

Water Scarcity

Water scarcity is defined as the shortage or scarce availability of water. While studying the chapter on water resources in class 10, it is important to know the reasons which lead to water scarcity. The following are important pointers:

- The areas that are drought-prone and have low rainfall are usually more prone to the shortage of water.
- The increasing population has also led to overexploitation and excessive use of water.
- Moreover, sometimes the water available is of bad quality, which creates further scarcity.

Need for Water Conservation and Management

Since water scarcity is increasing with each passing day, there is an urgent need to conserve water. This will ensure that people are safe from health hazards, and the natural ecosystems are not degraded. This can be done by preventing water pollution and avoiding wastage of water.

Hydraulic Structure of Ancient India

The topic of hydraulic structure in ancient India is important in this chapter. There is a long history of water resources in India. In the first century BC, there was a water harvesting system in Allahabad named Sringaverapura that was used to channelize the floodwater of the Ganga river.

But the development of dams, lakes, and irrigation systems happened during the time of Chandragupta Maurya. Moreover, in Kalinga, Nagarjuna, Konda, Benner, and Kolhapur, early irrigation works have also been found. One of the largest artificial lakes, Bhopal lake, was built in the 11th century. Three centuries later, Iltutmish constructed the Tank of Hauz Khas to supply water in the Siri Fort area.

Multipurpose River Projects and Integrated Water Resources Management

The construction of dams was one of the revolutionary incidents that took place at that time. Let us take a deep look at the major pointers covered in the chapter on water resources in class 10.

Dams can be defined as a barrier that obstructs, directs, or retards the flow of flowing water. It often creates a lake, reservoir, or impoundment. Dams are used for various purposes. Here are some of the uses of Dams:

- Electricity generation is the most crucial use of dams.
- Rivers and rainwater can be impounded with the help of dams for irrigation of agricultural land.
- Apart from this, dams supply water for domestic and industrial purposes.
- Dams also play a role in flood control.
- Inland navigation and fish breeding is also a less common use of dams.

But there are some disadvantages of dams as well, and they are-

- Many people oppose the construction of dams due to several reasons. Many new social movements have risen due to the construction of multipurpose projects and large dams. This is because local people suffer the loss of land and livelihood when dams are constructed.
- There has been a change in cropping patterns in many regions since farmers have shifted to water-intensive and commercial crops.
- It has widened the social gap between the wealthy landowners and the poor.
- Sometimes the dams fail to achieve the purpose for which they are built. For instance, because of sedimentation in the dams' reservoirs, the dams have sometimes triggered floods instead of controlling them. This has mostly happened in huge dams at times during excessive rainfall.
- Dams have also led to soil erosion.

Water Resources Class 10:Narmada Bachao Andolan

The chapter on water resources in class 10 also explains various revolutions and movements which were started to boycott the construction of dams, such as Narmada Bachao Aandolan. Narmada Bachao Andolan, also known as Save Narmada Movement, is one such movement against dam construction. This movement is led by human rights activists, environmentalists, farmers, and tribals who opposed the construction of the Sardar Sarovar Dam, which was supposed to be built across the Narmada river in Gujarat.

Water Resources Class 10: Rainwater Harvesting

Rainwater harvesting is a simple technique to avoid wastage of water by collecting rainwater for future usage. The rainwater is stored and then used for multiple purposes. The methods of rainwater harvesting vary across different regions. Here are some important pointers on this topic as per the chapter on Water Resources in class 10:

- In areas with high altitudes like hills, diversion channels were built for agriculture, just like the 'Guls' or 'Kuls' of the Western Himalayas.
- In Rajasthan, a common practice for storing drinking water was 'Rooftop rainwater harvesting.'
- Almost all the houses in the semi-arid regions of Rajasthan, such as Bikaner, Barmer, and Phalodi, had underground tanks used to store drinking water. These underground tanks were also known as tankas. A pipe was connected to these tanks with the sloping roofs. During rainfall, the rain from the rooftops traveled through these pipes to reach the underground tanks.
- This was a reliable source of drinking water, especially in summers, because the water could be stored in these tanks for a long time.
- This rainwater, also known as the Pular Pani, is considered the purest form of water.
- The first state in India that has made rooftop rainwater harvesting compulsory in all the houses is Tamil Nadu.