

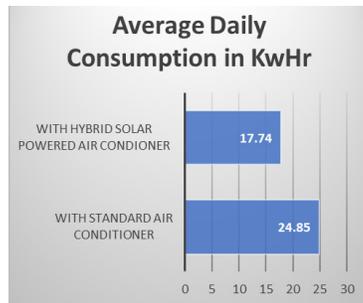


ENVIRONMENTAL GOOD PRACTICE

2020 Implementation of the Environment Strategy for Field Missions

ENERGY

HYBRID POWER ACs IN UNISFA



Since Air Conditioners (ACs) are a major consumer of electrical power in Field Missions, UNISFA installed 50 Hybrid Solar Air Conditioners in MSA-16 (a Uniformed personnel accommodation) in Abyei. During a test phase, two identical accommodations with the same number of equipment and occupants were selected and energy consumption was monitored for 3 weeks. The result was an average of 29% lower power consumption in the accommodation with the installed hybrid solar power equipment. While the investment cost of Hybrid Solar ACs is higher than standard ACs, a positive return-on-investment and significant savings can be realised over the expected life-time of 4 years due to lower operating cost. This project reduces UNSIFA's diesel fuel consumption by about 400 l/year and lowers its emissions by about 1,1 tons of CO₂. This is also planned for the level 2 hospital.

INSTALLATION OF PV SOLAR SYSTEMS IN UNDOF



UNDOF faced an increased power demand due to the installation of new wastewater treatment plants at two locations. To meet the higher load with renewable energy, the Field Mission decided to implement three (3) PV systems at TCC camps and UNDOF Positions. The first PV system of 250 kWp (on-grid) is installed at the TCC Camp Ziouani. The second system, 50 kWp (off-grid) will be installed at Position 22. The third system, 50 kWp (off-grid) is

installed at Position 37. The three (3) plants generate about 456 MWh per year and reduce UNDOF's carbon footprint from fossil fuel power generation by 250 tons of CO₂ each year. UNDOF has additionally reduced energy consumption by replacing all old heating systems that used kerosene, with split AC units.

ENERGY EFFICIENCY IMPROVEMENTS IN UNSOS



During FY 19/20, UNSOS intensified energy efficiency activities. UNSOS engineering programs replaced 3988 fluorescent lights with lower consumption LED lights, installed 335 light motion sensors and 429 AC sensors mission wide in all sector hubs. UNSOS engineering partially replaced water treatment plants with hybrid PV operated types and borewell pumps with a hybrid power supply. These projects are estimated to lead to a reduction in energy related fuel consumption of 250,000 L per year which corresponds to roughly 670 Tons CO₂eq.

NEW SOLUTIONS FOR PKOs TO EXPAND RENEWABLE ENERGY

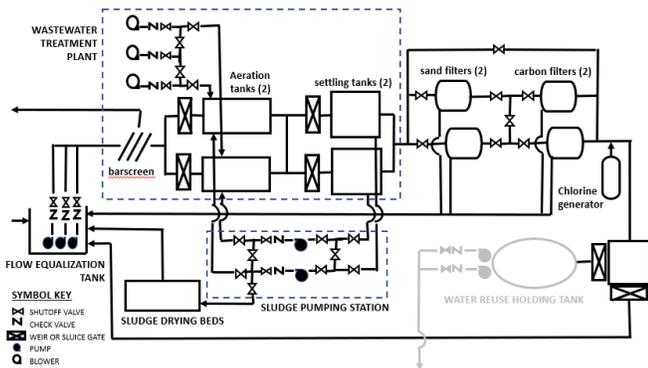


To overcome initial funding barriers of renewable energy projects, missions have started exploring various market available financial mechanisms. For example, in Somalia, UNSOS (picture above) has recently signed a Renewable energy Power Purchase Agreement (PPA) with an international service provided, enabling in 10-12 months the construction of a power plant in Baidoa that will provide energy both to UNSOS and to local businesses. Moreover, in Mali, MINUSMA recently received HCC approval

for a leasing to handover Solar PV with Energy Storage project with an international manufacturer, that will be implemented in Bamako. Both projects will lead to significant fuel savings, estimated at 900,000 and 2,500,000 L per year for UNSOS and MINUSMA respectively.

WATER AND WASTEWATER

MINUSMA PREPARES TO BUILD ON-SITE LARGE CAPACITY CONVENTIONAL WASTEWATER TREATMENT PLANTS



In Mali, MINUSMA plans to phase out compact wastewater treatment plants (WWTPs) to replace ageing systems in Timbuktu and Gao Supercamps. Following guidance by GSC and based on experience from UNIFIL, a conventional activated sludge WWTP is recommended as a better alternative, composed of aeration tanks and settling tanks. The full systems will consist of a flow equalization tank, wastewater treatment plant, effluent filtration and disinfection, sludge drying beds, and water reuse and off-spec water holding basins. The dewatered sludge will be composted for agricultural purposes. Unites will be designed to serve an equivalent population of 4,500 in Gao, and 3000 in Timbuktu. These systems will lower upfront costs, facilitate easier maintenance, and legacy after mission close-out. UNISFA and UNMISS are also in the planning stages of building conventional wastewater treatment plants.

