

## Project Case Study

# Cooperation with the Private Sector: ZoomPak - Central Treatment Facility in Accra

### Background

Like in other urban regions in Africa, the safe and environmentally sound management of healthcare waste (HCW) remains a challenge in the Greater Accra Region in Ghana. Large amounts of this infectious and other hazardous waste continue to be produced and burned in small, inappropriate waste incinerators, emitting high amounts of unintentionally persistent organic pollutants (UPOPs) like dioxins and furans which contribute to air pollution in the region.

Despite the considerable impact, the Greater Accra Region has the highest density of population of Ghana's administrative regions with more than 4 million people. Day by day, tons of hazardous waste are generated, including large amounts of infectious waste and sharps waste (biohazardous waste) as it hosts most of the health facilities in the country.

To address the problem, the Government of Ghana took the decision to set up a public private partnership (PPP) with support from the Turkish Government. The company, ZoomPak, was established and in 2015 a state-of-the-art and centralized HCW treatment system was commissioned at Teshie in Accra. Almost one million US dollars was required to put up this facility and to commence operations. The new biohazardous waste treatment center consists of a reception area, a refrigerated temporary storage, a large autoclave for the decontamination of waste and a shredding system to render treated waste unrecognizable and to reduce its volume.

The treatment center has sufficient treatment capacity (1.5 tons per cycle) to safely treat the entire biohazardous waste in the Greater Accra Region. However, the facility did not receive enough waste to meet this operational capacity - the system was heavily underutilized and was only operated a few hours per week serving less than ten health facilities.



(ZoomPak operational staff preparing the waste for autoclaving)

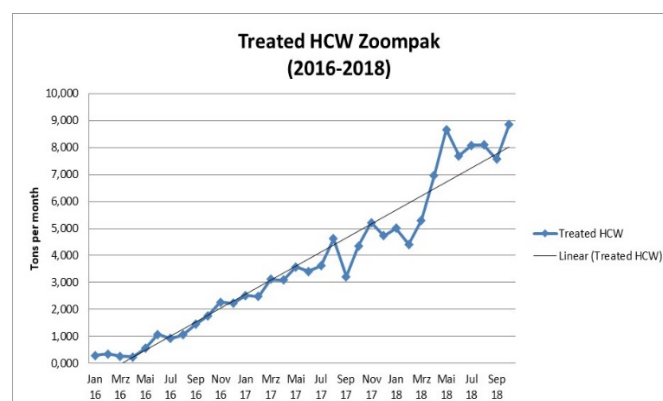
### Approach

During implementation of the GEF-financed Healthcare Waste Project, it has been decided not to set up additional healthcare waste treatment capacity in Accra but to utilize the existing ZoomPak Treatment facility as a central treatment plant. Following this decision, the aims of the UNDP/GEF project are met and in parallel the safe and environmentally sound treatment of waste by Zoompak was enhanced.

A Partnership was therefore established between Ghana Health Service and ZoomPak Ghana Limited to provide best healthcare waste management (HCWM) services to health facilities in the Greater Accra region. This partnership was enhanced through the review of the Ministry of Health's Policy and Guidelines on HCWM, which calls for the use of best available technologies (BAT) and best environmental practices (BEP) in healthcare waste management, training and outreach.

### Outcomes

The joint approach resulted in a better utilization of the offered waste treatment service. From 2016 to 2018, the amount of waste treated in an environmentally friendly manner increased from about 0.3 tons per month to nearly 10 tons by the end of 2018. It is expected that a release of about 5 g-TEQ Dioxins (UPOPs) per year will be avoided from 2019 onwards.



The increased utilization of the treatment system has also placed the company in a much better financial ground and is expected to help sustain not just the future operations of the system but also the jobs created in the waste treatment sector.

## ZoomPak Business Story

ZoomPak Ghana Limited as a subsidiary of JOSPONG Group of Companies entered into the medical waste management business with the goal of addressing concerns of improper management of medical waste in Ghana to reduce the risk posed by unsafe waste disposal. The facility was financed through a partnership between Zoomlion Ghana Limited and Campak Group of Turkey. The facility is the first in the West Africa Corridor.

The initiative was given impetus by the coming on board of GEF funded project. The facility had operated below capacity due to the initial service charge of GH8.00 per kg of medical waste. In addition to the unwillingness of the government owned health care facilities to pay for health care waste treatment, non-existence of regulations for disposal of medical waste has complicated efforts to promote full utilization of resources.

The facility still remains operating at below-capacity operational status despite increasing its customer base from 3 to 87 health care facilities as of December 2018. This increase has been possible due to the contribution of GEF financed project. According to the Operations Supervisor, approximately 40% of the clients subscribed to the services of Zoompak can be assigned to direct and indirect influence of the project. The facility is expected to operate under capacity for a while longer, until the Health Facilities Regulatory Authority (HFRA) and Environmental protection Agency (EPA) begin enforcing regulations on medical waste management. Fortunately, this forms part of the key priorities of the project in 2019 and it is anticipated that the facility will attract additional clients through the enforcement of these regulations.

The partnership with UNDP/GEF project will continue to contribute to increase the subscriber base of ZoomPak's services and hopes to consolidate in other regions where treatment technologies have been installed.



ZoomPak staff transferring medical waste collected from various health facilities into containers at the treatment facility

## Lessons learned

The availability of environmentally sound healthcare waste treatment services alone will not result in the utilization of facilities. A key factor to promote and expand the use of these facilities is the provision of financing to health facilities in Africa to effectively make use of treatment services.

The combination of trained personnel, effective use of HCWM technologies and efficient segregation of healthcare waste can help to reduce the financial, health and environmental costs of HCWM across the continent significantly.

For the implementation of BEP and BAT in HCWM, practical guidelines need to be established and must be accompanied by a clear monitoring and inspection system of enforcement.

## Impacts through Testimony

*“The UNDP’s project on reducing mercury releases and unintended persistent organic pollutants (UPOPs) in Ghana has really had a positive impact in the operations of the ZoomPak Medical Waste Treatment which happens to be the first centralized medical waste treatment facility in Ghana. The project helped to raise awareness on the negative impact improper medical waste management was having on human health and the environment. Through the various activities of the project, relevant stakeholders and authorities of Ghana were engaged and this helped to sensitize them on the need to shift from low temperature incineration to steam sterilization which is environmentally friendly.*

*The effect of these activities of the project helped to bring on board, thirty-four health facilities in the Greater Accra Region of Ghana on to the services of Zoompak as at the end of the year 2018. This represents 40% of our client base. These clients have contributed to the increase in the tonnage of medical waste collected and transported to our treatment facility over the years.*

*This medical waste project initiated by the UNDP is really helping to promote environmental health and safety in Ghana and the world at large.”*

**Mr. Senam Tengey**  
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### **At a glance**

**Objective:** Implement best environmental practices and introduce non-incineration healthcare waste treatment technologies and mercury-free medical devices in four Sub-Saharan African countries to reduce harmful releases from the health sector

**Financing:** \$ 6,453,195 (GEF financing)  
\$ 28,936,164 (co-financing)

**Term:** December 2015 until April 2020

**Countries:** Ghana, Madagascar, Tanzania, Zambia

**Agency:** UNDP Istanbul Regional Hub for ECIS

**Partners:** WHO - World Health Organization  
HCWH - Health Care Without Harm

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