

Sources of Irrigation in India

India is an agricultural based land. In India around 70 % of people are farmers. More than 50 % of India's income comes from agriculture and its related sources each year. To do agriculture, one of the most important things that a farmer need is *Irrigation*.

However agriculture is not only based on irrigation, it needs other things too like pesticides, seeds etc. Irrigation means supplying the lands with water.

By proper irrigation, controlled amount of water is given to the plants and trees. Without proper irrigation agriculture becomes a difficult task to do and sometimes even impossible. Irrigation helps in growing and cultivating of crops.

The country India is filled with many big rivers and its branches and because of that there shouldn't be any problem faced by the farmers in the irrigation department. But that is not the case.

India needs other sources of irrigation too as there are some places where no rivers flow through and during summer times; most of the seasonal rivers dry up. Without proper and adequate irrigation crops cannot be grown (except the crops that can grow on little amount of water like cabbage, corn etc.) as most of the crops like rice, jute etc., requires a lot of water.

Sources of Irrigation

To have proper irrigation for the crops, a lot of water is required especially during summer when the rivers almost dry up.

That is why other reliable sources of irrigation is necessary so that when the rivers dry up, farmers can have another source through which they can give water in the fields. Some of the major sources of irrigation are listed as follows –

Rivers

India has many rivers and some of the most important ones are Ganga, Yamuna, Brahmaputra, Narmada, Godavari etc. These rivers are the main source of irrigation in India.

These rivers have many side branches which go through all over the country and because of that irrigation has never been much of a problem in India.

Few of the rivers originate from the mountains and these rivers never dries up as their water comes from the snow that falls on the mountain and then melts and turns into water.

Rainwater

Rainwater is another major source for irrigation in India. Four out of twelve months falls under rainy season in India namely – June, July, August and September.

During these four months, farmers face no problem about irrigation as all the water that the crops needs come from the rain itself. During rainy season, heavy rainfall occurs which in turn fills up the rivers for the rest of the months. This is why rainwater is another important source of irrigation.

Groundwater

Groundwater means the water that is held underground in the soils or in the pores and crevices in rock. There is a massive supply of water that is present underground. Underground water or ground water is clean and can be used for even drinking purposes.

For the purpose of irrigation, this water is extracted through tube wells or wells. In states like Punjab, Rajasthan, Gujrat, Uttar Pradesh etc, tube well and well irrigation is done. 50 % of the irrigation is done with the help of groundwater. Process through which the groundwater is extracted -

- **Tube well irrigation** – By the help of tube wells the ground water is extracted from under the soil or from the crevices that is present in the rocks. This water is used for irrigation purposes. This water is easier to use as farmers install tube wells near the agricultural lands.
- **Well irrigation** – By digging the wells, the groundwater can be brought back in the surfaces. Well has water all the time which makes it an important source of irrigation for the farmers. Once a well is dug in a place, till the groundwater is finished in that particular place, it continues to give water.

Tank irrigation

Tank irrigation is another source of irrigation in India. In tank irrigation, the rain water is stored for four months and is kept in a large tank. This stored water is used during the summers when most of the water in the river dries up and it becomes difficult to do irrigation.

Tank irrigation is done because many of the rivers are seasonal and only have water in it during rainy seasons. 11 % to 14 % irrigation is done by tank in the country. Tank irrigation is mostly popular and highly developed in South India.

Canal irrigation

Canals are manmade channels of water supply. In some places where there is a scarcity of water, canals are built so that water can be supplied there. It is an important source of irrigation.

Uttar Pradesh stands first in India in case of canal irrigation which is then followed by Punjab and Haryana.

There are two types of canal irrigation – *Inundation canal* and *Perennial canal*. Inundation canal are the canals that are drawn from the rivers and only has water during rainy season i.e., when the river is full and Perennial canal are the canals that are drawn from rivers or reservoirs or dams and supply water throughout the year.

Canal irrigation has become one of the important sources of irrigation for India.

Conclusion

Irrigation is done so that a lot of water does not go to waste but this does not means that sufficient amount of water won't be provided. India is a country where many rivers flow through. These rivers play a major role in the sources of Indian irrigation system.

However India cannot only rely on the rivers for irrigation purpose as many rivers in India are seasonal rivers and only have water during the months of July to September i.e., during rainy season and rest of the time they just dries up along with their branches.

Irrigation is required also in the places where there is a scarcity of rivers, but agriculture is done. Which is why, different sources of irrigation are used. Some of them are – rivers, rainwater, groundwater etc. Without proper irrigation, the agriculture will not be possible and our whole country depends on the agriculture as India is an agro-based country.

There are some cases when the farmers has dug a canal for the purpose of irrigation and in one case the farmers bended the flow of a small branch river to give water to their crops which would have died without the water. India's products are also exported in a large amount.

So, agriculture cannot be compromised anyhow. 70 % of Indian population depends on agriculture. In a way agriculture is the life source of India and irrigation is the life source of agriculture. Irrigation has to be done no matter what and proper use of irrigation is also necessary.

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