possible, make the transition from fluorescent tubes to LED.

Pollution associated with energy use (petroleum oils etc.) from contingent equipment is a common issue on UN sites. Prevention of pollution is usually easily managed through the adoption of a range of best practices as outlined below.

Good practices on reducing the level of pollution by preventing soil pollution:

- Install containment basins/platforms with berms of sufficient capacity under all fuel tanks and drums, fuel collection points and generators, and include in the design an oil-water separator and a roof, if possible, to avoid soil contamination and water pollution. Such bunding or containment should be included for all hazardous substances/ material stored on-site.
- Ensure that workshops and car washing areas are paved, and that water collected is diverted toward an oil-water separator prior to discharge into the environment.
- In collaboration with Mission Support, ensure the proper storage/management of used fuel/oil from facilities[11].
- Ensure there is no discharge of used oil or diesel into a drainage channel, water body, septic tank, sewer or wastewater treatment plant.
- Handle petroleum, oils and lubricants (POL) with care to avoid spills. Ensure diesel generators are

11 Manual on Policies and Procedures concerning the Reimbursement and Control of Contingent-Owned Equipment of Troop/Police Contributors participating in Peacekeeping Missions (31 August 2020).

inside sheds or under a roof to prevent excessive sun exposure and accumulation of dirt.

- Perform manufacturer specified routine maintenance of diesel generators and maintain required oil levels to guarantee good working conditions to prevent leakages.

In cases where soil pollution has not been properly prevented:

- Report incidents of POL spills from and around generators as well as poor handling of diesel (including by unit management contractors) immediately to Mission Support.
- Ensure spill kits are available on site and make prompt use of them.
- Ensure uniformed personnel know how to use spill kits in the event of a spill. Conduct practice drills periodically.

New requirements in the 2020 COE Manual are marked in **bold** in the excerpt below:

Responsibilities related to minor engineering during development and maintenance of the camp area:

- Construct concrete platforms **with berms**, slabs and sheds for generators (contingent-owned equipment and equipment owned by the United Nations), vehicle wash areas, gymnasium,

etc., with the purpose of preventing petroleum pollution in and around United Nations camps.

- **Installation of contingent-owned equipment fuel storage (including used oil storage) through the necessary construction of concrete platforms with berms to prevent petroleum pollution in and around United Nations camps.**

3.2 Water and Wastewater Management

Objective: To promote sustainable abstraction, water conservation and the use of alternative water sources while simultaneously reducing the level of risk to personnel, local communities, and ecosystems.

Water management aims at reducing both excess water consumption and wastewater generation, thus diminishing the volumes of wastewater to be treated and reducing the likelihood of problems in the wastewater system (e.g. septic tank overflows). Sustainable abstraction also aims to minimize adverse effects on waterbodies, especially where water levels are already low and to reduce competition with neighbouring communities when the resources are scarce.

Wastewater management is the planned processing, treatment, and disposal of water contaminated by faeces or urine (sewage) but also includes any water contaminated by toxic or corrosive materials such as oil, fuel, grease, etc[12].

Unit commanders shall be aware of the wastewater risk

12 2018 DPKO/DFS Waste Management Policy for UN Field Missions

assessment methodology and indicators to support/delegate the day-to-day monitoring and mitigation of risks in close collaboration with Mission Support. In accordance with UN guidance on wastewater[13], missions are to ensure that there will be no discharge of wastewater outside the perimeter fence of a UN unit's camp or directly into streams, rivers, groundwater, or other bodies of water without prior treatment set to minimum wastewater reuse standards irrespective of whether the wastewater will be reused or not.

Where the contingent is responsible for water collection and/or wastewater disposal, from and to designated locations, it shall be done in a responsible manner and careful logs and records shall be maintained and available for inspection upon request by Mission Support representatives. At a minimum, the logs should include the vehicle plate number, the truck capacity, the driver's name and ID, the date and time, and, ideally, countersignatures at the collection/disposal points. Ensuring proper training, monitoring, maintenance and allocation of required resources for the operation of the wastewater infrastructures will directly contribute to improving wastewater risk management.

Unit commanders shall ensure water conservation, proper use of water, and water quality (by regularly having potable water tested to ensure health and safety) in accordance with mission guidance. All measures shall be taken to reuse treated wastewater while protecting occupational and community health by safely managing wastewater. All military components shall undertake water conservation measures, not only in missions located in water scarce areas, but as a good practice throughout all missions.

13 2018 DPKO/DFS Waste Management Policy for UN Field Missions

While bearing in mind that the health and wellbeing of peacekeepers remain a priority, and also acknowledging that there is still some room for behavior change, unit commanders shall take measures to manage demand, reduce water consumption and strive to achieve a per capita water consumption within the following parameters[14] or as set by mission related SOPs or Water Management Plans, where or when applicable:

The mission will set the consumption standard, however, as general guidance the below is to be considered:

- For bulk water, no more than 80-100 litres/ person/day in all units; and

- For drinking water, ensure 5 litres/persons/day in accommodations.

Any issues noticed in wastewater management, such as leaks, wastewater overflows, critical breakdowns, unplanned discharges of wastewater, incidences of flooding, among others, should be reported immediately to the unit military environmental focal points. Reports then go to the Mission Support Environmental Unit and/or water and sanitation unit to enable the implementation of necessary risk mitigation actions including, but not limited to an urgent need for maintenance.

Commanders at all levels are required to support mission initiatives to monitor water production and/or consumption at the site-level by providing meter readings whenever required and/or by facilitating 'smart' installation of systems such as water meters capable of remote sensing to the

14 DOS Water and Wastewater Guidelines for Peace Operations (being developed in 2021)

Field Remote Infrastructure Management (FRIM) platform[15].

Good practices on conserving water:

- Take short showers.
- Do not keep water running when shaving, washing hands, or brushing teeth.
- Report leaky faucets and pipes and take action to stop water leaks and waste as soon as possible. Check toilets for leaks.
- Request Mission Support to install water efficient fittings in ablution units (e.g., low flow fixtures, tap/showerheads aerators, dual flush toilets, waterless urinals).
- Regularly test drinking water quality to ensure health and safety of all personnel (particularly where military units are treating their own water)
- Ensure water storage tanks are properly covered to prevent water contamination and water loss by evaporation. Maintain these tanks regularly to ensure water remains in a fit-for-purpose state.
- Provide water meter consumption reading for remote sites in support of Mission Support.
- Maintain appropriately detailed, accurate water collection records, where applicable.

