CLASSIFICATION OF RESOURCES

Compiled by

Dipankar Chakraborty

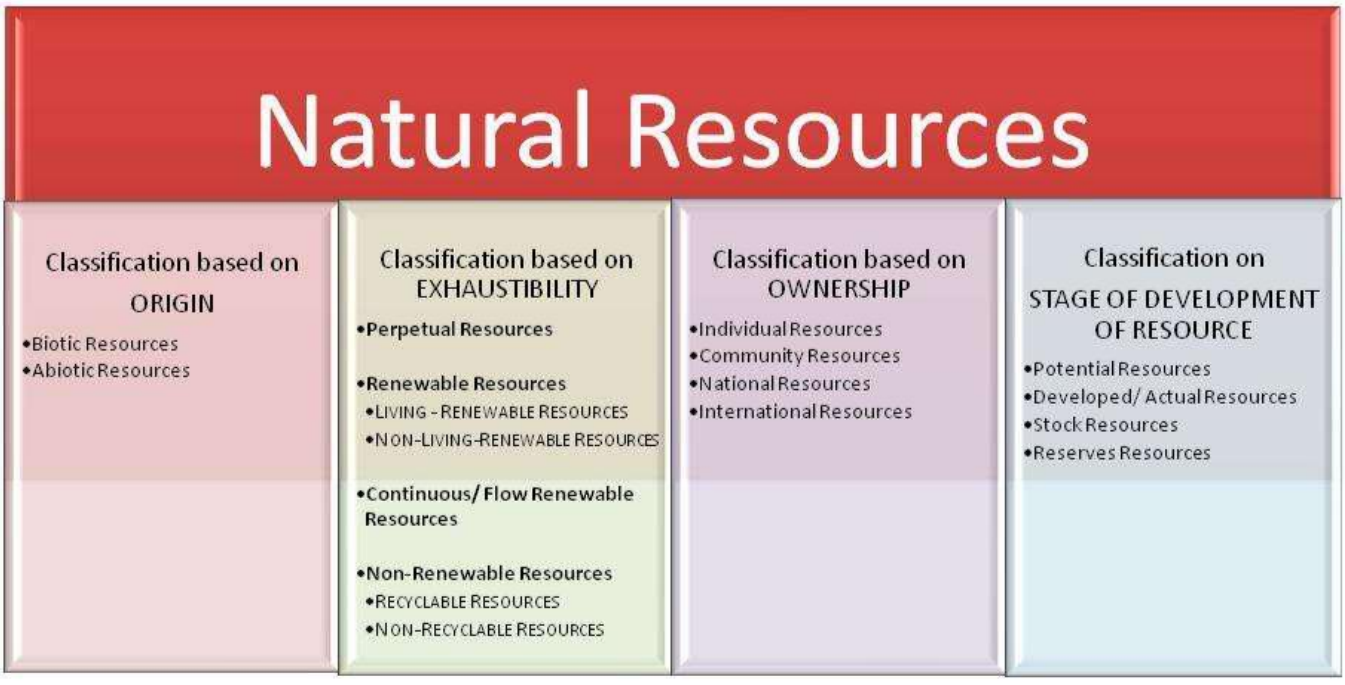
College Teacher

Raniganj Girls' College

When we say Classification of Resources, we first need to understand what is this natural resource to be classified? There are other set of terms used like renewable resources, non-renewable resources, man-made etc.

To begin with, ***"Natural resources"***was first coined and popularized by E.F. Schumacher in the 1970's by his famous book "Small is Beautiful."Generally speaking, 'natural resources' is a term applied to all naturally occurring substances which are considered valuable in their relatively unmodified, i.e. natural form. The value of the any resource is determined by its demand-supply situation. The demand-supply again is determined by the utilitarian value of that commodity.

Any commodity is a natural resource only if the primary activities of obtaining it are extraction and purification, not creation. Due to this reason, petroleum, hunting, fishing, forestry and mining are classified as natural resource industry. Since agriculture is an occupation/ industry related to creation, it is not considered a natural resource industry.Some parameters used to classify resources are (i) Classification based on Source of Origin; (ii) Classification based on exhaustibility; (iii) Classification based on ownership; (iv) Classification based on the stage of development of the resource



(i) Classification based on source of origin: **Abiotic vs. Biotic**

- BIOTIC RESOURCES are resources which come from biosphere and have a life example. human beings, flora and fauna, fisheries, livestock etc. The materials obtained from them are also considered biotic, example fossil fuels, coal, petroleum, because these are formed from decayed organic matter.

