

Rain water harvesting

[Science](#), [Agriculture](#)



Rain water harvesting Rain water harvesting is just a technology that is used for collecting and also storing rainwater for human use obtained from land surfaces, rooftops, or rock catchment by use of techniques such as pots, jars or engineered techniques. Rainwater harvesting has been used for many years because of the rainfall variability. This is a vital source especially in the areas with minimal rainfall. However, in the areas where there is lack of fresh quality water this method of rainwater harvesting is useful. Therefore, the application of the suitable rainwater harvesting method is crucial for proper utilization of rainwater. In Oregon, rainwater harvested is used in agriculture and other domestic purposes. The increase in population and agriculture intensification leading to the worldwide water crisis calls for the need to promote rainwater harvesting. For example, 20 percent of the population is lacking access to clean water while about 50 percent do not have safe sanitation system. Rainwater is essential for it can provide water in the intended point of use and thus the rainwater is clean and safe for different purposes.

Rainwater harvesting systems

The rainwater harvesting systems involves three main elements that are collection system, conveyance and storage system. The type of harvesting system rely on the magnitude as well as the nature of the catchment area. Simple roof water catchment is one of the collection systems used in many households whereby cistern, pipe and appurtenances are the materials used in roof water collection system (Malesu, p 19). Second is the large systems that are made for the large institutions such as stadiums, schools among other facilities. The system appears complex as ground and roof water is

preserved in underground reservoirs. Roof water systems for the higher buildings are another rainwater harvesting technique. In this system, roof water is often designed for collecting rainwater and the water is stored in a different cistern. Land surface catchments are regarded as the simplest way of harvesting runoff water as compared to rooftop catchment. Lastly, is the collection of storm water in urban areas whereby the storm water is subjected to various contaminants? In this catchment, maintaining the catchment clean is the central aim of the system and thus it entails consideration of water pollution control.

Water collection efficiency

The collection of the rainwater using gutters is determined by the material used in water harvesting that can affect the efficiency of the system. For example, the low-pitched roofs do not lose much water like steep-pitched roofs. The materials used in water harvesting and the location of the storage facility affect the efficiency of the system operation. The system of rainwater collection should be designed in a manner that they catch all the water and preserved in the storage facility for human use and other purposes.

Price and use

Rainwater harvesting systems are sometimes costly depending on the size of the house or institution in which you want to collect water for. However, the cost also depends on the quality of the collection system as some such as Graf system costs about £2, 500 with a tank that has a self-cleaning facility and has a capacity of 2, 700 litre. The local harvesting systems such as roof catchment may not need much money to purchase the materials as it requires a cistern, a pipe and appurtenances that are not costly. If the water

is properly stored, it can be used in the domestic purposes and also for irrigation depending on the amount of the harvested water.

Work Cited

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