15 See following pages on Field Remote Infrastructure Management (FRIM):
https://iseek-external.un.org/content/ungsc-workshop-rsce-marks-beginning-unite-frim-africa
https://unitednations.sharepoint.com/sites/OICT/SitePages/Unite-FRIM--IoT-for-field-missions.aspx

- Take reasonable steps to carry out minor engineering work immediately and do not allow them to turn into major engineering works because small problems were ignored.

Good practices on the use of alternative water sources:

- Establish alternate water sources to supplement conventional sources and reduce fresh water consumption (e.g. use of rainwater collection tanks where practical, use of treated wastewater when available).
- In accordance with water and wastewater guidelines[16], use non-potable water for activities such as car washing, toilet flushing, watering vegetation, and dust control, etc.

16 DOS Water and Wastewater Guidelines for Peace Operations (being developed in 2021).

Good practices on sustainable abstraction:

- Support the implementation of groundwater monitoring (by Mission Support) to reduce the impact of water abstraction (e.g., adapt flow rate to lower the risk of saline intrusion). Aim to achieve fit-for-purpose treatment to reduce waste and reduce total volume of water abstracted.

Good practices on wastewater management:

- Where the contingent is responsible for wastewater disposal to a designated location, each truck should keep a logbook in which records are made to ensure each trip is accounted for. The record should include the name of the driver and the trip details (time and date, volume disposed of, the collection and disposal point)[17].
- Remain vigilant for any signs of problems in wastewater management and immediately action or report any issues such as broken

17 These records should be available for inspection upon request. The drivers should be vigilant in performing this duty and escalate to the attention of the chain of command any concerns related to the suitability of the wastewater disposal location, e.g. it is in close proximity to a water body, local community, or similar sensitive environment. Wherever possible, a counter-signature should be obtained at the disposal location for every trip received.

or malfunctioning equipment, foul odors and sewage overflow.

- Where military units/camps are treating their own wastewater, systematically treat all wastewater and sludge to the required standards[18] prior to being discharged to the environment.
- Avoid storm water ingress into septic tanks and the wastewater treatment network to avoid overflows.
- To prevent water borne diseases and mosquito breeding, eliminate stagnant water by taking action such as keeping the drainage channels free of waste and silt accumulation.
- Take reasonable steps to carry out minor engineering works on time and do not allow them to result in major engineering works.
- Do not throw any items such as utensils, fabrics, condoms, solid food remains, used cooking oil from kitchen/ dining facilities. nor any chemical product in the toilets or any other part of the wastewater system. Do not flush any other paper than toilet paper into the toilets.
- Do not discharge used oil or diesel or any POL in a drainage channel, a water body, or a septic tank to control mosquito breeding or odor.
- Do not discharge greasy water into the environment. Ensure a suitably sized grease trap is installed at every kitchen facility and that it is

18 Required standards are available in the DOS Water and Wastewater Guidelines for Peace Operations (being developed in 2021).

properly maintained.

- Maintain appropriately detailed, accurate wastewater disposal records, where applicable.
- Ensure the use of treated wastewater (often a by-product out of the UN-owned equipment wastewater treatment plant system) for activities in which direct human contact is limited (e.g., washing cars, plant watering, flushing toilets, etc.).

3.3 Waste Management

Objective: To improve solid and hazardous waste management and reduce the level of risk to personnel, local communities, and ecosystems from waste impacts.

The waste hierarchy, also known as Lansink's Ladder, is expected to drive all waste management processes in UN peace operations. The 4Rs (**reduce, reuse, recycle** and **recover**) are solutions that require prioritization. When this is not possible, the UN (through its Mission Support) will ensure mission-wide implementation of centralized and remote site waste management yards, including responsible incineration of certain wastes, in fit-for-purpose, high quality incinerators. The incinerators used will have controlled processes, organic waste composting or bio-digestion for energy recovery (e.g. cooking gas) and are preferred solutions to the use of host country landfills/dumpsites when they are assessed as unsuitable and no other alternative solutions are identified as available.

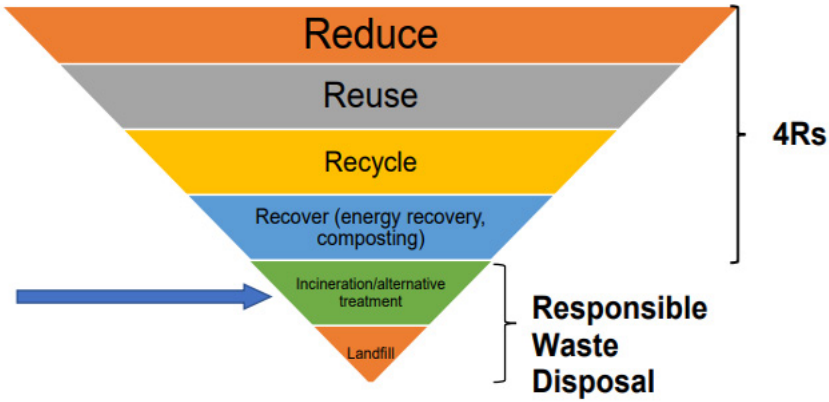


FIGURE 3

Lansink's ladder

Commanders at all levels are expected to ensure the following principles to minimize risk from hazardous waste:

- waste minimization (i.e. source avoidance and reduction)
- segregation of waste for temporary storage purpose and facilitating consecutive waste collection (led by Mission Support or its contractors) to enable proper treatment and final disposal of waste
- responsible waste management practices

Potential exposure to dangerous substances should be assessed and precautions should be taken when storing, handling, transporting or disposing waste in order to ensure personnel will not be exposed to biological and chemotoxic risks and infections that may cause damage to human health or the environment. For information on the overall mission waste strategy, UN personnel should refer to the mission's

Waste Management Plan.

Unit/Camp commanders will ensure there is waste pre-collection (at unit/camp level) and that all litter and any material and equipment is disposed of properly. Each patrol leader must ensure that each patrol vehicle has enough trash bags for waste storage. All waste, including inorganic waste such as empty (plastic) water bottles, cans and plastics used during routine or long-range patrols, must be brought back to units/camps for proper disposal or stored or be sent to the next UN unit/camp for disposal. No waste, such as bottle packaging or wraps, shall be thrown directly into the local environment. Unit/Camp commanders will include environmental management in the troops patrol briefings.

It is important to avoid using single use plastic products (plastic bags, plastic cutlery) or containers (plastic bottles and cups) and to use reusable and/or recyclable products wherever and whenever possible.

Also, unit/camp commanders shall ensure that an inventory of hazardous substances is maintained, and records are kept in units/camps. This inventory of chemical, biomedical, or otherwise hazardous materials (whether stock or waste) is crucial for managing the risks and for planning ahead for proper treatment and disposal without undue burden during unit/site closure.

