# Revision Notes

## Class – 10 Social Science (Geography)

## Chapter 3 - Water Resources

- Earth's surface is covered three-fourth with water, but very small percentage of water is usable and accessible to us. This is mainly the surface run-off and groundwater which can be renewed by the hydrological process. Still, Water scarcity persists.

- **Causes of Water Scarcity:** Some of the common causes are:-

1. Uneven Precipitation - The seasonal and annual rainfall varies with respect to geographical region and time.
2. Over Exploitation- With the increasing population and unequal access to water resources, the water resources are exploited for domestic purposes, industrial needs. It is also polluted due to hazardous practices of the industries.
3. Irrigative agricultural fields- Water is needed in a large quantity for growing crops. Farmer owns individual water pumps, which causes decreased groundwater level in that region, causing scarcity and drought.
4. Industries - Industries not only harm and pollute the water resources like rivers and lakes, they also require groundwater for working by water pumping devices. The electric power supply source is also Hydroelectric power.
5. Releasing untreated chemicals into water bodies by the industries.
6. Unplanned drainage system:- Throwing of garbage in water bodies pollute them and makes them unfit for use.

- **Solutions for Water Scarcity**

1. Dams:

   Dams are a hydraulic structures built to store water for future use. They act as reservoir. They become barrier and restrict the flow of water which can be later used for purposes such as irrigation, domestic use, industrial use, aquaculture, etc.

   Uses:

   a. It is used in Irrigating the feilds.

   b. Used in Electricity Generation: In the Sutlej-Beas River Basin, The Bhakra- Nangal Dam is used widely for hydel power production and irrigation.

   c. Used as Water supply for domestic purposes.

   d. Used to Supply water for industries and manufacturers.

   e. Used in Flood control:- The Hirakud Dam in the Mahanadi basin is used for flood control.

   f. Used for Recreational purposes like water parks

   g. Used in Inland Navigation.

   h. Used in Fish Breeding.

   Jawaharlal Nehru claimed dams to be "Temples of Modern India " as they would help in activites like agriculture, development of village economy, blooming of industries, and growth of the urban economy.

❖ Disadvantages of Dams

   ➢ Constructions of Dam interrupted the flow of water which caused the irregular flow of sediments, increasing the sedimentation in the

reservoir, which caused the livelihood of aquatic animals quite difficult. The dam led to fragmented rivers which caused the migration of aquatic organisms difficult.

- ➢ Local People started getting displaced from their land.
- ➢ Due to high water availability, all farmers preferred commercial crops, which caused an ecological imbalance.
- ➢ There was an increase in the social gap as they caused disputes among the people wanting their water needs to get prioritized. Even inter-state disputes became common.
- ➢ Flood control dams triggered floods as well because of the sedimentation in the reservoir. When excessive rainfall occured, dams failed to control floods. The release of water from dams caused the floods itself many times.
- ➢ Land degradation: Other than the loss of lives and properties, the flood also eroded soil.

2. Rainwater Harvesting

Rainwater harvesting is done according to the region and its climatic conditions. It is done in India since ancient times.

- ❖ In Western Himalayas - 'guls' or 'kuls' were formed which were the diversion channels for water for agriculture.
- ❖ In Rajasthan - Rooftop Rainwater harvesting is common.
- ❖ In West Bengal - Inundation channels are formed for irrigation.
- ❖ In Arid and Semi-arid regions - Agricultural fields are used as rain-fed storage structures which allowed the rainwater to be stagnant and made the soil moist. They had large tanks which were as big as a room and

were placed in the courtyard of their house, the rainwater from their sloppy roofs would accumulate in the tanks through a pipe.