

How the land lies

Andy Lester asks if there's time to change our relationship with land or are we already too late?

In a recent documentary, Sir David Attenborough warned that for the first time in history, a single species (humans) could wipe out the majority of other species on the planet.¹ There is a certain irony to this: the word 'human' derives from the Latin *homo*, meaning 'man' or 'being', and *humus*, meaning 'of the earth'. By definition, we are 'earth beings' – and yet, in our lifetimes, we may be responsible for destroying much of the life on Earth, upon which our survival depends.

There are at least four specific areas where our action on the land is having an impact that will prevent future generations from thriving.

Farmland

According to the UN Food and Agriculture Organisation (FAO), 75 billion tonnes of soil are eroded from farmland every year, costing at least \$400 billion in lost revenue from crop failure to floods and fertiliser costs.²

At a national level, the impacts are far-reaching. A Yale University study concluded that the US Corn Belt had lost over 100 million acres through a combination of deep ploughing, intensive grazing, heavy farm machinery, acute climate-induced drought and the application of fertilisers, herbicides and pesticides.³ Extensive soil

loss across Europe and Africa has been similarly caused.

The FAO believes that currently at least 33% of farmed soils are moderately to severely degraded. If our relationship with farmed land is broken, the knock-on effect on our ability to produce enough food for over 8 billion people is seriously compromised. Damaged and decayed soils lose their capacity to lock in carbon and instead become a net contributor to the climate crisis.

Deforestation

Virgin forest continues to be felled at a rate of 10 million acres every year, according to the UN.⁴ That's an area roughly 30 times the size of Greater London every year. Native forests cover just under 30% of the land surface, but that percentage continues to



Fire, illegal logging and plantation expansion have halved the area covered by Borneo's forests, one of the world's most biodiverse ecosystems. © T.R.Shankar Raman, CC BY-SA 4.0

decline. According to the journal *Nature Communications*, 40% of tropical forest cover will revert to savannah in the next few years due to increased drought and the degradation of remaining forests by livestock ranchers. WWF UK believes that we are nearing the tipping-point for the Amazon rainforest, whereby a further 5% loss will cause the forest to become a net emitter of carbon rather than a sink (store).

Grasslands

The Wildlife Trusts report that we have lost 47% of our semi-natural and unimproved grasslands in the UK since 1960, and an eye-watering 97% since 1940. That is a total of 74 million acres lost in this country alone.

The UN suggests that as little as 10% of the world's naturally-occurring species-rich grasslands are still intact, and some of the most important areas have in the last 20 years become so degraded that their ecological value is now a fraction of what it used to be. This is also the case for the Serengeti (due to uncontrolled livestock overgrazing grasslands), the Mongolian Steppe (where wheat has replaced grass, leading to a rapid decline in diversity) and the Great Plains in North America (with the extermination of 50 million bison and the arrival of mechanised farming).

Grasslands are vital for locking in soil nutrients, but also for the pollinating

insects so critical to our food supply. According to Plantlife International, a typical 'unimproved' three-acre field in a temperate country can support up to 9 million flowering plants, 50 species per square metre and up to 300,000 bees.⁵ In contrast, an 'improved', intensively farmed field of the same size will support a fraction of that number of species.

Peatlands

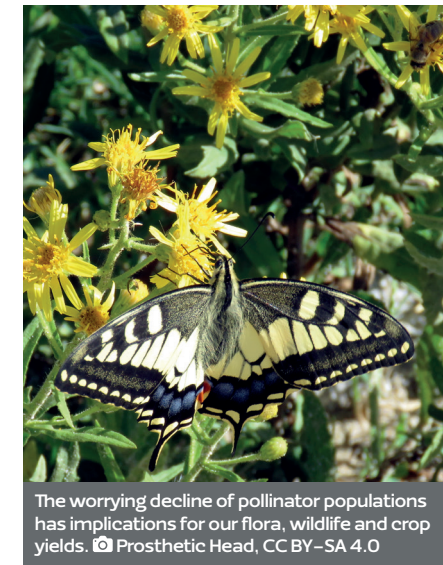
One quarter of the world's peatlands are drier than at any period in the last 2,000 years.⁶ Covering just 3% of the world's surface, peatlands across Canada and Russia lock in a massive 20% of the world's carbon and a high percentage of the world's methane. (Methane is a potent gas, with even more ability to increase short-term warming of the planet than carbon dioxide).

Peatlands are rapidly being destroyed for fuel extraction, fertilisers and commercial forestry. The peat-based permafrost of the Arctic Circle is one of the richest stores of methane in the world and it is melting dangerously fast. Proceedings of the US National Academy of Sciences indicate that of 3.7 million square kilometres of these peatlands, nearly 2 million are in the process of permanent melt.⁷

Signs of hope

What kind of world will the next generation inherit? Is change at the scale required even possible?

In the UK, we have a once-in-a-lifetime opportunity to update our environmental regulations through a new Bill that will pass through parliament during autumn 2021. In it, the government has committed to protecting 30% of the UK land area by 2030. A Rocha UK and many other conservation organisations are calling on the government to be specific, focussed and creative, so that the 30%



The worrying decline of pollinator populations has implications for our flora, wildlife and crop yields. © Prosthetic Head, CC BY-SA 4.0

becomes a genuine asset for nature and people, not simply a vague aspiration.

This is also a chance for the really big landowners (Forest Enterprise, MoD, Crown Estate) to reimagine what they could do with their land to make it climate-resilient, wildlife-rich and carbon-neutral.

Christians and churches could play a significant role too. The UK Church is probably the sixth largest collective land-holder in the UK⁸ – imagine what the Church could do if it decided to focus the management of its land on fighting back for nature and for climate.

A Rocha UK will be working across the Christian community through through our Partners in Action, Eco Church and Convening programmes to encourage change in the way land is managed and cared for. We have set an ambitious goal of improving land for nature on 75,000 acres over the next five years, and will also aim to inspire church leadership to rethink the value of leaving land undeveloped for the benefit of people and nature. (See overleaf and pages 10–11.)

Calling for change

The natural world has spoken through floods, droughts, loss of species, loss of human life – and we must listen.

Humanity has the ability and capacity to change. Our collective imagination, allied to robust science and a faith in a God who is all about making impossible things happen, offers true hope. In respect of land ownership and management, collective reimagining and faith-based determination will be fundamental to any global plan to avoid a climate and biodiversity catastrophe.

A Rocha UK is not alone in wanting to take bold and creative steps to help bring about the changes that will give nature and people a fighting chance. Our land goal is just one small step in this direction. There has to be a rapid and wide-ranging change in every part of life: how we manage land, how we rewild, how we grow food, how we engage community and church on the land we care for. And that change is needed now.

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References

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- ⁷ Hugelius, G., Loisel, J., et al., 2020, pnas.org/content/117/34/20438
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