

RAINWATER HARVESTING

Rainwater as a source

- The utilisation of rainwater is an easy and ecological way to substitute fresh water (tap water).
- Rainwater from roof areas is quite clean.
- Utilisation for domestic purposes, such as toilet flushing, showering and laundry, does not require great effort.
- Disadvantage: Rainfall varies heavily with the seasons.

Filtering and treatment

Rainwater filters can be quite simple, for example using mosquitonet as screen. More sophisticated filter systems may be maintenance-free, but some loss of water has to be accepted, especially at heavy rainfall. Fine particles settle in the tank and remain at the bottom.

Rain

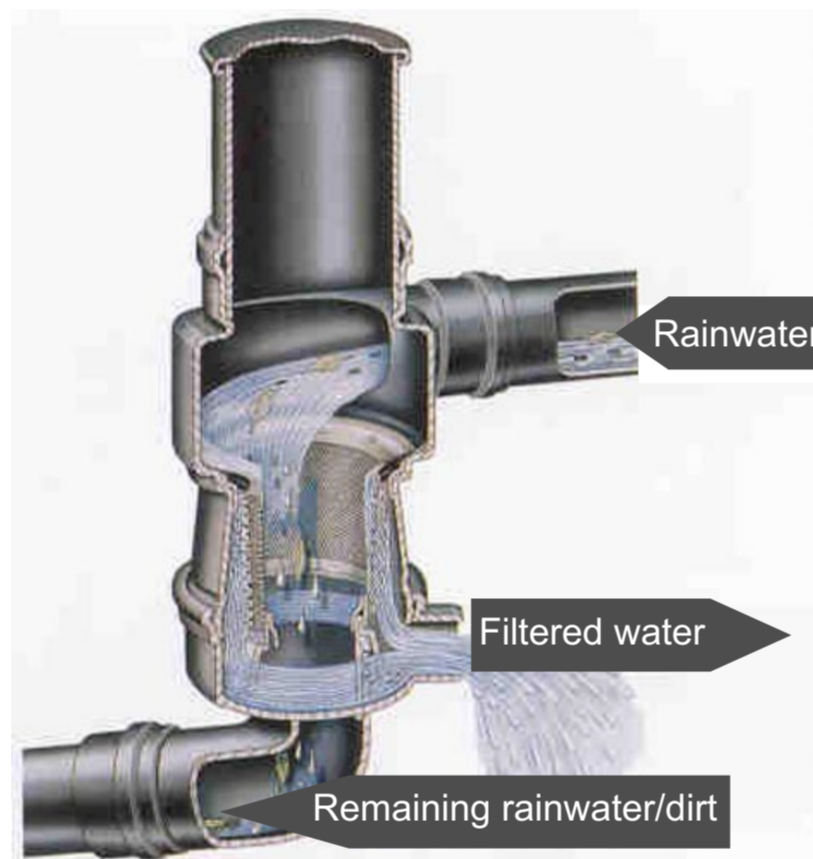
Water Harvesting Plant

The main components of a rainwater harvesting system are:

- Gutters and rain pipes
- Filter
- Rainwater tank (cistern)
- Second pipe system for rainwater supply
- Fresh water top-up in case of rainwater shortage



Rainwater harvesting (Bungalow at VVU campus)



Industrially manufactured filter with self-cleaning function (source: Wisy AG)

WATER SAVING INSTALLATIONS

Saving water

Fresh water is a valuable resource, hence its consumption should be as low as possible. For many applications (e.g. flushing toilets) fresh water can be substituted by rainwater or sanitised greywater. Modern water saving installations can help to reduce the consumption of fresh water without any loss of comfort.

Dry urinals

Dry urinals work without flushing. The system used at VVU has a rubber membrane that opens when fluid passes through it and then closes again, so no stench can occur. Additionally, the urine bowl is made of sanitary china with a high density surface, which makes cleaning and maintenance very easy.

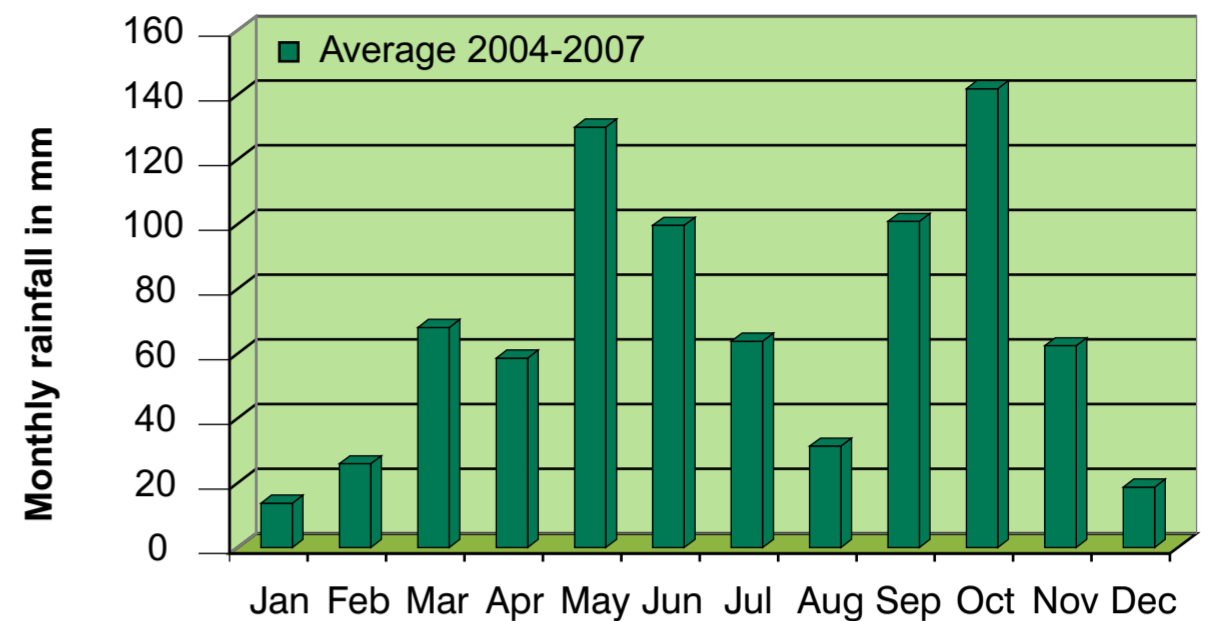
Water-saving flush toilets

Water-saving flush toilets require only 4 litres for flushing faeces and 2 litres for flushing urine. Compared to conventional flushing toilets this means savings of 50% or more! The toilets are specifically designed for flushing effectively with small flushing amounts. They offer high standard and comfort.

Water-saving taps and showers

Pneumatic self-closing taps start by pressing a button and stop after a preset time. In this way the water consumption is limited. Shower heads using air turbulence save water without loss of comfort.

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Monthly rainfall at Valley View University



Locally manufactured filter (Cafeteria at VVU Campus)



Cleaning of the rubber membrane



Dry toilet (Sanitary block, VVU campus)