

MANAGEMENT AND CONSERVATION OF THE ENVIRONMENT

- 1 a)
 - To ensure that there is supply for present and future generations
 - To maintain the hydrological balance
 - To maintain the eco-systemb) By reducing surface run-off which ensures that rain water seeps slowly into the ground.
2. a)
 - Lighting
 - Strong winds
 - Dust storms
 - Pest/diseases
 - Floods
 - Pollution
 - Soil erosion
 - Fires
 - Land slidesb)
 - Population pressure/clearing of forests for farming/settlement
 - Climatic changes
 - Accidental fires
 - Poor methods of farming/overgrazing/Overstocking/poor irrigation methods
3. a)

- Central highlands
- The Nyika plateau
- Coastal lowlands
- Nyando
- Nzoia
- Kuja/Gucha

c)

- The stagnant water becomes breeding ground for vectors that cause water related diseases.
- Floods cause loss of property/lives
- Floods cause soil water logging which lowers crop production
- Floods wash away crops leading to food shortages/famine
- Floods wash away bridges/roads/telephone lines/air fields disrupting transport and communication
- People are displaced by floods/are made homeless

4. a) The presence in the environment of contaminants which are injurious to human, land, plant animals life.

b)

- The garbage may result to foul smell/air pollution
- When it rains, the dumped waste/garbage is washed to rivers causing water pollution.
- Garbage can be a breeding ground for rodents/flies/cockroaches which can cause disease outbreak e.g plague.
- Accumulation of garbage leads to blockage of roads/drainage systems

- Garbage heaps are an eye sore as they make the environment ugly.

c)

- Burning waste materials
- Digging pits for throwing rubbish
- Minimizing use of harmful chemicals/Use of organic manure
- Creating public awareness on the dangers of land pollution and how to control it.
- Recycling of waste materials
- Government legislation against dumping
- Settling up proper garbage collection programmes

5

a)

- Leads to shortage of pasture
- Leads to crop failure
- Leads to shortage of water for livestock and irrigation
- Leads to shortage of agricultural raw materials for agro-based industries
- Leads to reduction in export of agricultural commodities/reduction in the farmers' income.

b) What is soil conservation?

It is careful management/protection of soil against erosion/exhaustion

c) State three farming methods that assist in soil conservation

- Ploughing along the contour
- Controlled grazing
- Strip cropping
- Making terraces

- Digging cut off drains/trenches
- Planting cover crops
- Mixed cropping
- Agro-forestry

6.

- Occurrence of heavy rainfall leading to high volume of water than river banks can hold e.g. Nzoia and Nyando
- Siltation of lakes, river channels and canals on the lands due to soil erosion upstream thus reducing carrying capacity triggering floods.
- Nature of land- plain areas are prone to floods as drainage tends to be poor
- Deforestation-Clearing of vegetation on catchment areas along the river (river line vegetables) entrance run off and reduce percolation.

7.

- Stagnant grounds are breeding grounds for carrier diseases e.g. malaria, typhoid, bilharzias
- Loss of life
- Loss of property which take time to regain
- Causes soil water-logging thus lowers crop production
- Food shortages or famine where farmers calendar is disrupted or crops washed away
- Traumatized people or make people panic
- Loss of confidence and interest in undertaking development and economic activities.
- Disrupts clean water supply to major towns where floods wash away water pipes.

8.

- Construction of dams to reduce volume and velocity of river discharge downstream
- Construction of dykes or artificial levees which help to restrict outflow of rivers or canals e.g. along river Nyando and Nzoia.
- Conservation of vegetation on catchment areas and along the course of the river meander thus smooth flow of rivers
- Engaging government and non-governmental organizations ICRAF in creating awareness on importance of activities e.g. agro-forestry, water management and conservation which enhance infiltration
- Clearing deepening and widening of rivers and canals to facilitate easy flow of water into lakes and dams.

9.

