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**GEOGRAPHY TASK 1**

**TASK : TO INVESTIGATE THE CAUSES OF LAND POLLUTION( LANDFILL) SUGGESTING POSSIBLE MEASURES OF RESTORING THE POLLUTED AREA.**

**TOPICS : ECOSYSTEMS , NATURAL RESOURCES**

**Centre :GUINEA FOWL HIGH SCHOOL**

**MIDLANDS PROVINCE**

**FORM 3A1**

**2017**

**Overcrowded landfills**

***A landfill is a place we can dispose of our trash and other waste materials.***

Each household /business /person produces tonnes of garbage each year . Garbage like aluminium , plastic , paper , cloth , wood is collected and sent to the local recycling unit . Items that cannot be recycled become a part of the landfills that hampers the beauty of the city and cause land pollution.

**Plan of action**

Area under investigation will be the overflowing landfills of Kudzanai Bus Terminus in Gweru town.

*Permission seeked from City Council.*

*The investigation is going to run from 03 November to 10 November which is a week .*

**Resources required**

1. Safety gloves
2. Safety glasses
3. Working overall9
4. Nose and mouth mask
5. Camera
6. Notebook
7. Stationery : pen , pencil
8. 30 QUISTIONNAIRE papers.

**Sampling method**

Probability sampling : Simple random sampling (SRS)

Choice randomly from the available possible areas

**Case study : Kudzanai Bus terminal**

Solid wastes is the number one contributor of landfill waste disposal . However schools , restaurants , public places , markets , offices , and so on produce a great deal of rubbish , garbage and used materials . Because most of these waste materials are non biodegradable, they heap in the landfills where they stay for years.

**Methods of data collection**

1. **Observation**

Observations made :

* Presence of rubbish piles.
* Damp soil and land polluted .
* Patches of burned rubbish.
* People coughing and having watery eyes.
* The air smelled bad and was stuffy.
* Dirty sewage like water was seen emanating from the rubbish.

**Data analysis**

The rubbish piles looked like they had not being collected in a very long time. Litter was overflowing from the reserved landfills and was everywhere on the roads and areas in the terminal. Some of the rubbish was partly burned showing some efforts by the terminal vendors who had tried to get rid of the wastes . But to them they were unaware that they had caused air pollution ( specifically contributed to global warming) in the process. There looked to be some sick people in the area as some were repeatedly coughing and had red watery eyes . The air in and around the area smelled very bad and was stuffy containing smoke , toxins among others. Dirty sewary water was being seen emanating from the rubbish and it was highly smelly.

1. **Questionnaire**

Population sample ( local vendors , bus driver , commuters )

**Questions asked**

1. What causes the build up of wastes ?

Agricultural waste

Mining , manufacturing and construction wastes

Uncollection of wastes by City councils

Low enforcement by the police towards this cause

InadequateplanningofthecitybyCityfathers

Outdated methods of waste management

Urbanisation and population growth

1. Do you know people with diseases that emanated from this place ? Yes [ ] No [ ]
2. What do you think caused this?

Continued exposure to the pollution

Unhygienic working area

Flies or other animals brought them

Grumbled personal hygiene

1. What measures do you want to be taken to solve this?

Thorough cleaning of the area

Collection of the litter

Improving knowledge of personal hygiene

Legislation against Unhygienic disposal of waste

1. If not stated above mention it .
2. What can the government do to help solve this uncontrolled littering?

Improve legislation

The police enforce the law

City collection system be improved

Better city planning

Removal of all wastes from the area

Barn selling in ranks

Barn waste disposal in the rank

1. What can one as an individual do to solve this?

Improve personal hygiene

Stop littering everywhere and place in bins

Report cases of disobedience to the law

Clean working areas regularly

Do selling g or vending in designated places

**Responses received ( on causes)**

1. **AGRICULTURAL WASTE**

Arise from waste materials generated from animal manure , crop and farm remains. The solid wastes like the animal manure and other agricultural by products are collected and dumped in the landfills.

1. **Industry , manufacturing and construction wastes**

Industrial processes , construction activities and power plants produce a wide range of solid by-products and residues. The predominant waste products are generated from power plants , construction works , pharmaceuticals and product producers.

The solid wastes usually find ways to the conflicts.

1. **Uncollection of wastes by City councils**
2. **Low enforcement by the police towards this cause**
3. **Inadequate planning of the city by City father’s**
4. **Outdated or Obsolete methods of waste management that do not cater for the rapidly growing population**
5. **Urbanisation and population growth:**

Urbanisation and population growth rate is considerably accountable for the increased number of landfills across the world. With the increase of population and urban growth , demand for manufactured products and materials increases. As the demand increases so does the increase of solid wastes.

1. **Relaxation of City by – laws and country laws in general**

**Percentage contribution of the causes**

* Agricultural waste contributed 10% because of the many vendors who operate in the compound who just sell and their waste everywhere without having a conscience on the effects of their actions.
* Industry , manufacturing and construction wastes contribute 20% because of the surrounding buildings who are owned by various companies who just dump the waste on the overflowing landfill.
* Uncollection of wastes by City council is 20% because of the slacking of the city’s collection system . Wastes are left to pile up even overflowing without any one collecting them.
* Relaxation of by – laws and country laws in general was 10% because of the low law enforcement or seriousness of the laws that discourage this kind of waste disposal?
* Low enforcement by the police towards overflowing landfills contributes 10% there fore offenders are left without arrest.
* Urbanisation and population growth was 10% because of the vast amounts of people coming to live in towns in prospect of getting jobs and getting better lifestyle but end up being mere vendors who add in dumping litter everywhere when selling their goods.
* Inadequate planning by city father’s is 10% because no proactive action was taken in creating proper dumping places for the rapidly growing population.
* Outdated methods of disposal of wastes were 10% because of the few small landfills that can not hold that amount of wastes. The landfills are inadequate for the ever growing population.

**Measures to restore the polluted area**

1. Design and implementation of integrated waste management.

The waste management system of the country is now crumbled . The reserved landfill no longer satisfy the ever growing population . So better methods of waste management need to be introduced.

1. Recycling some of the wastes

To reserve the natural resources for future generations we need to reduce, reuse and recycle some of the substances we use. Some of the wastes can be recycled such as plastics, papers and glasses into other useful substances like bags , clothes etc

1. Design and implementation of an effective waste collection group.

The current waste collection system is not able to provide for everyone . It also faces it’s problems such as lack of fuel , manpower, vehicles and proper management. A better efficient body should be set up , that makes sure no waste is left for months to pile up without collection.

1. Enforcement of waste management laws by the police to make sure that wastes to pile up again.

**CONCLUSION**

To conserve our natural ecosystem we should first of all conserve our natural resources through recycling and other methods. Uncontrolled littering can be stopped if all of us work together to remove , manage and control wastes . It is not a job reserved for one person but for all because if one contracts a disease form this it can also be passed to us whether we like it or not .