Natural resources are materials and components (something that can be used) that can be found within the environment. Every man-made product is composed of natural resources (at its fundamental level). A natural resource may exist as a separate entity such as fresh water, and air, as well as a living organism such as a fish, or it may exist in an alternate form which must be processed to obtain the resource such as metal ores, oil, and most forms of energy.

There is much debate worldwide over natural resource allocations, this is partly due to increasing scarcity (depletion of resources) but also because the exportation of natural resources is the basis for many economies (particularly for developed nations such as Australia).

Some Natural resources can be found everywhere such as sunlight and air, when it is so the resource is known as an ubiquitous (existing or being everywhere) resource. However most resources are not ubiquitous. They only occur in small sporadic areas; these resources are referred to as localized resources. There are very few resources that are considered inexhaustible (will not run out in foreseeable future) – these are solar radiation, geothermal energy, and air (though access to clean air may not be). The vast majority of resources are however exhaustible, which means they have a finite quantity, and can be depleted if managed improperly.

Classification –

There are various methods of categorizing natural resources, these include source of origin, stage of development, and by their renewability, these classifications are described below. (**Classification.html**)

On the basis of origin, resources may be divided into:

* Biotic – Biotic resources are obtained from the [biosphere](http://en.wikipedia.org/wiki/Biosphere) (living and organic material), such as [forests](http://en.wikipedia.org/wiki/Forests) and [animals](http://en.wikipedia.org/wiki/Animals), and the materials that can be obtained from them. [Fossil fuels](http://en.wikipedia.org/wiki/Fossil_fuels) such as [coal](http://en.wikipedia.org/wiki/Coal) and [petroleum](http://en.wikipedia.org/wiki/Petroleum) are also included in this category because they are formed from decayed organic matter.
* Abiotic – Abiotic resources are those that come from non-living, non-organic material. Examples of abiotic resources include [land](http://en.wikipedia.org/wiki/Land), fresh [water](http://en.wikipedia.org/wiki/Water), [air](http://en.wikipedia.org/wiki/Air) and heavy metals including [ores](http://en.wikipedia.org/wiki/Ores) such as [gold](http://en.wikipedia.org/wiki/Gold), [iron](http://en.wikipedia.org/wiki/Iron), [copper](http://en.wikipedia.org/wiki/Copper), [silver](http://en.wikipedia.org/wiki/Silver), etc.

Renewability is a very popular topic and many natural resources can be categorized as either renewable or non-renewable:

* [Renewable resources](http://en.wikipedia.org/wiki/Renewable_resources) are ones that can be replenished naturally. Some of these resources, like sunlight, air, wind, etc., are continuously available and their quantity is not noticeably affected by human consumption. Though many renewable resources do not have such a rapid recovery rate, these resources are susceptible to depletion by over-use. Resources from a human use perspective are classified as renewable only so long as the rate of replenishment/recovery exceeds that of the rate of consumption.
* [Non-renewable resources](http://en.wikipedia.org/wiki/Non-renewable_resources) are resources that form extremely slowly and those that do not naturally form in the environment. Minerals are the most common resource included in this category. By the human perspective, resources are non-renewable when their rate of consumption exceeds the rate of replenishment/recovery; a good example of this are fossil fuels, which are in this category because their rate of formation is extremely slow (potentially millions of years), meaning they are considered non-renewable. Some resources actually naturally deplete in amount without human interference, the most notable of these being radio-active elements such as uranium, which naturally decay into heavy metals. Of these, the metallic minerals can be re-used by recycling them,[[1]](http://en.wikipedia.org/wiki/Natural_resource" \l "cite_note-1) but coal and petroleum cannot be [recycled](http://en.wikipedia.org/wiki/Recycled).

Other types of classifications are shown in the Tree Map.

USES -

* Rock and mineral resources have a wide variety of uses and play a huge role in our lives The Mineral Information Institute has a poster showing how much of a variety of minerals each person uses in his or her lifetime.
* Minerals are important to our health. We need small amounts of a wide variety of minerals. Minerals found in Tennessee which people need include: calcium, phosphorus, sulfur, copper, fluoride, iron, and zinc.
* Coal, oil and natural gas provide us with almost all of the energy we use to light, heat and run our world.
* Oil and natural gas are used as fuels and ingredients in the chemical industry to produce petroleum based products notably plastics.
* Minerals are ingredients in almost all of the products we use from fertilizer to plastics, from toothpaste to kitty litter, from knives to plates.
* Minerals are common ingredients in pigments. In fact, some of the earliest uses of minerals were as pigments.
* Minerals also play an important role in the processing of materials. Bentonite is important in well drilling, Barite is important in oil drilling. Fluorite is important in making steel

The usage of various natural resources are shown in the following Area chart – (**Usage of various Resources.html**)

DEPLETION –

In recent years, the depletion of natural resources has become a major focus of governments and organizations such as the United Nations (UN). The depletion of natural resources is caused by 'direct drivers of change'[[13]](http://en.wikipedia.org/wiki/Natural_resource#cite_note-Nelson-13) such as [Mining](http://en.wikipedia.org/wiki/Mining), [petroleum extraction](http://en.wikipedia.org/wiki/Petroleum_extraction), [fishing](http://en.wikipedia.org/wiki/Fishing) and forestry as well as 'indirect drivers of change' such as demography, economy, society, politics and technology.[[13]](http://en.wikipedia.org/wiki/Natural_resource#cite_note-Nelson-13) The current practice of [Agriculture](http://en.wikipedia.org/wiki/Agriculture) is another factor causing depletion of natural resources. For example the depletion of nutrients in the soil due to excessive use of nitrogen[[13]](http://en.wikipedia.org/wiki/Natural_resource" \l "cite_note-Nelson-13) and desertification[[4]](http://en.wikipedia.org/wiki/Natural_resource#cite_note-UN_2002-4) The depletion of natural resources is a continuing concern for society.