Good practices on waste management:

Overall

- Where packaged water is required, encourage bulk and/or reusable packaging to help reduce single-use plastic water bottles.
- Avoid using single use plastic products (plastic bags, plastic cutlery) or containers (plastic bottles and cups).
- Practice 'smart printing' (e.g., setting printer to black & white, double-sided printing, etc.) when applicable and avoid printing as much as possible by using electronical signatures, etc., where applicable.
- Do not litter, both inside the units/camps and while outside, e.g., on patrols.
- Do not conduct open burning of waste of any kind, whether general, hazardous or biomedical waste. It is officially prohibited for UN personnel.
- Do not directly discharge any waste into the environment.
- Properly dispose of all waste, including waste equipment, as per Mission Support's rules.
- Segregate and store all waste by type to ensure proper waste recycling treatment and disposal, especially when it comes to hazardous waste.
- Compress segregated waste materials, such as cardboard, plastic bottles and metal, to reduce

volume. Practice minimizing food waste and composting.

- Reuse or recycle water bottles to cut back on waste.

Hazardous Waste

- Do not dump hazardous waste, chemicals, biomedical waste or expired medicine.
- Do not discharge used oil or diesel or any liquid hazardous waste in a drainage channel, a body of water, a septic tank or a wastewater treatment plant.
- Segregate hazardous waste and chemicals (e.g., Petroleum, Oil and Lubricants (POL), oil filters, used batteries, oily rags, battery acid, water treatment chemicals, degreasers, fluorescent lights, etc.), biomedical waste (e.g., silver-X-ray film developer, lab reagents) and electronic waste (e.g. transformer, air conditioners, computers, TV screens, radios and any electric/electronic component of equipment) from other solid waste.
- Store all such hazardous materials in a safe designated area on sealed concrete floors, properly ventilated and roofed to protect from rainfall and runoff, away from potential ignition sources, and equipped with spill prevention, and storage organization accounting for the incompatibility and reactivity characteristics of each hazardous waste.

- Prepare a full inventory, by category, of hazardous waste and inform Mission Support Property Disposal Unit (through the unit/sector environmental focal point) of the amount/type of the hazardous waste in your unit/camp for collection, treatment and disposal.
- Retrieve and properly dispose of empty casings used in shooting ranges.
- Ensure the use of Personal Protection Equipment (PPE) is correctly specified according to International standards for the hazardous waste materials being handled.
- Place Material Safety Data Sheets (MSDS) in close proximity to the storage of any hazardous chemicals or materials.
- Use chemicals/hazardous material prior to the expiration date and do not keep expired chemicals in stock with the exception of chlorine, detergents, hand sanitizers, bleach, and fabric softener (the dates for which should be considered as “Best If Used By” and not as “Expired”).

Biomedical Waste

- Practice proper medical waste segregation at the source (e.g. clinics, hospitals, medical services) before disposal.
- Segregate biomedical waste and expired medicine from solid waste into generally three categories and store them in separate bins:

1) Infectious Waste; 2) Sharp Waste; and 3) General Biomedical Waste.

- Safely eliminate biomedical waste in UNOE, COE, or contractor approved biomedical waste incinerators, and/or in accordance with practices outlined in the United Nations Environment Programme Compendium of Technologies for Treatment/Destruction of Health-Care Waste.
- Biomedical ashes are to be adequately disposed of by Mission Support or its waste contractor. Store them in closed, secured containers. Examples such as 200-L metal barrels, adapted sections of culverts and HDPE tanks are containers that provide adequate resistance before handing waste over to the Property Disposal Unit (PDU).
- Recover and safely store in containers all equipment containing mercury, such as medical thermometers and other medical instruments for proper disposal by mission support PDU.
- Ensure COE medical waste incinerators are fit for purpose and in adequate working condition including a spare parts inventory and operating contingency plan.
- Seek specific guidance from Mission Support (Medical Unit and Waste Management Unit), in incidences where an extra level of caution may be required.

4 ROLES AND RESPONSIBILITIES IN ENVIRONMENTAL MANAGEMENT

4.1 Force Commanders

Force commanders are ultimately responsible for the integration of environmental considerations during planning for military operations and during the conduct of operations and activities within his/her area of responsibility (AOR).

Force Commanders are expected to:

- Demonstrate leadership and promote environmental awareness throughout the chain of command and ensure that environmental focal points and advisors within the military staff are involved in every aspect of operational planning, pre-deployment reconnaissance and mission execution and liquidation, when applicable.
- Ensure forces under their command develop appropriate levels of environmental awareness through technical training based on UN standards and understand relevant UN and mission environmental standards, policies, SOPs and guidance. Resources should also be identified and assigned to provide effective and proactive environmental management.
- Monitor activities and ensure corrections are

made when needed and provide feedback.

- Ensure that environmental issues are included in military task implementation.
- Appoint a Force advisor to serve as the focal point within the military component of the mission to liaise with the environmental officer and to deal with environmental issues within the military component and in task implementation.
- Ensure senior military representation (assisted by the environmental adviser) in the senior environment committee.
- Ensure that each contingent complies with infrastructure provisions, equipment, and other supporting tools/kits to support waste management activities during their deployment.
- Ensure procedures for military personnel to report incidents contrary to the mission's waste management objectives through appropriate channels without fear of reprisal.
- Ensure that military contingents and personnel comply with and implement relevant policies (see list of references, pgs. 40-41) throughout the mission area including remote areas.
- Ensure their military components, accounting for operational exigencies and contingent capabilities, contribute to the planning, operations, personnel and equipment as part of the mission's waste incident emergency response actions, including taking part in mission training and rehearsals for waste incidents.

- Direct each military headquarters and each formed contingent to designate a Focal Point for Environmental and Waste Management in line with fax 2018.UNHQ.FGS.FAX.38977.3 dated 27 March 2018 from OMA on the designation of military environmental focal points (see Annex B).
- Ensure all recommendations issued after unit/ camp inspections are implemented promptly.
- Review and sign off the Environment Action Planning and Performance, along with other senior leadership in the mission.

4.2 Military Force Headquarters Environmental Adviser/Focal Point Responsibilities (as per the ToR developed by OMA[19])

- Liaise/Consult with Mission Support Environmental Unit regarding environmental management on a regular basis (if not embedded) and attend staff meetings of Environmental Unit.
- Maintain up-to-date listing of Sector/Region Environmental Focal Points, especially after contingent rotation, and share it with DPO/OMA Environmental Adviser/Focal Point and the Mission Support Environmental Unit.
- As per para. 27 of the DPKO/DFS Environmental Policy for UN Field Missions (2009.06), the

19 These roles and responsibilities listed supersede the Terms of Reference (in PCRS) developed by OMA.

appointed official in the military component is required to report on environmental issues and provide advice on appropriate measures to be taken to address these issues within the mission's military component in a manner consistent with the environmental measures instituted by the Director of Mission Support.

