Quality not Quantity

Among the more unedifying moments during the recent general election was the spectacle of the five largest parties trying to outbid each other for the number of trees they aim to plant each year. The Tories proposed 30 million, the Lib Dems and the SNP 60 million, the Greens 70 million — but Labour topped them all with a target of 100 million, or a total of two billion trees by 2040.

It sounds a lot, but planted at the optimum density for production, and hence carbon sequestration, of 1.5 metres spacing, this works out at around 22,700 hectares a year, or less than 0.1 percent of the UK's total land area — and fewer than the 30,000 hectares advocated by the statutory Committee on Climate Change. At this rate by 2040 woodland will have increased from 13 percent of the area of the UK to about 14.8 percent — still way below the European average of 44 percent.

Previous governments have come up with similar targets, without much being achieved. The difference this time is that tree-planting is now prioritised as an opportunity for the "Carbon Dioxide Removal" deemed necessary by the IPCC to achieve net zero carbon emissions by 2050. The more trees we plant to suck up carbon, the longer we can carry on using fossil fuels. Tree planting is an electorally safe way for political parties to show they are doing something about global warming. Turning down the gas isn't. We didn't see them, in the run up to the election, competing with each other to increase the annual rate at which they would reduce fossil fuel use. Only the Green Party proposed a carbon tax.

Carbon Dioxide Removal

In the vanguard of the movement to reforest Britain on a scale far beyond that envisaged by the Labour Party are two Harvard Law School academics, Helen Harwatt and Matthew Hayek, whose report *Eating Away at Climate Change with Negative Emissions* is much quoted by vegans. H and H propose that by converting all of the UK's grassland to "natural vegetation cover" also defined as "climax vegetation (forest)", the UK can offset more or less all of the 130 Megatonnes of CO_2 per year that it will unavoidably still be emitting by 2050.

Whether Britain really can sequester that much carbon by turning its fields over to wildwood, we are not in a position to judge. The more immediate question is what exactly are these activities that will still be emitting carbon dioxide in such profusion in 2050, and which require such drastic action.

The forecast comes from the Committee on Climate Change who calculate that three sectors will be responsible for the majority of these intractable emissions: industry (27 Mt CO2 eq) aviation (35Mt) and agriculture (38Mt). Industrial emissions come from fuel combustion and processing, plus leakage from carbon capture and storage schemes. Emissions from aviation — can you believe this? — will by 2050 be only 15 per cent lower than they were in 2005.

Michael McCurdy

As for the allegedly unavoidable agricultural emissions, the bulk of these — 23 Mt of CO_2 equivalent — are methane from cows and sheep. This means precisely nothing since it is is now well established that the CO_2eq unit is an inaccurate metric for comparing methane with carbon dioxide (see p.28). The UK ruminant herd has declined in numbers by 25 percent in the last 30 years, so its methane emissions are likely to be in decline as well, in which case the amount of global warming caused is either negative or negligible. If the decline in cattle numbers is outweighed by an increase in methane emissions per cow, which is possible, this could quite easily be rectified by a modest reduction in the size of the herd, or reducing methane emissions per cow.

The remaining 14Mt of nitrous oxide emissions from agriculture can largely be addressed by eliminating the production of feed grains for livestock, which would have the triple effect of reducing direct N_20 emissions, offsetting other emissions through soil carbon sequestration, and reducing livestock methane emissions. In short the agricultural industry is capable of achieving net zero carbon on its own, and no doubt would do so once fossil fuels and artificial fertilizers become scarce.

Extreme Remedy for Avoidable Harm

The removal of 130 Mt of Carbon Dioxide every year is thus required partly to compensate for agricultural emissions that either don't or won't exist, and mostly so that some people can carry on using fossil fuels, notably by flitting back and forth across the globe in aeroplanes.

