

Water Resources

Water is essential component of all living things. 80% of earth surface is covered with water. All organisms are made up of mostly by water.

(e.g) Tree 60% by weight of water

Animals 50 – 65% by weight of water

Water exist in three phases solid, liquid and gases. It is circulated in the hydrological cycle.

Hydrological cycle:

Water from various water bodies

↓ Evaporated by solar energy

Enters in to the atmosphere as clouds

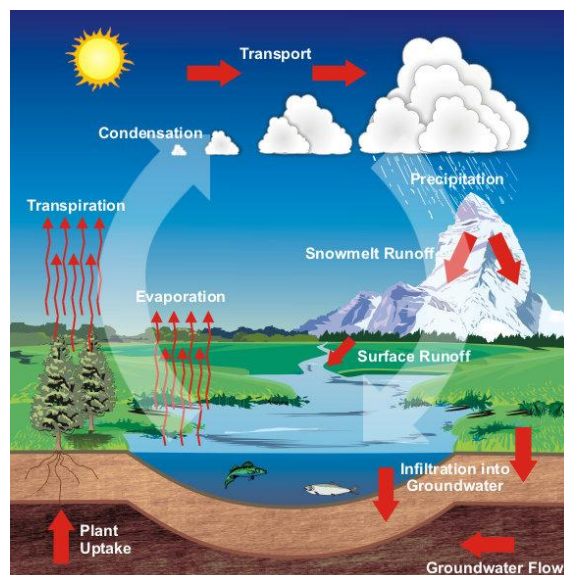


Falls again on earth as rain or snow



Ultimately returns to the ocean.

This process is called hydrological cycle.



Estuaries:

These are deltas formed at the mouth of rivers, where they join the ocean. The mixing of fresh and salt water gives estuaries.

Flowing water bodies:

Water flows in streams and rivers. It carries sedimentary materials and dissolved minerals.

Under ground water:

Water available deep in the ground due to percolation of surface water. It is the major source. It is very pure and used for almost all purposes in the world.

Under ground water**Aquifer:**

Layers of highly permeable rock containing water is called an aquifer. Layer of sand and gravels are good aquifers. Clay and crystalline rocks are not good aquifers.

Effects of over utilisation of water:**1. Decrease of ground water:**

- Increased usage decreases the ground water.
- Insufficient rain fall
- Building construction activities sealing the permeability of the soil.

2. Ground subsidence:

Ground water withdrawal is greater than its recharge rate, the sediments in the aquifers get compacted. As a result shrinkage of land surface takes place.

Problems:

- a. Structural damages in the buildings
- b. Fracture in pipes.
- c. Reversing the flow of canals.

3. Lowering of water table:

Over utilisation of ground water in arid and semi arid regions for agriculture disturbs the state of equilibrium of the hydrological cycle.

Problem:

- a. lowering of water table
- b. decrease the number of aquifers
- c. Change the speed and direction of water.

4. Intrusion of salt water:

In coastal area over exploitation of ground water leads to the intrusion of salt water from sea. Therefore that water cannot be used for drinking and agriculture.

5. Over utilisation of water causes earth quakes, land slides and famine

6. Drying up of wells:

Due to over utilisation, ground water level decreases much faster than can be regenerated. It leads to drying up of dug well and bore wells.

7. pollution of water:

Near the agricultural land ground water decreases therefore water containing nitrogen enters into the ground and pollute the ground water.

Problem:

Water which contains excess nitrate content is not suitable for drinking.

Source : <http://nprcet.org/e%20content/eee/EVS.pdf>