

Harvesting rain water comes with a number of advantages. Not only will you minimize your water bill, but you will have plain B during times when water is scarce.

BY NORQUE MURIKU
& CAROLYN R. ATANGAZA
atthor@nyrainwater.co.ke

Majority of homes in urban centres depend exclusively on groundwater sources for their water needs. By scrutinising the increasing cost of water, it is easy to understand the burden the growing demand is placing on the limited sources. Not only are these sources of water slowly being depleted but some are contaminated which increases the required energy and cost to access.

The rain, however, offers a steady and constant source of fresh water for our homes. The question is then, why don't more of us take advantage of this abundant source of fresh water?

Faith Birungi, a resident of Bweyogerere, is one of the few people that take advantage of the abundant rain to supplement her water needs. She has a 5,000 litre plastic tank that always sustains her family even when there is a water crisis.

"My family is assured of constant water supply with or without piped water. During the rainy season, we always harvest enough," she says.

Getting started

When thinking about harvesting rainwater for your home, it is important to be specific about what you want to use that water for. Are you simply looking to harvest rainwater for outdoor watering purposes or are you interested in a system that provides water for indoor use as well? Is it going to be the only source or you are going to supplement with other sources?

According to Peter Mabirizi, an engineer with Plenco Plumbing and Engineering Company, each purpose involves a different set-up, equipment, maintenance and costs.

To begin with, all you need is rain, a roof and a container in which to collect the water. However, Mabirizi says a more sophisticated system can be incorporated into your home's plumbing system to provide water for a variety of household needs, from toilet flushing to general home use.

"Install a gutter on the roof and put an underground tank with a water submersive pump. This will pump the water to the reserve tank and finally into the household plumbing system," Mabirizi clarifies.

Mabirizi adds that rainwater harvesting systems, simple or complex, have the same basic components.

"These include a catchment area to capture the rainfall usually from the roof of the house, a conveyance system to move the water from the roof to a storage area, a storage system to hold the rainwater and a distribution system to get the water from storage to where it is being used."

There could also be full integration with the existing plumbing system in the house.

Reduce your bill by harvesting water



Where above-ground water tanks may not be aesthetically pleasing, underground water tanks are hidden from view. NET PHOTO



Roof catchment area

To successfully harvest water, one needs a good roof and gutter system. Certain roofing materials can impact rainwater quantity and quality. For instance, porous materials such as asbestos shingles, clay or concrete tiles, or wood shingles will soak up some of the rainwater, which reduces the amount harvested.

Metal roofing is often considered the best type of roofing for rainwater catchment. Metals used in roofing are generally non-toxic and very little water is lost during the catchment process. To get the full benefit of the catchment area, your home needs to be equipped with properly sized and placed gutters. Otherwise water may overflow during heavy rainstorms and get absorbed in the ground or run off into the storm sewers.



Choose a tank that can store a considerable amount of water. NET PHOTO

It may be necessary to have an in-ground collection system that gathers all the water drained by downspouts located at different positions around the house to take full advantage of the rainwater that falls on the roof. Patrick Ssemenda, a constructor of concrete tanks in Mukono, recommends tanks made from rock or concrete because they last longer, although they are a bit costly.

Safety measures

Tom Kayimba, a crest tank seller and installer observes that rainwater can be easily contaminated by leaves and other debris on the roof as well as from dust and local air pollution.

Depending on the intended use of your rainwater, you may wish to consider some form of filtration and disinfection of water from the storage tank to reduce potential health risks, particularly if you wish to use the harvested rainwater for drinking. One way to ensure water safety is to remove the contaminants before they collect in your storage tank.

"Another option is to install a filtration system such as gutter guards, filters or to get rid of the first several litres of rainwater at the start of each rainfall," says Kayimba.

Site selection

The placement of your rainwater harvesting system is essential. While choosing the site, ensure that there is enough distance to keep your wall and foundation safe from spillage.

Factors to consider according to Mabirizi include location of taps, and septic tanks, depth to bedrock and soil classification, accessibility and aesthetics for you and your neighbours.



50,000

THE APPROXIMATE COST IN SHILLINGS OF A 500 LITRE PLASTIC WATER TANK IN KAMPALA.