



education
DEPARTMENT: EDUCATION
MPUMALANGA PROVINCE

NKANGALA DISTRICT
ECONOMICS NOTES
TOPIC 14: ENVIRONMENT
GRADE: 11
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TOPIC 14: THE ENVIRONMENT

- Environment: is the natural world including air, water, plants, land and animals.
 - The problem of environmental deterioration /degradation
 - Environmental deterioration is the loss of the quality of the environment.
 - It is the erosion of natural environment through the depletion of resources.
 - The cause of environmental deterioration are human activity and natural events
 - Human activity mainly related to production of goods and services is the main cause of environmental degradation
 - Natural events such as **earthquakes**, **volcanoes** and **excessive rainfall** cause the degradation of the environment.
 - The environmental damage caused by natural events is small as compared to the damage caused by human activity.
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- **THE ROLE OF HUMAN ACTIVITY IN ENVIRONMENTAL DETERIORATION/DEGRADATION/DAMAGE**
 - **Excessive consumption:** human beings engage in excessive and unsustainable consumption of goods and services.
 - Both renewable and non –renewable resources are used to provide these economic goods;
 - Renewable resources can eventually be exhausted if the rate at which they are used is faster than the rate at which they are replaced
 - Non-renewable resources cannot be replaced; therefore, human beings need to use them sparingly.
 - The rate of consumption is very high and the resources available cannot sustain it, this means the environment will be totally destroyed if the rate of consumption is not decreased .
 - **Pollution:** is the release of waste matter into the environment. Types of pollution are air pollution, water pollution, land pollution and noise pollution.
 - Air pollution is the release of poisonous gases such as carbon dioxide into the atmosphere. Consumers often use perfumes while firms burn oil, which contain these poisonous gases. These poisonous gases destroy the ozone layer.
 - Because of the damage to the ozone layer, the global warming which leads to climate change takes place.
 - Water pollution: is the dumping of waste matter into rivers, lakes, dams and oceans.
 - These waste matters kill the organisms that water is their natural environment such as fish. The toxic matters can also cause water borne diseases in humans who use the contaminated water. Examples of water borne diseases are cholera and typhoid.
 - Land pollution: waste matter such as plastics and other waste matters are dumped onto the earth's surface. Plastics materials are non- biodegradable (do not decompose easily), therefore the environment gets damaged when exposed to large amounts.

- Waste matter produced by consumers include cans, plastics, glass bottles. Some of these materials can be recycled but most of the time consumers do not recycle them.
- **Soil erosion**
 - It is the wearing away of the top soil by water or wind from one location of the earth surface to another location.
 - It affects the environment negatively as it reduces the fertility of soil and can cause pollution of water sources.
 - Wrong agricultural methods can cause the top soil to be loose and be eroded easily.
- **Deforestation**
 - Deforestation is the cutting down of trees or removal of forest from land.
 - Natural forests are cut down to use the land for cultivation, building houses, factories, to obtain wood for making furniture.
 - Trees help to maintain the water cycle and give shelter to organisms. When deforestation takes place, the entire ecosystem is disturbed.
 - Deforestation can increase the rate of soil erosion.

MEASURES TO PROTECT THE ENVIRONMENT /METHODS ACHIEVE ENVIRONMENTAL SUSTAINABILITY (Possible essay)

- Environmental sustainability is the ability of the environment to survive its use for economic activities
- **The use of laws**
 - In South Africa, the government has passed several laws to protect the environment.
 - These laws include the Environmental Conservation Act, the Environmental Management Act and the Atmospheric Pollution Act.
 - New housing development must produce an independent Environmental impact studies results before these developments are approved..
 - The aim of environmental studies/assessment is to check how the developments can affect the environment.
- **Charging for the use of the environment**
 - Consumers and producers pay a monthly fee to the government for the waste they produce and dispose of in the environment.
 - Consumers pay municipal charges for rubbish collection and sewage disposal
 - Industries might also be levied emission charges and vehicle owners for gas emissions.
 - For best results, the charges should be proportional to the waste produced.
 - A fixed total charge such as a monthly charge will not encourage waste producers to reduce waste.
- **Environmental taxes/ green taxes**
 - Government levies taxes on the output or consumption where environmental costs were generated e.g. tyres.

- **Paying environmental subsidies**

The government can provide subsidies to encourage activities that reduce environmental damage.

Subsidies could be for:

- ♣ Developing a new technique or equipment e.g. to save energy, reduce smoke or to use environmentally friendly energy such as wind, tide or sun energy.
- ♣ Encouraging the production of environmentally friendly substitutes such as unleaded petrol.
- ♣ Encouraging recycling of wastes such as bottles, cans and cardboard

- **Joint efforts by consumers and producers**

- Manufacturers can make packaging out of materials that can be recycled.
- Offices can reduce the amount of paper used by increasing electronic methods.
- People can reduce the number of cars on the road by using public transport
- Households can recycle cans, plastics and bottles instead of throwing them on to the environment
- Education
- The society should be educated of the importance of protecting the environment.
- The awareness can focus on the importance of recycling and the consequences of global warming.

THE IMPACT OF ENVIRONMENTAL DAMAGE ON SOUTH AFRICA

- **Increased air pollution:** South Africa has a declining quality of air due to air pollution.
- The use of coal for production of electricity plays a major role in the increased amount of carbon dioxide released in the atmosphere
- Increased soil erosion: the loss of soil due to erosion is increasing in South Africa
- **Increased loss of biodiversity:** biodiversity is the number of different species of plants and animals in an environment. South Africa is regarded as the third biodiversity rich country in the world (After Indonesia and Brazil).
- Due to human activity such as deforestation, over-population and over exploitation of natural resources, some plants and animals are at the near extinction stage.
- **Climate change:** the main cause of climate change is the releasing of carbon dioxide in to the atmosphere. South Africa as a major polluter of air therefore a contributor to climate change.
- Climate change is often result in changes in weather patterns and South Africa has been increasingly becoming hotter.
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- **Declining fresh water resources:** the availability of fresh water is slowly declining due to factors such as over-population and climate change.
- Many rivers have been dammed to meet the demand of growing population.