The various life expectancy (Years a particular mineral will be available) of different minerals at three different growth rates is shown (**minerals.html**)

STEPS TO BE TAKEN -

* 1. MANAGEMENT –

[Natural resource management](http://en.wikipedia.org/wiki/Natural_resource_management) is a discipline in the management of [natural resources](http://en.wikipedia.org/wiki/Natural_resources) such as land, [water](http://en.wikipedia.org/wiki/Water), [soil](http://en.wikipedia.org/wiki/Soil), [plants](http://en.wikipedia.org/wiki/Plant) and [animals](http://en.wikipedia.org/wiki/Animal), with a particular focus on how management affects the [quality of life](http://en.wikipedia.org/wiki/Quality_of_life) for both present and future generations.

Management of natural resources involves identifying who has the right to use the resources and who does not for defining the boundaries of the resource.[[24]](http://en.wikipedia.org/wiki/Natural_resource#cite_note-Kommers_and_Mackie-24) The resources are managed by the users according to the rules governing of when and how the resource is used depending on local condition.[[25]](http://en.wikipedia.org/wiki/Natural_resource#cite_note-Managing_Ecosystem-25)

A successful management of natural resources should[[*neutrality*](http://en.wikipedia.org/wiki/Wikipedia:Neutral_point_of_view) *is* [*disputed*](http://en.wikipedia.org/wiki/Talk:Natural_resource)] engage the community because of the nature of the shared resources the individuals who are affected by the rules can participate in setting or changing them.[[24]](http://en.wikipedia.org/wiki/Natural_resource#cite_note-Kommers_and_Mackie-24) The users have the rights to device their own management institutions and plans under the recognition by the government. The right to resources includes land, water, fisheries and pastoral rights.[[25]](http://en.wikipedia.org/wiki/Natural_resource#cite_note-Managing_Ecosystem-25) The users or parties accountable to the users have to actively monitor and ensure the utilisation of the resource compliance with the rules and to impose penalty on those peoples who violates the rules.[[24]](http://en.wikipedia.org/wiki/Natural_resource#cite_note-Kommers_and_Mackie-24) These conflicts are resolved in a quick and low cost manner by the local institution according to the seriousness and context of the offence

* 1. USE OF RENEWABLE RESOURCES –

Renewable energy resources and significant opportunities for [energy efficiency](http://en.wikipedia.org/wiki/Efficient_energy_use) exist over wide geographical areas, in contrast to other energy sources, which are concentrated in a limited number of countries. Rapid deployment of renewable energy and energy efficiency, and technological diversification of energy sources, would result in significant [energy security](http://en.wikipedia.org/wiki/Energy_security) and economic benefits.[[17]](http://en.wikipedia.org/wiki/Renewable_energy#cite_note-17)

Renewable energy replaces conventional fuels in four distinct areas: [electricity generation](http://en.wikipedia.org/wiki/Electricity_generation), [hot water](http://en.wikipedia.org/wiki/Solar_hot_water)/[space heating](http://en.wikipedia.org/wiki/Space_heating), [motor fuels](http://en.wikipedia.org/wiki/Motor_fuel), and rural (off-grid) energy services:[[18]](http://en.wikipedia.org/wiki/Renewable_energy#cite_note-ren15-18)

* **Power generation**. Renewable energy provides 19% of electricity generation worldwide. Renewable power generators are spread across many countries, and wind power alone already provides a significant share of electricity in some areas: for example, 14% in the U.S. state of Iowa, 40% in the northern German state of Schleswig-Holstein, and 20% in Denmark. Some countries get most of their power from renewables, including Iceland (100%), Norway (98%), Brazil (86%), Austria (62%), New Zealand (65%), and Sweden (54%).[[19]](http://en.wikipedia.org/wiki/Renewable_energy#cite_note-ren53-19)
* **Heating**. [Solar hot water](http://en.wikipedia.org/wiki/Solar_hot_water) makes an important contribution to [renewable heat](http://en.wikipedia.org/wiki/Renewable_heat) in many countries, most notably in China, which now has 70% of the global total (180 GWth). Most of these systems are installed on multi-family apartment buildings and meet a portion of the hot water needs of an estimated 50–60 million households in China. Worldwide, total installed [solar water heating](http://en.wikipedia.org/wiki/Solar_water_heating) systems meet a portion of the water heating needs of over 70 million households. The use of biomass for heating continues to grow as well. In Sweden, national use of biomass energy has surpassed that of oil. Direct geothermal for heating is also growing rapidly.[[19]](http://en.wikipedia.org/wiki/Renewable_energy#cite_note-ren53-19)
* **Transport fuels**. Renewable [biofuels](http://en.wikipedia.org/wiki/Biofuel) have contributed to a significant decline in oil consumption in the United States since 2006.[[19]](http://en.wikipedia.org/wiki/Renewable_energy#cite_note-ren53-19) The 93 billion liters of biofuels produced worldwide in 2009 displaced the equivalent of an estimated 68 billion liters of gasoline, equal to about 5% of world gasoline production.[[19]](http://en.wikipedia.org/wiki/Renewable_energy#cite_note-ren53-19)

In international public opinion surveys there is strong support for promoting renewable sources such as solar power and wind power, requiring utilities to use more renewable energy (even if this increases the cost), and providing tax incentives to encourage the development and use of such technologies. There is substantial optimism that renewable energy investments will pay off economically in the long term.

The Growth Rates of Renewable Energy Capacity is shown (**renewable\_growth.html**)