INSTALLATION OF AN ULTRAFILTRATION SYSTEM IN UNMIK



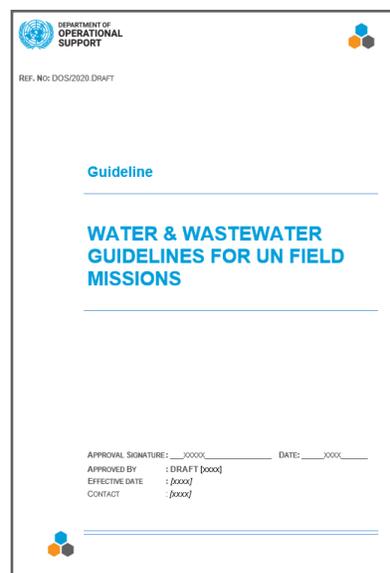
In 2019, UNMIK banned the usage of plastic substances from the point of sale, managed by the UNMIK contractors, as part of the effort to reduce plastic waste. Following project "Reduce plastic waste in UNMIK" there was a requirement to ban single-use bottles. Therefore, installation of water filters in existing water network was completed in early 2020. Implementation of this project reduced single-use plastic bottles in UNMIK.

A PILOT PROJECT OF AIR-TO-WATER GENERATOR IN MINUSCA



In Obo, South East of Central African Republic, MINUSCA installed an Atmospheric Air to Water generator (AWG). In an area that has no regular source of safe drinking water, nor a borehole within the vicinity of the camp, and uses river water for non-drinking purposes, the generator is a great alternative supplier of water. It was installed last summer, and the pilot proved successful. The mission found that the generator consumes less power, does not need chemicals to treat the water, is environmentally friendly- reducing the amount of plastic bottle waste, and is a valuable solution for potable water during quick deployments for troops, police and civilians when starting remote filed missions, and during crises like COVID-19. Now that the pilot project is completed, MINUSCA will buy and install 15 more AWGs in remote and small size camps.

A MISSION TASK FORCE COLLABORATES ON DRAFTING THE WATER AND WASTEWATER GUIDELINES



In 2020, a Task Force consisting of 16 members from 9 missions (MINUSCA, MINUSMA, MONUSCO, UNAMA, UNIFIL, UNISFA, UNMISS, UNMOGIP, and UNSOS) contributed actively to the preparation of technical wastewater related guidance for field missions. This collaborative work was led by ETSU (UNGSC) and REACT, with the support of the Environmental Section in HQ. The developed guidance material defines requirements for wastewater management, and practical steps and instructions to address wastewater

challenges in the field. This guidance has been combined with a draft water guidance developed in 2014 to create a final comprehensive product: The Water and Wastewater Guidelines for UN Field Missions. These guidelines are currently under final revision and expected to be promulgated in 2021.

SOLID WASTE

UNMISS BANS THE SALE OF PLASTIC BOTTLES THAT ARE LESS THAN 1 LITER



In South Sudan, to beat plastic pollution, UNMISS banned the sale of small plastic water and soda bottles on its premises, starting in September 2020. It is estimated that about 300,000 small plastic water bottles are sold per year in the supermarkets located on UNMISS camps. Working with the main vendors, UNMISS aims, with this green initiative, at significantly reducing the number of small plastic

bottles it generates, through the substitution of plastic bottles with aluminum cans, the sale of refillable large water bottles and the use of reusable water mugs at drinking water points.

UNAMID INSTALLS 2 NEW INCINERATORS



In Darfur, UNAMID’s Occupational Safety and Environment Unit, in collaboration with the Mission’s Engineering Section, installed two large capacity incinerators at the Mission’s Logistics Base in Elfasher. The Incinerators’ commissioning and training was conducted by the manufacturer and the REACT team in March 2020. Ten UNAMID Engineering staff and ICs were provided with level 1 (classroom) and level 2 (hands-on) training. In addition to training, the REACT team developed a step-by-step operation guide, which is being translated into Arabic for operators. The incinerators has improved the mission’s solid waste management; reducing waste volume and haulage frequency to the ZamZam tipping site by 90%, and provides an adequate solution for the high volume of special waste during the drawdown and liquidation phase, and for any possible COVID-19 infectious waste.

IMPLEMENTATION OF CENTRALIZED WASTE MANAGEMENT YARDS IN UNISFA

In Abyei, UNISFA is minimizing its environmental impact by establishing waste management yards (WMY). Being a remote mission with limited options for municipal treatment, UNISFA has to do its own solid waste management from collection to disposal. WMYs in team sites shall be equipped with an incinerator, ash landfill and composter; reducing the amount of solid waste at generation point. These plus compactors,



woodchippers and other specialized equipment will be included in the WMY Hubs in three locations – Abyei, Kadugli and Gok Machar. Solid waste that cannot be handled or recycled on site will be transported to the nearest hub in sea containers. A video touring the WMY can be seen on the Knowledge Gateway site.

