

# Unit 3 : Water Management

## Chapter 1 : Water is the basis of life

### Water and living things:

The earth is described as 'Bahuratna Vasundhara'. Water is one of the most important natural resources among the many gems on earth. All living things on earth are made of water. The source of life for plants and animals is water. From ancient times the development of human beings can be seen in the places where water is available, i.e. rivers and reservoirs. History tells us that the ancient cultures of Mesopotamia, Egypt, and Harappa were formed on the banks of rivers. Therefore, careful use of water is very important and it is the responsibility of all of us.



### 3.1.1 Concept picture - Earth

### Water scarcity in Maharashtra :

According to the Falcon criteria, the region is considered to be in good water condition only if more than 1700 cubic meters of water is available per capita per year. If the annual per capita availability of water is less than 1000 cubic meters, then the scarcity of water adversely affects the living standard of the people. If the per capita annual availability of this water is less than 500 cubic meters, it is also a problem for the animals. Considering the present state of Maharashtra, only 788 cubic meters of water per capita per year is available



### 3.1.2 Some examples of water scarcity

for consumption, so our state is a region of water scarcity. If the availability of water is reduced to such an extent of 500 cubic meters, it will fit into a very difficult for human life.

### Drought man-made or natural?

Maharashtra has been suffering from drought for thousands of years. Even today, there is a shortage of water everywhere. Maharashtra has sufficient rainfall as well as the number of dams. What is the reason for the shortage of drinking water despite the huge increase in the number of dams? On the one

hand there is a wet drought and on the other hand there is no water to drink. On the one hand, there are sugarcane plantations, and miraculous conditions like tankers in the same village. As per the total availability of water in Maharashtra, the need and the actual drought situation, the reasons for the disparity are natural or man-made?

#### Ground water abstraction/lifting :

In our country, farmers traditionally draw water from wells to irrigate their crops and irrigate the entire farmland.



#### 3.1.3 Groundwater abstraction/lifting

So water is wasted and excessive use of water decreases groundwater level. Now, tube

wells more than 400-500 feet deep are being dug and water is being pumped out of the ground. In our country, 65% of the water used for irrigation and 3% of the water used for domestic use is drawn from wells. Groundwater reserves are rapidly declining due to the depletion of such abundant water for irrigation. Decreasing ground water levels is a matter of concern.

#### River system : dilapidation/be spoiled

Rivers are of paramount importance in every country. Many cities, industrial projects and factories are located on the banks of big rivers. As a result, a large amount of water has been polluted in the river. The health of the rivers has deteriorated due to sewage and waste from the factories. The springs of the rivers have been closed. The river has stopped flowing due to extreme ground water abstraction. It is imperative to revive such polluted rivers and improve their health.

#### Observe

Visit river, wells, tube wells and other reservoirs the surrounding and observe the status of water consumption. Also study the causes of pollution.

#### Exercise

1. Explain the relationship between water and living organisms.
2. How is water scarcity intensity divided according to Falcon criteria?
3. Give an example of unequal availability of water for use despite the same rainfall.
4. Why is groundwater depleted?
5. What is the relationship between river health and urbanization?