Massachusetts bill would block logging, let state forests keep their carbon

Enlarge / A gravel path cuts through a forest in Mount Everett State Reservation in Massachusetts.

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We're going to have to do more than just reduce greenhouse gas emissions to combat climate change, according to an Intergovernmental Panel on Climate Change report issued last year. Given our current emissions trajectory, we'll also have to remove excess carbon from the atmosphere. Unfortunately, there is not a proven industrial technique that can accomplish carbon removal on the scale required.

But the IPCC authors do point out a rather banal way to draw CO_2 out of the atmosphere: trees.

This year, Massachusetts lawmakers proposed novel legislation that would enlist all state forest lands in the fight against climate change by protecting them from commercial logging. The law would affect roughly 600,000 acres. If it passes, "Massachusetts would become a model for wildland protection and for using its public lands to maximize carbon storage and address the climate crisis," said Edward Faison, senior ecologist at Highstead, a New England-based ecological research organization.

Out-of-date policies

“Most of [Massachusetts’] public land policies were written decades ago before global warming and climate change were recognized as a real and imminent threat,” said Massachusetts State Representative Michael Finn in a statement. “Now is the time to review these policies and make the necessary changes to modernize our public land laws.”

While the proposed legislation, House Bill 897, is said to be the first of its kind in the United States, it is not totally unprecedented. Countries such as Nigeria and Brazil have already pledged large-scale tree-planting efforts to fight climate change. However, the Massachusetts legislation conforms more closely with a recent scientific paper that promotes “proforestation,” or simply letting existing trees grow, as a better way to remove carbon from the air than planting new ones.

Intact, continuously growing forests sequester more carbon than those that are newly planted or periodically logged, said Faison, an author on the paper. This is because as trees grow larger, they tend to add more carbon-containing wood each year than they did the previous year. Additionally, when protected from logging, forests accumulate dead logs and branches on the ground, where they sequester carbon until they decay and their carbon is transferred to the soil. According to the paper, older forests can have half of their total carbon buried in the soil, and logging operations disturb the soil in a way that can release these stores.

Climate scientists are all in

Big hitters in the global climate science community are going to bat for the legislation. William Moomaw is a professor emeritus at Tufts University and has been a lead author on five IPCC reports as well as the proforestation paper. He

submitted testimony in favor of the bill at a recent state hearing. Famed Harvard ecologist E.O. Wilson wrote a letter of support in which he stated, “This is the single most-important action the people of the state can take to preserve our natural heritage.”

Not everyone supports the legislation, though. Ross Hubacz, chairman of the Massachusetts Society of American Foresters, testified at a state hearing that logging of state lands was necessary to promote healthy forests, create habitat for certain bird species, and provide wood products. Those suggestions, however, were contested at the same hearing. “There is no credible scientific evidence that… any native Massachusetts species needs logging to survive,” said Michael Kellett, executive director of Restore, a Massachusetts forest conservation organization.

Susan Masino, an author on the proforestation paper and Trinity College professor, supports a sustainable wood-products industry. She calls for a balance between resource extraction and the need to protect large tracts of intact wildlands to sequester carbon and provide wildlife habitat. She said the bill only applies to 20% of Massachusetts forests, those on public land; forestry practices on private land would not be affected by the legislation. The bill also allows for tree cutting to prevent fire and pest outbreaks, as long as the intervention is scientifically vetted.

Faison believes that the legislation could “inspire others across the region, country, and beyond” to pass similar laws. With the fourth-largest forested area in the world, the United States is in a unique position to bolster the role of forests in global climate change mitigation. If the legislation is enacted, it could provide valuable data on both implementation and effects if other states decide to follow suit.

“In Massachusetts, forests are estimated to sequester 13.33% of the state’s emissions in above-ground woody biomass,”

Massachusetts State Senator Adam Hinds said in a statement. “It is important to now recognize forests, particularly old-growth forests, as a key player in the battle to contain carbon and ensure that energy policy considers the role of forests.”

The legislation is currently under committee review.

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