



## Toolkit for Responsible Paper Use

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# Paper Impacts and Solutions

## Introduction

Book publishing is a wonderful endeavor which advances literacy, inspires creativity, and contributes to cultural evolution. Despite the valuable contribution of book publishing, as with many industries, the current book paper production and consumption cycle can be improved in a manner which benefits the common good. Page one outlines the justification for industry innovation and page two provides an introduction to best practices as it relates to paper choice.

## Global Warming

The paper industry emits the fourth-highest level of carbon dioxide among manufacturers, according to the Department of Energy. Added to this, the printing and writing sector (of which books are a part of) uses about 95% virgin fiber. This is a big issue because this demand for virgin fiber contributes to deforestation and doesn't help to keep paper out of landfills....which is key as the facts illustrate below:

- The Food and Agriculture Organization (FAO) estimates that deforestation accounts for 25 percent of the annual emissions of carbon caused by human activity. Additionally, researchers at Ohio State University in 2005 found that the carbon content of regrown forests - some of which had been in recovery for 70 years—was just one half the amount stored in nearby forest stands that had never been cut—**the less pressure on forests, the better.**
- Paper comprises nearly 40% of the material in landfills and the decomposition of paper produces methane—a **greenhouse gas with 21 times the heat trapping power of carbon dioxide.**
- So....specifying postconsumer recycled fiber results in demand for recovered paper—keeping it out of landfills. Postconsumer recycled fiber also requires 30-40% less energy in its lifecycle and conserves 2,000 – 3,200 pounds of carbon dioxide for each ton of virgin fiber that it replaces

## Endangered Forest Impacts



It is estimated that in the past three years, 3 to 4 million tons of varying grades of book paper were shipped to U.S. book publishers<sup>1</sup>. This required the consumption of 60-90 million trees<sup>2</sup>. The origin of these trees is a cause for concern as many are sourced from Endangered Forest regions and in ways that are negatively impacting local communities. In the **Southeastern U.S.**, book paper is surprisingly one of the top ten paper products produced and represents 6-10% of all regional paper production<sup>3</sup>. In the Southeast, the paper

industry is currently logging an estimated 6 million acres of forests each year—with many native forests converted to plantations (see photo above) that support 90% fewer species. One of North America's other major paper sourcing regions is the Canadian Boreal. The **Boreal Forest** is a nesting ground for nearly 40% of North American bird species, plays a particularly vital role in mitigating the impacts of climate change, and stores between 7 and 11% of the world's terrestrial biospheric carbon<sup>4</sup>. It is estimated that 2.5 million acres of forest are cut each year and 65% of trees cut in the Boreal are harvested specifically to make paper—much of it consumed by publishers (news, book, magazine, catalog) in the U.S. The issues in North America are also true in Indonesia and South America—two large and expanding pulp and paper producing regions.

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<sup>1</sup> Data from Pulp and Paper Factbook 2001-2004

<sup>2</sup> Based on calculations provided by Environmental Defense, 2004

<sup>3</sup> Compiled from data in the Lockwood Post Directory, 2004 [as identified by the Dogwood Alliance]

<sup>4</sup> "Boreal in the Balance: A Status Report", January 2005: Canadian Boreal Initiative

## Social Impacts:

Individuals from both indigenous and rural communities represent the faces of the forest and their way of life is being altered due in part to ever-increasing market demands for paper and the associated short-term oriented forestry practices of many of the largest paper manufacturers. In the Southeast, biodiverse forests are rapidly being converted into pine plantations for optimal pulp yield and are intensively managed with chemical herbicides and fertilizers. The use of chemical fertilizers on tree plantations in the South exceeds the sum of all the fertilizers used on tree plantations in the rest of the world<sup>5</sup> and has been linked to adverse health impacts for local community members. Many indigenous communities are also being negatively impacted by the paper production/consumption cycle. Today there are about 500 indigenous communities within the Boreal forest, many of them beyond the reach of roads and accessible only by air or water. Some communities, including Grassy Narrows in Ontario and the Innu in Quebec, and are losing traditional-use lands to paper companies that are not integrating their conservation wishes into forestry plans. [photo from youth blockade in Ontario]



## Paper Choice: Stewardship in Action

Publishers seeking to improve their social impacts and eliminate their use of Endangered Forest fiber are adhering to the precautionary principle and maximizing the use of recycled and FSC certified fiber.

