

Natural (e.g.) a
country becomes rich
in



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Natural resources fall into four categories as follows 1. Basic natural resources such as land, water and air. 2. Natural resource commodities such as timber and fish. 3.

Environmental amenities such as clean air and scenic views. 4.

Environmental pollution, soil erosion, ground water recharge and species generation.

Attributes of a Resource A resource is multi attribute in nature. It has four attribute as follows 1. Quantity: A resource available in nature may be infinite or finite in quantity.

(e. g.) Coal, iron ore and petroleum products. 2. Quality: A resource will be different in quality also.

(e. g.) Recovery of iron from iron ore will be high or low depending upon the quality of ore excavated from different parts of the world. 3. Time: It refers to relative abundance and scarcity of resources at different point of time. (e. g.

) A country becomes rich in resources by discovering new resources or by finding new uses for already known resources. 4. Space: It refers to availability of different resources in different parts of the world.

While availability is not uniform in all the regions, demand for resources is more or less same for all the people. Importance of natural resources:

Natural resource includes land, water, fisheries, mineral resources, forest, marine resources, climate, and topography. Some of resources are known to man. But man utilises small portion of land resources and other surface resources. There are large amount of undiscovered resources under the

surface. Importance should be given to explore natural resources in surface and undersurface.

Classification of Resources: Based on the attributes, resources can be classified as 1. Exhaustible Resource or Stock Resource: These resources are finite in quantity and hence its exploitation and use should be in an optimum way. Spacio-temporal (space and time) dimensions of stock resource are important for its optimum use. Examples: A. Non renewable resource Coal, oil, iron, other metal, old growth timber and soils. B.

Renewable resources Water stored in tanks, solar energy stored in cells. 2. Inexhaustible Resource or Flow resource: These resources can be exploited continuously without diminishing the stock.

It must be utilised when it is available. A. Non renewable resource Wind, flowing river water. B. Renewable resources Young-growth timber. 3.

Biological Resources: These resources represent complex category of resources. It involves solar energy, hydrological resources and soil nutrients. (e. g.) Crops, Forest and Animals.

Man derives value from a complex system of solar, atmospheric, geological, hydrological and biological resources. There are several factors that influence the scarcity of natural resources as follows: 1. India's Population Growth and Demography: It is a fundamental determinant of raising demand for natural resources. Population growth increases pressure on the resources required for subsistence land for producing crops and grazing animals. 2. Income Growth: As people become wealthier, their consumption increases

and its form changes. Rich people consume more energy in the form of transportation, heating, and air conditioning.

They seek improved housing that uses more space and they buy more manufactured goods. Raising income mean fewer people depend directly on natural resources for their subsistence needs. 3. Market Forces: Pressure on natural resources also increases demands in national and international markets.

4. Technology: Improved technologies to harvest and harness natural resources have increased demand for them over the last century. (e. g.) Better transportation infrastructure made forest areas more accessible to distinct markets; improvements in pumps and power sources made it economical to tap scarce ground water supplies. Improved agricultural technologies and production practices have stimulated vast increases in food production on India's limited area of agricultural land. Mitigating Scarcity of Resources: All nations and regions are not uniformly endowed with natural resources have to mitigate resource scarcity for economic development. The various possibilities: 1.

Substitution: Scarce resource can be substituted with resource available in plenty. (e. g.

) Aluminium can be used for copper. 2. Technological change: Technological improvements mitigate resource scarcity in a variety of ways.

(a) Better efficiency in resource use. (e. g.

) Better technology helps to recover more metal from its ore. 3. Trade: Import of resources mitigates resource scarcity. It depends on infrastructural facilities like ports, roads. 4. Discovery: Discovery of new resources by better exploitation techniques. (e.

g.) Discovery of new fields or mines. 5. Recycling: Recycling of once used resources is a very important method of mitigating resource scarcity. (e. g.) Waste paper, metal.

Guiding Principles of Resource Development: The principle objective of resource development is to maximise national output. For this purpose, there should be optimum utilisation of resources not only for short period but also for sustained long period. The following principles have been evolved for resource development: i.

Economic use of resources to achieve minimum waste. ii. Sustained use of economic resources through conservation of renewable resources and economic use of exhaustible resources.

iii. To increase multipurpose use of resources. iv.

Integrated planning in use of natural resources. v. Minimising transport cost by locating industries nearer to source of raw material. vi. Optimum utilization of electrical power and other resources. vii.

To employ modern technology to explore possibility of bringing more natural resources.