



ENVIRONMENTAL GOOD PRACTICE

2018 Implementation of the DOS Environment Strategy for Field Missions



ENERGY

UNISFA'S PILOT PROJECT – FRIM



UNISFA has commenced a Field Remote Infrastructure Monitoring (FRIM) Pilot Project in the Abyei Mission HQ to optimise consumption of fuel, energy and water, improve wastewater treatment, and enhance data management. This 'centralized innovative operational planning and oversight platform' supports management of mission resources and utilities, enabling proactive monitoring of usage and potential risks of outage. The current focus is on managing power and water consumption through the installation of meter baseline measurements. Data will be used for real-time monitoring and repair of faults, with a mobile app provided to staff to change consumption-related behaviours.

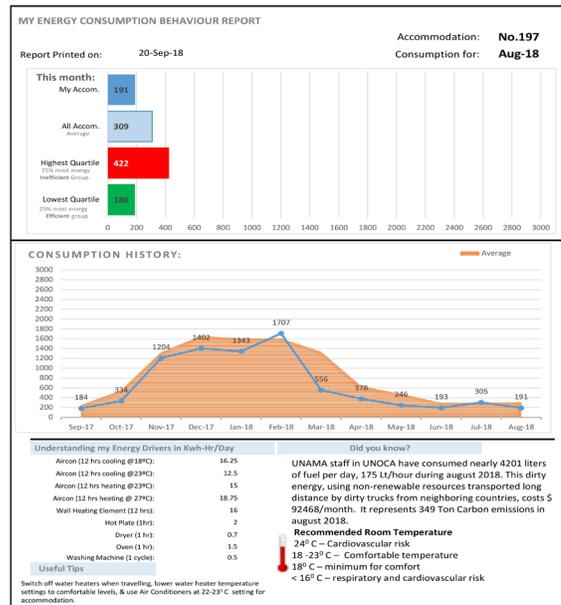
GREENING ENERGY DEMAND-SUPPLY IN UNMIK



The UNMIK HQ in Pristina houses a fully functional solar PV system of 296 kWp integrated on the roof of the warehouse, with current production levels above expectations. Double glazed windows, light sensors in toilets and corridors, brightly painted interior walls, and centralized heating and cooling systems enhance the energy

performance of the building. The replacement of internal lighting with LEDs and complete integration of daylight and occupancy sensors is expected to generate 30% reductions in demand. Additional savings are expected to come from effective HVAC control by electronic thermostats.

PERSONAL ENERGY BEHAVIOR REPORT IN UNAMA



In Afghanistan, UNAMA created a personal energy behaviour report. The report documents personal energy consumption, while comparing usage to other staff members and a yearly average. It also ranks the consumption behaviour while providing tips and facts on conserving energy. As a result, a 19% reduction in electrical consumption has been observed from January to July 2018 in comparison with the same time period in 2017.



WATER AND WASTEWATER

TREATMENT AND REUSE OF WASTEWATER IN MINUSMA

In Mali, MINUSMA has installed 42 of 70 planned wastewater treatment plants in 13 locations. The mission is one of the first to install centralized banks of wastewater treatment plants; supporting effective day-to-day operation and maintenance within limited capacity. The Main Operating Base (MOB) was designed specially to minimize the loss of trees, with 243 trees saved, and 4 trees lost replaced by 1,130 new trees and ornamental plants, watered by



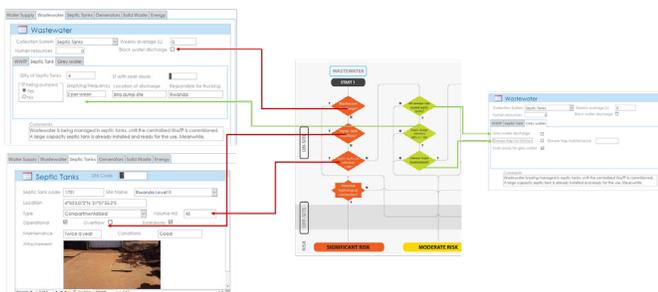
treated wastewater. Other beneficiaries of the treated wastewater include car washes, lawns and vegetable gardens, and as a result no wastewater from the Base is discharged into the environment.

UNAMID GROUNDWATER MONITORING PROGRAM



In Darfur, UNAMID successfully established a groundwater monitoring program to monitor the drawdown/recovery parameters of an aquifer, using sophisticated data loggers installed in observation wells within the target aquifers. These data loggers are computer based electronic logs, picking up and recording fluctuations in the groundwater level over time. The program enables UNAMID to monitor the effects of its water consumption on the scarce local resources and adjust, where necessary.

