



Ben Sweeney is working to restore species-rich grasslands at Plantlife's Ranscombe Farm nature reserve.

# This might just look like grass, but it has the power to absorb a load of our carbon emissions

By Lauren Kent, CNN

Photographs by Li-Lian Ahlskog Hou, CNN

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**Rochester, England (CNN)** Forests have long been celebrated as the natural heroes in the fight against the climate crisis. They are so good at absorbing and storing carbon dioxide, [a consortium of environmental groups](#) are calling on the world to plant one trillion trees over the next decade.

But while we are looking up at the treetops for climate solutions, some campaigners are urging the world to look down, where another answer lies -- right under our feet.

Forests, peatlands, deserts and tundra can all absorb and hold stocks of carbon-dioxide (CO<sub>2</sub>). Of all the carbon held in land-based ecosystems, around 34% can be found in grasslands, [data from the World Resources Institute show](#). That's not much less than the 39% held in forests.

"Whether you look at the Serengeti, the Cerrado in Brazil, whether you look at what's left of the prairies in North America or the steppes of Mongolia -- every single one of our major, iconic grassland habitats is under threat at the moment," Ian Dunn, chief executive of the British conservation organization Plantlife, told CNN.

There's also plenty of it in the United Kingdom, which will host world leaders and climate negotiators in just over a week at the COP26 climate talks in Glasgow, Scotland. Among several items on the agenda is how to protect forests and plant more trees to help slash global emissions. But Plantlife, [among other groups](#), is campaigning for grasslands to be protected at an international level and part of any deal that emerges in Glasgow.



Plantlife is working to reestablish meadows in the UK.

While leaders meet in the Scottish city, Plantlife is working to restore more than 100,000 hectares of meadows, including one on the other side of the United Kingdom, in the southern English county of Kent. The Ranscombe Farm Nature Reserve looks just like your typical patch of English countryside, with its soft rolling hills and grazing cattle. The grass here looks ordinary, browned in patches from the autumn weather. But come spring, the rare orchids, bellflowers and rock roses will bloom in a celebration of this grassland's biodiversity.

Restoring species-rich ecosystems like this takes time, said Ben Sweeney, Ranscombe Farm's manager, who has been working on this grassland since 2010.

"It will take a couple of decades," he said.

Ranscombe Farm protects not only grasslands but also woodlands, rough grazing pastures and crop fields for rare plants.

Sweeney explains that just like with an animal sanctuary, Ranscombe Farm nurtures rare plants in small sections of the reserve, where they are

thriving, and can hopefully grow and spread out into bigger habitats soon.

But even after years of careful management, rangers have not been able to reverse all the impacts that farming and land degradation have had on the site.



The loss of grasslands threatens the region's biodiversity.

In the UK, these vital habitats have been slowly disappearing as a consequence of decades of intensive agriculture, housing development, and infrastructure build-up over the last century. The UK has [lost more than 2 million acres of grasslands](#) as urban and woodland areas expand, according to the UK Center of Ecology & Hydrology.

That concerns activists, because grasslands not only store carbon but also serve as a buffer for extreme weather and help prevent soil erosion. Their roots hold together light soil, and the ground cover prevents erosion from wind and water. These habitats help with natural flood management by holding water after extreme weather events, then releasing it gradually.



The world is banking on giant carbon-sucking fans to clean our climate mess. It's a big risk.

The loss of grasslands also threatens the important species that rely on them, like bees, butterflies and other pollinators.

A recent [study published by the University of Manchester](#) revealed the UK's grasslands store more than 1.8 billion metric tons of carbon. That's the equivalent of storing the [yearly emissions from about 400 million cars](#).

"But they are pretty much ignored or have been ignored in many sustainability policies," said soil expert and ecology professor Richard Bardgett, the study's lead researcher.

[Another study](#), published in 2018 in IOP Science, concluded that grasslands in California could play a bigger role than forests as carbon sinks, as they are less vulnerable to fires and drought, which parts of the world will experience more of as the Earth continues to warm. That's because grasslands keep most of their carbon locked in their roots underground -- even during drought and fire -- unlike forests, in which carbon is spread up and throughout trees.



Cows grazing at Plantlife's Ranscombe Farm Reserve help stimulate plant growth.