- Coordinate with the military components, especially the G4 (Sector-Level Peacekeeping-Logistics Staff) branch, and report to the Force Chief of Staff and Force Commander on environmental issues related to military contingents.
- Assist the Force Commander by reviewing relevant operational procedures, discussing these with the Mission Support Environmental Unit, and when necessary, assist in the preparation of instructions and amendments to operational procedures in coordination with the Mission Support Environmental Unit to ensure that environmental issues are appropriately managed and controlled.
- Assist the Force Commander or Senior Military Leadership in the preparation and participation of Meetings of the Senior Environmental Committee.
- Coordinate with the Military/Force Chief of personnel (U1) on administrative issues related to environmental management within the military contingents, in particular monitoring the appointment of sector/unit/camp level environmental focal points and reporting to the Mission Support Unit and DPO/OMA/

Military Environmental Adviser/Focal Point on a quarterly basis.

- Assist mission Environmental Officers in planning and carrying out environmental inspections within military contingents (and FPUs if required) , identifying environmental problems that need to be addressed by relevant sections within the Mission, and preparing inspection reports.
- Liaise with respective sectors and units/camps for environmental inspection planning.
- Coordinate activities related to remediation of environmental issues within the military component identified during inspections.
- Provide onsite guidance and training to military contingents (and FPUs if requested), especially during induction training, on required preventive and remedial measures. Follow up on the implementation of remedial actions in close coordination with the mission training unit.
- Promote environmental awareness, provide briefings/training to the military component.
- Act as the focal point on cultural heritage for the military component in compliance with the DPKO/DFS Environmental Policy for UN Field Missions.
- Any other tasks on environmental and culture issues related to military operations as directed by the Force Commander.

4.3 Sector Commander Responsibilities

- Appoint a sector/region military environmental adviser/focal point as instructed by the FC and OMA guidance.
- Monitor activities ensuring that corrections are made when needed and give feedback (also positive).
- Provide oversight to sector/region military environmental adviser/focal point to ensure he/she is complying with his/her responsibilities and receive briefs regularly on the status of the various activities related to environmental management in the sector (leadership role).
- Ensure Sector reporting to the FHQ environmental adviser/focal point and, upon request, brief the FC or senior mission leadership on the various environmental activities and related status in the sector. Highlight priorities and challenges faced.
- Facilitate training opportunities for the sector/region military environmental adviser/focal

point, and for himself/herself, by attending environmental briefings or training sessions on environmental management in close coordination with sector G7 training personnel.

- Promptly appoint new sector/region military environmental adviser/focal point when rotations are taking place to ensure a smooth handover of information and lessons learned / lessons identified on environmental aspects.
- Ensure contingent's support data collection and reporting on environmental management issues in their respective areas and information is shared with Mission Support and the FHQ Environmental Advisor/focal point.
- Ensure all the contingents have in place an inventory for hazardous substances and waste.

4.4 Sector/Region Military Environmental Adviser/Focal Point Responsibilities (as per the ToR developed by OMA[20])

- Instruct each military contingent in every unit/camp to designate a focal point for environment and waste management.
- Update the list of environmental and waste management focal points at unit/camp level, especially after contingent rotation, and share the list with the FHQ Environmental Adviser/Focal Point and the Mission Support Environmental Unit.
- Ensure a handover of environmental concerns of the unit/camp is done during rotations between the old and new focal points.

20 The roles and responsibilities listed supersede the Terms of Reference developed by OMA.

- Review and approve the environmental inspection planning prepared by the Mission Support Environmental Unit for the units/camps.
- Coordinate with the Mission Support Centre to support the organization of environmental inspection and briefing in units/camps.
- Periodically liaise with unit focal points on environmental issues.
- Consult with the Environmental Unit on environmental issues on a regular basis, especially with follow-up on an environmental inspection.
- Follow the implementation of environmental recommendations for mission sites (SHQ and contingent units/camps).
- Keep a lessons learned/lessons identified database and update it regularly. Exchange the information with FHQ environmental adviser/focal point and Best Practice Unit.
- Regularly report to mission FHQ Military Environmental Adviser on environmental actions implementation at the regional level.

4.5 Unit/Camp Commanders Responsibilities

- Ensure continuous monitoring of activities and ensure that corrections are made when needed and give feedback (also positive).
- Monitor daily framework operations and guide how to incorporate environmental issues at the tactical level.
- Appoint a unit/camp environmental and waste focal point, as instructed by the sector commander and OMA guidance.
- Establish an Environmental Committee (or a similar group) which ensures that corrections are made when needed and run campaigns to encourage personnel to switch off devices and set cooling and heating at efficient temperatures. This committee monitors the daily framework operations, guides how to incorporate the environmental issues at the tactical level and shall be composed of the environmental and waste focal points, the unit/

camp level doctor, an outreach/awareness officer and logistic or engineering officer.

- Support access to the unit/camp for environmental visits/inspections as required by Mission Support including but not limited to the environmental unit/camp and engineering unit/camp.
- Monitor the unit/camp military environmental and waste focal point to ensure he/she is complying with their responsibilities.
- Receive regular briefings on the status of the various activities related to environmental management in the unit/camp (leadership role).
- Brief the sector commander, upon request, on environmental related activities in his/her unit/camp, highlight priorities and challenges faced.
- Provide support and resources to the unit/camp environmental and waste focal point to ensure he/she can comply with his/her duties in the best possible way (i.e. support the implementation of environmental inspection recommendations).
- Meet with the Environmental Unit from Mission Support, or its representatives, when an environmental inspection is completed in the unit/camp and brief on the main findings at the end of an inspection, as a best practice.
- Participate in environmental briefings when given in the unit/camp.
- Facilitate the record-keeping and regular reporting of various unit/camp data (e.g., on

waste management, energy production and fuel consumption, and water consumption), as requested by Mission Support.

- Facilitate training opportunities for himself/herself and for the unit/camp environmental and waste focal point on environmental management.
- Ensure handover of environmental information when rotations occur (incoming and outgoing) and facilitate the appointment of a new unit/camp environmental and waste focal point.
- Ensure that the environmental focal point liaises with the Mission environmental officer or focal point on environmental issues.