- ABIOTIC RESOURCES are those resources which come from non-living, non-organic material. Example, rocks, minerals, air, water, metals etc.

(ii) Classification based on exhaustibility: **Renewable vs. Non-renewable**

- PERPETUAL RESOURCES – these are resources which exist irrespective of the amount of their usage. With adequate technology, they provide a vast potential for use. Example. Sun, wind and water

- RENEWABLE RESOURCES - the resources which can be renewed and reproduced by physical, chemical or mechanical processes are known as renewable or replenishable resources. These resources are able to increase their abundance through reproduction and utilization of simple substances. Examples of such resources are water, forests and wildlife, plants etc. we can further divide into continuous or flow and biological.

o Renewable Resources can be further classified as Living Renewable Resources and Non-Living Renewable Resources. Some examples of renewable resources though they do not have life cycle but can be recycled are wood and wood-products, pulp products, natural rubber, fibers (e.g. cotton, jute, animalwool, silk and synthetic fibers) and leather.

o **Living Renewable (biological) resources** are those renewable resources which come from living (biotic) sources – like forests, plants

o **Non-Living Renewable resources** are those that renewable resources which come from non-living (abiotic) sources like land, water, air. Example, metals, minerals, wind, sun etc.

o **Continuous/ Flow Renewable resources** are resources which do not need regeneration. Similar to that of perpetual resources, example wind, tides etc.

- NON-RENEWABLE RESOURCES - this process takes place over a long geological time. Examples of such resources are minerals and fossil fuels. This may take millions of years in their formation. Some of the resources like metals are recyclable and some like fossils fuels cannot be recycled and as such they get exhausted with their use.

o Non-Renewable Resources can be further classified as Recyclable and Non-Recyclable resources.

o **Recyclable resources** are those which can be processed to be used again and again. These are non-renewable resources, which can be collected after they are used and can be recycled. These are mainly the non-energy mineral resources, which occur in the earth's crust (e.g. ores of aluminium, copper, mercury etc.) and deposits of fertilizer nutrients (e.g. phosphate sock and potassium and minerals used in their natural state like asbestos, clay, mica etc)

o **Non- Recyclable resources** are those which once used perish, example coal. These are non-renewable resources, which cannot be recycled in any way. Examples of these are fossil fuels and uranium, which provide 90 per cent of our energy requirements.

o There are a few substances too which can be recycled a few times, before they completely perish or turn non-renewable resources.

(iii) Classification based on ownership: **Individual vs. Community vs. National vs. International**

- This classification is inspired from socio-economic demarcation or classification of resources and natural wealth. Interestingly, the resources (metals/ minerals) found on these pieces of land ownership also belong to the concerned owner.

- INDIVIDUAL RESOURCES - these are resources owned by individuals privately. Example, land owned by a farmer allotted to them by government against the payment of revenue. Urban people own plots, houses and other property. Some other examples include plantation, pasture lands, ponds, water in wells etc.

- COMMUNITY RESOURCES- these include resources that are accessible to all the members of the community like the village grazing grounds, burial grounds, village ponds, public parks, picnic spots, playgrounds in urban areas are accessible to all the people living there.

- NATIONAL RESOURCES- technically speaking all the resources belong to the nation because the country has legal powers to acquire even private property for public good. This we may have seen many times when government take fields owned by private individuals to construct roads, canals, railways. All minerals, water resources, forests, wildlife, land within the political boundaries and oceanic area upto 12 nautical miles from the coast termed as territorial water and resources therein belong to the nation.

- INTERNATIONAL RESOURCES - there are also international resources regulating resources. The oceanic resources beyond 200km of the Exclusive Economic Zone belong to open ocean and no individual country can utilize these without the consensus of international institutions.

(iv) Classification based on the stage of development of the resource: **Potential vs. Developed vs. Stock Reserves**

- Potential resources are those which can be found in a particular region but are yet to be put to use. Example. Regions in states like Rajasthan and Gujarat have huge potential for development of solar, wind and tidal energy, which us yet to be used.

- Developed/ Actual resources includes are resources which have been/ are surveyed and their quality and quantity have been determined for utilization. The development of resources however depends on technology and level of their feasibility

- Stock - the materials in the environment which have the potential to satisfy human needs but human beings do not have the appropriate technology to access these, are included among stock. Water for example is a compound of two inflammable gases; hydrogen and oxygen which can be used as a source of energy. But we do not know how to use them for this purpose. Therefore it is considered as stock.

- Reserves - they are the subset of stock/ actual which are/ can be used with the help of existing technical knowledge. Reserves can be used for meeting future requirements. For example water in lakes, dams, forests etc is a reserve which can be used in the future.