Natural Resources: Concept and classification

Online Class for 5th Semester
Resource Geography (DSE-2, Unit I)

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What is resource ?

The word resource does not refer to a thing or a substance but to a function which a thing or a substance may perform or to an operation in which it may take part, namely, the function or operation of attaining a given end, such as satisfying a want. In other word the word resource is an abstraction reflecting human appraisal and relating to a function or operation.

- Zimmermann, E. W. – world resource and industries ; (1951) .

Anything which may have some functions not only to satisfy human demand at a given end but also to ensure preservation of biosphere should be considered as resource.

- Earth Summit (1992)

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According to Encyclopedia of Social Sciences; (Vol-XI)

Resource are those aspect of man's environment render possible or facilitate the satisfaction of human wants and the attainment of social objectives.

Natural resources are materials created in nature that are used and usable by humans. Natural resources are resources that exist without any actions of human. Materials occurring in the environment thus are nothing more than 'neutral matter' until people recognize their presence, attach great importance to them.

Important Characteristics of Resource:

- Functionability of a substance/object is resource
- Resource meets the human needs like various social demand and expectations.
- Resource may be material and non material
- Some natural resources has certain limit but we are not sure human resource.
- Resource has a great role in Biosphere conservation.

Some important characteristics of Resource are mentioned below-

❖**Utility -** Utility is what makes an object or substance a resource. The factors that determine the utility of any natural resources foremost are human beings. Utility power of a resources is not always same. For example, petroleum first used as fuel but later is also used in multipurpose (nylon, fertilizer etc.)

❖**Functionability-** Another most important character is functionability. Zimmerman explains that the development and functionality of resources is a dynamic process and explains what the relations between the factors. Without functionability everything is a neutral staff.

❖**Serviceability-** It indicate whether it is easy or difficult to control access to a good or service. When some mater can produce different output that can prove huge service to people.

❖**Acceptability-** When resource is accepted to all people from all community without barrier (religion, caste, tribe.) .

❖**Demand-** Huge demand is necessary to resource and this demand is everywhere.

❖**Obsolescence-** Resource have a power to be obsolescence. In respect of time any particular resource are less used compare to its past and many time a new resource is take place in the same position.

❖**Limitation-** In this earth environment have enough resources but due to over population, human greed, unscientific use and other causes natural resources is depleted very soon. So, Malthus, Meadows, Osborn and some other economist think natural resource is limited.

❖**Accessibility/Feasibility -** It indicate whether it is easy or difficult to control access. Some resource may lying under Himalaya is lying as a neutral staff. If is accessible then it can changed into resource. Another thing easy access leads more demand.

- **Eco-friendliness-** Eco-friendliness means not to harm to environment, other ways we can not say it is a resource. Lead is resource when it used in colour or used in mixed up with other metal, but when lead it polluted the air then it considered as pollutant not a resource.
- **Ability to preserve biosphere-** In 1992 Rio de Janeiro earth summit, it is said that Resource has power to save the earth. From this approach Reserve forest, biotechnology and implication of law in proper way also considered as resource.

The 5 Most Important Natural Resources are:

1. **Air:** Clean air is important for all the plants, animals, humans to survive on this planet. So it is necessary to take measures to reduce air pollution.
2. **Water:** 70% of the Earth is covered in water and only 2 % of that is freshwater. Initiative to educate and regulate the use of water should be taken.
3. **Soil:** Soil is composed of various particles and nutrients. It helps plants grow
4. **Iron:** It is made from silica and is used to build strong weapons, transportation, and buildings
5. **Forests:** As the population increases, the demand for housing and construction projects also increases. Forests provide clean air and preserve the ecology of the world

Classification of Resources

Classification of Resources: On the Basis of ownership:

a. **Individual:** Resources owned by individuals are called Individual Resources. For example – land owned by farmers, house, etc.

b. **Community:** Resources owned by community or society are called Community Owned Resources. For example – Graveyard, grazing land, ponds, burial grounds, park, etc.

c. **National Resources:** Resources owned by Individual Nations are called National Resources. For example – Government land, Roads, canals, railway, etc.

d. **International Resources:** Resources regulate by International bodies are called International Resources. For example – Ocean and sea beyond the Exclusive Economic Zone. No individual country can utilize these resources without the permission of International bodies

Classification of Resources: On the Basis of origin:

a.Biotic Resources: All living organisms in our environment are called biotic resources. For example, trees, animals, insects, etc.

b.Abiotic Resources: All non-living things present in our environment are termed as abiotic resources. For example – earth, air, water, metals, rocks, etc.