4.6 Unit/Camp Military Environmental and Waste Focal Points Responsibilities (as per the ToR developed by OMA[21])

Liaise with the Mission Support Environmental Unit, Sector/Regional Military Environmental Adviser/Focal Point and his/her uniformed colleagues in the unit/camp on environmental issues related to the unit/camp management (i.e. water, wastewater, solid waste, energy, hazardous substances, animals and plants, pollution and nuisances, etc.).

- Facilitate environmental visits and briefings in the unit/camp.
- Ensure that contingent personnel are briefed and trained on environmental issues and provide them with available awareness material.
- Keep a record of the number of trainees and the training provided.

21 The roles and responsibilities listed supersede the Terms of Reference developed by OMA.

- Ensure all projects and activities at unit/camp levels comply with mission environmental objectives.
- Coordinate and follow up on environmental corrective action recommendations and implementation.
- Periodically update and share with the Sector/Regional Environmental Focal Point, the FHQ Environmental Adviser/Focal Point and the Mission Support Environmental Unit/Camp, on the status of the implementation of the environmental inspection recommendations.
- Keep an inventory of hazardous substances (including hazardous waste) present at the unit/camp. Send the inventory quarterly to the Sector/Region Military Environmental Adviser/Focal Point as well as the Mission Support Environmental Unit.
- Provide corrective measure progress reports with photos to the unit/camp manager, Sector/Regional Environmental Focal Point, the FHQ Environmental Adviser/Focal Point and Mission Environmental Unit every two weeks after the inspection until all recommendations are closed.
- Ensure handover of information on environmental issues at unit/camp level is done after rotation and ensure the new contingent appoints upon arrival a new focal point and reports his/her name to the Sector/Regional Military Environmental Focal Point.

ANNEXURES

Annex A Glossary of Terms

Bunding

Also called a bund wall, is a constructed retaining wall around storage "where potentially polluting substances are handled, processed or stored, for the purposes of containing any unintended escape of material from that area until such time as a remedial action can be taken.

Corrective measure

Any enabling action to eliminate the cause of an environmental shortcoming or non-conformity and to avoid their recurrence.

eAPP

Environment Action Planning Performance: application that replaced the previous Excel format of the MEAP (Mission-wide Environmental Action Plan) launched as of July 2020. The eAPP software is a dedicated online platform for peace operations to use in improving their environmental performance and risk management. It provides tools for data collection, validation, approval and reporting, as well as analytics and visualization to support decision-making.

Effluent

Liquid waste or sewage discharged into a body of water (such a river or the sea).

Environmental Baseline Survey (EBS)

Undertaken to assess the initial environmental conditions of the site prior its use. It identifies all existing environmental hazards and sensitivities of the site at a specific moment in time to determine its suitability for its intended purpose.

Environmental Impact Assessment (EIA)

A tool to identify and assess the potential impact on relevant elements of the environment resulting from a project and to propose actions to prevent, mitigate or compensate for the impacts.

Environmental inspection

Process through which the mission ensures compliance during the implementation of the mandate, provisions, technical standards and requirements of the environmental laws and regulations (National or UN) in force.

Environmental risk

Defined as the possibility that an event, or a situation resulting from the mission activity or task that occurs and whose consequences are likely to negatively affect the environmental elements such as water, air, soil, etc.

Hazardous Waste

Waste material that may cause damage to human health or the environment that requires precautions when storing, handling, transporting or disposing due to its toxicity, corrosiveness, ignitability or reactivity.

Remedial action

Corrective actions that are to be taken to clean up identified contaminated or polluted areas on-site before leaving the unit/ camp or site.

Waste

Any substance, agent, effluent, object, material or equipment to be discarded, destroyed or disposed of, which has been generated through any UN field mission operation, activity or process. It does not include material or equipment being processed in accordance with the DFS Guidelines on Disposal of Property in United Nations Field Missions except where the outcome of that process is disposal.

Waste Management

The planned and managed separation, storage, collection, movement, processing, treatment and disposal of waste with emphasis on reduction, recycling, reuse and recovery prior to disposal.

Annex B References

Fax 2018.UNHQ.FGS.FAX.38977.3 dated 27 March 2018 from OMA on the designation of Military environmental focal points and related ToRs.

Fax 2020. DPO-2020-00376 dated 22 January 2020 from OMA to follow up on Fax 2018.UNHQ.FGS.FAX.38977.3 dated 27 March 2018.

DOS Environment Strategy for Field Missions 2017-2023 (formerly DFS Environment Strategy, 2017-2023).

DPKO/DFS Environmental Policy for UN Field Missions (2009.6) (under revision).

DPKO /DFS Waste Management Policy for UN Field Missions (2018.14).

SOP on "Appointment of Military Environmental Advisers/Focal Points and Reporting Mechanisms" and attached Terms of Reference for the three categories of focal points (2018).

DPKO/DFS SOP on the Development of Waste Management Plans (2018.30).

DPO/DOS SOP on the Development of Energy Infrastructure Management Plans (2020.06).

DOS SOP on the Development of Water and Wastewater Management Plan for UN Field Missions (under development).

DOS SOP on Environmental Impact Assessment for UN Field Missions (2019.09).

Manual on Policies and Procedures concerning the Reimbursement and Control of Contingent-Owned Equipment of Troop/Police Contributors participating in Peacekeeping Missions (31 August 2020).

UN Manual on Ammunition Management (January 2020), 2019.27.

Water and Wastewater Guidelines for UN Peace Operations (under development).

Solid and Hazardous Waste Management Manual (under development).

UN Secretary-General's Bulletin on Whistle Blower Protection: ST/SGB/2005/21

Website Refereces

UNGSC SSU portal for technical designs

https://unitednations.sharepoint.com/sites/UNGSC-SCS_SS/Home/Forms/AllItems.aspx

PCRS – Peacekeeping Capability Readiness System

https://pcrs.un.org/Lists/Resources/Forms/AllItems.aspx

DOS – Department of Operational Support Knowledge Gateway:

https://unitednations.sharepoint.com/sites/APP-Gateway/SitePages/Environment(1).aspx

https://peacekeeping.un.org/en/operational-support

https://operationalsupport.un.org/en/environment

PPDB – Policy and Practice Database

https://unitednations.sharepoint.com/sites/PPDB/SitePages/Environment.aspx

Resource Hub: Pre-deployment training material - Module 3.5 on Environment and Natural Resources

https://research.un.org/revisedcptm2017/Module3

Annex C Awareness Card and Awareness Campaign Poster

Awareness Card

Duties of Peacekeepers: Reducing the Environmental Footprint of Field Missions

Available in English, French and Spanish

Awareness Campaign Poster

Water/Wastewater, Energy and Waste Waste Management in UN Field Missions

Available in English, French, Spanish, Arabic, Hindi and Amharic

Available for download on the Environment page of the UN Knowledge Gateway, under “Call to Action Posters and Cards” (for Download)”.