For this dubious purpose, Harwatt and Hayek propose to throw a mantle of woodland over nearly two thirds of Britain, leaving food production and wide open space consigned to the arable areas centred around East Anglia. The species they advocate for planting in England are "oak, sycamore, ash, beech and birch", but since oak is slow growing, beech gets trashed by squirrels and ash is out of the picture due to die-back, what we are likely to get initially, in the absence of grazing animals, is birch, sycamore, and a lot of impenetrable bramble and bracken — not an inspiring combination.

The authors claim that their scenarios "could provide habitat for wild species reintroductions and help address the global wildlife crisis." But ecologists would be up in arms at the loss of biodiversity from the disappearance of meadows and pastures, along with the associated wildflowers, butterflies, insects, birds, reptiles and mammals.

Moreover, as the authors acknowledge, carbon uptake by the new woodland would reach saturation point after 30 years. In other words Britain's entire pastoral heritage and the wildlife and the farms associated with it will have been sacrificed so that some people can continue flying and burning fossil fuels for another three decades. The report is a *reductio ad absurdum* of the increasingly prevalent view that agriculture should pay for the sins of industry, and the countryside suffer for the excesses of the city.

(continued in next column)

SOURCES

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Good Husbandry

There is undeniably a need to create more woodland, and for reasons that go beyond the storage of carbon; but the job should be tackled in a spirit that encourages good land management practice, not as a race to cover the land with forest.

Trees are multifunctional: along with carbon storage, they provide timber, fuel, food, fodder, game, shelter, screening, amenity, biodiversity, and water retention. Creating a woodland requires identifying the best site, the best species and the best management regime for the purposes in mind.

Woodland should be established in sensible places — on bracken-strewn banks, poor land, wet land, north facing slopes, or as shelterbelts, and only rarely on decent arable or meadow land. Productive fast-growing species, such as poplar or Douglas fir, are also the species that sequestrate the most carbon. Trees destined for durable construction timber, such as oak, chestnut, Douglas fir, and western red cedar, will continue to store carbon for years after they are felled. Dense planting at 1.5 metres or so spacing will provide a thinning crop, grow better trees and store more carbon per hectare than sparse planting. And trees need to be looked after: you don't just plant them, you grow them.

Quality not quantity is what is needed: good husbandry, not the willy-nilly broadcasting of trees on random hectares. Good husbandry will come naturally when fossil fuels are eliminated, and artificial fertilisers a thing of the past, for it is then that people will fully appreciate the true value of land.

SF

Do Not Go Naked Into That Deep Space

Global debt is now officially $116 trillion dollars. Or, (also officially), $244 trillion. Too many zeroes: they've lost count. Nobody has a clue what's happening any more. So let's just cut the cackle and state the obvious: capitalism is bankrupt. And any money still floating around is phoney. Funny money? Ha ha. Let's print some more.

Reasons to be cheerful: most of the carbon-gobbling, planet-trashing mega-projects we are being promised by rogue politicians are bunk, just cover-ups for empty coffers: close to home HS2, among 100 others, and internationally the Great Moon/Mars Myth.

Earlier this year the Trump announced the creation of a Space (police) Force, while demanding an extra $1.6 billion for NASA for 2020, at which the US Department of Defence blew a raspberry of total incredulity, but he carried on blithering. Solid evidence that the lunar stuff is bluff and nonsense lies in the matter of moon suits, the most expensive garments ever made. Called EMUs, they are almost 40 years old, "smell like a locker room" according to NASA astronaut Doug Wheeler, and are full of dodgy-looking stains. Of the 18 originals, 11 have already rotted away. The wardrobe is empty. Designer Amy Ross is working on space hoodies to update the old fish-bowl helmets, but she admits "fundamental advances in materials science are needed" before the intractable problem of moon dust, which wrecks zips, can be overcome. The knackered life-support backpacks alone will cost $250 million *each* to replace. So Trump's just being silly, showing off again.

All these vanity projects, nobody needs them. They're not going to happen. Driverless cars? Pah! A lot of the things we're being conned into worrying about are equally baloney. The only growth in the "growth economy" is debt. But if they must spend all those fake dollars on something, to pretend the system's not broke, then let it please be Earth, and leave Space for later. It's freezing up there.

W. T. Horton

GB

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