

# General information



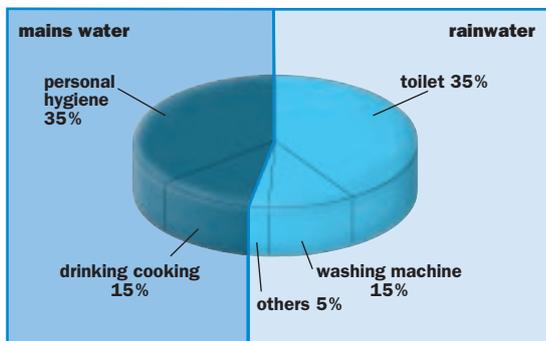
## Introduction

More than 97 percent of the nearly 1.4 billion cubic kilometres of water on earth is sea water - non-potable water. Most of the remaining almost 3 percent freshwater is permanently bound, in the ice of the poles and glaciers. The remaining, freely useable freshwater accounts for 0.3 percent of the world's water resources.

An even bigger problem than the quantity is the quality of drinking water.

Increasing water pollution caused by nitrates, phosphates, pesticides and other chemical substances is making purification increasingly difficult and expensive.

The freshwater reserve is being used in a permanent cycle. Today the average daily consumption of freshwater in Germany is 132 liters, in the USA 300 litres per capita. But for some domestic applications the quality of highly purified potable water is not necessary. Around 50 percent of drinking water can be replaced by untreated rainwater.



**Daily use of water per person:** Applications and amounts per person, which are replaceable by rainwater in a household per day.

Beside the advantage that the use of rainwater is free of charge, it neither has to be purified nor transported over long distances. The two most important arguments to support the use of rainwater are as follows:

### Substitution of potable water

### Decentralisation of rainwater drainage or attenuation reservoirs

Thanks to its characteristics the use of rainwater also has positive side effects:

- ideal medium for enabling plants to absorb minerals
- better washing efficiency – 50 percent of detergent can be saved
- no calcification of the washing machine
- no urinal calculus in the WC
- central rainwater drainage reservoirs for rainwater can be made smaller
- compensation of abnormally high precipitation in the sewage system

The combination of rainwater utilisation and seepage systems is an excellent ecological concept for supporting drainage management.

## IRM®

**IRM®** Intelligent Rainwater Management is a registered trade mark which describes all systems and products that have been developed by the company GEP after many years of experience and optimisation.

**IRM®** tested technology guarantees operating safety and reliability of the system.



In the beginning of 1999 GEP became an official corporate member of "The Sustainable Development Agenda" (SDA). SDA is a program of the United Nations which has been established in the scope of the "Agenda 21" (the final document of the UN-conference in 1992 in Rio de Janeiro). The program creates a platform for experiences and solutions which help to make a world wide sustainable and environmental development possible.

Beside other well-known companies like Siemens or IBM, GEP has been chosen for the field of "rainwater harvesting" because of its leading role considering innovation and quality.





# Details for designing a rainwater harvesting system

Please complete the page and return it to us.

name:

street:

city/postal code:

telephone:

In case of new construction please state site address

street:

city/postal code:

## Main building

### General information:

- private
- office
- commercial building
- school
- others

floor area in m<sup>2</sup>

In case of commercial use please indicate application (e.g. car wash, irrigation plant)

### Details of needs:

- number of persons
- wc for ... persons
- washing machines for ... persons

garden area to be irrigated in m<sup>2</sup>

other water need  (litre per year)

### Application:

- number of wc
- number of wc with flush valve
- number of washing machines
- number of taps

### Roof material:

- concrete tiles
- glazed tiles
- slate
- gravel
- planted roof
- others

### Down pipes:

number of down pipes  
diameter in mm

### Material:

- zinc
- copper
- plastic

## Additional buildings (e.g. garage)

### General information:

floor area in m<sup>2</sup>

### Roof construction:

- pitched roof
- flat roof
- others

### Roof material:

- concrete tiles
- glazed tiles
- slate
- gravel
- planted roof
- others

### Down pipes:

number of down pipes  
diameter in mm

### Documents:

Please enclose ground plan and dimension of building as drawing and indicate position of down pipes.

Moreover also indicate possible position of storage tank.