

RAINWATER HARVESTING

A Public Guide

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WHAT IS RAINWATER HARVESTING?

Rainwater harvesting is the harvesting or collection of rainwater from a surface catchment, such as a rooftop or hillside, to store in a receptacle for future use, which may be domestic, farming, industrial, etc.

SOME GENERAL INFORMATION

Traditionally, many communities, especially in rural areas, have been collecting rainwater to store for various purposes.

At its most basic level, a traditional rainwater harvesting system would consist of a gutter channelling rainwater to a tank for storage and future use.

A modern system would differ in sophistication. Pipes may lead runoff to a collection receptacle some distance away and from there, it may be distributed to different locations for use. A filter may be added to sift off general debris such as leaves, bird droppings, dirt particles, etc. A pump may be necessary if the water is to be delivered to a higher level.

Rainwater contains some contaminants, e.g. weak sulphuric acid. You cannot drink rainwater. If collected for domestic purposes, untreated rainwater is suitable only for non-ingestion uses, like flushing toilets, watering gardens, or washing floors and other general cleaning. Untreated rainwater is unsuitable even for showering or laundry.

USES AND IMPORTANCE OF RAINWATER HARVESTING

The efficient management of water is a key environmental and socio-economic issue.

Rainwater is a natural and renewable resource. The harvesting of rainwater is good natural resource management which impacts favourably on the environment, economy and society.

In Malaysia, a reliable supply of rainwater is available for harvesting purposes. We receive plenty of rain.

With population growth and socio-economic development, water needs increase and scarcity becomes a problem. Our plentiful rainfall can be a significant and valuable contribution to the overall supply of water, easing the dependence on the other sources, rivers and underground aquifers.

Rainwater harvesting reduces the demand for treated water and alleviates the burden on the treated water system i.e. the building and maintenance of treatment plants, reservoirs, etc. In the process, a lot of energy and other resources are saved.

Harvested rainwater provides for our water needs without threatening the environment or compromising our health and quality of life.

Rainwater harvesting is a water conservation measure which can be practised by local communities. It is a solution at community level to address the issues of water scarcity and conservation. Public participation of this nature to solve local problems support Local Agenda 21.

We can reduce our ecological footprint by harvesting rainwater to use. As a form of sustainable consumption, it contributes to our nation's goal of sustainable development.

Rainwater harvesting can also help to ease the problem of flash floods in urban areas.

If rainwater is intercepted by vegetation, it infiltrates into the ground and takes time to travel to rivers. Large expanses of impermeable surfaces in urban areas, i.e. roofs and paved areas, prevent rainwater from permeating the ground. Instead it quickly runs into drains which rapidly channel it into the nearest river. At peak times, when drainage and river systems cannot cope with excessive and rapid loads, flash floods occur, resulting in environmental, social and economic losses.

Rainwater harvesting can reduce the amount of stormwater entering drains and rivers.

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RAINWATER HARVESTING SYSTEM

