SUSTAINING **OUR DEFENSE**

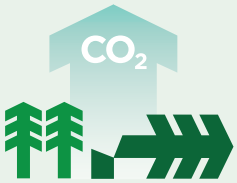
Southern Forests, Carbon & the Fight Against Global Climate Change

DOGWOOD ALLIANCE

From the cypress swamps, pine bogs and pocosins of the Middle Atlantic and Gulf coasts to the mixed pine-oak and hardwood forests of the Piedmont and Cumberland Plateau to the rich and diverse landscapes of the Appalachians and Ozarks, Southern forests are home to more plants and wildlife than any other region in North America.

Are We Devastating Our Frontline Defense Against Global Climate Change? Southern Forests are one of our region's most important and powerful tools for sequestering and storing carbon and other greenhouse gasses and protecting our environment from the dangers of global climate change. When natural forests are protected or managed responsibly, they accumulate and hold carbon, serving as carbon reservoirs, or "sinks," helping to lower our greenhouse gas emissions overall. When they are disturbed by logging or lost through conversion to industrial tree plantations or development, they release carbon dioxide and add to atmospheric levels of greenhouse gasses overall. Today, millions of acres of Southern forests are cut down each year (5-6 million clearcut acres per year), primarily to make paper and wood products and the impact on our environment is all too real — and all too negative. No one currently plays a bigger role than the paper industry.

Paper Production:
Delivering a One-Two-Three Punch to our Climate



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Paper is everywhere, in almost every aspect of our lives. The majority of paper made in the U.S. — from the bags, cups and boxes of the fast food chains to office paper and newsprint — begins in Southern forests. Unfortunately, most of the current practices used by pulp and paper producers have a devastating, triple-whammy impact on greenhouse gasses released into our atmosphere.

First, when trees are harvested, there is an immediate, long-term negative effect on the forests' natural sequestration of carbon. Cut trees immediately begin to release their stored CO2. Harvesting 2½ acres of an oak/pine forest with an average tree age of 30 years releases more than 55 tons of CO2 into the atmosphere. Yet, allowing that same plot to remain unharvested for 100 years would sequester more than 220 tons of CO2. This means that when trees are harvested, they not only begin to emit their stored carbon, but we also lose the ability to remove even more carbon from the atmosphere.

Large-pine plantations and clearcuts like this in the Green Swamp region of eastern North Carolina that supply a large paper mill are climate crushers, releasing CO_2 into the air and limiting carbon sequestration.

Even when replanted this pine plantation will not hold the same amount of carbon as a natural forest for decades.

Paper Production:
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Second, after a forest site is harvested, the smaller trees, logs, limbs and other parts of the forest left behind (called slash) continue to emit more CO2 as they decay or are burned. Even when trees are replanted, it can take up to 25 years for a newly planted forest to stop being a net emitter of greenhouse gases. It can take hundreds of years before it stores the same amount of carbon as an undisturbed forest.

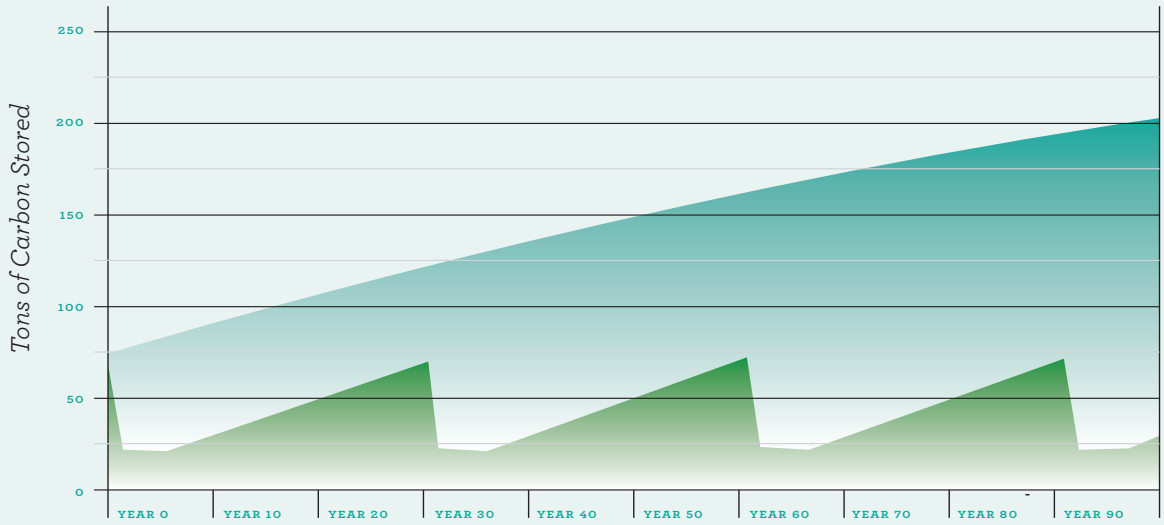

FIGURE:
Oak / pine accumulated carbon storage using USDA Forest Service data.

