

Print and Paper The Facts

Paper is one of the few truly sustainable products

Paper is made from a natural resource that is renewable, recyclable and compostable. These features, combined with the North American paper industry's advocacy of responsible forestry practices and certification, use of renewable, carbon-neutral biofuels and advances in efficient papermaking technology, make paper a product with inherent and unique sustainable features.

- Paper is based on wood, a natural and renewable resource that can be planted, grown, harvested and replanted. Each year forests in the U.S and Canada grow significantly more wood than is harvested.^{1,2}
- “Paper has been an integral part of our cultural development and is essential for modern life. Paper helps to increase levels of literacy and democracy worldwide and plays an important role in protecting goods and foodstuffs during transit. Paper is made from renewable resources, and responsibly produced and used paper has many advantages over other, nonrenewable alternative materials.”³
- Paper is recyclable and in North America, paper is recycled more than any other commodity in the municipal solid waste stream, including plastics, glass and metals. The benefits of paper recycling include: extending the supply of wood fiber; reducing greenhouse gas emissions that can contribute to climate change by avoiding methane emissions (which are released when paper decomposes in landfills or is incinerated); contributing to carbon sequestration; reducing the amount of energy needed to produce some paper products; and saving considerable landfill space.⁴
- Only 36% of the U.S. timber harvest is used each year in manufacturing paper and paperboard, with the rest from sawmill residues and recycled paper products.⁵ In Canada, only 13% of the wood fiber to make paper comes from trees. The rest comes from sawmill residues (59%) and recycled paper (28%).⁶
- The paper industry has a number of respected certification schemes ensuring the paper you use has come from a sustainable forest source. These include the Forest Stewardship Council (FSC); the Sustainable Forestry Initiative® (SFI®) program; the American Tree Farm System (ATFS) and systems endorsed by the international Program for the Endorsement of Forest Certification (PEFC).⁷
- “Forest certification is widely seen as the most important initiative of the last decade to promote better forest management. It is a mechanism for forest monitoring, tracing and labeling timber, wood and pulp products and non-timber forest products [like paper], where the quality of management from environmental, social, and economic perspectives is judged against a series of agreed standards. The key to forest certification is the development of a system that combines auditing forest practices with tracing forest products.”⁸
- “The Sustainable Forestry Initiative, Forest Stewardship Council and American Tree Farm System all do an excellent job of making sure products from our forests continue to benefit the environment and our communities. The value of having more than one certification program is that they push each other to improve – and this improves forest management on the ground.”⁹
- Globally, only about 10% of the world’s forests are certified—the majority of which are in North America. By sourcing certified products, from a variety of credible standards, buyers are sending a message that they support sound forestry and buy responsibly.¹⁰
- Wood stores carbon indefinitely, even as a finished product, helping to reduce the effects of greenhouse gas emissions over the long term. Growing trees also release oxygen into the atmosphere, thereby supporting life on our planet.¹¹
- The biomass emissions from papermaking are part of the natural carbon balance and do not add to atmospheric



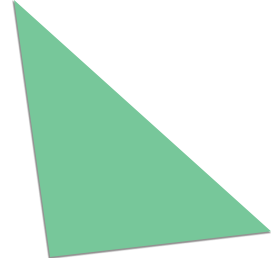
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concentrations of carbon dioxide, unlike emissions from fossil fuels. The forests which provide that biomass support key climate change mitigation technologies and practices currently commercially available including, “afforestation; reforestation; forest management; reduced deforestation; harvested wood product management; use of forestry products for bioenergy to replace fossil fuel use; tree species improvement to increase biomass productivity and carbon sequestration; improved remote sensing technologies for analysis of vegetation/soil carbon sequestration potential and mapping land-use change.”¹²

