

Rubbish and Recycling in Aberdeen and Kisumu

Both schools were interested in looking at how each city dealt with rubbish. The S4 Environmental Education class and the Intermediate Modern Studies class collected information about what happens in Aberdeen. Pupils at Otieno Oyoo carried out fieldwork on the nature of the rubbish, and took photographs to show how it is dealt with. They drew detailed conclusions from the findings.

The information is shown below:

Municipal Waste Disposal Site Aberdeen



Disposing of waste in a landfill involves burying the waste. Landfills were often established in abandoned or unused quarries, mines or natural hollows.

A properly-designed and well-managed landfill can be a hygienic and relatively inexpensive method of disposing of waste materials. Older, poorly designed or poorly managed landfills can create a number of adverse environmental impacts such as wind-blown litter, attraction of vermin, and generation of liquid effluent.

Another common byproduct of landfills is gas (methane and carbon dioxide), which is produced as organic waste breaks down anaerobically. This gas can create bad smells and kill surface vegetation.

Roadside Collections in Aberdeen



There are many different wheelie bins in Aberdeen. Some of the bins are different colours from other bins. This colour co-ordination is used because each bin is taken to a different facility to deal with the waste. There are five different kinds of bins:

- There are blue bins, or kerbside boxes, that are used to recycle certain items like paper, card, cans, detergent bottles and empty aerosol canisters.
- There are brown bins in which you can deposit garden waste such as grass clippings, dead leaves, hedge trimmings, small branches, weeds and bedding plants.
- One type is usually found in a local area. These are called recycling bins and are usually green in colour. In these, you can deposit glass, textiles, books, shoes, aluminium foil, CD's, tapes, videos and sometimes tetra paks.
- Food and drink waste can be turned into compost using a green cone or a black compost bin.
- The final bin used is a landfill bin. Anything can be put in this but it is highly recommended to put only things that are non-reusable.



Recycling Centre Aberdeen



The Scottish Waste Awareness Group (SWAG) is a Scotland-wide group whose aim is to deliver a national campaign called "WASTE AWARE SCOTLAND". There is a group called Free Cycle. They are an organisation that aims to keep reusable items out of the landfills. It works by putting up notices of what you have and no longer need. The articles must be free and legal; whatever you want for example a piano, you then simply send an email to your group. And if you want something you can just send an email to your group and maybe someone there may just have the item you are looking for.

Pollution and Waste Management in Kisumu

Major sources in the district include pollution from industrial, agricultural, municipal and other human activities. Pollution from industrial activities mainly arises due to emission of untreated and partially treated wastes from industries. Some factories discharge into municipal sewer and this is not operational as of now. The Jua Kali activities in the industrial part of town are also a key polluter. Oil and grease coming from the Jua Kali garages, petrol stations and car wash in the lake are key point sources of pollution in town. Such pollution sources are known to contain heavy metals such as lead, which are detrimental to aquatic habitats. Such heavy metals though not yet out of control have been reported in the lake sediments at Kisumu Bay. Other sources of heavy metals include those from factories that use and have metal as by-products. Fish wastes from fish processing and filleting factories are a source of pollution. Another source of 'fish pollutants' is the processing by fishermen of fish in the beaches where internal organs are thrown haphazardly thus polluting the whole beach. Blood and fats from slaughterhouses form part of the effluent, which either go directly into the environment or to the lake via the municipal sewer line.

The solid waste management in Kisumu town is similar to those of other towns in the country. It faces challenges regarding waste collection and absence or poor final disposal site. This poor collection has several implications including soil pollution and potential of spread of diseases. There are also blockages of drainage system with mostly polythene bags. Recycling presents an opportunity and this has not been addressed adequately.



Students of Otieno Oyoo at the major dumping site in Kisumu. This site is located along the main highway to Nairobi very close to Nyalenda Railways Estate and the major Supermarket in town, Nakumatt Mega City. It contains all sorts of waste materials; however the common ones are polythene papers, glasses, used food, waste paper and clothes.

Dealing with the Waste in Kisumu

The dump site is also the home of some people who scavenge on the wastes; they sort out the waste to obtain food and other items that they sell i.e. used paper, bottles and metals to be sold to vendors who transport them to recycling factories.



List of firms concerned with waste collection

- Sanitation environment services
 - Shade cabbage
 - Tema Home cares
- Kenya Refuse handlers
 - George Agolla
 - SKIM
 - Kenchick
- Kenya Breweries (own)
 - Swan Millers (own)

Several households have made it a routine to burn their waste, as there are no adequate and proper collection mechanisms. Plastic wastes remain a challenge in the town. Most of the businesses in town use plastics as packaging material and coupled with poor disposal have become a critical problem. The bus park and the surrounding Market Park are littered with polythene.

