# RESOURCES

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## INTRODUCTION

Since the dawn of civilisation man is dependent upon nature for his survival. Nature is catering to the various bare physical needs of man on a continuous basis. Nature provides food, shelter and clothing in raw form. In earlier times, man consumed these raw materials as they were available but gradually he learnt to use them in a better and efficient manner. Later, man learnt to live a settled life and storing things for his use. Nature bestowed humans with various resources started are like land, water, forest, soil.

## MEANING AND DEFINITION

The term 'resource' has been derived from Latin word "Reserge" which means to rise again. It also has close links with old French word "Resourde" that means to relive. Thus, we can say that an element becomes resource only when its importance is known and it is beneficial to man.

"Resources are those aspects of man's environment which facilitate the satisfaction of man's wants."

"Means of attaining given ends."

Resources are considered as the means to achieve man's given ends and to satisfy wants, be they individual or societal.

**Resources are basically:**

- Means of achieving given ends
- A tool to satisfy human wants
- A possible assistance
- A base for survival
- Stuff which can be used in need.

## ESSENTIAL CONDITIONS

1. **Utility :** A particular stuff available in nature should have some utility to man. Unless and until it is of no use to man it is treated as a neutral stuff. But by the time it becomes useful to man in any way it becomes a resource.
2. **Function ability :** A thing becomes a resource by its functionability towards man. A lump of coal is resource not because it looks black in colour and is composed of dead remains of plants but because it has some utility to man. It satisfies human wants in various ways.

**A. Resources**

(i) Any thing that can be used to satisfy human need is a resource.

(ii) Utility or usability is what makes an object or substance a resource.

(iii) Any physical material becomes a resource when humans find them useful and attach some value to it, such as rocks, minerals, soils, rivers, plants and animals.

(iv) By developing human skills only, other resources can be developed.

(v) The things become resources only when they have a value.

(vi) Time and technology are two important factors that can change substances into resources. For example discovery of fire led to the practice of cooking.

**B. Value**

Human needs and desires grow and become with the progress of a society. Gifts of nature acquire value with reference to the needs of people living in a region and the technology. Natural endowments were, already present on earth when humans appeared on the scene. But, these were not of much value till humans discovered their use and found appropriate technology to make them usable.

**Value can be -**

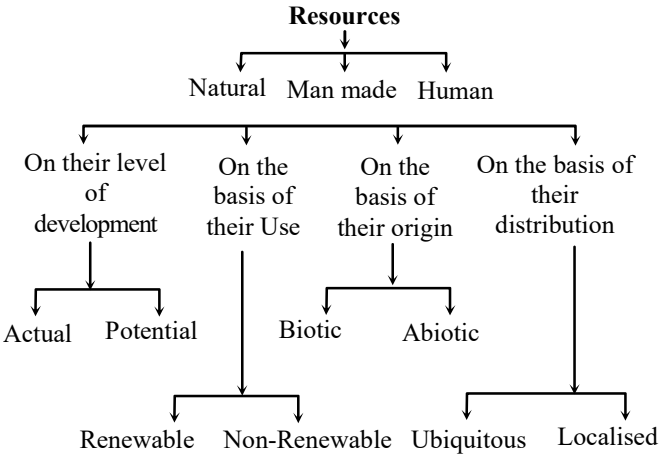
**(i) Economic :** When resources are used for production.

**(ii) Legal :** When clean Air Act is attached to the quality of air.

**(iii) Aesthetic :** When we think of natural beauty of forests, mountains, lakes and rivers,

**(iv) Ethical :** When we preserve our National Parks for future generations.

## ➢ TYPE OF RESOURCES




## A. NATURAL RESOURCES

Nature is the original basis of all resources. Nature has provided us sunlight, air, water, etc. We can use these resources directly and without any value addition. Most of the resources are a free gift of nature and hence they should be used with utmost care. Today, the total environment of the world has become a resource. We use these gifts of nature to satisfy our needs.

Natural resources can be further classified in the following ways :

**1. On the basis of origin :**

**Abiotic and Biotic resources -**

On the basis of origin, natural resources can be abiotic and biotic resources. The living things such as plants and animals are biotic resources while the nonliving things such as land, water and air belong to abiotic resources. Biotic resources are capable of reproduction, while abiotic resources are fixed in amount and can possibly be -exhausted if not used properly. We can say that biotic resources are generally renewable while the abiotic ones are non-renewable.

**2 On the basis of their use and development**

**Actual and Potential Resources**

On the basis of their use and development, natural resources can be classified into actual resources and potential resources. The resources which are at present in use and their estimated reserves are known, are called the actual resources. The total amount of coal in the Damodar Valley of India is known. Thus it is an actual resource. When the force of falling water is used for generating electricity, it is an actual resource.

