

How do you plant a trillion trees?

UK experts and volunteers are getting their shovels out for the One Trillion Trees initiative

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Not generally known for its tree-hugging vibe, the World Economic Forum at Davos this year launched the One Trillion Trees initiative. It was such a big number that even Donald Trump signed up for it. But while there is a general agreement that trees are good things, how do you actually plant 10,000, let alone a trillion? Just after WEF's January meeting, I found myself in a windswept field in Gloucestershire with a group of about two dozen volunteers. Anoraks on, shovels in ground, the team was at work bordering and studding what had been an old dairy farm — a monoculture of sweet grass for the cows — with willow, maple and dogwood saplings. The first project was a fat hedgerow about half a mile long; later could come crops interspersed with trees. You could do mass planting with machines that cut slits in the ground, says team co-ordinator Fred Miller, "but we do it with a bit more TLC." This might not seem like the most efficient way to attack the trillion figure but at least it is some sort of progress. Clare Mahdiyone, who runs the environmental group Stroud Valleys Project (SVP), the local environmental group that helped convene the volunteers, is used to hearing large numbers thrown around. "We are in Gloucestershire where our county council has pledged to plant one million trees," she says. "But they've got no plan on how they are going to do it . . . they haven't talked to anyone like me who is actually doing it on the ground." The UK should — according to the Committee on Climate Change, an independent public body advising the government — be planting 30,000 hectares a year to achieve net zero carbon emissions by 2050, but keeps falling short. "We probably have to do anywhere between seven and 10 thousand hectares annually in England," says John Tucker, director of woodland creation for conservation charity the Woodland Trust. "We are way off where we should be." John Tucker, director of woodland creation for conservation charity the Woodland Trust: 'We are way off where we should be'



© Phil Lockwood Woodland Trust



Trees planted by volunteers in Stratford Park, Stroud © Paul Green

The WEF's target, 1tn trees by 2030 globally, therefore, might seem a bit optimistic. That said, the initiative's aim is to be a catalyst for planting and the conservation of existing trees. The top-line number was devised as a result of research by Thomas Crowther, the British scientist now of Crowther Lab, part of the Swiss university ETH Zurich. Five years ago, an existing global estimate put the number of trees at 400bn but Crowther and a team of scientists, using a new methodology of combining satellite imagery with data from ground observations and forestry inventories, came up with a new figure of 3tn.



Planting a hedge near Stroud © Deborah Roberts

From there, Crowther went on to map the world in detail, finding sparsely used locations that could sustain new tree populations. He excluded land in use for agriculture. Russia, the US, Canada, China and Brazil have the greatest potential for mass tree cover through both planting and natural regeneration, though even the little ol' UK has a lot of potential. Crowther estimated that the planet could support a further 1.2tn trees — hence the WEF's figure — which, if achieved, could reduce carbon in the atmosphere by 25 per cent. "Now we've established these targets, it suddenly seems like over the past year, the amount of people getting engaged has skyrocketed," says Crowther. "It's almost like there's a movement beginning." He cautions against assuming that every new tree is a good thing. "There's real danger that as conditions get hotter and drier, that won't favour tree growth in the tropics." But that does favour tree growth "in the boreal forest", he adds. The boreal zone runs between the Arctic and temperate zones in areas such as Siberia and Canada. "Those are very small trees which don't store much carbon," he says, and which "actually warm the planet because they are darker than the snow that would otherwise be there".



Siberia, part of the 'boreal forest' © Khanty-Mansi Autonomous Okrug, Russia

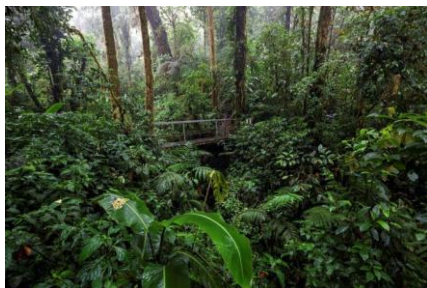
There might be an expectation that developing nations with greater land mass and labour are most able to pick up the burden; for example, as part of the ambitious Great Green Wall project, the 8,000km length of forest being planted along the southern edge of the Sahara from Djibouti to Senegal. But Crowther points out that developing countries have their own pressures, which NGOs may not appreciate. "So many times a restoration project comes in and buys a chunk of land, just plant the little trees and then walk away. That can be devastating for local communities who need that land for their livelihood." But you can create successful partnerships that educate as well. Crowther cites a project in the Sahel where an organisation buys plots of unclaimed land, restores forest to half of it and allows the local community to do as they wish with the other half. "What they find is that the agriculture always improves next to the restored trees." In tropical cocoa plantations, it can be demonstrated that top yields are achieved with 30 per cent tree cover. "When there's an economic incentive, it works really well."



A woman from the Senegalese Women's Association of Koyly waters seedlings on the Great Green Wall project to plant drought-resistant trees © Redux/eyevine

The UK could also learn from this marriage between agriculture and trees. Tucker, a forester of 25 years before he joined the Woodland Trust, looks for sites to replant — a recent acquisition was a former colliery in Derbyshire which has the potential for 400 acres of forest. But such sites are few and far between and there has been a push to look to

agricultural land again. “Probably 70 per cent of the UK land is currently down to farming,” says Tucker. “So that if we want to see more trees, we’re going to have to work very closely with that farming sector.” He has been advising farmers on tree spacings in fields that provide shade and shelter to livestock and crops that also provide enough room for the use of combine harvesters.



A UK estimate says the planet can support a further 1.2tn trees © Getty Images

“We are relearning the skills that people had 100, 200 years ago which we had forgotten about,” Tucker adds. “In the UK certainly farming and forestry have been poles apart, probably since before the second world war.” Alongside the Woodland Trust, which has relatively deep pockets and a wide subscriber base, are numerous smaller organisations, like the SVP, that also help chip away at the UK’s target of 30,000 hectares or, roughly, 50m trees.



London schoolchildren tree planting © WTPL/Philip Formby

Most of the organisations do not promote such new flashy techniques as using drones to fire seedlings into the ground. This is a method being trialled on post-industrial sites by, for example, Oxford-based Dendra Systems working with Glencore, the mining multinational, on the aerial reseed of its 850-hectare Bulga Coal operations in Australia. Nor do small groups often sign up to government schemes such as the Countryside Stewardship scheme or the fiendishly complicated Woodland Carbon Guarantee auction for new planting. The paperwork burden is too high. Instead, they find a way through the system. Mahdiyone at SVP finds landowners, farmers or just people who have clubbed together to buy a couple of acres but have no money to invest in trees, and matches them to community and school groups that have been given free saplings but have nowhere to plant them: “I like to call us a dating agency.” There’s a post about a new project on Facebook and local networks and the volunteers sign up by the dozen. House & Home Unlocked FT subscribers can sign up for our weekly email newsletter containing guides to the global property market, distinctive architecture, interior design and gardens. Sign up here with one click It is a labour of love rather than a bureaucracy. As the volunteers in the Gloucestershire field worked, a middle-aged woman arrived with a jar of some sort of fairy dust that she sprinkled into each freshly dug hole. It is Mausdorf, she explained, “a biodynamic preparation that encourages the roots to grow.” It is made of basalt dust, crushed egg shells and dried cow manure. By such means, and with one hedgerow here and five hectares there, SVP’s planting numbers continue to knock a little off that trillion. As they say, great oaks grow from small acorns.