



Scientists make surprise discovery of massive new forests around the world

Brandon Morse

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Recent global analysis of the Earth's drylands has discovered 467 million hectares of unreported forested areas — or roughly seven times the size of Texas — located in drylands across the world. The discovery has lent more credence to the theory that increasing levels of man-made CO2 emissions are actually helping to increase global greening.

The study, conducted by biologists Andrew Lowe and Ben Sparrow as well as 28 other co-authors, used modern high-resolution satellite imagery via Google Earth Engine to map 210,000 drylands. This high-resolution imagery allowed biologists to discover that forests cover a whopping 9 percent more of the world than previously thought.

“We found new dryland forest on all inhabited continents, but mainly in sub-Saharan Africa, around the Mediterranean, central India, coastal Australia, western South America, northeastern Brazil, northern Colombia and Venezuela, and northern parts of the boreal forests in Canada and Russia. In Africa, our study has doubled the amount of known dryland forest,” Lowe and Sparrow wrote in their report at The Conversation.

“With current satellite imagery and mapping techniques, it might seem amazing that these forests have stayed hidden in plain sight for so long. But this type of forest was previously difficult to measure globally, because of the relatively low density of trees,” the report said.

This greening is likely the result of the fertilizing effects of CO2, as revealed in a 2016 study by an international team of 32 scientists from 24 institutions. The study, titled “Greening of the Earth and its Drivers,” utilized satellite sensors over the span of 33 years to monitor the Earth's vegetation. What they found was that the Earth had greened significantly due to increased CO2 emissions. The greening was equivalent to “adding a green continent about two-times the size of mainland USA,” according to a statement by Dr. Zaichun Zhu, a researcher from China's Peking University.

Furthermore, the 2016 study also revealed that only 4 percent of the Earth showed global “browning”:

We show a persistent and widespread increase of growing season integrated LAI (greening) over 25% to 50% of the global vegetated area, whereas less than 4% of the globe shows decreasing LAI (browning). Factorial simulations with multiple global

ecosystem models suggest that CO₂ fertilization effects explain 70% of the observed greening trend.

“We were able to tie the greening largely to the fertilizing effect of rising atmospheric CO₂ concentration by tasking several computer models to mimic plant growth observed in the satellite data,” co-author Prof. Ranga Myneni of the Department of Earth and Environment at Boston University said.

Climate scientist Patrick Michaels of the Cato Institute noted that the new study from Lowe and Sparrow, as well as the 2016 study, contradicts conventional predictions that an increase in CO₂ emissions would cause an increase in dead foliage and arid regions throughout the world.

“This may lead to a remarkable hypothesis — that one of the reasons the forested regions were undercounted in previous surveys (among other reasons) is that there wasn’t enough vegetation present to meet Bastin’s criterion for ‘forest,’ which is greater than 10% tree cover, and carbon dioxide and global warming changed that,” Michaels wrote.