- “On average, about 66 percent of the energy used at AF&PA member pulp and paper mills is generated from carbon-neutral biomass. In fact, forest and paper products facilities accounted for 62 percent of the renewable biomass energy consumed by all [U.S.] manufacturing facilities in all sectors”.¹³ “Forest bioenergy has become a significant portion of the energy used by the Canadian pulp and paper sector (58% in 2007).”¹⁴
- Fifty-nine percent of the electricity used by AF&PA members was self-generated. A combined heat and power (CHP) generation process produces the electricity and steam needed to manufacture the forest products, and exhaust steam from electricity-generating turbines is used directly to dry wood and paper and to heat production processes or buildings before being condensed and recycled back to steam generation boilers. “The use of CHP results in efficiencies in the range of 50 to 80 percent at forest products plants, in comparison to non-CHP electrical stations, such as utilities, with typical efficiencies around 33 percent.”¹⁵
- GHG emissions by the Canadian Pulp and Paper sector have dropped 79% since 1990 by decreasing its reliance on fossil fuels, increasing energy efficiency and reducing energy use.¹⁶

- “A changing energy mix and greater energy efficiency are clearly reducing energy use and greenhouse gas (GHG) emissions in the Canadian forest sector. The forest sector’s substantial cut in fossil fuel use between 2000 and 2011 has helped reduce direct emissions by 50% and total energy use by 30%.”¹⁷
- Greenhouse gas (GHG) emissions intensity [for members of the AF&PA] in 2010 was 10.5% lower than in baseline year 2005.¹⁸ The emissions intensity rate for pulp and paper mills and wood products facilities combined decreased by 22.5 percent since 2000. Between 2010 and 2012, this rate was reduced by 4.4 percent.¹⁹
- With 1.1% of the world’s greenhouse gas emissions, the value chain of pulp, paper and print is one of the lowest industrial emitters.²⁰
- “At a global level, the greenhouse gas emissions from the forest products industry value chain are largely offset by sequestration in forests and forest products.”²¹ Atmospheric measurements indicate forest land (and ‘other land uses’, FOLU) is a net sink for CO₂, implying a ‘residual’ terrestrial sink offsetting FOLU emissions²².
- While carbon is stored in forest products like paper, it remains out of the atmosphere. Globally, forest products are estimated to store about 103 million tons of carbon annually.²³ The net sequestration of carbon stored in forest products is estimated to be the equivalent of 540 million tons of carbon dioxide per year.²⁴ “Substitution of wood for non-renewable resources can reduce GHG emissions, e.g., when wood is substituted for emission-intensive materials such as aluminum, steel, or concrete in buildings. Integrated optimization of C stocks in forests and in long-lived products, as well as the use of by-products and wastes for energy, can deliver the highest GHG benefits”.²⁵

¹ [USDA Forest Service, 2012](#)

² [Natural Resources Canada, 2014](#)

³ [World Wildlife Fund \(WWF\), 2010](#)

⁴ [U.S. Environmental Protection Agency \(EPA\), 2013](#)

⁵ [Dovetail Partners Inc., 2014](#)

⁶ [Forest Products Association of Canada, 2012](#)

⁷ [American Forest and Paper Association, 2014](#)

⁸ [World Wildlife Fund, 2010](#)

⁹ [M. Goergen, Exec. Vice President, Society of American Foresters, 2010](#)

¹⁰ [Sustainable Forestry Initiative, 2012](#)

¹¹ [Environmental Protection Agency, 2013](#)

¹² [Intergovernmental Panel on Climate Change, 2007](#)

¹³ [American Forest & Paper Association, 2014](#)

¹⁴ [Natural Resources Canada, 2010](#)

¹⁵ [American Forest & Paper Association, 2014](#)

¹⁶ [Natural Resources Canada, 2012](#)

¹⁷ [Natural Resources Canada, 2014](#)

¹⁸ [American Forest & Paper Association, 2012](#)

¹⁹ [American Forest & Paper Association, 2014](#)

²⁰ [World Resources Institute, 2009](#)

²¹ [World Business Council for Sustainable Development & National Council for Air & Stream Improvement, 2007](#)

²² [International Panel on Climate Change, 2014](#)

²³ [Dovetail Partners, 2010](#)

²⁴ [National Council for Air and Stream Improvement, 2007](#)

²⁵ [International Panel on Climate Change, 2014](#)

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