



DEPARTMENT OF
OPERATIONAL
SUPPORT



ENVIRONMENTAL GOOD PRACTICE

Annual Collection of Case Studies from
Field Missions





ENERGY

UNFICYP COMMISSIONS A GRID CONNECTED SOLAR PV SYSTEM IN ITS NICOSIA SITE



In line with the Environment Strategy of the Department of Operational Support, UNFICYP has consistently pursued and made considerable efforts towards the implementation of a photovoltaic (PV) plant project in Blue Beret Camp (BBC) within the United Nations Protected Area (UNPA) in Nicosia. This project is aimed at increasing the capacity of power generated from renewable energy sources, reducing fossil fuel generated power, producing energy that shows consideration to the local population, and achieving a considerable decrease in fuel costs and electricity bills. After a lengthy approval process with the local authorities, UNFICYP successfully commissioned two solar PV systems with a total capacity of 410 kWp in Blue Beret Camp in Nicosia, establishing a net-metering agreement with the local electricity company. The systems are expected to produce approximately 677 MWh of renewable energy per year, increasing UNFICYP's renewable energy share by approximately 12%.

BANGLADESH CONDUCTS A "SMALL RENEWABLE ENERGY PROJECT WITH A BIG HEART"



In view of the 2021 Seoul UN Peacekeeping Ministerial, the Government of Bangladesh, with support from DOS, deployed a 10 kWp Solar PV system to its UNMISS base in Juba. While this project, entirely funded by Bangladesh, is expected to bring modest fuel savings due to its small size, it will provide valuable lessons learned and serve as a case study to demonstrate to other troop and police contributing countries the feasibility of solar PV solutions in military settings. It is hoped that it will encourage the development of larger scale projects by other T/PCCs in order to reduce the dependency on fuel and reduce the environmental impact of peacekeeping operations. Bangladesh, who is one of the largest troop contributing country and the co-chair of the Group of Friends on Leading Environmental Management in the Field (LEAF), is currently evaluating the option to conduct additional solar PV projects in other unit sites, with another similar project planned for its Quick Reaction Force (QRF) which is deploying to Mali in Q1 2022.

UNIFIL POWERS ITS ITALIAN CONTINGENT SITE WITH RENEWABLE ENERGY



UNIFIL has been working hard to increase the share of electricity it gets from renewable sources both in UN civilian sites and in remote contingent sites, in an effort to reduce green-house gas emissions and the sites' dependence on fuel supplies. In particular, UNIFIL installed a 41 kWp Solar PV system with 288 kWh of energy storage in the Italian contingent site UNP 1-31, allowing it to be powered almost exclusively by renewable energy during Lebanon's sunny days, with the existing 60 kVA diesel generators remaining as backup. This project will reduce the site's fuel consumption by about 36,000 liters per year, resulting in CO2 emission reductions of approximately 95 tons per year. In addition, it will also reduce the number of fuel convoys to the site and the frequency of generator maintenance work required, allowing the mission to focus on other substantive tasks.

ENERGY COMPACT SIGNED AT THE HIGH-LEVEL DIALOGUE

In September 2021, on the occasion of the High-Level Dialogue on Energy, the Special Representatives of the Secretary-General (SRSG) of five missions, MINUSMA, MONUSCO, UNSOS, UNMISS and UNFICYP signed the Energy Compact, signifying their commitment

to explore ways in which their large energy demand and credit worthiness can be used as an "anchor" for investment in host states renewable energy capacity. The Compact, which is led by the Permanent Missions of the United Arab Emirates and Norway, was also signed by the Department of Operational Support, the Department of Peace Operations and various host states including Mali, Lebanon, South Sudan and Cyprus. The Compact supports the commitment made by the UN Secretary-General António Guterres to reduce the carbon emissions of the UN Secretariat and dramatically increase the use of renewable energy to 80% by 2030.

WATER AND WASTEWATER

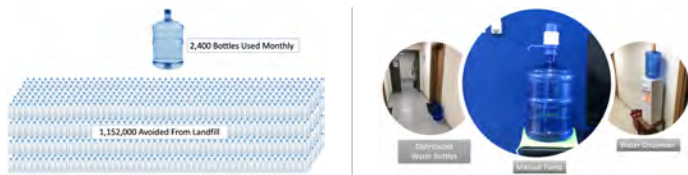
UNDOF MINIMIZES USE OF PRECIOUS WATER RESOURCES



UNDOF optimizes the use of treated water produced by the wastewater treatment plants (WWTPs). The Engineering Section installed a central car wash facility in Camp Faouar which receives an average of 480,000 liters of treated wastewater per month in compliance with the WHO water quality standards. The car wash facility is composed of six water tanks with a capacity to hold 5,000 liters and a concrete platform base which can cater to four light or two large vehicles at the same time. Since commencing operation in January 2021, the facility consumed approximately 360,000 liters of treated water per month, which increased to 450,000 liters per month during the winter season. The quality of water is regularly monitored by UNDOF Engineering Section. Reusing treated wastewater in this way reduces the amount of fresh water abstracted by the mission.

