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WATER UPTAKE FEATURE OF MANGROVES HELPS FIGHT CLIMATE CHANGE: STUDY

Relevant for: Environment | Topic: Biodiversity, Ecology, and Wildlife Related Issues

A team of researchers installing a live monitoring device on a mangrove tree at Shakthikulangara in Kollam district to asses foliar water uptake | Photo Credit: by special arrangement

A team of scientists led by Sreejith Kalpuzha, principal scientist, department of forest ecology, Kerala Forest Research Institute, and Kathy Steppe of department of plant ecology, Ghent University, Belgium, has found that mangrove plants are heavily equipped to fight climate change.

The six-member team found that mangrove plants have a special phenomenon called foliar water uptake (FWU), which is a mechanism that enables plants to acquire water from the atmosphere through their leaves. The study was published in the recent edition of the journal *Forests*.

The study was envisaged to assess the FWU capacity of six different mangrove species belonging to four genera using a series of submersion experiments in which the leaf mass increase was measured and expressed per unit leaf area, said Mr. Kalpuzha. As mangroves live in a saline sediment water environment, the mechanism of FWU might be of vital importance to acquiring fresh water and growth, he said.

The amazing ability of mangrove plants to take up water from the rain and atmospheric water makes them a good candidate to answer climate change, said Ms. Steppe. Mr Sreejith said the team had already completed studies on the abilities of mangrove plants in fighting different threats posed by the changing climate.

The KFRI was keenly observing and studying the effect of climate change on mangrove ecosystems from various perspectives, said the institute’s director Syam Viswanath. The findings were promising and underlined the fact that mangroves are one of the answers to climate change threats across the globe, he added. Researchers Abdulla Naseef, Katrien Schaepdryver and Willem Goosens were the other members of the team.