

Recycle Diapers to Save the Environment

Kisimiri Secondary School

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Introduction

It is estimated that more than 2 million diapers are used per day in Tanzania (NBS 2017) and only 1000 diapers are placed in a manner that may not cause effects to the living organisms equals to 0.05% of the daily consumption, this is due to the fact that the cost of this diapers is low costs only 500 TSH. Many people from different areas both rural and urban afford to buy diapers for their children.

One among the sensitive areas affected by plastic wastes especially diapers in Tanzania is Arusha city, due to the presence of a high population (416,442), diapers in the streets are so many which creates the risk of various diseases to the people and other living organisms, and due to the presence of nucleated settlement the municipal authority fails to collect wastes from streets thus the area are very dirty full of diapers, streets like Ungalimited, Ngarenaro, Tengeru, Maji ya chai, Ngarenanyuki, Usa river, Momella as well as Kisimiri where our school is located.

Purpose Of The Study

The purpose is to reduce and finally make an end to the diapers dumped in streets and to come up with an alternative solution to these diapers through recycling to getting fine products that can help to facilitate agriculture, fighting the effects of floods, manufacturing of self-curing concrete, firefighting as well as waste management and create a better living environment than it is now that could make people benefit from diapers instead of being harmed.

Method

The Study Location

The study was carried out in Kisimiri village which is administratively found in Arumeru district, Arumeru district is located in longitude 36.2630846 and latitude -2.7583634.

Materials And Methods

To make this project successful number of approaches and methodology were applied for data collection which included, field observation, key informant interview and number of experiments in the laboratory which finally gave us the solutions to the problem.

Key Informant Interview

The interviews about the problem was done in three different areas, first, we visited The Nelson Mandela Institute of Science and Technology and met two professors, professor Muzuka A, and Miss Kimario and interviewed them about how compounds found in diapers can be useful if recycled, secondly, we interviewed the officers of the National bureau of statistics and third, district councilor and interviewed specialists who have done researches on the areas.

Procedure

Different questions were asked to people in the area of Kisimiri village and other nearby places as to why they tend to dump diapers in streets without placing them in a proper way that cannot bring effects to the living organisms.

Results

Dioxins

The experiment done in laboratory, the chemical compound Dioxins was present.

Most disposable diapers are bleached white with chlorine, resulting in a byproduct that leaches into the environment and the diapers.

Through this project there could have been maximum benefit to the society but there still are some limitations.

The habit of dumping diapers cannot be escaped easily since people do not have enough education on the effects of dumping diapers to the environment. It is difficult to change the minds of the people but through this project education about the effects of disposable diapers to the society will be spread to all people.

The table below shows the number of disposed diapers per year in Tanzania since 2016 to 2018

Year	2016	2017	2018
Number	789,654	954,864	1,475,623

CODE	1	2	3
NUMBER	32	78	11

CODE	MEANING
1	Poor education on waste management
2	No other means of waste management
3	We don't know

Conclusions

Based on the findings of the study it can be concluded that;

- Sodium polyacrylate is present in diapers as a major component
- Sodium polyacrylate has a great ability to hold water without being dissolved
- Sodium polyacrylate is a fire proof material
- Factors leading to poor dumping of diapers is lack of proper waste management systems in rural and urban areas
- Recycling diapers saves the environment



Picture 02: Sodium polyacrylate in gel form during laboratory test.



Picture 3: Showing the fire proof ability of sodium polyacrylate. It can be useful to people by creating fire proof materials.

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