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# HANDOUT 2:

## WHAT DO MANGROVES TREES LOOK LIKE?

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Mangrove trees are not like ordinary trees. They live in muddy marshes with salt or brackish water. Brackish water is a mix of fresh water and seawater. However, like all plants on land, mangroves need fresh water and air to grow. So they have adapted, or changed, to live in a marsh environment.

One way mangroves adapted is through the shape and function of their roots. The roots of a mangrove tree are very special. They provide support for the entire tree. They can also prevent salt from entering the plant. Some mangroves even use their roots to breathe!

Mangrove trees need oxygen to survive, just like other plants. However, the roots of a mangrove tree grow from salty, muddy grounds. There is no oxygen in salty, muddy grounds.

In order to breathe, parts of the mangrove roots grow upwards from the salty, muddy ground and above the water surface. This way, the mangrove tree can breathe through the roots. These roots can grow from 10 inches to over 100 inches long.

Another way mangroves adapted to living in salty marshes is through their leaves. Mangrove tree leaves are thick and waxy, so they can store freshwater. There are pores on the leaves, just like leaves on other plants. Mangrove leaves can control the opening of their pores.



This reduces the amount of water evaporating, or leaving from the leaves. If a mangrove tree has too much salt from the salty marshes, it can remove the extra salt in two ways. It can secrete, or give off, the salt from its leaves. It can also remove the salt from water and store the salt in vacuoles, or sacs in the leaves.

Take a look at the mangrove leaf on the left. Why are there white spots on the leaf?

Text adapted from CERV Philippines Inc. & Meaningful Volunteers. (2009). *Protecting mangroves: Benefits for people and the environment, reforestation efforts and experience from San Agustin. An education kit.*