



# **RAINWATER HARVESTING: AN APPROACH TO CONSERVE WATER**

**CASE STUDY/INSIGHT**

# RAINWATER HARVESTING: AN APPROACH TO CONSERVE WATER

The availability of water resources has become a critical challenge. Water is a basic need for many necessities such as drinking, cooking, sanitation and hygiene. Besides, water is essential for various activities like agriculture, automobile industry, textile industry, power plants and other manufacturing processes. What could be done to conserve the precious water?

Rainwater harvesting is one of the simplest, oldest and potential methods of conservation of water. There are two ways of harvesting rainwater. They are surface runoff harvesting and rooftop rainwater harvesting. Rooftop rainwater harvesting involves collection of rain from a structure/surface most commonly roof-top and storing it for future use. The collected rainwater can be used for domestic purposes, irrigation, livestock, landscaping and general uses. This water can also be used to recharge groundwater which benefits the society. Rooftop Rainwater harvesting can be done in residential areas, educational institutes, hospitals, industries and other places for meeting their water demands. This will reduce the quantity of fresh water withdrawal from the groundwater. It also reduces the quantity of runoff, and load on drainage. Rainwater harvesting has been in practice traditionally in our history, where people used vessels and containers to collect rain from their sloping roof and used it for domestic needs.



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Surface runoff harvesting involves capturing the runoff of rain in streets and roads. This water can be used to recharge aquifers by adopting appropriate methods.

Rainwater harvesting systems can be simple systems that require minimal installations, to complex automated systems that require advanced installations. The most common and basic type of rainwater harvesting system is rooftop rainwater collection. It involves all outlets from the terrace connected through a pipe to an underground tank or aquifer. This system may have additional installations such as drains, pumps and filters.

The number of bore wells has drastically increased over time, which results in over drawing of water from groundwater. Recharging bore wells with harvested rainwater is a solution for reviving depleted ground water. Groundwater recharge can be done by constructing recharge pits and injection of rainwater to bore well.



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Rainwater harvesting yields a lot of benefits. By using the harvested rainwater, we reduce freshwater withdrawal from aquifer, which may enable groundwater levels to be sustained. Rainwater supplements the main source of water. Storage of rainwater provides water source during situations such as droughts. Rainwater harvesting provides independent water supply in regions with water restrictions. Rainwater harvesting prevents runoff and urban flooding.

Rainwater harvesting is a viable method to harvest fresh water and conserve it. Let us pledge to implement rain water harvesting system effectively wherever possible and practical and conserve water.

