Save the Rain

SAVE A RAINDROP. SAVE A LIFE.

Why Reforesting East Africa is an important part of Saving the Rain

The earth is an interdependent system, all living things play a part within it. Trees play a remarkable role in the cycle of life. They supply us with oxygen, they play a crucial role in the Water Cycle, and they are some of the world's best rainwater harvesters! Deforestation in Africa has created insurmountable obstacles like famine. It also played a part in the Hurricanes that devastated the North American East Coast in 2017. Without trees and vegetation to slow down the aerosols blowing over the continent of Africa, high speed winds hit the Atlantic and headed straight for North America. Though Africa may seem far away, it is our neighboring continent and we are one big interconnected family.

Africa is suffering deforestation at twice the world rate. One factor contributing to the continent's high rates of deforestation is the dependence by 90% of its population on wood as fuel for heating and cooking. Massive deforestation threatens food security in many African countries. Without trees to call the rains and to irrigate and infiltrate the soil, accessibility to clean water is compromised. Without water, there is no food. This is a complicated issue, what are people to do when there are little affordable options for heat, cooking fuel and light?

Taking Action in Tanzania

To help put an end to deforestation in East Africa, Save the Rain has a Reforestation Initiative. Every community we serve receives hundreds of tree saplings and our Water Cycle Curriculum education. Our goal is to teach Tanzanians about the vital role trees play in their accessibility to clean water and food, while providing them with easily re-propagated trees so they can take immediate action by planting and protecting trees in their community. The method we teach is a 7-fold approach to replanting. For every tree taken, 7 must be planted in its place. The most common tree sapling we distribute is Moringa. We have chosen Moringa because of its several miraculous attributes.

- They grow very quickly – 7 to 14 feet in the first year. It comes into leaves at the end of the dry season, when other foods are scarce. Once matured, one can cut a limb from the tree, plant it and it will re-propagate a root system.
- The leaves can be cooked for food and contain high levels of carbohydrates, vitamins, protein and fiber. Only a 200g serving can supply a child with all his/her daily nutrition.
- The tree grows a seed pod, the seeds can be crushed into a fine powder which will remove 90% of bacteria from dirty water.
- From that same pod, one can extract oil that is said to be better than extra virgin olive oil.
- It is also drought and flood tolerant and grows natively in Tanzania.

With our tree distribution also comes our Water Cycle Curriculum. With the help of North American students, we provide classrooms in Tanzania with Water Cycle Posters (see our Water Cycle Art Project Resource for a printable template) and our Water Cycle Curriculum so the students and teachers of the community can be the leaders in reforesting their landscape.

Taking Action in North America

You can make in impact on clean water access across the globe by taking a few simple actions here in North America. To get you started, we encourage you to complete our Water Conservation Activity (a printable version is available in the Resource section of our Get Involved Page). This will help you gauge your water use, and see how you can conserve and protect our precious resource of clean water.

You can also help us by coloring in copies of our Water Cycle Art Project and laminating it (or we can do that for you!). This ensures we have plenty of tools to distribute to the students of Tanzania.

You can also help us by fundraising to plant trees. For every $1.50 we raise we can plant a tree. For Tips and Ideas on how to fundraise, please visit our Get Involved Resources or contact getinvolved@savetherain.org for support!

Also becoming an expert on our Water Cycle Curriculum and teaching your peers about it can help spread this important information and create more Reforestation champions like yourself. So, let's get you started!

Save the Rain

SAVE A RAINDROP. SAVE A LIFE.

www.savetherain.org

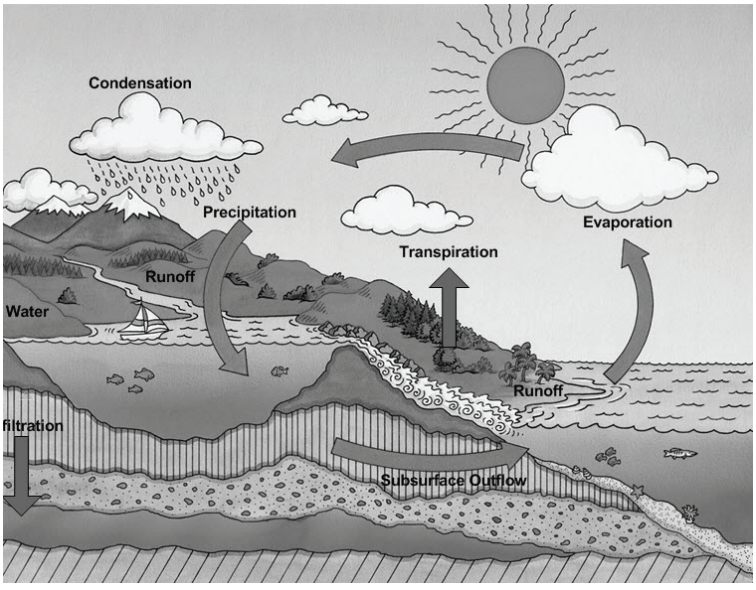
It rains everywhere people live. Free clean water delivered directly to every door step. In some parts of the world, we call it a bad day when it rains. In places where water is scarce, rain is the bringer of life. To understand why we harvest the rain, we have to go back and understand the Water Cycle.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