

Wood is good

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I believe trees are the answer to many questions about the future of human civilization and the preservation of the environment. Questions like, "What is the most environmentally friendly material for home construction?" "How can we pull carbon dioxide out of the atmosphere and how can we offset the greenhouse gas emissions caused by our excessive use of fossil fuels?" "How can we build healthy soils and keep our air and water clean?" "How can we provide more habitat for wildlife and biodiversity?" "How can we increase literacy and provide sanitary tissue products in

developing countries?" "How can we make this earth more green and beautiful?" The answer to all these questions and more is "trees." Trees show us there can be more than one answer to a question, and sometimes the answers seem to contradict one another. But I hope to demonstrate that just because we love trees and recognize their environmental value doesn't mean we shouldn't use them for our own needs.

Over the past 10,000 years we have converted nearly one-third of the world's forests into cities, farms and pastures, the best one-third in terms of fertility and productivity. As long as the planet's human population was reasonably small compared with the vastness of global forests, deforestation remained a very local issue. But as numbers grew and more land was cleared for crops and grazing animals, we began to take our toll on the natural world. During the 18th and 19th centuries, forests of the industrialized European countries were rapidly decimated and wood soon came into short supply.

We began to learn how to farm trees in the same way we had learned to farm food 10,000 years earlier. The art and science of silviculture, more commonly known as forestry, emerged in central Europe as a way to increase the wood supply to feed the growing demands of industry. Up until about 250 years ago, forests had merely been exploited and the land was either converted to farm land or left to grow back on its own, often with trees not as stately or useful as the ones that preceded them. Now people began to replant harvested areas with new trees of desirable species for timber production. Over the past 200 years the forested area of Europe has tripled from about 10% to about 30%, due almost entirely to the transition from pure exploitation to forest management.

Similar patterns have occurred more recently in China and India, where the demand for wood products from an emerging middle class has resulted in a doubling of forest area in recent decades. During the past 20 years, China has added more new forest than any other country and has adopted an aggressive reforestation program that will continue into the foreseeable future. The forests of Canada, the U.S., Australia, New Zealand, Chile, South Africa and Japan are all stable or growing in area due to the application of sustainable forestry management. And even though there is a net loss of forests in Brazil and Indonesia due to clearing for farming, there is also a major effort afoot to establish sustainable plantation forestry over large areas.

It may seem ironic that with few exceptions the countries that use the most wood have a stable or growing area of forest whereas the countries that use the least wood are losing forest as more land is cleared for agriculture. There are two reasons for this apparent contradiction. First, the adoption of intensive agricultural practices in the industrialized countries makes it possible to grow much more food on the same amount of land. Second, it is precisely because we use so much wood that the area of forest is maintained. We may think that when we buy wood from a lumberyard we are causing a bit of forest to be lost somewhere. But what we are really doing is sending a signal into the marketplace to plant more trees to produce more wood to supply the demand in the lumberyard. It is no different from any other renewable crop; it's just that trees take longer to mature than annual farm crops. As long as the demand for wood is steady and strong, landowners, both private and public, will plant trees to supply that demand.



There is the same area of forest in both the U.S. and Canada today as there was 100 years ago; in fact, the area of forest has been growing in recent years. This is despite a tripling of population and an even larger increase in the consumption of food and wood products. About 85% of timber production in the U.S. is from private lands. Those millions of individual landowners could easily remove the forest from the land and grow crops like corn or cotton or raise cows for beef. But they choose to grow trees because they know they will get a good price for them to pay their taxes, send their children to college and live a good life. Because landowners choose to grow trees, the land remains forested, providing habitat for other plants and wildlife, pulling carbon from the air, protecting soil from erosion and making the landscape beautiful. Rather than illustrating the common belief that forestry destroys the forest, it is truly a win-win solution for the environment and the economy, maintaining the land in a forested state while providing an income for the owners.

Of course it is important to maintain large areas of land as parks and wilderness, and make them off-limits to industrial development for factories, managed forests or farms. The World Wildlife Fund, one of the largest nature protection groups, states that 10% of the world's forests should be protected from development. I would have no problem with 15% or even more in some cases. In California, about 25% of the natural range of the coastal redwood forest is completely protected. The redwood is a unique

tree, the tallest in the world, and creates such a beautiful ecosystem, that it is reasonable to protect a significant percentage as natural forest. But some anti-forestry activists are never satisfied.

They would fight until every tree was protected as if using trees for wood products was unnecessary. Redwoods produce a unique wood that is both durable for outdoor use as well as beautiful in color and texture. Therefore it is also reasonable that large areas of the redwood forest be sustainably managed for timber. The most important thing is to make sure that as much of the forest as possible is retained either for protection or forest management, and as little as possible is deforested and converted to non-forest uses.

In recent years, anti-forestry activists have claimed forest harvesting and forestry in general has a negative impact on climate change. The group ForestEthics (an offshoot of Greenpeace) claims forestry amounts to a "carbon bomb," referring to the release of CO₂ from decomposing wood immediately after harvesting.



It is true that there is a net release of CO₂ as a result of harvesting, but the activists fail to take into account that new trees are soon established and that they absorb all that CO₂ back over time as they grow into a new forest. And they fail to take into account the reduction in wildfires in managed forests, which reduce the amount of carbon that goes into the atmosphere. A hot wildfire not only burns trees but it also burns soil, causing a far greater release of carbon than just harvesting the trees. And, most important, the wood harvested is used to build homes where the carbon in them remains stored for many years. In addition, when we use wood we avoid the use of non-renewable materials such as steel and concrete, which require large amounts of energy to manufacture, putting more CO₂ into the atmosphere.

In the final analysis, the combination of harvesting trees and then reforesting the area, suppressing wildfire, storing carbon and using renewable wood instead of non-renewable materials has a large net positive impact in terms of greenhouse gas emissions. Yet in order to further their anti-environmental aim of curbing the use of wood, activists distort the truth and mislead the public. They make these claims despite the fact that both the Kyoto Protocol on climate and the Intergovernmental Panel on Climate Change (IPCC) have clearly recognized the benefits forest management bring to reducing greenhouse gas emissions.

When it comes right down to it, we must recognize that wood is the most abundant and most environmentally friendly renewable source of both materials and energy resources on earth. About 75% of all our renewable energy comes from wood, used mainly for cooking and heating but also for making charcoal, drying lumber and producing pulp and paper. Wood provides more than 90% of our renewable materials for buildings, furniture, packaging and sanitary products. One of the great ironies of the "environmental" movement today is that it claims to support all things renewable on the one hand while at the same time ignoring or rejecting the fact that wood is far and away the most important renewable resource. Environmental activists place huge importance on solar panels made from aluminum, silicon and gallium arsenide when in fact the most important solar collectors on earth are the leaves and needles of trees and other plants.

There is probably no better way to make trees the answer than to use more wood for our buildings and other infrastructure. All things considered it makes sense both environmentally and economically to use more wood in our buildings, especially where it is not exposed to the elements and kept dry. If wood is protected from water and sunlight, it will last for hundreds of years. The more wood we use, the more trees we must grow and therefore the more land will remain forested. That is the real win-win solution for the environment and the economy.



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