

## Chapter-1 Resources and Development

### 1. Enumerates how the resources are interdependent.

- I. The process of transformation of things involves an interactive relationship between nature, technology and institutions.
- II. Human beings interact with nature through technology and create institutions to accelerate their economic development.
- III. Resources are a function of human activities.
- IV. Human beings themselves are essential components of resources.
- V. They transform material available in our environment into resources and use them.

### 2. Justify how planning is essential in judicious utilization of resources

- I. Resource planning is essential for sustainable existence of all forms of life.
- II. An equitable distribution of resources has become essential for a sustained quality of life and global peace.
- III. If the present trend of resource depletion by a few individuals and countries continues, the future of our planet is in danger.

### 3. Evaluate the need to develop resources in India.

- I. It is important because India has huge diversity in the availability of resources.
- II. There are regions which are rich in certain types of resources but are deficient in some other resources.
- III. There are some regions which are self-sufficient and there are other regions which have acute shortage of some vital resources.
- IV. For example, the states of Jharkhand, Chhattisgarh and Madhya Pradesh are rich in minerals and coal deposits.
- V. Arunachal Pradesh has abundance of water resources but lacks in infrastructural development.
- VI. The state of Rajasthan is very well gifted with solar and wind energy but lacks in water resources.
- VII. The cold desert of Ladakh is relatively isolated from the rest of the country. It has very rich cultural heritage but it is deficient in water, infrastructure and some vital minerals.
- VIII. This calls for balanced resource planning at the national, state, regional and local levels.

### 4. Infers the rationale for development of resources.

- I. Resources are vital for human survival as well as for maintaining the quality of life.
- II. Human beings used them indiscriminately and this has led to the following major problems.
- III. Depletion of resources for satisfying the greed of a few individuals.
- IV. Accumulation of resources in few hands, which, in turn, divided the society into two segments i.e. haves and have nots or rich and poor.
- V. Indiscriminate exploitation of resources has led to global ecological crises such as, global warming, ozone layer depletion, environmental pollution and land degradation.

### Analyse and evaluate data and information related to non-optimal land utilization in India.2

Read the diagram given in the book.

### 5. Appraise and infer the need to conserve all resources available in India.

- I. Resources are vital for any developmental activity.
- II. Irrational consumption and over-utilisation of resources may lead to socio-economic and environmental problems.
- III. To overcome these problems, resource conservation at various levels is important.
- IV. For example, Gandhiji voiced in these words: "There is enough for everybody's need and not for any body's greed."

- V. The greedy and selfish individuals and exploitative nature of modern technology is the root cause for resource depletion at the global level.
- VI. He was against mass production and wanted to replace it with the production by the masses.

#### 6. Examine the causes of degradation of land.

- I. Human activities such as deforestation, over grazing, mining have aggravated degradation of land.
- II. Mining sites are abandoned after excavation work is complete leaving deep scars and traces of over-burdening. In states like Jharkhand, Chhattisgarh, Madhya Pradesh and Odisha deforestation due to mining have caused severe land degradation.
- III. In states like Gujarat, Rajasthan, Madhya Pradesh and Maharashtra overgrazing is one of the main reasons for land degradation.
- IV. In the states of Punjab, Haryana, western Uttar Pradesh, over irrigation is responsible for land degradation due to water logging leading to increase in salinity and alkalinity in the soil.
- V. The mineral processing like grinding of limestone for cement industry and calcite and soapstone for ceramic industry generate huge quantity of dust in the atmosphere. It retards the process of infiltration of water into the soil after it settles down on the land.
- VI. In recent years, industrial effluents as waste have become a major source of land and water pollution in many parts of the country.

#### 7. Suggest remedial measures to solve the problem of land degradation.

- I. Afforestation and proper management of grazing can help to some extent.
- II. Planting of shelter belts of plants, control on over grazing, stabilisation of sand dunes by growing thorny bushes are some of the methods to check land degradation in arid areas.
- III. Proper management of waste lands, control of mining activities, proper discharge and disposal of industrial effluents and wastes after treatment can reduce land and water degradation in industrial and suburban areas.

#### 8. Examine the causes of Soil Erosion and suggest measures for Soil Conservation.

- I. The denudation of the soil cover and subsequent washing down is described as soil erosion.
- II. Human activities like deforestation, over-grazing, construction and mining etc., while natural forces like wind, glacier and water lead to soil erosion.
- III. The running water cuts through the clayey soils and makes deep channels as gullies. The land becomes unfit for cultivation and is known as bad land. In the Chambal basin such lands are called ravines.
- IV. Sometimes water flows as a sheet over large areas down a slope. In such cases the top soil is washed away. This is known as sheet erosion.
- V. Wind blows loose soil off flat or sloping land known as wind erosion.
- VI. Soil erosion is also caused due to defective methods of farming. Ploughing in a wrong way i.e. up and down the slope form channels for the quick flow of water leading to soil erosion.

#### Measures:

- I. Ploughing along the contour lines can decelerate the flow of water down the slopes. This is called contour ploughing.
- II. Steps can be cut out on the slopes making terraces. Terrace cultivation restricts erosion. Western and central Himalayas have well developed terrace farming.
- III. Large fields can be divided into strips. Strips of grass are left to grow between the crops. This breaks up the force of the wind. This method is known as strip cropping.
- IV. Planting lines of trees to create shelter also works in a similar way. Rows of such trees are called shelter belts. These shelter belts have contributed significantly to the stabilisation of sand dunes and in stabilising the desert in western India.