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SUBJECT:Environmental Science

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TEST TYPE: III - HOME ASSIGNMENT.....

TITLE:Land Resources

Natural resources are taken to be those components of land units that are of direct economic use for human population groups living in the area, or expected to move into the area: near-surface climatic conditions; soil and terrain conditions; freshwater conditions; and vegetational and animal conditions in so far as they provide produce. To a large degree, these resources can be quantified in economic terms. This can be done irrespective of their location (intrinsic value) or in relation to their proximity to human settlements (situational value).

LAND DEGRADATION:

- ☐ Farmland is under threat due to more and more intense utilisation.
- ☐ Every year, between 5 to 7 million hectares of land worldwide is added to the existing degraded farmland.

CAUSES:

- Deforestation
- Mining
- Overgrazing
- Mineral processing
- Industrial waste disposal

PREVENTION:

- 1.Afforestation
- 2.Regulated mining
- 3.Systematic grazing
- 4.Planting thorny bushes in arid areas
- 5.Processing industrial waste before disposal

MAN INDUCED LANDSLIDE:

Man induced land-slides refer to land-slides that occur due to human activities, such as construction, mining, deforestation, and land use changes. These activities can destabilise the slope leading to landslide and soil erosion.

Causes:

- ➔ Construction activities such as excavation, blasting and digging can destabilise the slope, leading to landslides. When natural vegetation is removed, the soil becomes exposed to lead erosion and landslides.

- Deforestation is another human activity that can lead to landslides. Trees play a crucial role in stabilising the soil and preventing erosion. When trees are cut down, the soil becomes exposed and it is more vulnerable to landslides.
- Mining activities involve removal of soil and rocks, which can weaken the slope and increase the risk of landslides.

Prevention:

- i) It is essential to adopt sustainable land management practices, like proper construction techniques, reforestation, and use of erosion control measures such as retaining walls, terracing and vegetation cover.
- ii) It is also important to avoid constructing buildings on steep slopes, especially in areas prone to landslides.
- iii) Proper planning and management of mining and other land use activities can also help prevent landslides.

SOIL EROSION & DESERTIFICATION:

Soil erosion: Soil erosion is the natural process in which the topsoil of a field is carried away by physical sources such as wind and water. Soils of various types support a wide variety of crops. The characteristics of natural ecosystems such as forests and grasslands depend on the type of soil.

Causes of soil erosion :

1. Rainfall and flooding
2. Logging and Mining
3. Construction
4. Heavy winds

Prevention:

1. Plant trees on barren lands to limit erosion of soil.
2. Mulch matting can be used to reduce erosion on slopes.
3. Put a series of fibre logs to prevent any water or soil from washing away.
4. A wall at the base of the slope can help in preventing the soil from eroding.

DESERTIFICATION:

Desertification is the degradation process by which a fertile land changes itself into a desert by losing its flora and fauna, this can be caused by man-made activities and climate change, like drought, deforestation, climate change, human activities or improper agriculture. Desertification takes place when a particular type of biome converts into a desert biome.

Desertification Causes

1. Overgrazing
2. Deforestation
3. Farming Practices
4. Urbanisation and other types of land development
5. Climate Change
6. Stripping the land of resources

Prevention:

- i) Focus on Water management.
- ii) Reforestation and tree regeneration
- iii) Better and hyper-fertilisation of soil through planting.
- iv) Buttrussing the soil through the use of sand fences, shelter belts, woodlots and windbreaks