UNAMI REDUCES SINGLE-USE PLASTIC CONTAINERS

UNAMI implemented a communication campaign (TV, email broadcast and posters) aimed at reducing the amount of single-use plastic containers used within the mission. To support this effort, a water treatment plant complemented by a bottling water unit has been deployed. The reusable 20 liter water bottles produced are distributed in UNAMI premises to be used with manual pumps and water dispensers. With this initiative, an average of 2,400 reusable 20 liter bottles are now being used on average each month at the mission. Substituting single-use plastic water bottles with these reusable bottles will eliminate at the source more than 1 million of 0,5 liters plastic water bottles which would have otherwise been sent to the landfill each year.



UNMISS CONSTRUCTS A WATER PIPELINE IN COLLABORATION WITH UNICEF



UNMISS, in 2021, commissioned a 7 km long pipeline to supply water from a floating pontoon in the river Nile, to the UN House camp in Juba. This project was conducted in collaboration with UNICEF for a total cost of USD 3,300,000. The pipeline will replace water trucking that was previously in place to supply UN House with water. The benefits are multiple: reduction of water shortages especially in insecure situations, improved monitoring of water consumption, reduction of fuel consumption and air pollution, reduction of accidents, vehicles maintenance and manpower. The UNICEF portion of the pipeline now provides water access to the host community.

SOLID WASTE

IMPROVED COMPOSTING PRACTICES IN MINUSMA

Up to 50% of non-hazardous solid waste generated in MINUSMA is composed of organic materials, such as food waste, cardboard, paper, grasses, leaves, flowers, and branches of trees. The Mission has decided to convert this waste generation to an opportunity to generate compost as a valuable resource to green the camps. Ten (10) camps have been selected to accommodate composting facilities and are generating compost from organic waste collected through the non-hazardous solid waste contractor, Ecolog. As a result, the mission reduced its environmental footprint while reaping several benefits from the compost generated: reducing the use of incineration, elimination of odor emissions from organic waste accumulation in waste yards, availability of compost for gardening and crop production in camps, reduction of spending for procuring compost and fertilizer and improvement of the overall camps' environment with thriving green spaces.



MONUSCO SETS UP AN E-WASTE CONTRACT



In absence of available local solutions in the Democratic Republic of Congo, MONUSCO stockpiled e-waste in containers for a long time. In collaboration

with the REACT team, an e-waste recycling company, Enviroserve, was identified, and assessment visits were subsequently carried out. In October 2021, MONUSCO established a contract with Enviroserve Services LLC for the removal and disposal of e-waste in MONUSCO DRC and Uganda. The contract covers responsible and documented end-to-end processes to improve e-waste management. This effort ensures the final disposal of e-waste in an environmentally safe and friendly manner, protecting the health and safety of MONUSCO personnel and neighbouring communities thereby contributing to a positive legacy of the mission.

UNAMID DONATES A MEDICAL INCINERATOR TO STATE HEALTH AUTHORITIES



May 2021, as part of its draw down plan prior to its exit from Darfur, UNAMID handed over a newly installed medical incinerator at El Fasher Maternity Hospital to the North Darfur State health authorities. The incinerator will provide improved ways of managing medical waste generated by health care facilities in El Fasher township to stop the flow of medical waste to the ZamZam controlled tipping site. Similarly, in December 2021, UNAMID handed over water purification equipment and materials to the Ministry of Infrastructure and Urban Development, Water Administration Unit through UNICEF. The donated equipment includes water treatment equipment, water

quality test lab, chemicals, sodium hypochlorite and other supplies. The sodium hypochlorite can be used to generate about 634,000 liters of chlorine solution, enough to treat over a billion liters of fresh water. In addition, groundwater sources development equipment and two modular packaged water purification plants capable of producing 2,500 liters of pure drinking water per hour were donated. These plants could provide over 14 million liters of water to the local community on a yearly basis.

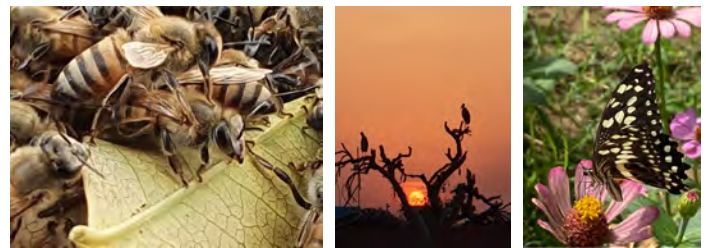
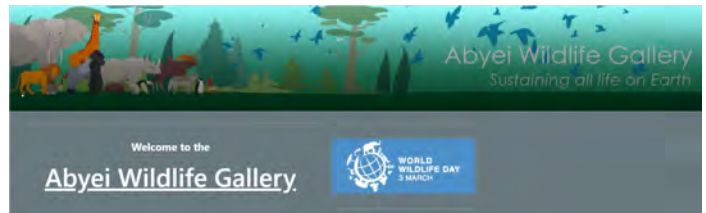
MINUSCA PROCURES 21 INCINERATORS



MINUSCA acquired 21 medium-sized incinerators for general solid waste with the last batch arriving in Bangui in December 2021. The next steps consist of their transportation and installation at selected sites in the field office locations. Mission expects to complete the installation of the 21 incinerators by June 2022 to improve its overall waste management across the Mission and reduce risk related to solid waste.