Classification of Resources: On the basis of Exhaustibility:

a.Renewable Resources: Resources that can be replenished after a short period of time are called Renewable Resources. For example – agricultural crops, water, forest, wildlife, etc.

b.Non-renewable Resources: Resources which takes million years of time to replenish are called non-renewable resources. For example – fossil fuel.

Classification of Resources: On the basis of Status of Development:

a. Potential Resources: Resources which are found in a particular region, but not yet used properly. For example – Rajasthan and Gujarat receive plenty of solar energy and have plenty of wind energy, but use of these resources so far has not been developed properly.

b. Developed Resources: Resources which are developed and surveyed for utilization and are being used in present time are known as Developed Resources.

c. Stock: Resources that are available, but we do not have proper technology to used them are called Stock. For example – water is made of oxygen and hydrogen, which can be used as fuel, but because of lack of proper technology these are not being used.

d. Reserves: Resources which are available and the know how to use them is also present but they are yet to be used are called Reserves. For example – river water which is not used to generate electricity

Natural resources are also categorized based on distribution:

1. **Ubiquitous resources** are found everywhere (for example air, light, and water).

2. **Localized resources** are found only in certain parts of the world (for example metal ores and geothermal power).

Classification of resources based on touch ability:

1. Tangible resources: Whereas, tangible resources such as equipment have an actual physical existence.

2. Intangible resources: Intangible resources such as corporate images, brands and patents, and other intellectual properties exist in abstraction

Difference between renewable and non-renewable resources

Renewable Resources	Non-Renewable Resources
It can be renewed as it is available in infinite quantity	Once completely consumed, it cannot be renewed due to limited stock
Sustainable in nature	Exhaustible in nature
Low cost and environment-friendly	High cost and less environment-friendly
Replenish quickly	Replenish slowly or do not replenish naturally at all

Concept of Phantom Pile

Phantom piles: Application of new technology or some modern technique on any given substance that it can produces extra resource— that extra resource is called Phantom Pile.

The name Phantom Pile means that it is technological knowledge that can derive extra resource hidden within the substance. In reality, this invisible extra resource always lying within that substance but man was not able to harness it due to inappropriate knowledge and technological infrastructure.

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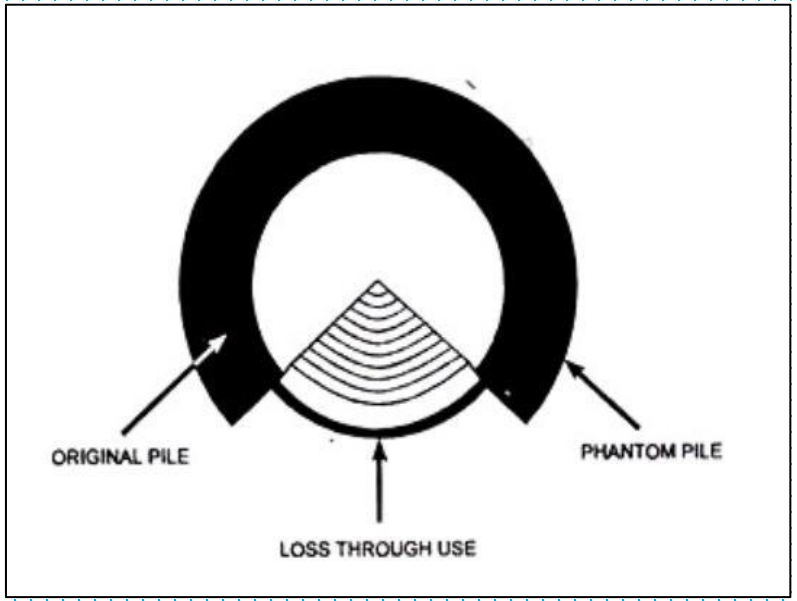
Formerly, for the production of one ton of pig iron, 5 tons of coal were required. But, in the contemporary world, 2 tons of coal are enough to produce 1 ton pig iron. In other words, 5 tons of coals can produce 2.5 tons pig iron.



Phantom Pile

The sustainable use, conservation and proper planning of resources through the implication of Phantom Pile is very essential in present time all over the world.

For further Reading:

1. https://www.excellup.com/classten/ssten/resources.aspx
2. https://en.wikipedia.org/wiki/Resource
3. Lujala, P. (2003, March). Classification of natural resources. In *Trabajo elaborado para el ECPR Joint Session of Workshop. Edimburgo, Reino Unido* (Vol. 28).
4. https://www.yourarticlelibrary.com/economy/important-ideas-concepts-developed-in-economy/25276