WHY PLANTING TREES WON'T FIX CLIMATE CHANGE

Trees are made of carbon, which comes from atmospheric CO_2.
Young trees, as they grow, therefore remove CO_2 from the atmosphere.
Mature trees, however, are full!

Imagine you are in a submarine, deep under the polar ice, and you discover it is leaking. In order to survive, you must do something about the water that is coming in. Because you are too lazy to actually fix the leak, you get a saucepan from the galley and use it to catch the incoming seawater. When it becomes full, you fetch another one and fill that, and then another, and so on. Is there anything wrong with this way of dealing with the problem? The reason I ask is because it is equivalent to tackling climate change by planting trees.

In the submarine analogy, here are some drawbacks of the saucepan approach. Most obviously, you will eventually run out of empty saucepans. Then you won't be able to keep on catching the incoming water, which will go into the bilges and eventually inundate the batteries, which will produce fumes that will promptly (but uncomfortably) kill you. So eventually, and very hurriedly, you will have to fix the leak after all. And, since you didn't even think about fixing the leak until all the saucepans had been filled, you haven't got any longer to fix it than you would have had without using the saucepan tactic. Also, even after the leak gets fixed (if, indeed, you manage it in time) you won't be able to cook anything because all the saucepans will still be full of seawater (either for the rest of the voyage or until you can figure out some way of emptying them). In other words, you should have fixed the leak immediately, instead of allowing the presence of saucepans to distract you from that crucial job.

Now for the trees. Not that long ago, before the Earth lost so many standing trees through deforestation, colonialism, and even agriculture, pretty much everywhere on Earth that could grow trees was completely covered in them. When people cleared the trees, the carbon those trees were made of went into the atmosphere and oceans. And, in approximate terms, that is where it still is, ruining the climate and disrupting the pH of seawater. The bare land created by clearing those trees is also still there, although much of it is now being used for agriculture or has been ruined so that nothing much can grow on it. So, we could stop doing the agriculture and put the carbon back where it came from, into trees. It would, roughly speaking, use up all the land on Earth that is not covered with trees already. It would leave, remaining in the atmosphere and oceans, all the carbon from fossil fuel burning, not to mention the carbon from escaped methane hydrates and clathrates. So we would still have a terrible climate change and ocean acidification problem which would continue to get worse (as well as, to put it mildly, a food shortage).

Note that, in the submarine analogy, it was the emptiness of saucepans that made them valuable. In the Earth equivalent, it is the bareness of land that appears to give it value in the form of some potential to help (a tiny bit, and once only) in tackling climate change and ocean acidification. If we had worked on stopping our use of fossil fuels instead of planting trees to deal with climate change, we would be in a better position now. In fact, assuming we will eventually suddenly be forced by the adverse effects of climate change to take things seriously and immediately stop most of our fossil fuel use, it has always seemed (to me) better, until that realisation point, to saw down trees rather than plant them in order to reach the realisation point with a deforested Earth instead of a forested one (from the point of view of carbon alone, ignoring such issues as habitat and erosion).

So, do you still want to tackle climate change by planting trees?

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