WIDER IMPACT

UNISFA'S ONLINE PLATFORM TO SHOWCASE LOCAL FLORA AND FAUNA



In March 2021, UNISFA launched the Abyei Wildlife Gallery. This new online platform, hosted on the Missions SharePoint, is an initiative which showcases photographs of local flora and fauna submitted by the UNISFA community. By collecting, recording and displaying photographs, the gallery aims to fulfil three main purposes: increase biodiversity awareness within the Mission, to foster community spirit between all personnel and encourage the UN principle of ‘do no harm’ with regards to the local ecosystem. To launch the gallery, a photography competition was held. Over 130 photographs capturing some 60 different species of Abyei wildlife were submitted by civilian and military personnel and winners were announced on International Day of Biological Diversity. The Abyei Wildlife Gallery reminds and inspires personnel to preserve and sustainably interact with the vast variety of life in Abyei.

REGIONAL HQ MITROVICA CONSTRUCTS ENVIRONMENTALLY FRIENDLY BUILDINGS



UNMIK continues to adapt its premises to meet its operational requirements and improve working conditions. As part of these efforts, UNMIK replaced existing accommodation containers and constructed new environmentally friendly buildings in Regional HQ Mitrovica. These premises are based on sustainable design structures which incorporate solar panels and solar water heaters, energy efficient lighting, centralized printers, thermal isolation of the building, treat wastewater before discharge, rainwater harvesting, and recycling bins for glass, plastic, paper and metal, all of which will lead to a reduction of UNMIK’s environmental footprint.

PLANTING TREES FROM THE AIR IN SOMALIA



In Somalia, UNSOS has been using a United Nations-operated drone – named “Blue Bird” to help reforest the Baidoa area. UNSOS flew “Blue Bird” over a 14 square kilometre area, dropping 60,000 tree seed balls (seed coated with charcoal dust) in an effort to combat the country’s deforestation. The drone is loaded with seedballs that can stay dormant for up to 20 years and spreads the seed balls considerably faster than a human planter, avoiding the security challenges faced in land-based sowing. The drone-planting and the nurseries have the potential to support reforestation in the conflict affected country. From this first drop, a forest of approximately 6000 trees could become visible as soon as two years from the time of the first rainy season, in addition to promoting secondary growth. The carbon offset value from this initial batch of seeds delivered by “Blue Bird” is estimated at 238 tons of carbon dioxide per year, based on the acacia tree average over its lifetime. The next areas identified by “Blue Bird’s” flights are now being worked on, with a return to Baidoa to plant in a second area being planned to combat the solid waste problem inside the buffer zone as a bi-communal effort to protect the environment.



UNISFA CONDUCTS ENVIRONMENTAL AWARENESS TRAINING

Environmental Awareness training is a serious matter for UNISFA, especially with incoming new troops. It is the perfect opportunity for UNISFA to create a rapport between the Environmental Affairs Unit (EAU) and the Environmental Focal Points (EFPs) in each team site; and encourages a proactive approach towards environmental sustainability and solving potential

challenges team sites may face from an environmental perspective. It sets the expectations and responsibilities of the EFPs, and highlights the pivotal role they play in ensuring all environmental issues are addressed in a timely and efficient manner. The training provides general environmental knowledge, raises awareness and showcases what is being done now and in which direction UNISFA is going. These sessions allow both parties to share experiences, ask questions and clarify any doubts. But most of all, for UNISFA, the human factor remains the most important: creating a trust-based relationship between the EAU and the EFPs is top priority and the Environmental Awareness training sessions provide the perfect setting to start off these new relationships on the right foot.



UPDATE ON PHASE II OF THE DOS ENVIRONMENT STRATEGY FOR PEACE OPERATIONS

Phase two of the DOS environment strategy (2017 to 2023) is now well underway, Full details can be found at the following link:

[Environment Strategy Executive Summary](#)

Excellent progress was made during the first phase of the Strategy, with missions working tirelessly to eliminate significant wastewater risk, establishing a robust data baseline, and building staff capacity. The Second Phase sets out a very ambitious agenda of building effective partnerships, increasing the proportion of energy produced by renewable sources, and laying the groundwork for a “positive legacy” from our operations.



CERTIFICATION FOR UNMIK'S ENVIRONMENTAL MANAGEMENT SYSTEM

In June 2021, UNMIK's environmental management system (EMS) was certified as compliant with the ISO 14001:2015 international standard. UNMIK believes that implementation of this standard will further assist the mission to improve its environmental performance through the more efficient use of resources and reduction of waste, thus minimizing the environmental footprint.

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