

Project Case Study - Madagascar

CHRD Manjakandriana, greening health care in Madagascar

Background

Manjakandriana Hospital, in the Analamanga region, is located 48 km east of the capital Antananarivo. The hospital established units of surgical radiography, laboratory, pediatric, and stomatology-dentistry in 2005 and became a District level 2 Hospital (CHD2). In 2015, it became a referral hospital at district level. The national road RN2 and the railway to Toamasina pass through the Manjakandriana district and the CHRD receives all the referred patients from the district. The CHRD has 45 beds and 8 units.

As part the eight pilot health facilities benefiting from the GEF/HCWM project, the Centre Hospitalier Régional de District or Manjakandriana Hospital was equipped with a health care waste treatment facility in 2018. Due to unstable supply of the electricity and low income, the hospital requested a support to cover costs of electricity to be consumed by the non-incineration HCWM equipment—autoclave—supplied. Therefore, the project provided a 3 KVA photovoltaic system to compensate the energy consumption of the autoclave.



Approach

- Electrical and solar power outlets were separated to minimize the risk of over-consumption.
- Hospital staff were advised to use the solar energy in a specific part of the hospital, i.e. for the operating room and the patient-reception room.

Outcomes

- When the photovoltaic system became operational, electricity consumption and hospital expenses were reduced by 90%.



Sustainability Strategy Implemented

- It is important to establish close collaboration of the hospital's management team between the District's Department of Public Health, authority representing the Ministry of Public Health in the district.
- In addition, the CHRD Manjakandriana Regional Hospital joined the Global Green Healthy Hospitals¹—GGHH—network, coordinated by the project's partner, NGO Health Care Without Harm. Global Green and Healthy Hospitals is an international network of hospitals, health care facilities, health systems, and health organizations dedicated to reducing their environmental footprint and promoting public and environmental health. The installation of the photovoltaic system was the first step towards greening the hospital. In coordination with the project, the hospital is also planning to go ahead with installation of a bio-digester² to produce a biogas from organic waste to be used in cooking food for hospital staff and patients. The hospital is also looking for partners to recycle the plastic waste disinfected by the autoclave.

¹ The Global Green and Healthy Hospitals network has more than 1,300 members in 65 countries who represent the interests of over 36,000 hospitals and health centers. <https://www.greenhospitals.net/>

² Bio-digestion: Anaerobic digestion is the process by which organic matter such as food waste is broken down to produce biogas.



Lessons learnt

- Due to risks of misuse/excessive use solar energy, hospital staff decided to use the photovoltaic system only for the specific areas—the operating room and the patient-reception area.

Next Steps

- The hospital plans and prepares for piloting the bio-digester system.
- The hospital looks for partners to support recycling of plastic waste in the hospital.
- The hospital aims to conduct a small competition between different units to promote proper segregation of the health care waste which will facilitate recycling efforts.

Project Overview

Project: GEF-financed UNDP-supported regional project: “Reducing UPOPs and Mercury Releases from The Health Sector in Africa”

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 December 2020

Partner: WHO - World Health Organization
HCWH - Health Care Without Harm

Countries: Ghana, Madagascar, Tanzania, Zambia

Executing Agency: Ministry of Public Health, Madagascar
Ministry of Environment, Madagascar

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