- Excess water stored in dams can gainfully be used to generate HEP
- Excess water can also be used for commercial farming through irrigation
- Creation of environment e.g. irrigation schemes
- Promotion of fishing activities in dams and lakes due to reduced sedimentation and pollution
- Poverty would also go down due to reduced incidence of loss life, crops, homes and livestock
- Flood plains are highly rated for agricultural due to fertile soil deposits.

10.

- Floods
- Droughts
- Earthquakes

- Diseases Pests
- Lighting

11.

- Fires
- Soil erosion
- Pollution
- Desertification

12.

It's spread of arid conditions/deserts into formerly productive areas

13.

- Climatic changes
- Wanton destruction of vegetation
- Overstocking resulting on overgrazing
- Cultivation of marginal lands
- Poor cultivation methods
- Population pressure leading to opening up of virgin land and clearing forest

14.

- Food shortage
- Reduction of livestock due to lack of water and pasture-dwindling of agricultural and potential land
- Low standards of living of farmers

- Stagnation of Agro-based economy

15. i) **Natural environment**

Includes things that are availed by nature e.g. landscape and air

ii) **Geographical environment**

Refers to environment factors whose relationships are considered in terms of spatial location

iii) **Physical environment**

Includes all phenomena apart from man and the things he creates.

iv) **Non human environment**

Includes all those things that are not in a social system, whether man made or not

v) **Cultural environment**

Includes all aspects of human culture found within a given environment for his survival e.g. taboos, totems, traditional beliefs, etc.

16. a) i) **Environmental** refers to all those external conditions that surrounds a living organism. It comprises of the atmosphere, water, land, vegetation and animals.

ii) Management of the environment involves all the measures aimed at better and useful exploitation and rehabilitation of natural resources.

iii) Conservation of environment involves the proper utilization of resources that ensures little or no wastage.

b)

- In order to sustain life
- For recreation purpose

- For protect wildlife
- For aesthetic value.
- Lightning
- Windstorms
- Pests and diseases
- Pollution
- Droughts
- Earthquakes
- Windstorms

c) i)

- Heavy downpour which increases the river volume leading to the river bursting its banks
- Impermeability of the soils which reduces the rate at which rain water percolates into the ground
- The rise of lake levels that causes the lake water to rise hence flooding the adjacent land
- The occurrence of tsunamis which produces strong sea waves leading to sea water spilling onto the land
- Deforestation that results into land being exposed to run-off causing flash floods.
- Poor urban drainage that clogs the drainage system.

ii)

- It leads to loss of life
- It results in the destruction of property

- People have been displaced
- Flooded areas are associated with waterborne diseases
- It also disrupts the infrastructure.

17. a) i)

It is a bright sudden flash of natural electricity produced during a thunderstorm

ii)

It is caused by a formation of the clouds whose ions are positively and negatively charged thus releasing an electrical charge.

b) i)

- Claims many lives
- destroys property

ii)

- By installing lightning arresters
- By public awareness campaigns
- By conducting research

18. a) i) Pollution is the addition of harmful substances into the environment

ii)

- Air pollution
- water pollution
- Land pollution
- Noise pollution
- Radiation pollution

b) i) Air pollution is the additional of harmful substances into the atmosphere

making it to be contaminated.

- Discharge of smoke and gases by industries
- Emission of fumes from motor vehicles
- Engagement in agricultural activities that leads to such pollution.
- Discharge of smoke from domestic heating using charcoal, firewood and coal.
- Smoke emitted from air crafts
- Mining and quarrying
- Poor disposal of domestic waste

iii)

- Ensuring that industrial effluents and fumes are properly treated
- Encouraging the use of biodegradable materials
- Legislation to regulate the amount of noise in social places
- Increase in the farm manure as an alternative to organic fertilizer
- Regulating by law the setting up of industries which are likely to pollute the environment

19. a)i)

- The international Centre for Research in Agro forestry (ICRAF)
- The Swedish International Development Agency (SIDA).
- The United Nations Environmental Programme (UNEP)

b)

- Several laws have been enacted to combat environmental degradation like the Water Act which gives guidelines on the safety and welfare of employees and the working conditions in factories.

- The Wildlife Conservation and Management Act whose aim is to protect the wild game and their natural habitats.