The resources which can be explored and are likely to be available for use, are called the potential resources. Their quality and quantity are not known. Potential resources can possibly be developed in future. The size of a potential resource may change with the time and new technological development. The numerous waterfalls in Africa provide potential resource for hydroelectricity.

**3. On the basis of their use :**

**Renewable and Non- renewable Resources**

On the basis of use natural resources can be classified into the renewable resources and non-renewable resources. The resources which have

the capacity or ability to reproduce or renew quickly are called renewable resources. But, the non-renewable resources are of exhaustive type as they cannot reproduce themselves.

The renewable resources include solar and wind energy, water, soil, forests, etc. Some of the renewable resources can be destroyed due to careless use.

The non-renewable resources are limited in reserves and it may take thousands of years to renew them. For example, coal or petroleum if taken out completely, may take millions of years to produce them. As the time period is extremely long, such resources are considered as non-renewable.

**4. On the basis of their distribution:**
**Ubiquitous and Localised Resources**

On the basis of their distribution, these can be ubiquitous or localised resources. Ubiquitous resources are those which are found almost everywhere on the earth, such as the air we breathe. The resources like reserves of iron copper, coal etc. are not found everywhere, but they are confined to certain places. These are called the localised resources. The distribution of localized resources is highly uneven on the surface of the earth.

## B. HUMAN RESOURCES

The human beings are not only the most important, but also the ultimate resource on the earth. The human beings can explore, develop and convert the natural resources into useful goods as per their abilities and demands. Thus the people, who are the human resource, have to be healthy, educated and skilled.

The human beings are the only ones who can create more resources and put them to best possible use. The human resources actually refer not only to the numbers, but also to the physical and mental abilities of the people.

The human resource development can possibly be carried out by improving the quality of people s skills through education and training. The human resources like the natural resources are not distributed uniformly on the earth s surface. They vary greatly not only in their special distribution, but also as per their education, age,/ sex, standard of living, etc.

## C. MAN-MADE RESOURCES

Most of the natural resources involve various processes to make them useful. Human beings have the knowledge, skills and capacity to change the natural substances into usable resources. For example, most of the metals in the ore form were not a resource until the human beings developed the technique to extract metals from the metallic ores. The natural resources can be used to make \ buildings, bridges, roads, machineries, automobiles, ships, etc. which can be called the man-made resources. Technology is also a man-made resource.

Those aids of production which have been created by people to utilise the physical materials of the environment are called Human made resources

e.g. Machines, tools etc. Human made resources have gained importance because the help in enhancing the productivity

This is done by -

**(i) Growth In physical capital -** The equipments and buildings used to produce other things, contributes a great deal to productivity.

**(ii) Technology -** The method of doing or making things is an important contributor to productivity growth.

**(iii) Political Institutions -** Enforcement of the rule of law and of property rights reduces uncertainty. The laws of a nation concerning openness to International trade and investment also Influence productivity.

## D. RESOURCES USE

With economic development, the demand for resources increases faster. Developed countries use more resources than developing countries. They have a higher standard of living and can Influence demand for resources. They possess

latest technology and can exploit their resources fully. Their productivity per hour is higher than that of developing nations. The rising demand for various resources has caused degradation or depletion of many valuable resources.

(i) Overuse of soil has caused infertility in many areas.
(ii) Widespread deforestation and killing of animals and birds have endangered many animal and plant species.
(iii) The quality of air, water and land resources have also been affected badly due to misuse and overuse.

## E. CONSERVING RESOURCES

**(i)** Using resources carefully and giving them time to get renewed is called resource conservation
**(ii)** Balancing the need to use resources and also conserve them for the future is called sustainable development.
**(iii)** There are many ways of conserving resources. Each person can contribute by reducing consumption, recycling and reusing thing. Ultimately it makes a difference because all our lives are linked.
**(iv)** It strives to meet the need of both present and future generations.
**(v)** It also maintains ecological balance.
**(vi)** The carelessness can create a situation when even the renewable resources can become very scarce and the non-renewable ones can definitely get exhausted. We can do the conservation of resources by reducing consumption or by recycling the resources.

**The reasons for resource planning and conservation are as follows:**

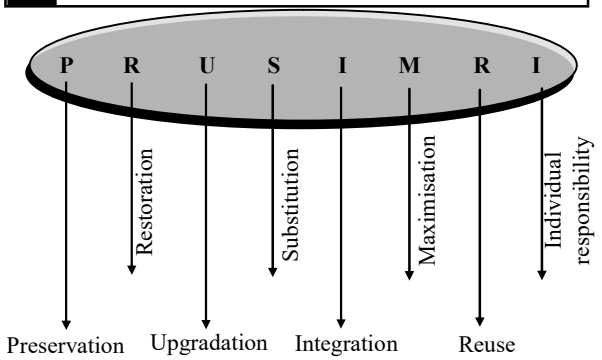
1 **Resource Scarcity:** At the end of the nineteenth century, in most parts of the world (developed countries), resource scarcity was felt due to several reasons. The very myth of super abundance of resources was shattered and some control over the exploitation of resources was considered necessary.

