

## WHAT ARE RESOURCES?

**Resources:** anything obtained from the environment to meet the needs and wants of the individual, population, or species

EX: food, water, space, air, soil, sunlight, minerals, etc.

\*\* various ways to classify or categorize resources:

**Vital resources :** those necessary for sustaining basic life

EX: food, water, air

**Essential resources** are those **deemed necessary for human life by the particular society** that are beyond the vital resources.

EX: energy (oil), farmland, trees, various minerals (iron, aluminum, etc.), clothes, shelter, etc.

**Material or tangible resources :** those which can be quantified or measured. Its supply may or may not be limited

EX: oil, natural gas, coal, trees, food, water, air, etc.

**Non-material or intangible resources** are those whose quantity cannot be measured because they cannot be touched. They are emotions or psychological (feelings).

EX: beauty, love, solitude, aesthetics, etc.

**Perpetual resources** are those which are **essentially inexhaustible on a human time scale**. The supply of these resources will not 'run-out'.

EX: solar energy, wind, air, etc.

**Non-renewable or exhaustible resources** are those which exists in a fixed amount in various places in the Earth's crust. They have the potential to be 'renewed', but by geological, physical, & chemical processes which take place over millions or billions of years.  
Thus not on a human time scale.

EX: *energy resources* (coal, oil, natural gas)  
*metallic mineral resources* (iron, copper, aluminum, etc.)

*nonmetallic mineral resources* ( salt, clay, sand, etc.)

\*\* supplies of these resources may not become completely exhausted, but may become economically depleted, meaning the cost of extracting is greater than the monetary profit

\*\* **Depletion time** refers to the time it takes to use a certain fraction, usually 80%, of the known or estimated supply of a non-renewable resource and thus making it economically depleted. This assumes a fixed or calculable rate of use and that extracting the remaining 20% would be too costly compared to the profit gained.

\*\* Some of these can have their supplies extended by **Reducing** usage of, **Reusing** and/or **Recycling** the resource or a portion of it.

**Renewable or potentially renewable resources** : those which can be replenished fairly rapidly through natural processes on a human time scale (hours, years, decades)

EX: trees, grass, wild & domesticated plants and animals, fresh water, soil, etc.; geothermal, vegetation as biomass fuels

\*\* These resources can be **depleted or degraded** into non-renewable resource status by overuse or pollution, so we must be wary of:

**Sustained yield** : which refers to the highest rate at which a renewable resource can be used without reducing its available supply throughout the world or in a particular area

EX: Do not cut down trees at a rate faster than they can be grown, or harvest wild fish stocks faster than they can be replenished.

**Environmental degradation** which refers to the **depletion or destruction of a renewable resource** that is used faster than it can be naturally replenished. If the resource is not managed in a sustained yield fashion, then it becomes degraded. If overuse (abuse) continues, then the resource may become non-renewable (on a human time scale) or even non-existent (extinct).

EX: the extinction of a plant or animal species because of overuse by humans

**Resource scarcity** refers to how scarce or abundant a resource may be but this can be **absolute or relative scarcity**.

**Absolute scarcity** exists when supplies of a resource are completely **exhausted or extinct**. This can also refer to a resource when it has become *economically depleted*.

EX: The extinction of a plant or animal species, or a non-renewable resource which has been exhausted.

**Relative scarcity** : exists when enough of a resource is still available to meet demand, but its *distribution is unbalanced* (could be political or economic reasons too)

EX: food, water, etc.