## Your diet could be linked to grassland destruction

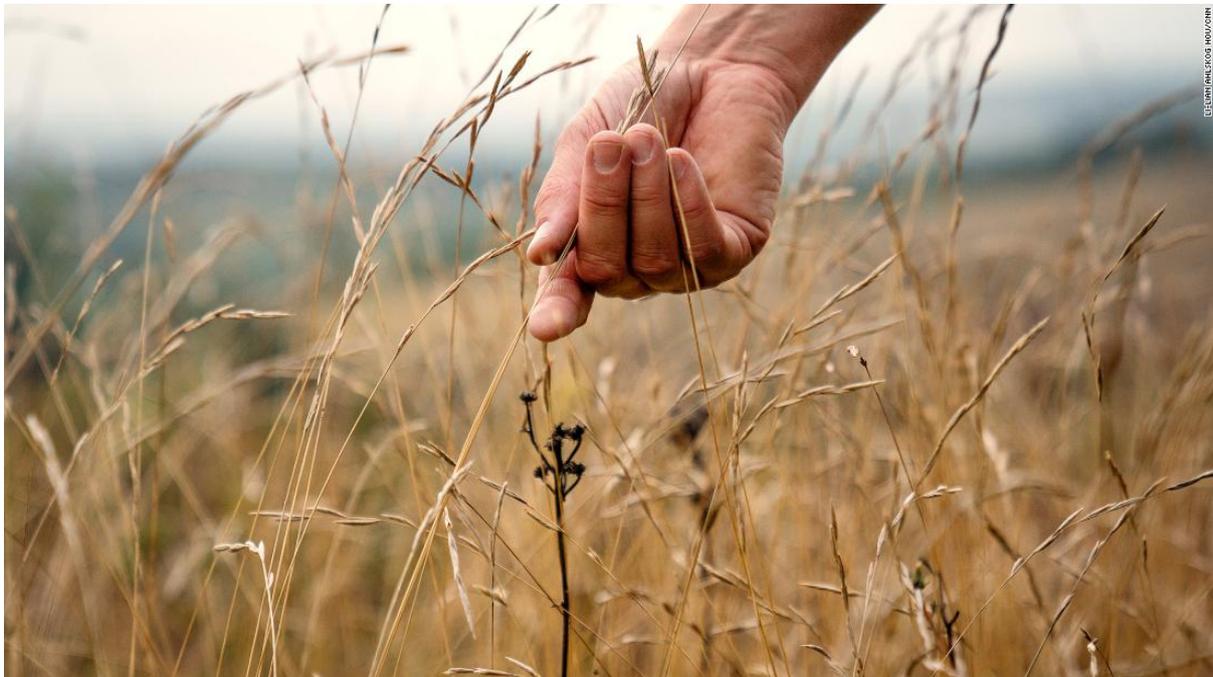
When managed poorly, [grasslands can become a net source of emissions](#), rather than a sink to remove them. Rearing livestock on grassland, too, plays a major role in methane emissions, which is also contributing to the climate crisis.

A global increase in demand for meat and dairy products, as well as soy, is putting pressure on grasslands.

The world's most biodiverse savanna, the Cerrado in Brazil, has been reduced to around half its original size, mainly for the expansion of beef and soy production, [according to the World Wide Fund for Nature](#) (WWF), which says the Cerrado loses an area equivalent to the size of São Paulo every three months.

In China, vast expanses of grasslands are in a "state of ecological crisis," according to scientists, caused by overgrazing of the land. Meanwhile, in the United States, the expansion of farmland has led to the prairies of the Great Plains losing an average four football fields every minute, according to a WWF report published in 2020.

While grassland protection is a global concern, there are growing expectations for the UK to show climate leadership ahead of COP26. Campaigners are disappointed with the omission of grasslands as a nature-based solution in the government's Net Zero Strategy, which is being seen as a potential blueprint for other nations' climate roadmaps.



Ben Sweeney walks through one of the carbon-storing grasslands Plantlife has been working to restore.

"The importance of grasslands in carbon capture, improved biodiversity, sustainable food production, water management and societal wellbeing continues to be missed in this report and in government policy," Dunn said.

