

Waste Management for Environmental Protection in Rwanda

“If waste is sorted at the production site, any further handling and/or treatment is made easier and cheaper!”

By RDIS ORGANISATION, RWANDA, 09/05/2018

African cities, towns and shopping centers are growing rapidly, however, hygiene and sanitation is questionable whereby the environment and people’s health is affected due to the poor collection, treatment, transportation, storage, and eventual disposal of waste. Owing to the encouraging data on economic growth, the increase in the level of urbanization in Africa is expected to continue in the future.

In Rwandan, waste management is not yet fully implemented; the collection is properly done in the capital city of Kigali and in a few towns located in the country side. In some hotels and guest houses, health centers, schools and training colleges, even those owned by Churches, the status of hygiene and sanitation is not adequate.

Environmental impacts of poor waste management and sanitation at a local level include pollution of land and water sources, spread of diseases, and bad odors’. At a global level, applying the four (4) R principles of cleaner waste management (Reducing, Reusing, Recycling and Recovering of waste) can reduce energy use which will reduce greenhouse gas emissions. So, not only the hygiene is damaged by the mismanagement of the waste but also, the physical environment is destroyed by the non-decomposable waste that is thrown into inappropriate areas of the communities. Solid waste management is an issue in both urban and rural areas of Rwanda.

The Rural Development Interdiocesan Service (RDIS organization) is for this reason currently implementing a **“Waste Management for Environmental Safeguard”** - project in Rwanda to tackle the issue of solid waste management. The beneficiaries of the project are Church’s training centers, guest houses, schools and health centers. Special training is given to managers and personnel of these institutions and people, especially the youth from environmental protection clubs, who are likely to influence others with knowledge and skills about waste management. Thirty (30) special waste bins and a number of copies of waste management policy have been distributed to selected institutions in the entire Church area in the Southern and Western Provinces in Rwanda so as to reach a wider population. They will soon be available also for sale through an affiliated company.



Thirty (30) special waste bins with three compartments have been provided by RDIS to help the community members to separate waste.

In order to find a solution to these challenges, Rwanda Environment Management Authority (REMA) is devising strategies to ensure proper solid waste management in collaboration with other stakeholders at district level. In rural areas, organic waste is composted and mixed in fields; other types of waste are re-used or buried. In urban areas, the local administration usually manages solid waste collection and disposes waste in open dumpsites or landfills. In some areas, waste is brought to some cooperatives to sort and recycle the organic waste into compost and briquettes; in other areas, much of organic waste is taken from a collection point and used in generating biogas, significantly reducing the amount of waste in the environment.

In general, while solid waste collection has significantly improved, waste sorting at source is still at a low level and poor

solid waste disposal still poses significant safety and health risks; as solid waste is dumped in open locations with simple management techniques that are likely to cause both environmental and health impacts.

The Director General of REMA, Eng. Coletha U. Ruhamyia is quoted saying, "the tasks ahead towards green economy are greatly challenging and cannot be achieved without ownership and active participation of the Rwandan population as well as all partners and stakeholders". REMA works with and through Rwandan citizens, public institutions as well as private and civil society organizations, along with conducting awareness raising campaigns to raise people's awareness about the need to separate solid wastes at households' level and production sites. In line with this arrangement, among the goals of the ongoing RDIS project for waste management is to encourage the population to dispose solid waste properly, by sorting them and separating them by their categories, mainly biodegradables and non - biodegradables.

For this reason, RDIS Organization has designed a special waste bin with three compartments for "organic & compostable materials", for "non-recyclable waste" and for "recyclable bottles & plastics". This waste bin is being produced locally by a Church owned training college, Muhanga Youth Technology Center (MYTEC) as a strategy of creating employment for the youth in Rwanda.

RDIS organization is raising awareness about the need to separate solid waste by the media, Internet, fliers, rollup banners and by conducting workshops to managers and personnel of Church owned training centers, guest houses, schools and health centers so as to impart them with practical techniques of proper waste management and encourage them to apply the four (4) R principles of cleaner waste management which are Reducing, Reusing, Recycling and Recovering of waste.



RDIS project uses this waste hierarchy to show the four R principles of cleaner waste management

The Waste Hierarchy is a model for sustainable waste management that aim firstly at **Reduction** of waste, which is by far the most effective way to reduce waste. Secondly it encourages **Reuse, repair and refurbishing** of some material instead of forwarding them to a landfill. Thirdly, it encourages **Recycling** of waste into useful materials: "What is considered as a waste by some can be a raw material to others!" And the fourth R stands for **Recovery** – converting waste material into useable heat, electricity or fuel; for example converting biomass waste into briquettes for cooking. By following this 5 – step waste management hierarchy, a little waste would land into disposal such as landfill or incineration without recovery as a last resort.

This is a pilot project with three objectives: to create awareness of the managers and personnel of church institutions whose responsibilities include hygiene and sanitation; to provide the more frequented places of the church with special waste bins for separating degradable and non-degradable waste and to develop; and to introduce waste management policy and practices likely to enhance hygiene and sanitation. Furthermore, this project is implemented in the Western and Southern part of Rwanda in cooperation with the Muhanga district council, whose responsibility includes the protection and management of environment. From this background, the workshops on awareness creation for waste management were conducted by the Environmental Officer from Muhanga District, Mr Vedaste Mpagartswenimana.

The scale-up phase would consider provision of services such as affordable waste collection services at a small fee and turning of tons of organic waste into compost or/and briquettes for distribution to community members at a small price. Waste collection services may include sorting and selling of recyclable materials such as paper, plastics, glass, textile and plastic bottles. For the sake of making this project sustainable, these services would possibly be provided by a social enterprise owned by RDIS organization.

While waste collection services will create jobs for many underprivileged youth as it is already done now during the production of waste bins and roll-up banner standers, the use of compost and briquettes for cooking would reduce tons of CO₂ emissions every year. Furthermore, the briquettes from organic waste may be used in the extension phase of our successful and exemplary Carbon Project for distribution of Improved Cook Stoves and Ceramic Water Filters in Rwanda: renewable biomass fuels (such as briquettes made from domestic waste or agricultural waste) can earn carbon credits at a higher rate. However, this scale-up phase would definitely require an investment for commercial composting facilities and recycling points.

- For more information, please visit our special page: www.rdis.org.rw/waste-management
- The project is sponsored by The United Evangelical Mission (UEM) – A Communion of Churches in three Continents. www.vemission.org
- The Rural Development Interdiocesan Service (RDIS) is a non-governmental organization (NGO) for promoting sustainable and holistic development in four dioceses of the Anglican Church of Rwanda: Butare, Cyangugu, Kigeme and Shyogwe. This Church is a member of UEM.