https://unitednations.sharepoint.com/sites/APP-Gateway/SitePages/Environment.aspx

Duties of Peacekeepers:
Reducing the Environmental Footprint of Field Missions

DUTIES OF PEACEKEEPERS

Reducing the Environmental Footprint of Field Missions

GREENING THE BLUE | SUSTAINABLE DEVELOPMENT GOALS | DEPARTMENT OF OPERATIONAL SUPPORT | ACTION FOR PEACEKEEPING

Office of Military Affairs

GENERAL DUTIES

- ☐ **Uphold the commitments in the Memorandum of Understanding (MOU) between UN and your TCC/PCC on environmental compliance and waste management*:**
- ☐ Endeavor to achieve full compliance with United Nations environmental and waste management policies and procedures for field missions as outlined in your pre-deployment or induction training.
- ☐ Undertake to "do no harm" to the local environment (including indigenous plants and animals).
- ☐ Upon departure, to leave the premises and physical environment in the condition in which it was provided.
- ☐ Observe a policy of no littering around the bases or on patrols.
- ☐ Take concrete steps to conserve water and energy, and to reduce and segregate waste.
- ☐ Properly manage hazardous waste and wastewater for which you are responsible.
- ☐ Where possible, prioritize the use of renewable energy.

Report any environmental incidents to the environment unit or mission support environmental focal points when it occurs:
Email: _____
Tel: _____

*under Article 7

UNIT

ENERGY MANAGEMENT

7 AFFORDABLE AND CLEAN ENERGY

- ☐ Know how much you consume and strive to reduce your energy impact.
- ☐ Close doors/windows when AC units are on.
- ☐ Avoid using/replace ACs units running with ozone depleting substances
- ☐ Optimise power production:

  Rightsize and synchronise generators, and connect to renewable grids where possible
- ☐ Improve the energy efficiency of where you live/work:

  increase shading,
  add insulation,
  install double-roofing,
  plant trees,
  etc.

INDIVIDUAL

ARE YOU ENERGY SMART?

- Switch off lights, ACs, and appliances
- Turn off vehicles, don't let engines idle
- Set your thermostat to minimum 23°C in hot climates
- Report spills and leaks - no matter how small
- Drive less - car pool, cycle or walk when possible

PETROLEUM, OIL AND LUBRICANTS POLLUTION PREVENTION

- ☐ Handle POL with care to avoid spills.
- ☐ Install containment basins / platforms with berms and sufficient capacity under all fuel tanks and drums, fuel collection points and generators.
  (Including in the design an oil-water separator and a roof, if possible.)
- ☐ Ensure that the workshops and car washing areas are paved and the water collected is diverted toward an oil-water separator, if discharged to the environment.
- ☐ Ensure a proper storage of collected used fuel / oil from the existing collection facilities.
- ☐ Ensure there is no discharge of used oil or diesel in a drainage channel, water body, septic tank or WWTP.

Duties of Peacekeepers:
Reducing the Environmental Footprint of Field Missions

WATER AND WASTEWATER MANAGEMENT

6 CLEAN WATER AND SANITATION

- ☐ Test regularly drinking water quality to ensure health and safety to staff.
- ☐ Systematically treat all wastewater and sludge prior to being discharged to the environment.
- ☐ Regularly check and maintain wastewater treatment infrastructure (septic tank, grease trap, manhole) to ensure proper function and avoid overflow.
- ☐ Avoid storm water penetration into the wastewater treatment network to avoid overflow.
- ☐ Introduce technologies to improve water efficiency in camps, e.g. install low flow fixtures, tap/shower aerators, dual flush toilets.
- ☐ Establish alternate water sources to supplement conventional sources and reduce water consumption, e.g. rainwater harvesting, re-use of treated wastewater for car washing, toilet flushing, dust control, ...

DO YOU USE WATER WISELY?

- Always turn off taps
- Report any leaks - no matter how small
- Use recycled water for car washing and gardening
- Use the half-flush on dual flush toilets
- Take short showers

PROHIBITED

- ⊘ To discharge or spill untreated blackwater / greywater into the environment.
- ⊘ To discharge untreated oil water or greasy water into the environment.
- ⊘ To discharge used oil or diesel in a drainage channel, a water body or a septic tank to control mosquito breeding or odor.
- ⊘ To throw any items (utensils, fabrics, ...) in the wastewater system.

UNIT INDIVIDUAL

UNIT INDIVIDUAL

SOLID WASTE MANAGEMENT

12 RESPONSIBLE CONSUMPTION

- ☐ Ensure all waste material and equipment is disposed of properly and in line with the environmental management framework.

  (For example, bring empty (plastic) water bottles used during patrols back to camps for proper disposal).
- ☐ Avoid using single use plastic products (plastic bags, plastic cutlery) or containers (plastic bottles and cups).
- ☐ Undertake segregation and storage of waste (including hazardous waste) for recycling and/or proper disposal. Think and act according to the 4R's (reduce, reuse, recycle, recover/composting).
- ☐ Maintain an inventory of hazardous substances kept in camps.
- ☐ Practice proper medical waste segregation at source (clinics, hospitals, medical services) before disposal.
- ☐ Practice smart printing when applicable.

LEAVE NO WASTE BEHIND

- Keep your camp tidy
- Always dispose of hazardous waste correctly
- Use the right bin
- Use refillable bottles and reusable bags
- Try composting

PROHIBITED

- ⊘ To throw away bottle packaging / wraps / bags directly into the local environment.
- ⊘ Open burning of any waste, whether solid, hazardous, chemical or biomedical.
- ⊘ Burying solid waste, hazardous waste and chemicals in the ground.
- ⊘ Burning of used tyres.
- ⊘ Dumping hazardous waste, chemicals, biomedical waste or expired medicine at the landfill or dumping site.

Duties of Peacekeepers:
Reducing the Environmental Footprint of Field Missions

WIDER IMPACT

11 SUSTAINABLE CITIES AND COMMUNITIES

- ☐ Be aware of the cultural, religous and historical sites and behave according to local pracitces.
- ☐ Promote compliance with international environmental treaties and provide capacity development support to Host-State counterparts (including when undertaking community outreach programmes and community-oriented policing
- ☐ Leave a positive legacy whenever possible.

