

Regenesi: feeding the word without devouring the planet

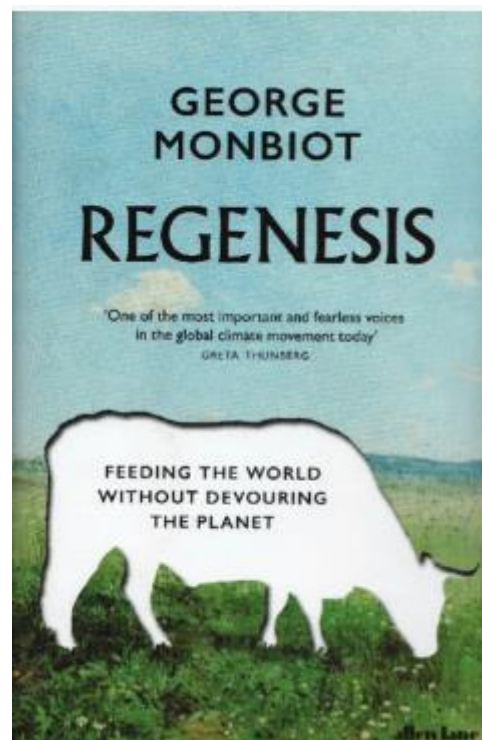
George Monbiot, 2022

Allen Lane (Penguin Random
House, UK)

Hardback, 337 pages, £20.00

ISBN 978-0-241-44764-2

George Monbiot uses his orchard as a barometer for climate change, noting the impacts of extremes of drought and rainfall. However, when he delves into the soil beneath the trees, he finds an extraordinary diversity of life encompassing thousands of species of microarthropods, bacteria and mycorrhizal fungi acting, symbiotically, to produce the sources of nutrients to satisfy plants' needs. Damaging soil, for example by ploughing, causes a dysbiosis and ultimately our own health depends on the health of the soil. He discusses the intricacies of soil structure, the cascades of habitats and organisms, and explains that the more complex a system is across space and time, the greater the diversity that it can support. George extends this analysis to the planet's current food system and concludes that it has both declining resilience and increasing vulnerability to external shocks.



Just-in-time delivery (think Ukraine), using half our grown calories to feed livestock (inefficiently) and the misuse of crops for biofuels, all lead to increasing fragility and increasing numbers of hungry people who cannot afford to eat. He calculates that climate breakdown will push half of the world's food production out of its safe space by 2080; fertile land will turn to dustbowls (again). Agricultural sprawl is one of George's nightmares as he documents the pollution of rivers, converting them into filthy gutters. Ecosystems are being destroyed (eg but not only, in the Amazon and Cerrado of Brazil) to produce the soya to feed the animals that destroy habitats thousands of kilometres away. One of his constant gripes is the way that sheep farming sprawls in the UK – destroying regenerating forest with a grossly inefficient production system. Eliminating beef and dairy farming would reduce the area needed for global food production by 76 percent (and reduce food production greenhouse gas emission by 60 percent).

Innovative and regenerative farming systems that work with nature, rather than against it, focus on the importance of biodiversity both above and below ground. George discusses these systems enthusiastically but draws attention to their limitations and sustainability. One of his conclusions is that the most effective means of removing carbon from the atmosphere is by rewilding agricultural land and restoring wetlands and forests. The chapter on agroecological

farming describes practices that will be very familiar to Ag4Dev readers: no-till for soil health and carbon sequestration, the elimination (or non-creation) of plough pans, a reduced need for pesticides and fertilisers and fuel consumption per hectare slashed. Conservation agriculture is resistant to climate breakdown, less susceptible to storm damage, more drought-resistant and can allow two crops a year. He discusses weed control and reasons that glyphosate causes much less damage than ploughing and that integrated weed management, including by biological and mechanical means, is the way forward.

The future could (should, George suggests) include protein and fat production by bacterial fermentation – farm-free food. Solar and wind energy can be used, there is no need for grazing land and ceasing destructive farming will not only sequester carbon but reduce our alarming species extinction rate. The technology is already available and produces delicious high-protein flour. At the same time, plant-based, eco-friendly meat substitutes are already on the market. The transition is under way and will be slow at first, then fast; why should we continue to eat products of cruel, dangerous and ecocidal livestock production systems when we don't need to? We need to re-purpose our agricultural subsidies to promote eco-friendly systems, such as rewilding, and recognise that farming is the most destructive human activity ever to have blighted the earth.

Averting global catastrophe will require a focus on soil ecology, the further development of perennial crops (especially grain crops) and a farm-free revolution for producing protein. This will create a profound transition and allow us to make peace with the planet which we have abused mercilessly for far too long.

Brian Sims

(TAA member)