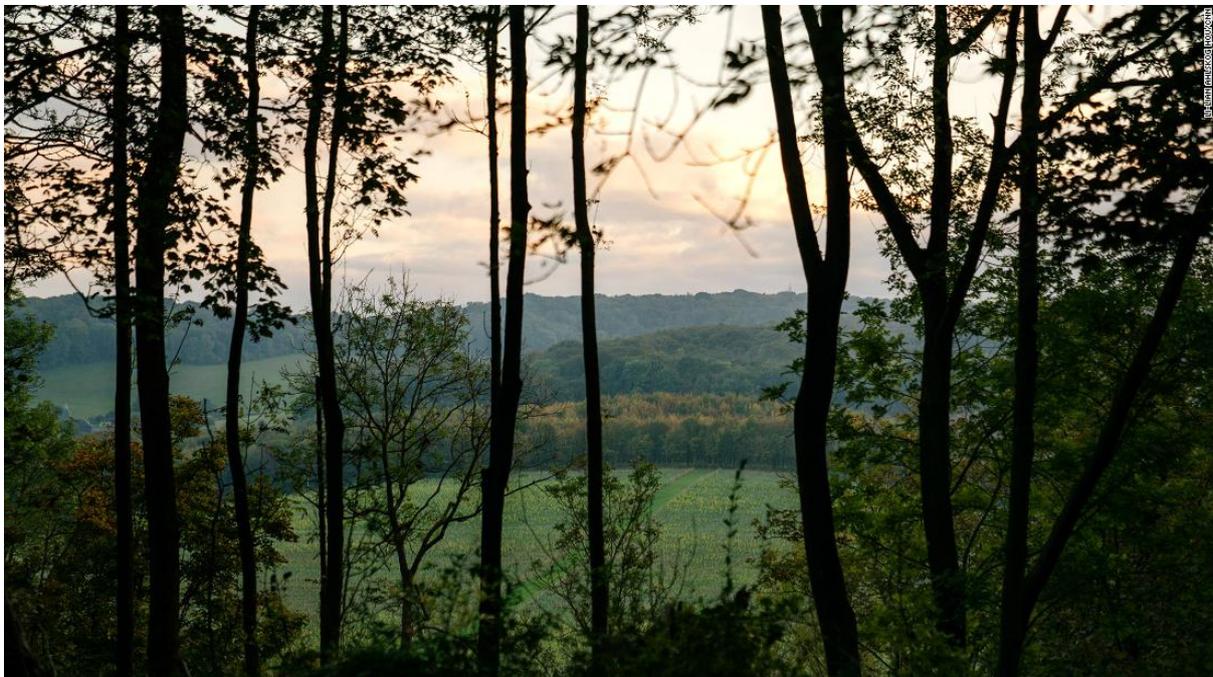
"We need to be working on a mosaic of habitats."

Craig Bennett, chief executive of The Wildlife Trusts, said that the government's Net Zero Strategy had significant gaps and that its authors, from the government, "don't seem to have fully recognized the role that nature can play."

There's little new for nature in the strategy, he said.

"Instead, old policies are being recycled -- and it's not enough."

The land restoration policies will rely on a modest \$880 million (£640 million) Nature for Climate fund, which had already been announced in the Conservative government's election manifesto, Bennett points out.



Plantlife is campaigning for grasslands to be recognized in the COP26 communique and protected on an international level.

A Department for Environment, Food & Rural Affairs (Defra) spokesperson told CNN it was protecting grasslands at some reserve sites in England, launching a pilot scheme for more sustainable farming practices, and giving more than \$55 million (£40 million) in grants for nature recovery projects.

"Biodiversity loss and climate change are global problems requiring global solutions," the spokesperson said.

But Defra did not comment when asked whether grasslands would be discussed at COP26 and sent quotes around the importance of ending illegal logging in forests as a nature-based climate solution.

A group of [38 British lawmakers are also calling for international recognition](#) and protection for grasslands at COP26. In a motion, they want parliament's House of Commons to recognize the role of grasslands for its ability to reduce emissions, reduce flood risk and act as critical ecosystems for pollinators.

- They urge "government ministers to use the opportunity of COP26 in Glasgow to seek international recognition and protections for species-rich grasslands, to lead by example in taking action to mitigate the effects of climate change and increase biodiversity and to ensure that those areas of natural beauty are preserved for future generations to enjoy."