

GREEN BUILDING FACT SHEET

WOOD PRODUCTS AND CARBON SEQUESTRATION

BACKGROUND

The burning of fossil fuels produces air pollution and carbon dioxide (CO₂), which is a principal greenhouse gas. Scientists report that greenhouse gas emissions are a significant cause of global warming, which is expected to increase the earth's temperatures and change weather patterns.

Trees, during their growth phase, draw carbon dioxide from the atmosphere, release oxygen back, and use carbon to produce wood and leaves. Through this process, trees remove or "sequester" large quantities of carbon dioxide from the atmosphere.

Wood building products have an important role to play with respect to climate change policy and programs, since the carbon stored in trees continues to be stored after harvest in forest products.

ISSUE

Each year, people contribute 8 billion metric tons of carbon to the air by using energy in their daily lives. Trees and oceans absorb much of the carbon dioxide emitted; less than half of

the 8 billion metric tons remains in the atmosphere to warm the planet. Balancing the generation and absorption of carbon has become a recent focus of scientific research.

Concerns over forest harvesting around the globe sometimes prompt consumers to turn to non-renewable materials, whose production generates more pollution than wood does. Governments and communities that seek to address the carbon



balance are not always aware of the role wood products play in minimizing impacts on the environment. Therefore, the attributes of wood are not being fully recognized in the design of sustainable communities, building rating systems and procurement policies.

As noted in the Intergovernmental Panel on Climate Change Fourth Assessment (IPCC) Report, Mitigation: "In the long term, a sustainable forest management strategy aimed at maintaining or increasing forest carbon stocks, while producing an annual sustained yield of timber, fiber or energy from the forest, will generate the largest sustained mitigation benefit."

WHAT YOU NEED TO KNOW

When a tree is cut down, the carbon it stored during its life cycle is retained within its cellular structure. The harvesting of trees and manufacturing of forest products transfers the carbon from the forests to the products. Those products, when used as building materials, remain in use and store carbon for long periods of time.

Maintaining a working forest by continuously planting new trees to replace those harvested keeps the forest in peak health and in the best condition to continue to remove greenhouse gases. Sustainable forest management practices ensure that the carbon-absorbing properties of the forest are preserved.

Sustainable forestry, in conjunction with widespread use of wood as a construction material, is a simple and cost-effective way to mitigate greenhouse gas emissions.