MINUSCA'S WASTEWATER RISK ASSESSMENT



In the Central African Republic, MINUSCA has developed a database closely aligned with the risk assessment methodology for wastewater to provide a user-friendly dashboard to present the results of the site inspections completed mission-wide. Future enhancements will include the creation of an online form to carry out the inspections

directly linked to the database for real-time information.



SOLID WASTE

THE KOLONGO LANDFILL IN MINUSCA



In Bangui, Central African Republic, MINUSCA is implementing an upgrade project for the municipal landfill, to bring the site to an acceptable operating standard and extend its life-span. Technical hands-on training for local landfill staff was provided, including on operational safety, grading, compaction, waste covering and soil characteristics. Future remedial actions at the site will include the installation of a leachate management system to protect against landfill liquids migrating off site and into the local groundwater; engineered waste covering, and suitable storm water and methane gas management; complemented by further training. This will allow the Mission to continue using the facility while seeking future alternative disposal options in collaboration with the local authorities.

MONUSCO TRAINING ON HAZARDOUS WASTE CHEMICAL TREATMENT TECHNIQUES



In Bukavu, Democratic Republic of the Congo, 20 MONUSCO personnel from engineering and environmental teams were trained in English and Swahili by REACT in mid-October 2018 on the appropriate methods for the treatment and disposal of expired chemicals (mainly sodium carbonate). The objective of this training was to provide the skills to neutralize and safely dispose of hazardous chemicals that accumulate in the mission, while reducing the overall amount and minimizing environmental impacts. A revised advice note was provided to the mission outlining the full procedure for disposal of the sodium carbonate.

UNSOS WASTE MANAGEMENT



UNSOS has a draft waste management plan that aims at source reduction and maximizing waste recovery through recycling. The Mission is now fully self-reliant with most of the non-recyclable and non-hazardous waste incinerated within its facilities, to reach 100% once the incinerator in Jowahar is operational. UNSOS is also a pioneer in centralized waste management yards. Recyclables, including aluminum cans, cardboard and scrap metal, are segregated, baled and containerized for management under the waste contract. While these recyclables are currently shipped for disposal, UNSOS is proactively exploring opportunities to support local initiatives. Readily biodegradable waste is composted and used to condition the soil. A pilot project to enhance this composting will be implemented in Mogadishu (MIA camp). The mission also operates and maintains medical waste incinerators. Engineered ash landfills receive incinerator residues, at a significantly reduced volume when compared to the original waste, contributing towards a reduced reputational risk to the organization.

UNIFORM COMPONENTS FOCUS ON “BEATING PLASTIC POLLUTION” IN UNIFIL



In Lebanon, UNIFIL’s uniformed components strive to reduce their environmental footprint and protect natural resources. The German house occupants in Naqoura initiated a clean-up campaign for the HQ beach, cleaning up 100 m to the left and right of the house. The Italian contingent gathered, separated and donated 30,000 plastic bottles and bottle caps to the “Beam of Environment” association. The Indian contingent is currently using all the plastic water bottle waste and other types of waste in useful projects, such as building a church, a multi-utility hut and greenhouses.



WIDER IMPACT

LIQUIDATION OF UNMIL



In Liberia, UNMIL completed its operations on 30 June 2018. With the goal of leaving a positive legacy, the mission handed over 3 wastewater treatment plants; 2 to the UNCT in a location operated and maintained by UNDP, with 1 gifted to the host government (Port authorities) after careful planning. Waste management officers from the Government’s Environmental Protection Agency were trained on the operation and maintenance of the system, and were provided with technical material to ensure that the facilities would be properly managed in the future. UNMIL was able to achieve a zero disposal of wastewater at the government facilities in February 2018, before its end of mission life time in Liberia.

PLASTIC BAN IN UNMISS

Beat Plastic Pollution
If you can't reuse it, refuse it
#BeatPlasticPollution



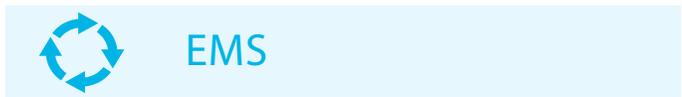
**FROM BROADCAST
TO REAL PRACTICE**

ADAMSON Florence
Architect
UNMISS/ENG



While the Government of South Sudan issued a directive to ban the use of plastic shopping bags in 2017, the ban was not strictly enforced, with continued prevalent use throughout the country. UNMISS implemented the ban at the beginning of July 2018, a joint effort which included various stakeholders: vendors, UN Agencies, NGOs operating within the UN compounds, and TCCs and PCCs. The Mission reached 100% compliance in all locations. The success is attributable to collaboration with vendors, including providing guidance and a realistic timeline for procurement of alternatives; and establishment of the team comprising different stakeholders across mission pillars. Efforts included a communications campaign

focusing on reuse which provided instructions on how to transform old t-shirts into reusable bags as an alternative to plastic.