PROHIBITED

- ⊘ To bring any plant / seeds from country of origin which is not endemic to country of deployment, and vice versa.
- ⊘ To acquire wild plants and animals, live or dead.
- ⊘ To use charcoal. Do not use fire wood for cooking purpose. Do not take part in deforestation and biodiversity loss.
- ⊘ To foster stray dogs and cats in camps by feeding them or improperly storing food waste.
- ⊘ To cut down existing trees without authorization.

LEAVE A POSITIVE LEGACY

ENVIRONMENTAL AWARENESS AND TRAINING

17 PARTNERSHIPS FOR THE GOALS

- ☐ Apply what you learned in the Environment and Natural Resources module of your Pre-Deployment Training.
- ☐ Pay attention during your in-mission induction briefing on environmental management and ask questions to the trainers.
- ☐ Actively participate in your on-site camp briefings and environmental site inspections conducted by your mission's Environment Team.
- ☐ Do your part in implementing the recommendations of the environmental site inspections at your camp.
- ☐ Learn about your Mission-wide Environmental Action Plan (MEAP) and the Environmental Management Scorecard.
- ☐ Support your Environmental Focal Points at camp, sector/region, and mission level, and collaborate with your mission's Environment Team in Mission Support.
- ☐ Join environmental events and awareness campaigns.
- ☐ Where requested, help with data collection for measuring environmental performance and risk management.

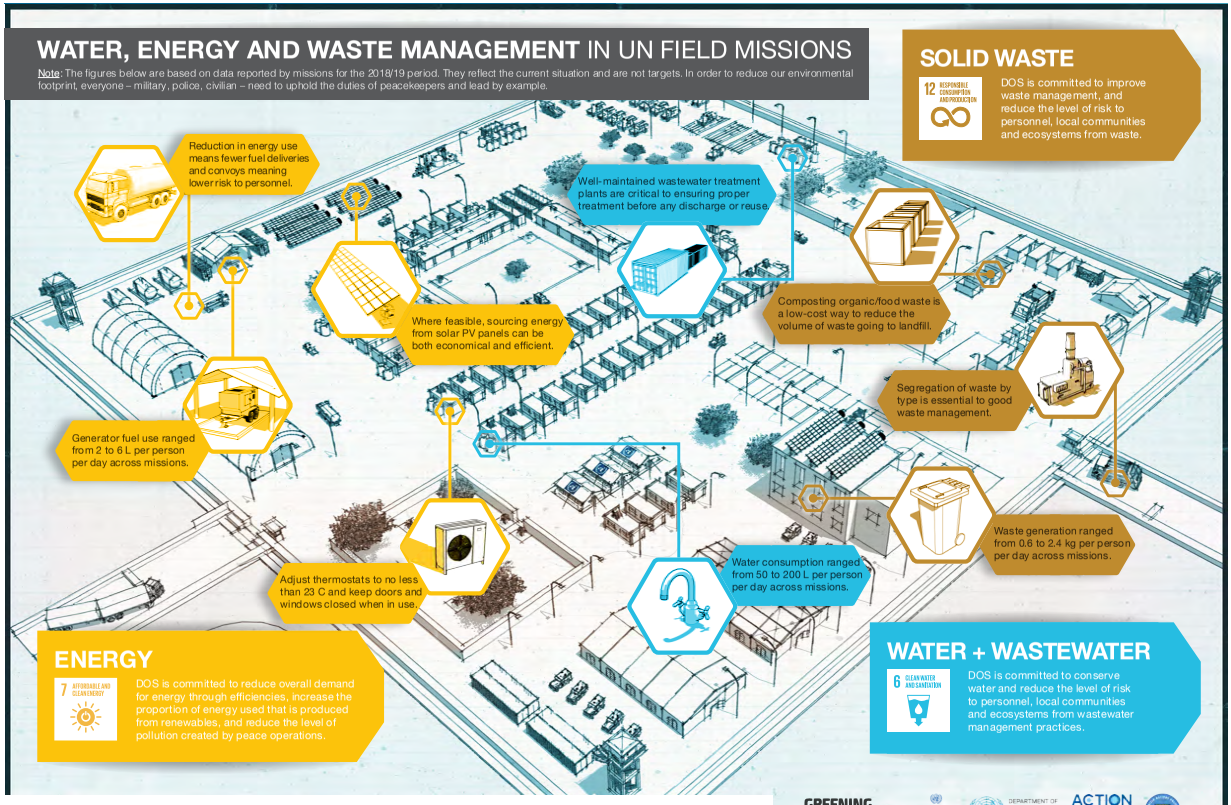
BE MINDFUL OF YOUR ENVIRONMENTAL FOOTPRINT

STOP

- ☐ Stop - before you start a new task/operation.
- ☐ Think - does the task involve issues (e.g. fuels, water, waste) that could affect the environment?
- ☐ Observe - the environment around you (e.g. drains, streams, trees).
- ☐ Plan - the task to avoid any damage to the environment.

WATER, ENERGY AND WASTE MANAGEMENT IN UN FIELD MISSIONS

Note: The figures below are based on data reported by missions for the 2018/19 period. They reflect the current situation and are not targets. In order to reduce our environmental footprint, everyone – military, police, civilian – need to uphold the duties of peacekeepers and lead by example.



SOLID WASTE

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

DOS is committed to improve waste management, and reduce the level of risk to personnel, local communities and ecosystems from waste.

ENERGY

7 AFFORDABLE AND CLEAN ENERGY

DOS is committed to reduce overall demand for energy through efficiencies, increase the proportion of energy used that is produced from renewables, and reduce the level of pollution created by peace operations.

WATER + WASTEWATER

6 CLEAN WATER AND SANITATION

DOS is committed to conserve water and reduce the level of risk to personnel, local communities and ecosystems from wastewater management practices.

The Environment Strategy for Peace Operations (2017-2023) sets out objectives and actions to realise the vision to deploy responsible missions that achieve maximum efficiency in their use of natural resources and operate at minimum risk to people, societies and ecosystems; contributing to a positive impact on these wherever possible.

GREENING THE BLUE | SUSTAINABLE DEVELOPMENT GOALS | DEPARTMENT OF OPERATIONAL SUPPORT | ACTION FOR PEACEKEEPING

Office of Military Affairs

Water/Wastewater, Energy and Waste Waste Management in UN Field Missions

DO YOU USE WATER WISELY?

Water, energy and waste management in UN Field Missions

Missions are:

- Introducing technologies to improve water efficiency in camps
- Regularly checking pipes and taps to reduce leaks and water loss
- Harvesting rainwater and recycling wastewater for dust control, car washing, gardening and other uses

6 CLEAN WATER AND SANITATION

The DOS Environment Strategy for Field Missions (2017-2023) sets out objectives and actions to realise the vision to deploy responsible missions that achieve maximum efficiency in their use of natural resources and operate at minimum risk to people, societies and ecosystems; contributing to a positive impact on these wherever possible.

