

## Steps towards Water

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**W**ater, it is not just a word to say, it's more important than what we think. Water means life which is a basic need for all living things and even non living things in our world. The Earth holds about 326 million trillion gallons of water, with 97.5% being salt water and 2.5% being fresh water. The water which is used directly for drinking is taken from the wells.

**Wells:** A well is a hydraulic hole drilled into the ground to access water contained in an aquifer. In many places wells provide a reliable and ample supply of water for home uses, irrigation, and industries. Where surface water is scarce such as in deserts, people couldn't survive and thrive without groundwater, and people use wells to get at underground water.



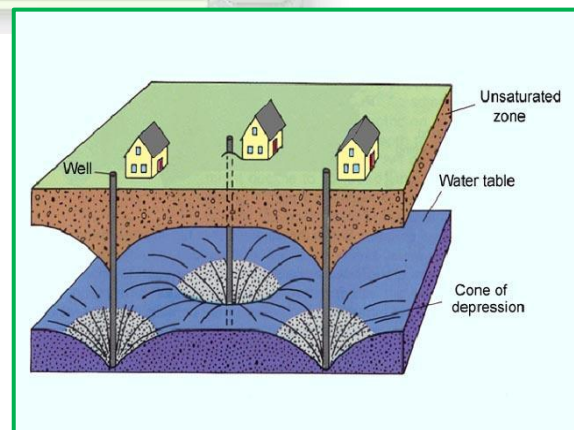
**Bore wells:** In recent days bore wells are more common in houses, even in cities with each one borewell. Bore well means a deep, narrow well for water that is drilled into the ground and has a pipe fitted as a casing in upper part of the borehole, typically equipped with a pump to draw the water to the surface. India now has around 33 million borewells, making us the largest user of groundwater in the world. Natural groundwater recharge occurs as precipitation falls on the land surface, infiltrates into soils, and moves through pore spaces down to the water table. Natural recharge also can occur as surface water leakage from rivers, streams, lakes and wetlands.



**How and where to use bore well?** When borewells are constructed nearby houses are crowded in a city like a closed area, sometimes we don't get water from wells. This is mainly due to drawdown of water level caused by pumping of water that was first described by Jacob (1947). The water level surface in the aquifer material exhibits a conical shape with increasing distance in all directions away from the well. The bottom of the cone is the drawdown water level in the wells. If we construct borewells in series nearby, the drawdown of one well will disturb the water level of nearby wells in an area surrounded. So the borewell should be constructed by considering the nearby wells and recharge area.

In early days we used only one well per village or panchayat by considering the cone of depression.

**Step wells:** In ancient days kings constructed Step wells in their palace for water use as well as architectural design. Stepwells are wells, cisterns or ponds with a long corridor of steps



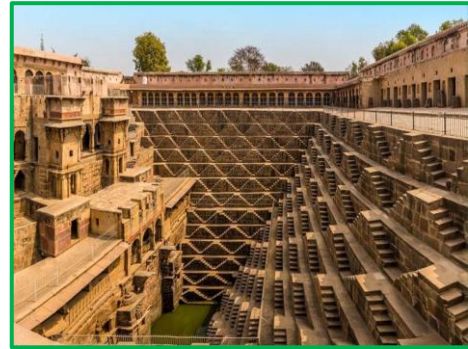
that descend to the water level. Stepwells played a significant role in defining Subterranean architecture in western India from 7th to 19th century.

**A stepwell structure consists of two sections:**

- a vertical shaft from which water is drawn
- the surrounding inclined subterranean passageways and the chambers and steps which provide access to the well.

### Stepwells of India

**Chand Baori stepwell (Rajasthan):** Chand Baori stepwell is one of the most overlooked landmarks in the country, consisting of 3,500 narrow steps over 13 storeys making it one of the deepest and largest stepwells in India. The well was built in the 9th century over 1200 years ago. The depth of the stepwell is around 100ft. Three corners have staircases that extend to the depth of this well. Water in this well can be stored for upto 1 year. It is one of the oldest and most attractive landmarks in Abhaneri village of Rajasthan and also the most visually spectacular step well in india.



**Trikuteshwara Temple at Gadag (Karnataka):** Stepwells attached to the 800 year old Trikuteshwara Temple at Gadag during the reign of the Western Chalukyas was designed and built by the acclaimed architect Jakanachar and it is a famous tourist destination.



**Stepwell at Mylacherla village, Chandrasekharapuram mandal (Andhra Pradesh):** The stepwell is an architectural marvel built by the Gand brothers, both cattle farmers, at a place in the Naamalla forests, as suggested by a seer from Bhairavakona. The formation is Meta Sediments Hard rock aquifer systems. Source of drinking water.



There are many stepwells in India still unmapped but few of them are a miracle of Indian architecture and heritage.

### Conclusion

From this article I wish to convey the message about the importance of well and how and where to construct. Farmers need to drill bore based on the cone of depression to get continuous flow of water and to conserve groundwater. Also the government should ban borewells in cities for each house rather than one well for an area.

### References

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