

Climate and nature

We are facing two inextricably linked crises – the climate emergency and the massive decline of nature across the globe. **Andy Atkins**, A Rocha UK's CEO, looks at connections and mitigations.

Conserving wildlife and addressing climate change have sometimes seemed like opposite (even opposed) poles of the 'environmental' world. Wind farms for renewable energy on bird migration routes are not a good mix, for example. But climate and biodiversity are both in crisis and, as Christians who love God and all his creation, we must understand the increasing connections.

Upsides?

Numerous scientific studies have now looked at the impact of climate change on nature globally and in the UK. There are apparent positives. For example, British birdwatchers have been delighted to see increasing numbers of little and great egrets over the last couple of decades. Hardly known here before the 1990s, they have become firmly established as their breeding range has moved north from Africa and the Mediterranean with our increasingly hot summers. We are also seeing 'new' species of butterfly and dragonfly, including on A Rocha UK's Foxearth Meadows reserve in Essex.

Bleak outlook

But the good news is limited. Not only is it too early to say what the impact of some recent immigrants may be on other native species, but globally the impact of climate on nature remains overwhelmingly negative. Extreme 'heat events' are bleaching coral reefs. Tropical and sub-tropical forests are drying out, with the result that they become much more vulnerable to wildfire, whether caused by a dry lightning strike or a carelessly tossed cigarette butt. The recent megafires in Australia are much more likely to happen with advancing climate change. Conservationists calculate that they have killed hundreds of millions of forest-living animals, including much of the viable koala population.

Climate breakdown is disrupting the breeding cycles of some species. The European hedgehog, for example, is waking from hibernation earlier and not finding its normal food of insects available in sufficient numbers to breed successfully when it does. Recent studies of the collapse of insect populations have begun to cite climate change as one factor too. Critically, scientists have concluded that even a low level of climate change will make *already vulnerable* species more at risk and hasten their extinction. Sadly, there are far too many already vulnerable species, like the common hedgehog (pictured), whose numbers have crashed by 50% in the UK in the last 20 years.



Once hunted to extinction in the UK, recent reintroductions of beavers have been very successful. © Makedocreative/CC BY-SA 3.0



Where beavers don't have access to deep water, they build dams to create it. © Luther C. Goldman, US Fish and Wildlife Service/Public domain

Two-way working

Anyone who cares passionately about nature would therefore be wise to act on climate change too. Fortunately, there is growing evidence of win-wins, of actions that benefit both. Here's a sample:

Tree planting In response to the need to absorb as much carbon dioxide from the atmosphere as possible in the decades ahead, scientists are urging tree-planting campaigns. Done in the right way, with the right mix, including indigenous species, this will create and restore important woodland habitat for wildlife and people's amenity. In his recent Budget, the Chancellor pledged to use the new Nature for Climate fund to protect, restore and expand vital habitats, including planting around 30,000 hectares of trees and restoring 35,000 hectares of peatland.

Creating and restoring wetlands Restoring wetlands can lock up more carbon and create better habitat for hard-pressed wetland wildlife. Degraded upland moors, particularly in the north of England, some damaged by controversial grouse-shooting regimes, have much reduced capacity to absorb rainfall, so rapid runoff exacerbates flooding. Restoring moors would not only be good for wildlife but help mitigate flooding too.

City green spaces These provide oases for wildlife, office workers and local residents alike. Increasingly wildlife-rich greenspace, alongside tree planting, would help combat the heat-island effect of cities and moderate city temperatures to combat human and wildlife heat stress in our increasingly hot summers. In the UK, the summers of both 2018 and 2019 broke temperature records.

To those natural solutions we can add **rewilding river floodplains** for nature reserves and flood control, and **reintroducing beavers**, whose dam-building increases river biodiversity and helps slow flood waters, protecting settlements downstream.



© David Chandler

None of these measures can replace the overriding need to get our economies off fossil fuels and overhaul our agricultural systems and diets fast. But as the dire trends in climate change and species loss suggest, we need to scale up methods that work for both climate and biodiversity before it's too late. It really is a no-brainer.

Hearts and minds

There's also another advantage. Natural solutions present a welcome opportunity to *engage more people* in tackling the time-critical and increasingly scary issues of climate disruption and species extinction. These can be deployed very locally, be fun, and bring clear benefit to the community.

It may take the government to plant new national forests, but homeowners or renters with a shoe-box garden can plant just one tree in the corner, and a school can plant a dozen new trees around the edge of the playing-field. Though it may take several county councils to return a major river floodplain to its original condition, a neighbourhood can restore the local stream at the bottom of the urban allotment. Volunteers from Eco Church, Christ Church Surbiton, have helped do just that with the Hogsmill River, which flows into the Thames near Kingston.

The task ahead

So how does this all connect with the big picture? As the climate and biodiversity crises worsen, we must look for 'win-wins' in addressing them both at every turn.

At the Paris climate negotiations of 2015 (COP21¹), the international community agreed to attempt to keep global temperature rise to no more than 1.5°C above the pre-industrial level. We are currently heading for a 50% chance of 2.5°C, which would be disastrous. The next COP, postponed to 2021 because of the Covid-19 pandemic, will have the critical task of getting the world on track to 1.5°C. The conference needs to inspire and negotiate much deeper greenhouse gas cuts, and at a pace commensurate with the emergency we are in. Governments will need to take people with them in the ensuing decade in a dash to avoid disaster.

Working with nature, or 'Nature-based Solutions' as the climate community is now calling it, could be a powerful, multi-purpose tool in global society's toolbox.

¹ COP stands for 'Conference of the Parties to the UN Framework Convention on Climate Change of 1992'.

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Australia has always had bushfires, but the 2019/20 season was worse than usual. © CSIRO/CC BY 3.0