Save the Rain

SAVE A RAINDROP. SAVE A LIFE.

www.savetherain.org

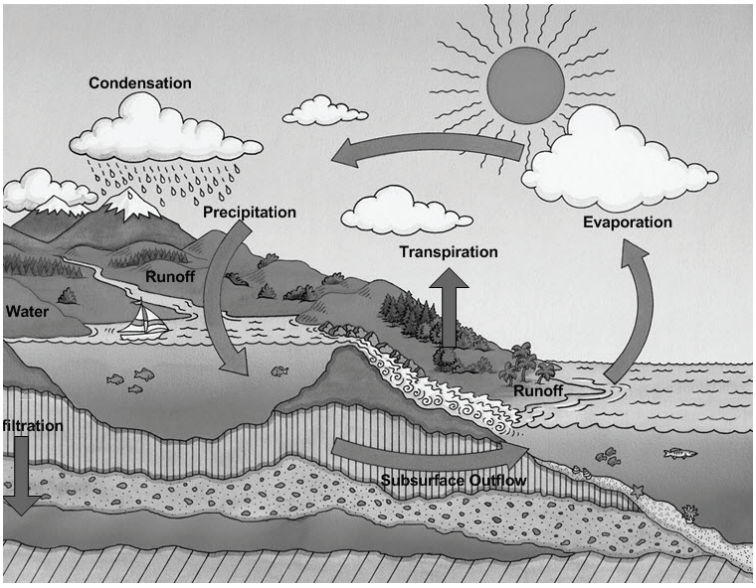
It rains everywhere people live. Free clean water delivered directly to every door step. In some parts of the world, we call it a bad day when it rains. In places where water is scarce, rain is the bringer of life. To understand why we harvest the rain, we have to go back and understand the Water Cycle. Here is a little info, to get you started.

The Water Cycle - Where it all begins

The Water Cycle has no starting point, but we'll begin in the oceans since that is where most of Earth's water exists. The sun, which drives the Water Cycle, heats water in the oceans. Some of it evaporates into the air. Water transpired from plants and evaporated from the soil is called evapotranspiration. Rising air currents take all the vapor up into the atmosphere. That vapor rises into the air where cooler temperatures cause it to condense into clouds.

Air currents move clouds around the globe, and cloud particles collide, grow, and fall out of the sky as precipitation. Some precipitation falls as snow and can accumulate as ice caps and glaciers which can store frozen water for thousands of years. Snow packs in warmer climates thaw when spring arrives, and the melted water flows overland as snow melt. Most precipitation flows either back into the oceans or over the ground as surface runoff. A portion of runoff enters rivers, with stream flow moving water towards the oceans. Runoff, and groundwater seepage, accumulate and are stored as freshwater in lakes. Not all runoff flows into rivers, though. Much of it soaks into the ground as infiltration. Some of the water infiltrates into the ground and replenishes aquifers, which store freshwater for long periods of time. Some infiltration stays close to the land surface and can seep back into surface-water bodies as groundwater discharge.

Some groundwater finds openings in the land surface and emerges as freshwater springs. Yet more groundwater is absorbed by plant roots to end up as transpiration from the leaves. Over time, though, all of this water keeps moving, some to reenter the ocean, where the Water Cycle "ends" ... oops - I mean, where it "begins".



Why Trees Are So Important

Water Cycle

When forests are destroyed the atmosphere, water bodies, and the water table are all affected. Trees absorb and retain water in their roots. A large part of the water that circulates in the ecosystem of rainforest's remains inside the plants. Some of this moisture is transpired into the atmosphere. When this process is broken, the atmosphere and water bodies begin to dry out. The watershed potential is compromised and less water will run through the rivers. Smaller lakes and streams that take water from these larger water bodies dry up.

Biodiversity

Africa has lost 40% of its biodiversity in the last 20 years
Many wonderful species of plants and animals have been lost, and many others remain endangered. More than 80% of the world's species remain in the Tropical Rainforest's. It is estimated that about 50 to 100 species of animals are being lost each day as a result of destruction of their habitats, and that is a tragedy. Many beautiful creatures, both plants and animals have vanished from the face of the earth.

Climate Change

Plants absorb Carbon Dioxide CO_2 (a greenhouse gas) from the atmosphere and uses it to produce food (carbohydrates, fats and proteins that make up trees). In return, it gives off Oxygen.

Destroying the forests means CO_2 will remain in the atmosphere and in addition, destroyed vegetation will live off more CO_2 stored in them as they decompose. This will alter the climate of that region. Cool climates may get a lot hotter and hot places may get a lot cooler.

Soil Erosion Destruction

Soils (and the nutrients within) are exposed to the sun's heat. When soil moisture is dried up, nutrients evaporate and the bacteria that helps break down organic matter is affected. Eventually, rain washes down the soil surfaces and erosion takes place. Trees also help reduce erosion by stabilizing our soils with their extensive root systems and help build our soils by producing essential organic matter, fungi, and increasing water storage.

In Conclusion

- Trees are known to hold up to one third of their weight in water.
- Trees help produce oxygen and fix nitrogen for our soils
- Trees moderate the climate
- Trees create wind buffers that prevent erosion
- Trees maintain moisture in the soil
- Trees are home for many animals