

NCERT QUESTIONS WITH SOLUTIONS

1. What can make what is today a renewable resource non-renewable tomorrow? Describe some actions that can prevent this from happening.

Ans. A renewable resource can become non-renewable if its consumption rate exceeds its natural regeneration rate, such as overfishing, deforestation, or excessive groundwater extraction. For example, when water is taken from underground reserves faster than it can be naturally replenished, the resource is depleted.

To prevent this, adopting sustainable management practices is essential. Controlled water harvesting, reducing waste, and using resources efficiently are key steps. Restoration efforts, such as reforestation or implementing water conservation technologies, can also play a vital role in maintaining balance. By prioritising responsible practices in areas like agriculture and resource management, the regeneration of these resources can be safeguarded for future generations.

2. Name five ecosystem functions that serve humans.

Ans. Ecosystems provide several crucial functions that directly support human life and well-being. These include:

- (i) **Pollination:** Insects such as moths, flies, and other pollinators help in the reproduction of many crops and plants, supporting food production.

- (ii) **Water Purification:** Ecosystems like wetlands and forests naturally filter and clean water, ensuring access to clean resources.

- (iii) **Climate Regulation:** Ecosystems absorb carbon dioxide and produce oxygen, helping to regulate the climate and maintain environmental stability.

- (iii) **Soil Fertility:** Processes like decomposition and nutrient cycling in ecosystems support soil formation and fertility, which is essential for agriculture.

- (v) **Provision of Food:** Ecosystems provide diverse food sources, including plants, animals, and fish, which are vital for human nutrition and survival.

3. What are renewable resources? How are they different from non-renewable ones? What can people do to ensure that renewable resources continue to be available for our use and that of future generations? Give two examples.

Ans. Renewable resources are natural materials that regenerate over time, such as sunlight, wind, water, and wood. Unlike non-renewable resources like fossil fuels and minerals, they are not exhausted when used responsibly, as they replenish naturally. Non-renewable resources, however, are limited and cannot be restored within a human timescale.

To keep renewable resources available for the future, they must be managed with care. This involves using clean energy sources such as solar energy and wind power, minimising waste, and adopting sustainable practices like responsible forestry. For instance, installing solar-powered street lighting helps reduce dependence on fossil fuels. Second example is to replant trees after timber harvests ensures forest renewal.

4. Identify cultural practices in your home and neighbourhood that point to mindfulness in the use of natural resources.

Ans. In our home and neighbourhood, several cultural practices reflect a mindful approach to using natural resources.

- (i) Firstly, certain trees such as the Peepal and banyan are regarded as sacred and are never cut down, promoting tree conservation.
- (ii) Secondly, forest patches known as sacred groves are preserved due to their spiritual significance, helping protect biodiversity.
- (iii) Thirdly, traditional festivals involve the use of eco-friendly materials, for example, banana leaves for serving food, clay for making idols, and natural dyes for decoration.

Additionally, water bodies like ponds and wells are cleaned and honoured through rituals, encouraging water conservation. Lastly, practices such as fasting and simple living during religious observances help reduce unnecessary consumption and promote sustainability.

5. What are some considerations to keep in mind in the production of goods for our current use?

Ans. In producing goods for current use, it's essential to prioritise sustainability by using renewable resources and eco-friendly materials. Energy efficiency should be considered to minimise carbon footprints, which refers to the amount of harmful gases, like carbon dioxide, released into the air from activities such as production and transportation. Waste can be reduced by recycling and reusing materials. Ethical sourcing ensures that materials are obtained responsibly, while goods should be designed for durability to reduce the need for frequent replacements. Additionally, production should support local communities and reduce transportation emissions, contributing to both environmental and social sustainability.