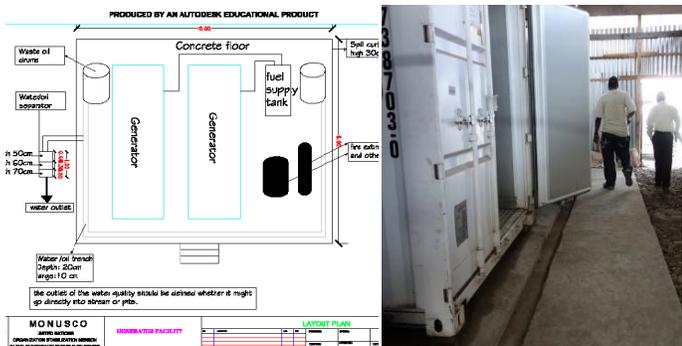


UNIFIL EMERGENCY PREPAREDNESS



In Lebanon, UNIFIL has developed an Environmental Contingency Plan (ECP); defining the standardized way in which an environmental incident must be dealt within the mission, with related rehearsal activities to be undertaken twice per year at different locations based on different scenarios. The main purpose of the rehearsal is to ensure that all the uniformed personnel are ready to deal with any environmental incident, and have the proper knowledge in its containment, mitigation and clean-up.

GUIDANCE MATERIALS ON SPILL PREVENTION IN MONUSCO



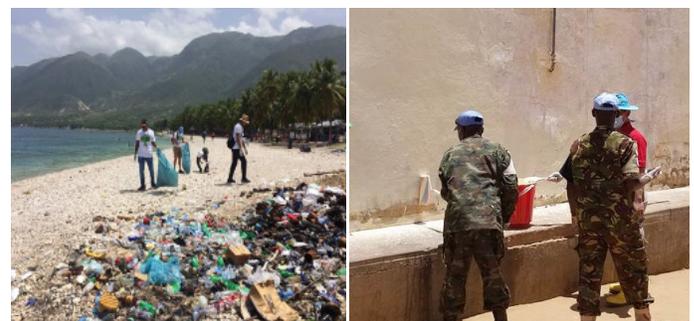
In the Democratic Republic of the Congo, MONUSCO undertook an assessment and evaluation of its significant environmental impact. One key aspect identified was petroleum pollution around the uniformed component's fuel storage areas and generator houses, due to poor storage infrastructure for both generators and petroleum storage facilities; the absence of emergency spill kits; and inadequate levels of awareness. To address these issues, operational guidelines were developed, including specifications for constructing generator and oil storage platforms, and minimum requirements for fuel storage and the car washing bay (including oil and water separator) in order to guide the COE unit and inspectors and the military chain of command. Contingents have now constructed fuel spill control platforms in 94% of mission locations.

MODIFICATION OF USED SEA CONTAINERS FOR ACCOMMODATION IN UNTSO



In Jerusalem, UNTSO constructed a temporary office out of used sea containers to accommodate the members of the Mission's senior management until the completion of restoration works. The office is designed for a quick set-up and uses sustainable and environment-friendly best practices while maintaining the compound's aesthetic and historical character. The structure is energy efficient, reducing heat transfer with secondary roofing and wall cladding to allow good air circulation between roofs and walls. Other environmental design features that promote energy efficiency include a skylight roofing for natural light, an open hallway for natural air ventilation, rubberized matting to insulate metal decking in the hallway from accumulating heat, double-glazed windows, insulated walls and ceilings, LED for all lighting fixtures, and inverter-type air conditioners.

WORLD ENVIRONMENT DAY



In UN MISSIONS across the globe, Environmental Officers and Engineers came together to create awareness and behavioural changes to reduce the UN's environmental footprint in observance of World Environment Day. Events included planting campaigns in UNMISS, beach clean-ups in MINUJUSTH and UNFICYP, arts and crafts contests with plastic waste in UNOCA, trainings and tree planting ceremonies in UNAMA, and cleaning and painting a teaching hospital in UNAMID.