

# ‘More in hope’: lessons from our tiny reforestation scheme in the Amazon

Four years in, it has become clearer that the future of the forest and the climate crisis depends on politics

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- Jonathan Watts and his wife, Eliane Brum, take a break from working on their plot of land in Altamira Photograph: Jonathan Watts

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until I moved to the Amazon, I assumed a sapling would grow into a tree as long as it had water, sunshine and decent soil. Now I am starting to realise the survival of plants needs political nourishment too. And that is sorely lacking.

That's true here in **Brazil**, though there have been some encouraging signs of late. It was true when I lived in the UK, since when things have, if anything, been getting worse. It is probably the case just about everywhere now. But it feels of particular concern in the rainforest because this is where plants grow the fastest, take up carbon most quickly and play an outsized role in climate stabilisation.

These qualities make the Amazon of crucial global importance. They are why airline and petroleum companies do so much of their carbon offsetting here. They explain the dubious deals offered by multinational carbon traders to remote Indigenous communities, and provide the scientific logic behind reforestation schemes, bio-economy expansion plans and new models of Amazonian development.

But can any of this be trusted when the political winds are even less predictable than the weather?

In Brazil, there are at least glimmers of hope. In June, the government celebrated a 34% fall in Amazon deforestation rates since Luiz Inácio Lula da Silva was elected president at the start of the year. The figures for July are on course to be even better, the environment minister, Marina Silva, told me, with **a decrease of more than 60%** compared with the same month last year.

But it is not all good news. The country's agribusiness-dominated Congress has undermined the chances of future gains by gutting the authority of the environment ministry, and the lower house passed a **bill to limit recognition of Indigenous lands**. These contradictory signals are not conducive to growth – ecological or economic.

I have been thinking about this a great deal recently because my wife and I are experimenting with our own small-scale reforestation scheme. I started out looking at the sky and the soil for signs of success, but now wonder whether the prospects are not more determined by what I read in the online tea leaves about the mood in Congress and international efforts to cope with the climate crisis.

Four years ago, we put down a first instalment on half a hectare (1.2-acres) of pasture in Altamira which had been degraded by fire and years of grazing cattle. It is in a small community of people who have been trying to regenerate the land, with some good results.

Our long-term plan was to build a house, but before we got started on construction, our priority was to restore some of the natural vegetation. Our main reason was quality of life. Unlike the vast majority of settlers in this region, we prefer living in semi-forest rather than cleared land because the trees provide shade, we think it is more beautiful and it feels healthier. Other factors were support for biodiversity and a drawdown of carbon, though we know that on this small scale that is unlikely to make much of a difference.

We sought the help of an agroforestry expert from the Instituto Socioambiental, Brazil's biggest environmental justice organisation, who advised us to try an Indigenous-based reforestation strategy called **muvuca**. The idea was to plant dozens of species in a way that loosely replicated diverse natural regrowth, but with an emphasis on trees that provide fruit, medicine or other benefits. We were unlikely to consume or sell the produce ourselves, but in the long term, the potential economic value of these living trees would be one less reason to cut them down, and thereby work as an extra layer of protection.



The reforestation project involved planting more than 30 varieties of seed. Photograph: Jonathan Watts

The muvuca was mucky, but fun. Over several days, we hacked at the orange dirt with pickaxes and shovels to open a grid of shallow holes spaced at distances of roughly 1 metre (3.3ft). Then, we mixed together thousands of seeds from more than thirty varieties of plant, dropping a handful into each hole, covering them up with earth and waiting for the rainy season to do the real hard work of germination.

The mix of seeds was carefully thought out to encourage different phases of the forest's regrowth. In the first one-year stage, the plot resembled a vegetable garden because bean plants were the first to grow to knee height. This was done to fix the soil with nitrogen, and divert ants and other insects from the other slower growing seeds.

By the second year, the plot looked more like a head-high shrubbery, speckled with bright red seed pods. These were from the urucum (achiote), which created a light canopy that offered shade and shelter for the bigger trees that were now starting to push through; slim elegant Ipe, luscious-leaved cashews, spiky sumauma (kapok), frilly mango.

When mature, some of these species can reach more than 50 metres high, making them the pillars and roof of the rainforest, around and below which thousands of other species can thrive. This is the third stage, which potentially lasts hundreds of years.

“Potentially” is the crucial word here. Reforestation schemes depend on a stable regulatory environment. Leave a sapling to mature for 100 years and the ecological benefits are enormous. I like to think that long after my death, the trees will continue to grow and sequester carbon. Similarly, an investor in a reforestation scheme needs to know that trees will be left to do what comes naturally without human interference. Then those carbon credits may actually be worth something.

But there is no guarantee and far too many threats. First, from the capitalist economy, which makes it extremely difficult for any tree to grow fast enough to provide a rate of return that keeps up with inflation and investor expectations. If money is your goal, then market logic dictates you should burn down any forest you own and make a quick killing by converting it into agricultural or commercial land.

Second is an incomplete democracy, in which politicians think in terms of four-year election cycles rather than the decadal or centennial timeframes needed to nurture a tree. So while it is encouraging that Lula has reduced deforestation by

a third in six months, the Amazon is still shrinking, just at a slower pace. And in three years' time, Brazil could once again vote in a Bolsonarist (though not the former president Jair Bolsonaro, as he is banned from running for office for eight years) who would go right back to the slash, burn and poison policies of the past.

Both the lower and upper houses of Congress are dominated by representatives of extractive industries, such as ranching, farming and mining, who prioritise short-term profits over the wellbeing of the country or the world. The situation is even worse at a local level. The vast majority of governors and mayors in the Amazon rose to power by waging war on the forest.

The third threat is thermal. As human emissions continue to rise, so do global temperatures, especially in an **El Niño year** like this one. The Amazon suffered historic droughts during the last two big El Niños in 1997-98, and 2015-16. If the same happens this time, the consequences could be far more catastrophic because the forest is now less resilient than it was, after a brutal decade of destruction. With every year of rising temperatures, the risk increases of the saplings in my garden burning or dying of drought before they mature.

I hope economic values can recognise the true worth of a living tree, that democracy can be completed by giving some form of representation to future generations and other species, and that humanity can collectively address the insanity of fuelling a climate crisis with ever higher emissions. I will nurture those solutions like my plants, more in hope than expectation, with one eye on the weather and one eye on the news. It is clearer to me than ever that the best hope for the forest and the climate crisis is politics.