

PLASTIC RECYCLING TECHNOLOGY IN TANZANIA

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Tanzania, officially known as the United Republic of Tanzania, is a mid-sized country in Eastern Africa bordering the Indian Ocean. It is home to a population of about 46.1 million people. Tanzania has a tropical climate, temperature range between 10°C and 32°C.

Currently, With more than 10 bottled water companies, high supply competition in commercial cities and consumption of water bottles have significantly increased, moreover, majority of entrepreneurs in Tanzania own small shops and retail business, door to door and moving shops, the amount of plastic bags and plastic material waste have been a considerable threat toward environment protection.

Everyday, tons of plastic waste in the form of water bottles and plastic packages are dumped in roadside drains or burned in landfill sites or on vacant land. The impact of plastic waste on communities and the environment is significant and far-reaching.

Plastic waste clogging drains and waterways can lead to flooding and the pooling of stagnant water, which reduces water quality and provides a breeding ground for malaria carrying mosquitoes and other epidemic diseases such as cholera and typhoid. In addition, the burning of plastic waste at dumpsites occurs at a low temperature, which releases plumes of toxic smoke and creates hazardous ash that contaminates the surrounding environment.

Plastic recycling technology enables the process of recovering scrap or waste plastic and reprocessing the material into useful products, sometimes completely different in form from their original state. For instance, this could mean melting down soft drink bottles and then casting them as plastic chairs and tables. Plastics are also recycled /reprocessed during the manufacturing process of plastic goods such as polyethylene film and bags. A percentage of the recycled pellets are then re-introduced into the main production operation.

In Tanzania, since 2001 several companies and local industries engaged in the use of plastic recycling technology. The process starts from collection of plastic materials from streets, mainly PET plastic materials, hard plastic materials, clean & unclean plastic packaging. Then these materials will be processed for resell in manufacturing companies/industry.

In addition to significantly reducing their own ecological footprint, recycling provided an income by paying rebates to economically disadvantaged local people who collect and deposit recyclable plastics to one of the collection points. This technology lead to a significant reduction in the amount of waste plastic littering urban areas and also provided basic and easily accessible economic opportunities for thousands of people.

Table 1- Average price for recyclables materials in Tanzania.

Average price for recyclables materials		
Recyclable material	Buying price from local business (Tsh)/kg	Selling price to industry (Tsh)/kg
Plastic bottles(PET)	400	550
Hard plastic bottles	250	350
Packaging plastics (clean)	300	400
Packaging plastics (unclean)	200	300

Note: 1,600 Tsh is approximately 1 Us Dollar.

In conclusion, the use of recycling technology in a developing country like Tanzania should be taken more serious by the government entities, not only because it helps to prevent diseases and provide jobs to local people but also it is so important toward sustainable development. Arguably the government should impose more strict policies and laws which include penalties for individuals and strict measures like dissolution of enterprises or industries which produce plastic wastes without proper disposal method.

Taking into account the benefits obtained from plastic recycling technologies, government ministries should invest more and promote the importance of this sector to the community.

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