

Paper: A Resource

Forests are one of our most treasured resources, but they are disappearing at the rate of 20 football fields per second because of pulp and paper production. Nearly 50% of all trees harvested in North America are turned into some type of paper product. Global production in the pulp, paper and publishing sector is expected to increase by 77% from 1995 to 2020, so we must act now to preserve our forests. Using post-consumer recycled paper reduces the need to log forests.

Green Print Solutions for Saving Paper

It takes a combination of long and short fiber to produce paper. Long softwood tree fiber gives paper its strength, and short fiber taken from hardwood trees provides paper with its flexibility. Recycled (deinked) paper fiber makes a ready replacement for virgin hardwood fiber in paper because of its short fiber length. Substituting deinked for virgin fiber no longer affects paper quality and makes a significant difference in the overall quantity of trees used for a publication.

The paper industry consumes much more than just our forests. Producing paper from virgin fiber is both energy and water intensive, and releases significant amounts of greenhouse gases into our atmosphere. Using recycled paper measurably reduces these impacts. Every ton of recycled fiber that displaces a ton of virgin fiber results in the following reductions in usage:

- Wood - 100%
- Total energy consumption - 27%
- Waste water - 33%
- Air particulate emissions - 28%
- Solid waste - 54%

Pre- and Post-Consumer Recycled Paper

Using recycled paper is THE most important step in reducing a magazine's ecological footprint. However, some recycled paper is more preferable than others. When buying recycled, choose paper with post-consumer recycled content where possible.

Pre- and post-consumer materials differ in a very simple way. Pre-consumer material is that which has never reached an end user, or consumer. This includes printer scraps, paper mill trimmings and magazines that never make it off the newsstands. Post-consumer waste is paper that met its intended use, and was then discarded and recovered through a recycling system.

Choosing post-consumer recycled paper is important because it generates incentive to expand and improve our current paper recovery and recycling systems, diverting even more waste from landfills. In Europe no such distinction between post- and pre-consumer exists because of the highly efficient recycling collection systems. Paper accounts for approximately 40% of the solid waste clogging up U.S. landfills, and while recycling has increased in years past, recovered printing and writing grades of paper remain extremely low. Publishers have an opportunity to create the market for ever-increasing rates of recycled office paper.

Paper Recycling Resources

- Publishers should find out what their current paper is costing the environment. Environmental Defense's Paper Calculator will figure out the environmental toll that each publication is exacting, how much waste it's producing, and what the savings are when recycled paper replaces virgin paper.
- Start looking at viable post-consumer recycled and even tree-free paper options to replace current paper. Choose the highest post-consumer recycled content available. Check out the environmental paper listings courtesy of Conservatree.

Paper Production and Consumption Facts

Global and U.S. Paper Production and Consumption Statistics.

- Of the global wood harvest for "industrial uses" (everything but fuelwood) 42% goes to paper production, a proportion expected to grow by more than 50 percent in the next 50 years. (Abramovitz, "Paper Cuts", WorldWatch Institute 1999, p. 124)
- Industrialized nations, with 20 percent of the world's population, consume 87 percent of the world's printing and writing papers. (Klaus Toepfer, Executive Director, United Nations Environment Programme, Keynote Address UNEP's 7th International High Level Seminar on Cleaner Production, 29-30 April 2002)
- Global production in the pulp, paper and publishing sector is expected to increase by 77% from 1995 to 2020 (OECD Environmental Outlook, 2001, p.215)
- The pulp and paper industry is the single largest consumer of water used in industrial activities in OECD countries and is the third greatest industrial greenhouse gas emitter, after the chemical and steel industries (OECD Environmental Outlook, p. 218)
- Paper pulp exports from Latin America from forests converted into plantations and from the harvesting and conversion of tropical and subtropical forests are expected to grow 70 percent between 2000 and 2010. (Mark Payne, "Latin America Aims High for the Next Century", Pulp and Paper International, 1999) • Tree plantations host about 90 percent fewer species than the forests that preceded them. (Allen Hershkowitz, Bronx Ecology, 2002, p. 75)