The blue area represents the 'no harvest' option, i.e., leaving the forest unharvested over a period of 100 years, compared with the green area that represents the same forest area regularly harvested and the resulting carbon storage in that stand.

Pine plantations like this cover 42 million acres across the US South. Better management can allow this area to provide a much larger carbon benefit – holding and sequestering more CO_2 to fight climate change.

Ditches and raised beds illustrate the degree of manipulation required to grow pine plantations in the Green Swamp region

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Third, once harvested trees arrive at pulp and paper mills, the manufacturing process required to convert them into paper packaging products emits enormous amounts of CO2 into the atmosphere. In addition, these mills consume approximately 3.5 tons of wood for every ton of paper produced. The wood that does not become part of the final paper product burned as fuel releasing additional CO2 into the air. In fact, a study of manufacturing processes at just two of the nearly one hundred mills producing paper packaging from virgin fiber in the Southern U.S, showed these two mills alone were responsible for increasing atmospheric levels of carbon dioxide by over 7,507,000 tons in a single year. According to the EPA, that's the equivalent of the emissions from 1,301,911 passenger vehicles or the annual emissions from nearly two coal fired power plants. This does not include the release of CO2 from the slash left behind or the reduced capacity of that land to absorb additional carbon dioxide after harvest.

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The One -Two Solution:
Using Recycled Fiber Dramatically Reduces CO_2 Emissions

The impacts of current pulp and paper manufacturing are horrendous on our forests and our climate, but fortunately, the answers to the problem are clear. The first step is turning away from virgin fiber and choosing paper and packaging from recycled fiber. The second step is managing existing forests more responsibly and sustainably.

Creating 100% PC Recycled paper not only helps preserve carbon-sequestering forests, it also reduces greenhouse gas emissions during the manufacturing process. In fact, creating paper from recycled fiber uses only one fifth of the energy required to create paper from virgin fiber, which dramatically reduces CO_2 emissions.

As consumers, we can seek and demand more recycled paper in our packaging and products. Even better, we can find ways to reduce our overall paper consumption, and insist that the companies we patronize to do the same. Less paper means less energy use, less pressure on forests, and more opportunities for forests to protect us by recovering carbon from our atmosphere.

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The One -Two Solution:
Better Stewardship of Forests Ensures a Healthier Climate

Paper producers and forest landowners can work together to managing forests more responsibly. Responsible forestry includes extending harvest cycles to store more carbon for longer periods, protecting key ecosystems and areas within forests that provide important habitat for wildlife and protection for streams and rivers in addition to sequestering CO2. It replaces outdated clear cutting with new and improved methods for harvesting that protects non-target trees and other forest plants.

Certification from the Forest Stewardship Council (FSC) in the U.S. is an indication that a paper product was produced in a responsible and sustainable manner with minimum impact on our climate. You can help more companies achieve FSC certification by looking for and purchasing products with the FSC designation. (Be aware, an “SFI” designation is NOT an indication of responsible forestry practices.)

The Biggest "Climate Criminal"

A Look at a Paper Industry Climate Polluter

When you look at the negative impacts of the pulp and paper industry on our climate, you cannot ignore the oversized impact of International Paper (IP) the largest pulp and paper producer in the Southern U.S. and the world. With such a large impact, its actions are important for both our forests and our climate. Unfortunately, IP has been unwilling to change its practices and become a better steward of precious forests resources here in the US South where its packaging mills produce the virgin fiber bleached board and other papers found in fast food packaging like the iconic fried chicken bucket from KFC. From clearcuts and lost natural forests to IP's big paper packaging mills to the cups, bags, boxes and buckets of the fast food companies and ultimately to the landfill, the impact is huge.

While IP doubles down on business-as-usual destructive forestry practices, it leads in greenwashing efforts with the deceptive "Sustainable Forestry Initiative" (SFI), while giving only lip service to the real stewardship achieved via FSC certification. Through just two of its 15 pulp and paper mills in the Southeast, IP spews billions of pounds of carbon dioxide into the atmosphere each year.

IP (and some other companies) may claim that their paper or paper production processes are "carbon neutral," but that's simply not true. Every time paper is made from virgin fiber, there is a huge opportunity cost that comes from releasing carbon from the forest instead of keeping it in the trees and out of the atmosphere.