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FLOORS

Cut Trees To Save  
The Environment  
- Who Knew?



## CARBON SEQUESTRATION, SUSTAINABLE FORESTRY, AND REDUCING GLOBAL WARMING


In the last 200 years, with the onset of the Industrial Revolution, there has been a significant increase of greenhouse gases in the air. Greenhouse gases released to and trapped in the atmosphere cause global warming. The greatest contributors are three gases that are both naturally-occurring and human-induced: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O). These three are released into the atmosphere at various stages of any product's or material's life cycle. For a wood product's life cycle, the stages proceed from the planting or natural regeneration of trees, through harvesting, product manufacturing, home construction, home use and maintenance, and end-life, where wood products are landfilled, burned, or recycled.

Carbon dioxide is the most commonly produced greenhouse gas. To reduce the concentration of CO<sub>2</sub> within the atmosphere in consideration for the life cycle of wood products within the forest, three approaches can be made. First there is carbon sequestration, next is substituting wood products for fossil fuel-intensive products such as steel and concrete, and lastly by using wood as fuel instead of fossil fuels. In this article, we will focus on storing carbon in forest and wood products, also known as carbon sequestration, and substituting wood products. Carbon sequestration removes CO<sub>2</sub> from the atmosphere by storing, or sequestering, carbon in the trees, roots, and soil of a forest, and by sequestering carbon in wood products — in housing stock, recycled into other products, and wood products in landfills.

We know through carbon sequestration that growing trees takes carbon out of the atmosphere and stores it in the wood. However, we also know that as trees mature and grow more slowly, they absorb less carbon. When trees die their decomposition releases the carbon. Therefore, simply growing trees only stores carbon once. That is not a sustainable reduction unless we use the trees before they mature and plant new trees to replace those that were used. Managing the forest by removing and replanting trees so that growth remains greater than harvest is sustainable forestry. This growth cycle can continue over and over again on a single plot of land, creating a sustainable decrease of carbon in the atmosphere.

Furthermore, carbon remains in the cut down trees even as they are transformed into wood products such as desks, chairs, and construction material. The best part is the manufactured wood products use less fossil fuel than steel, concrete, brick, and plastic products. For example, if two tons of wood are used in residential construction instead of steel, carbon emissions are reduced by 4 tons. In addition, the wood retains one ton of carbon, so five tons of carbon are displaced by using wood instead of steel!

In conclusion, wood presents opportunities for reducing global warming by growing more trees, managing the forest (cutting down trees and replacing them), producing wood products that are used in long-term applications, using more wood to build houses rather than fossil-intensive substitutes like steel and concrete, and substituting the use of wood fuel for fossil fuels. This can be good for the environment and still be economical when considering the high price of fossil fuels, tax incentives, and carbon credits.



[WATCH THE VIDEO](#)

Dr. Elaine Oneil from the University of Washington explains simply in this video

### WHERE DO YOU PLAY A ROLE IN ALL OF THIS?

Well, the average American home emits five tons of CO<sub>2</sub> a year. That is equivalent to burning 5,335 pounds of coal!

Calculate your carbon footprint by clicking here - <https://www.conservation.org/carbon-footprint-calculator#/>

Someone with a footprint of 13.50 tons of CO<sub>2</sub> requires 193 trees to be planted per year!

**References:**

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