Hospital waste from hospitals and clinics are discharged into the sewer system or dumped at the municipal dumpsite and occasionally find their way to rivers through storm water. Waste such as bottles, syringes and cotton wool are found at the dumpsite. This is hazardous particularly to the street boys who frequent the dumping site.

There are 4 incinerators in the district with the one of CDC working efficiently.

Pit latrines often pollute ground water especially where water table is high. This is serious particularly in the informal settlements.

Apart from hospital waste, markets in the district are experiencing problems relating to solid/liquid waste. Kibuye market already experiences solid waste problem. Such markets also rely on pit latrines, which pollute ground water.

Learning institutions particularly in the municipality do not have serious waste management problems. Their waste such as paper is burnt within their vicinities.

Waste facilities available in selected areas in the district

Facility	Number existing	Incinerators	Latrines	Water Closets	Disposal Sites
Towns	1	0	148	120	11
Markets	13	0	210	0	20
Learning Institutions	380	0	320	195	250
Health Institutions	26	4	70	65	42

In the agriculture sector, horticultural activities around rivers and the lakeshores pollute water. This comes into play because of use of chemicals and pesticides in such forms, which are then washed into the waters. Sedimentation of rivers is another form of pollution. This has been caused by soil erosion arising from catchment's deforestation. This is rampant during the rainy season.

Air and Noise pollution

Although air pollution was not an issue in this town in the past, the increasing number of vehicles and the rise in the number of industries has contributed tremendously to both air and noise pollution. Occasionally, obnoxious smells emanating from industries is experienced.

Noise pollution both in the industries and at the bus park is rampant because of the increased number of vehicles operating within the vicinity. Although no studies have been done, air and noise pollution are emerging as key challenges particularly the urban Kisumu.

Poverty

Poverty is a big polluter; poor people cannot afford to use gas or kerosene and burn wood. This in addition to smoke production leads to deforestation, soil erosion and agricultural production. If the purchasing power of the people is increased, this can help them access modern environmentally friendly facilities thus leading to a reduction in pollution.

The trends of production and consumption are tilted towards having no regard for environmental conservation. If there is to be sustainability, the imports be they products and technologies have to be environmentally friendly. Further, if the district and the country at large were to have very high environmental standards, then all transfers would have to meet the said standards. The production must also adopt strict measures where a company polluting the environment is held responsible and this is provided well in the EMCA, 1999.

Outlook

Poverty reduction and/or eradication, changing our consumption and production patterns as well as protecting and proper management of the natural resources are key towards changing the negative impacts on land and land uses.

Water, air and soil pollution through domestic and industrial wastes reduces availability of clean drinking water and leads to loss of biodiversity, depletion of fish stocks, desertification and the general reduction in decent life. To correct these scenarios, the following needs to be addressed:

- Implementation of poverty reduction strategies
- Slum upgrading project implementation
- Pollution reduction through recycling
- Conservation of biodiversity
- Changing consumption patterns towards minimizing wastes
- Water quality and sanitation improvements

An Analysis of Poverty and the Environment

Poverty is a situation leading to a life devoid of the ability to acquire basic needs such as food, shelter, clothing, health services, education and an inability to exploit the available opportunities.

Poverty has been seen as

- a constraint to development
- a problem that perpetuates dependence on donors, government and NGOs respectively.
- a curse.

Poverty is a persistent and desperate socio-economic and cultural situation.

In Kisumu District the size of population living below the poverty line is estimated at 53% (267,310 people). Economically, the district relies heavily on primary industries such as rice growing, sugarcane, cotton, coffee and fishing. However, due to lack of market, poor infrastructure, no or low incomes are realized from these activities. Generally, low incomes result in the over exploitation of natural resources and the use of detrimental means of extraction resulting in environmental degradation. When the environment is destroyed, nature and the people suffer.

Poor people encroach into fragile areas, conservation areas and cause deforestation. In the district, a large number of people are currently living in hilly and mountainous areas and wetlands. Conservation areas have been targeted by people for firewood, grass and also hunting. Currently, the population around Ndere National Park wants the restrictions in the park to be reduced arguing that they have been denied access to the resources in the park.

Poverty also impacts negatively on agriculture because most people tend to do their agricultural activities in more fragile areas e.g. converting wetlands to agricultural land.

In Kisumu district, women account for 50.9% of the population thus forming the majority. The women are also in a disadvantaged position in education, health, income and decision making: this makes them interact more with the environment. Typical examples include women moving for long distances in search of firewood at the expense of engaging in other productive ventures.

In some areas of the district where there is little or no firewood, women have resorted to the use of cow dung. This is a disadvantage because cow dung could have been used as fertilizer while at the same time this is a source of indoor pollution. In the urban environment, charcoal is getting increasingly expensive and the people who live in slum areas have been forced to use dried wood from trees within town. Occasionally, women and children are seen collecting firewood in the wooded areas of town.