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Water/Wastewater, Energy and Waste Waste Management in UN Field Missions

ARE YOU ENERGY SMART?

Water, energy and waste management in UN Field Missions

Missions are:

- Introducing technologies to reduce energy consumption and improve energy efficiency
- Installing solar technologies for power generation and water heating
- Putting containment basins under generators, fuel tanks and washing bays to reduce soil and water contamination

7 AFFORDABLE AND CLEAN ENERGY

The DOS Environment Strategy for Field Missions (2017-2023) sets out objectives and actions to realise the vision to deploy responsible missions that achieve maximum efficiency in their use of natural resources and operate at minimum risk to people, societies and ecosystems; contributing to a positive impact on these wherever possible.

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Water/Wastewater, Energy and Waste Waste Management in UN Field Missions

LEAVE NO WASTE BEHIND

Water, energy and waste management in UN Field Missions

Missions are:

- Improving procurement procedures to reduce the amount of waste generated
- Composting organics and other biodegradable materials
- Improving management procedures for hazardous waste
- Investing in incinerators to reduce the total volume of waste going to landfills

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

The DOS Environment Strategy for Field Missions (2017-2023) sets out objectives and actions to realise the vision to deploy responsible missions that achieve maximum efficiency in their use of natural resources and operate at minimum risk to people, societies and ecosystems; contributing to a positive impact on these wherever possible.

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Annex D Partial Extract from a Sample Checklist

Below are sample templates that can used in a peacekeeping operation. Each commander should reach out to the Mission Support/Environmental Unit to obtain the mission-specific environmental inspection checklist and related inspection criteria.

Checklist for Visits/Environmental Inspections

Inspection date:

Unit/Camp situation:

Inspector's name:

- Applicability: **A** = Applicable; **NA** = Not applicable
- Observation: **E** = Excellent, **G** = Good, **S** = Satisfactory, **NS** = Not Satisfactory,
- Vidual illustration (photo): specify whether illustrative photos have been taken or a pattern made for inadequacy or non-compliance

		Applicability		Observation						
	Arrangements/ measures taken	**A**	**NA**	E	G	S	NS	**Comments/ explanations**	**Location coordinates**	**Visual illustration (Photo)**
Sewage, wastewater										
1. Wastewater (Black and grey water)	1.1 How many types of toilets and cabins are in the unit/camp (ration number of cabins for how many people)?									
	1.2 Is the type of toilet suitable for existing conditions?									
	1.3 How is the use or maintenance of toilets, latrines, septic tanks?									
	1.4 Is there a separation of floodwaters and grey water?									
	1.5 How often pits are drained									
	1.6 Is wastewater treated before draining?									
	1.7 Is there an overflow of septic tank (at the kitchen or toilet)?									
	1.8 Is the quality of the collection service by the contractor acceptable?									

Unit Environmental Inspection Checklist Sample

Checklist should be modified based on the type of unit, guidance from the Mission Support Environmental Unit and environmental conditions

General Observation

1. Troops strength, general observation?

Solid and Hazardous Waste

2. Unit/Camp dustbins available, segregation for organic and inorganic materials?
   - Hazardous waste (used batteries, filters, scrap metals)?
   - Biomedical waste (sharp container available)?
   - Type of operations outside unit camp by Unit [xxx Coy] (i.e. Convoys, Long range patrols, Force Operations)?
   - How is waste manage on those trips?
   - Were vehicle logs maintained and completed?

Energy

3. Unit/Camp type of energy uses (solar, electrical, generator)?
   - Are gensets (COE) provided by the UN?
   - Genset on a platform/separator/collector?
   - Soil contaminations observations?
   - Fuel spill kits available?
   - Type of fuel used for cooking (firewood, gas, charcoal, induction)?
   - State and cleanliness of kitchen?

Water

4. Source of unit/camp water supply, raw and purified drinking water?
   - Water management (any little leakages, stagnant water)?
   - How often do you test the treated water?

Wastewater

5. No# of ablution modules, no# of septic tanks and their readiness/maintenance state?
   - Unit proximity to the Water Waste Treatment Plant?
   - How is recycled water used - laundry, ablution unit flushing, car washing?
   - Grey water from kitchen pre-treatment, grease trap etc.?
   - Manhole cleaning?

Hazardous Substances

6. Are used oil/lubricants stored on the bare floor (cooking or machine)?
   - Soil contamination observed around genset, collector/ separator?
   - Are oil/lubricants stored on a concrete slab?
   - Are hazardous substances stored in a bunded area or secondary containment provided?

Wild Animals and Plants

7. Does the unit/camp have any wild or domestic animals as pets or used as a food source?
   - Are plants growing within the unit/camp boundary, beautification or food source?

Cultural and Historial Resources Management

8. Sensitization on culture, or history of the local population and surrounding area?

    - Any cultural/historical site within the unit/camp or within close proximity (i.e. burial sites, monuments)?

Cultural and Historial Resources Management

9. Are Prefab building in use or super structure?

    - No# of prefabs? UN or Contingent owned?

Annex E Sample – Template unit/camp data collection sheet

Below is a partial sample template used in a peacekeeping operation and not a complete, standard data collection sheet. Templates should be modified for the environment and based on Mission Environmental Unit guidance

Water Abstraction Data
Military Units/Camps Formed Police Units

Unit Camp:

Location:

Please submit on a monthly basis (before the 5th of the month) to:

For information, contact:

EXAMPLE: Water abstraction (i.e. raw water obtained from boreholes, shallow wells or surface water)

Month	January					February					March				
	Week 1	Week 2	Week 3	Week 4	Total	Week 1	Week 2	Week 3	Week 4	Total	Week 1	Week 2	Week 3	Week 4	Total
Data (in Litres)															
Measure unit used if not litres															

EXAMPLE: Energy production and consumption readings (Site Name)

Month	April					May					June				
	Week 1	Week 2	Week 3	Week 4	Total	Week 1	Week 2	Week 3	Week 4	Total	Week 1	Week 2	Week 3	Week 4	Total
Data															
Measure unit *(ideally in litres)*															

EXAMPLE: WATER production and consumption readings (Site Name)

Month	July					August					September				
	Week 1	Week 2	Week 3	Week 4	Total	Week 1	Week 2	Week 3	Week 4	Total	Week 1	Week 2	Week 3	Week 4	Total
Data															
Measure *unit (ideally in litres)*															

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