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Water

What kinds of water are there?

There are two sources of water, namely: surface water and groundwater.

Surface water - any water that travels. Includes water that is stored above ground like reservoirs. Although we cannot drink sea water, the seas and oceans are also considered as surface water.

Snow - this is considered as both surface and also groundwater. When the snow melts and gets absorbed in the ground it becomes groundwater. If there is too much water for the ground to absorb, then it becomes a stream. Consider snow on a mountain, excess water runs down the mountain until it reaches a lake or a body of water.

Runoff water - this is rain water that comes down in parking areas, down rain gutter pipes and in our roads. Runoff water is also considered surface water, however it is problematic as it carries rubbish, dirt and debris, including also car oils into our water supply.

Malta only uses a minimal amount of surface water that is captured in wells. The rest is lost and runs into the sea. Rainwater is lost in this way.

Ground water - harder to understand, as this is water you cannot see as it lies underground. Ta' Kandja Pumping Station, limits of Siggiewi produces about 43% of potable water. This work is done by the Water Services Corporation.



HSBC
The world's local bank



The Institute of Water Technology, Luqa and Reverse Osmosis Plant, Pembroke provide educational visits to schools and groups.

In what is referred to as the water cycle, rain water goes below ground and into aquifers, streams and watersheds. It depends on how steep the ground is and what is underground rock. Porous rock allows more water to seep through.

Once the water seeps down into the ground, it reaches a layer where there is already water. This is known as the saturated zone. The highest level in this zone is called the water table. Depending on the seasons and rainfalls, this would raise and lower the level of the water table.

Groundwater is cleaner than surface water because it becomes cleaner as it seeps through the different layers of porous rocks which act like filters. With farmers using fertilizers and insecticides, these chemicals are finding a way down to the water table and groundwater. Big tanks under petrol stations are also problematic. If these leak, the fuel sinks into the ground and contaminates the water in the water table. Groundwater is treated for these problems, but not as much as surface water.

Reverse Osmosis (RO)

In Malta we have to rely on Reverse Osmosis plants to produce high-purity drinking water as there is not enough ground water. The three RO plants in Ghar Lapsi, Cirkewwa and Pembroke produce around 17 million cubic metres of fresh water, which is converted from sea water. This water is stored in 24 reservoirs around the islands.

This high water production comes at a cost. 5% of the total energy use in the Maltese Islands is used to produce fresh water. Water wastage in this respect would be wasting two valuable sources - water and electricity. Controls are continuously carried out to detect and fix water leakages.

Report leakages and problems relating to water on free phone - 80072222.



One thing I can do...

Stop washing my teeth with running water and I'll be saving 4 litres of water per minute

Use water from your air conditioner and dehumidifier to water plants or wash the floor.....

Remember when we save water we are also saving electricity and reducing our carbon footprint!

*Use your water wisely
According to a United Nations report, more than half of the world's population lives without access to clean water. 5000 children die each day from sanitation related diseases*

Why is water important?

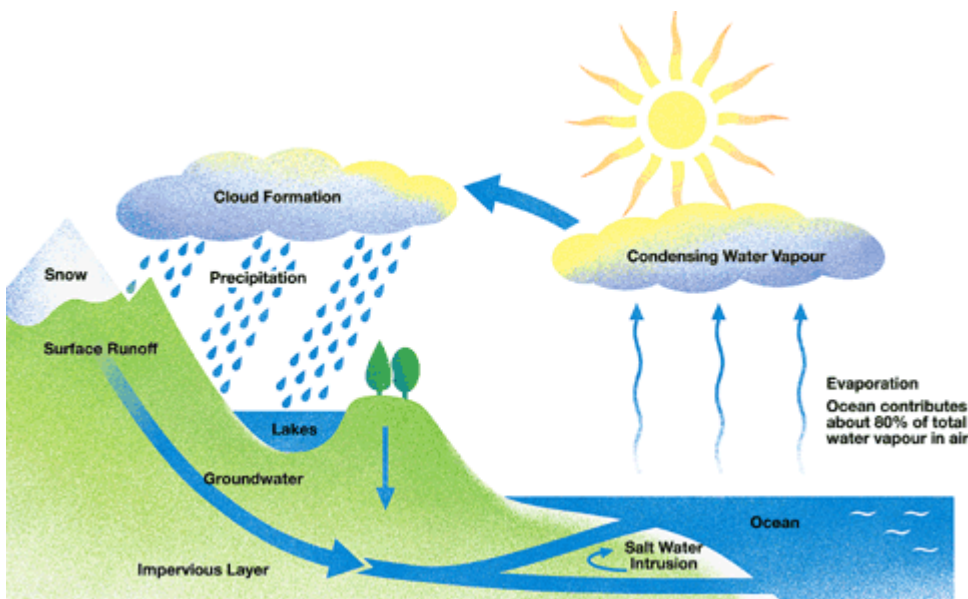
Water is used for: agriculture and farming, industry, our households, etc... Whatever we do we normally need water.

On the Earth, 97% of all water is sea water. The remaining 3% is fresh water, 66% of this is frozen in glaciers and in the polar ice caps. The rest is mainly ground water.

Fresh water is a renewable resource, which is steadily decreasing as the demand for fresh water is very much higher than the supply. The increase in the world population is all the time increasing, which is putting further strain on the need for fresh water. Biodiversity-rich freshwater ecosystems are declining faster than marine and land ecosystems.

Water and Climate Change

- Water is expected to become scarcer in the future
- Storms are shorter and more intense, resulting in more runoff water and less seepage into the ground
- Increased irrigation is increasing groundwater shortages further.
- Slight increases in temperatures and increased humidity is leading to higher evaporation of surface water.



What can I do?



Bathroom

Do:

- take a five minute shower every day, instead of a bath. You'll save up to 400 litres a week.
- if you need a bath, fill half the bath or less and save more than 30 litres.
- if double flush is available use half flush. If this cannot be done, put water hippos in the cistern to reduce the amount of water used per flush

Don't:

- leave the water taps on when you are shaving, brushing your teeth, washing your hands or face

Kitchen

Don't:

- leave the tap running whilst washing and rinsing dishes. Kitchen taps use 7 - 11 litres of water a minute

Outdoors

Do:

- use a self-closing nozzle on hose pipes

Don't:

- overwater plants and grass

Related links

<http://library.thinkquest.org/04apr/00222/sources.htm>

www.wsc.com.mt

<http://www.climate.org/topics/water.html>

<http://www.maltatoday.com.mt/2010/01/03/t12.html>

<http://www.youtube.com/watch?v=Se12y9hSO M0&feature=related>

http://en.wikipedia.org/wiki/Water_resources