2. **Realisation of Mistake:** Man soon began to realise his capability for destroying the environment and that ultimately his own survival is on stake. Moreover, social reforms during that period also prepared a strong base for planning of resources.

3 **Demand of Resources:** Due to the increase in population more and more resources were needed to cater to their demand. The increasing demand led to the development of the planning and conservation view.

4 **Overutilisation and Pollution:** With the passage of time, man overutilised the resources due to which acute shortage was felt. Also, resources were polluted without. being taken care of their preservation. For example, in some parts of the world, water is polluted to such an extent that it is no more worth usable. In most of the advanced countries, the wastes from factories and industries (without treatment) are discharged into rivers and streams.

### PRINCIPLES OF RESOURCE CONSERVATION




1. **Preservation:** Resources should be preserved from being totally destructed. It doesn't mean no use of resources but maintenance of them in the existing form.

2. **Restoration:** Despite our best intention, we often make mistake when making use of our natural resources. Once these errors are identified, the professional conservationist has the responsibility of repairing the damage, so that the original value and productivity of resources can be restored.

3. **Upgradation:** Upgradation means emphasis in the technology through which we can enhance the utility of resources.

4 **Substitution:** The replacement of scarce resources with one that is more abundant and replacement of non-renewable resources with one that is renewable is known as substitution. This conservation practice is mostly used in mineral resource conservation.

5. **Integration :** A given natural resource such as forest does not stand in isolation. It is frequently associated with other resources such as soil,

water, wildlife, etc. Conservationist must decide whether a mature pine is more valuable to society as timber or as part of forest, soil, water, wildlife, scenic beauty complex. The evaluation of how the maximum value for society may be obtained from such a complex or interrelated resources is known as integration. It reflects the issue of environment.

6. **Maximisation :** It refers to the reduction of waste by most efficient use of resources. This is dependent actually on advancement of the available technology.

7. **Recycle of Reuse :** There are many resources which can be reused by treating them again. For example: Paper, water, etc.

8. **Individual Responsibility :** This aspect is related to the human beings. We should take care of the resources because these take care of us. It is the responsibility of each and every person to protect the resources from total destruction and to protect them for the future also.

## F. SUSTAINABLE DEVELOPMENT

The Earth Summit in 1992 defined sustainable development as the type of economic development which should take into account the needs of the present and future generations. The main aims of the sustainable development are:

- There should be proper use of resources .
- The needs of present and future generations must be taken into account.
- The disparities between the nations should be reduced or removed.
- The main principles of the sustainable development are:
- Respect and care for all forms of life .
- Improve the quality of human life .
- Conserve the earth s vitality and diversity .
- Minimise the wastage of natural resources .
- Change your attitude towards the environment.

## G. DIFFERENCES

| **Difference between Potential and Actual resources** | | |
|---|---|---|
| **Potential resources** | | **Actual resources** |
| **(i)** | Potential resources are the resources which are yet to be used and are sill in preliminary stage | Actual resources are the resources which have been developed by man for use and which are being continuously utilized |
| **(ii)** | Potential resources are not fully surveyed or quantified for the actual use | Actual resources are fully surveyed and quantified for the actual use. |
| **(iii)** | Potential resources need detailed survey for estimating their quantity and quality | The development of an actual resource depends on the technology available and cost involved. |

| **Difference between Renewable and Non-Renewable** | | |
|---|---|---|
| **Renewable resources** | | **Non-renewable resources** |
| **(i)** | These resources are capable of being used over and over again and are capable of | These resources once utilized do not get regenerated and cannot be used again and again |

| | | |
|---|---|---|
| | regeneration | |
| **(ii)** | They are inexhaustible resources | They are exhaustible resources |
| **(iii)** | Their quantity is vast, unlimited e.g. water, wind and plant | Their quantity is limited and confined, e.g. coal, petroleum. |

| **Difference between Natural and Human resources** | | |
|---|---|---|
| **Natural Resources** | | **Human Resources** |
| **(i)** | The gifts of nature or natural endowments come under the category of natural resources. | Man belongs to the category of biotic resources and constitute an important asset for the development. |
| **(ii)** | Rocks, minerals, plants and animals etc. are natural resources which are being used by man | The constituents of human resources are the quantity (number) and ability of the people. |
| **(iii)** | Proper utilisation of natural resources make it competent for the development of resources. | Education and health make people competent for developing resources. It is basically the abilities of humans that help in transforming the physical materials into valuable resources. |