WIDER IMPACT

HOW COOL IS THIS? REPORT BY UNAMA



In Afghanistan, UNAMA created a report consisting of the “How cool is this?” emails distributed weekly from the UNAMA Environment mailbox to all mission staff and representatives of the fellow UN agencies, funds and programmes in Afghanistan. During its first year, 46 broadcast emails were sent, with numerous feedback emails, congratulating the initiatives and its content, linked to the Sustainable Development Goals. The broadcast has gone beyond borders, with colleagues sharing it with other Missions; spreading the word and raising awareness on positive environmental actions.

UNFICYP CAPTURES WORLD CLEAN-UP DAY AND PEACE DAY ON VIDEO



In Cyprus, UNFICYP marked World Clean Up Day by bringing peacekeepers and Youth Champions for Environment and Peace together, a group of 24 young Cypriots from both communities,

to combat the solid waste problem inside the buffer zone as a bi-communal effort to protect the environment. They were joined by the SRSG and the Setlios Philanthropic Foundation. UNFICYP's SRSG also commemorated the life of Mahatma Ghandi, together with the Indian High Commissioner in Cyprus, and planted a tree in tribute to this legacy of peace. The three videos of these events can be found on the Knowledge Gateway site.

EMS

LAUNCH OF IT TOOLS FOR PEACE OPS



A new online platform for data collection was rolled out this year. Called the eAPP (Environmental Action Planning and Performance), it replaces the excel-based Mission-wide Environmental Action Plans (MEAP) with software for data collection, verification, validation, approval and reporting, as well as analytics and visualization to support decision-making. It is a major effort that embodies the vision of the SG's Data Strategy, to maximize the value of data and to make better decisions and deliver stronger support to people and planet. Another IT tool developed focuses on on-the-ground technical assistance and tracking progress on agreed actions (e.g. 342 actions globally from phase 1 TA). This tool, the Technical Assistance Portal, will enable implementation of corrective actions to improve risk and performance management and link to the Environmental Scorecard.

MISSION UNIFORMED COMPONENTS ISSUE DIRECTIVES AND DISTRIBUTE POCKET GUIDE



In a testament to ongoing progress in environmental mainstreaming, Environmental Directives or SOPs have been issued by the Force Commander or Police Commissioner in MINUSCA, MINUSMA, UNAMID and UNMISS. Uniformed components have also demonstrated their commitment to environmental responsibility by distributing the pocket guides on the "Duties of Peacekeepers: Reducing the Environmental Footprint of Field Missions" developed by the environmental

Section in NY in collaboration with OMA and UNPOL. Each mission can also share these with incoming units as part of pre-deployment awareness raising. The pocket guides are so far available in English, French and Arabic, and will be available in other languages in the near future (e.g. Chinese, Bengali).

FIRST-EVER ENVIRONMENTAL AWARD IN UNIFIL GOES TO INDIAN BATTALION



In Lebanon, UNIFIL Head of Mission and Force Commander handed out the first-ever annual environmental awards to seven Mission entities for initiating and implementing innovative projects in environmental management. The top prize went to the Indian Battalion for a project seeking to increase awareness and decrease waste generation by planting seedlings in their positions and areas of responsibility, preventing littering, reusing plastic bottles, building green houses and building compost pits. Other UNIFIL units receiving awards and recognitions were the Irish-Polish Battalion, French-led Force Commander's Reserve, Indonesian Battalion, Republic of Korea Battalion, Infrastructure Management Center at UNIFIL Sector West Headquarters and Italian Battalion. The awards commend individuals, contingents, sections, units that have demonstrated leadership, innovation or exceptional activities in protecting or enhancing the state of the environment.

MISSIONS' GOOD PRACTICES IN RESPONSE TO THE COVID-19 PANDEMIC

In the face of the global COVID-19 pandemic and the unprecedented, necessary restrictions on movement and travel, field missions took actions to re-prioritize and adjust working methods in environmental management, with support from the team in DOS, GSC and REACT. Their response included a heightened focus on waste management, especially of biomedical waste, and technical guidelines on their treatment and disposal were disseminated by DOS in early April. To take further precautions in preventing secondary exposure to risk from mishandled hazardous waste, missions procured barrel incinerators – smaller, portable, fit-for-purpose incinerators as back-up to existing, large incinerators and also for use in remote locations. As part of their updates to business continuity plans, and in light of disruptions to municipal or contractor services and accessibility of treatment sites, missions developed emergency contingency plans in the management of biomedical waste, general solid waste and wastewater. On the energy and power generation side, a contingency plan on how to save energy in missions facing constraints in fuel supply was developed. For the biannual collection and reporting of data, missions applied remote monitoring techniques with on-site personnel, with a focus on maintaining vigilance in environmental risk assessments in each site.