Paper Impacts on Forests: Global and Regional Statistics

U.S. Southeast

- The Southern US, which contains the most biologically diverse forests in North America (Ricketts, Taylor H. et al, Terrestrial Ecoregions of North America, Island Press, Washington DC (1999)), is the largest paper-producing region in the world. (USDA Forest Service Southern Forest Resource Assessment, 2001)
- The paper industry is the largest consumer of forests in the Southern US, currently logging an estimated 5 million acres of forests (an area the size of New Jersey) each year. (USFS SFRA, 2001)
- While the Southern U.S. contains 31% of the nation's timber inventories, it is harvesting 54% of the nation's total timber volumes. (Ted Williams, "False Forests", Mother Jones May/June 2000, p. 73)
- Forest Service, monoculture tree plantations feeding the 156 chip mills in the South (110 of them built since 1990) now make up almost 40 percent of all pine stands in the southeastern U.S., and within twenty years, if current trends continue, tree plantations will make up 70 percent. (Williams, 2000, p. 73)
- 75% of the plantations established in the last 20 years have been established at the expense of natural forests (USFS, SFRA 2001) and the conversion of forests to plantations is the leading cause of freshwater wetland loss in the region. (US Fish & Wildlife Service, Status and Trends of Wetlands in the Conterminous United States 1986 to 1997.)

- Rural communities where the paper industry is concentrated are economically worse off than other rural communities, experiencing higher levels of poverty and unemployment and lower expenditures on public education. (USFS SFRA, 2001)

British Columbia, Canada

- Temperate forests are the most endangered forest type on the planet (World Resources Institute, 1997)
- Temperate rainforests only ever covered 0.2% of the world's land surface (Ecotrust and Conservation International, 1992)
- Temperate rainforests are truly ancient forests and contain some of the world's oldest trees.
- BC is home to a quarter of the world's remaining ancient temperate rainforests (WRI, 1997)
- One out of eight animal species in BC is at risk of extinction, according to the BC Ministry of Environment. Logging was identified as one of the primary contributing causes (BC Ministry of Environment, State of the Environment Report 2000).
- BC's Ministry of Forest data states that the rate of logging in BC is unsustainable (BC Ministry of Forests)
- 90% of the logging in British Columbia (BC) occurs in ancient forests (BC Ministry of Forests).
- Over 40% of the trees cut in BC are used to produce paper (Markets Initiative, 2001)

Indonesia

- Pulp production has more than quadrupled in the last decade, more than 1.4 million hectares of natural forest have been replaced by plantations. (Abramovitz, 1999, p. 25)
- Satellite data shows that 80 percent of the fires that burned over 2 million hectares of Indonesian forest in 1997 and 1998 were set mainly to clear land for palm oil and pulpwood plantations. ("The Year the World Caught Fire", Nature December 1997)

Environmental Benefits of Recycled Paper

Switching from virgin to recycled content paper results in many benefits. Research by the Alliance for Environmental Innovation has shown that each ton of recycled fiber that displaces a ton of virgin fiber used in coated groundwood paper (stock used in magazines):

- Reduces total energy consumption by 27%
- Reduces net greenhouse gas emission by 47% and reduces particulate emissions by 28%
- Reduces wastewater by 33%, reduces solid waste by 54%, and reduces wood use by 100%

30% Postconsumer Copy Paper

One ton (40 cases) saves the equivalent of:

- 7.2 trees [forty feet in height and 6-8 inches in diameter] (Conservatree, www.conservatree.org)
- 2,100 gallons of water, 1,230 kw hours of electricity, and 18 pounds of air pollution (Californians Against Waste, www.cawrecycles.org)

100% Postconsumer Copy Paper

One ton (40 cases) saves the equivalent of:

- 24 trees (forty feet in height and 6-8 inches in diameter) (Conservatree)
- 7,000 gallons of water, 4,100 kilowatt hours of electricity, and 60 pounds of air pollution (Californians Against Waste)

The Environmental Paper Network

A top resource for purchasers, environmental organizations, industry, and individuals. The Environmental Paper Network is a diverse group of environmental organizations joined together to support socially and environmentally sustainable transformations within the pulp and paper industry. The Network developed the Common Vision as a framework to guide necessary shifts in production and consumption.

<http://www.environmentalpaper.org/>