Countless corporations in varying sectors [including over 95 U.S. book publishers] have made commitments and changes in paper choice to maximize their use of recycled and/or FSC certified paper.

## The Benefits of Recycled Fiber

Approximately half of all paper produced is collected in the U.S. This is a good rate and can improve significantly. Using recycled fiber (postconsumer and deinked preconsumer) ensures that the paper comes from old paper instead of new trees. This process supports recycling markets, preserves landfills, saves natural resources and reduces the pressure on Endangered Forests. According to the Paper Calculator, each ton [avg: 1,300 books] of recycled paper that replaces a ton of virgin freesheet paper saves the equivalent of:

- 2,108 pounds of greenhouse gases
- 8,750 gallons of water
- 24 mature trees

*Note: The EPA and Environmental Paper Network's minimum suggested guidelines for recycled fiber are 30% postconsumer recycled for uncoated paper and 10% postconsumer for coated papers*

## Forest Certification – Eliminating Risk and Supporting the Best Practice

There are several different forest management systems and most have shown continual improvement. The Forest Stewardship Council (FSC) certification system is the only system that is endorsed by the Environmental Paper Network, World Wildlife Fund, ForestEthics, Natural Resources Defense Council, and hundreds of other environmental organizations. The rationale for the strong support for FSC is related to the fact that the FSC certification ensures:

- Adequate protections for Endangered and High Conservation Value Forests
- Natural and biodiverse forests were not converted to single-species tree farms after harvest
- The concerns of indigenous and local communities are adequately integrated into forest plans
- Biodiversity and landscape integrity are maintained according to the highest standard

## Signs of Change

In the past four years, 24 new book papers with strong environmental attributes have been developed and premiums have dropped from 15-20% to between parity and 5% presently. As publishers continue to take formal and meaningful steps towards using responsible paper, these trends will continue in the right direction.

<sup>5</sup> Dogwood Alliance, 2004

# Steps to Environmentally Responsible Book Production

## Connecting the Dots

As large consumers of paper, publishers that are interested in improving the environmental impacts of their industry are setting goals and implementing policies that create positive changes throughout the supply chain from the printer to the mill to the forest.

## Policy Guides Practice

In order to reach environmental goals, successful publishers start with a vision. They make a voluntary commitment through the development of an internal policy or statement of intent. This commitment demonstrates to printers, suppliers, and mills that the market is shifting and they will need to invest in developing new papers to meet the growing need. Publisher commitments have been instrumental in the development of 24 new environmental sheets in North America within the last 4 years. The policy or commitment also serves to reinforce environmental responsibility as a priority in addition to creating cohesion within the many layers of a publishing company. By 2012, participating publishers will make their best efforts to:

- Eliminate the use of papers that contain fibers from Endangered Forests
- Utilize an annual aggregate average of at least 30% recycled fiber (a majority to be postconsumer)
- Utilize an annual aggregate average of at least 20% of paper that is certified by the Forest Stewardship Council (FSC) or equivalent certification system
- Maximize production efficiency and reduce waste

## It's a Process

Each publisher approaches innovation differently. After making environmental responsibility a company priority, many “early adapters” have followed a process that includes the following steps:

**Step 1:** Develop a committee or working group that will develop a policy and establish a plan with goals and benchmarks (see policy template and responsible paper guidelines)

**Step 2:** Inform printers and suppliers re: goals of company commitment/policy and expectations

**Step 3:** Negotiate with printers and suppliers or work with new partners if existing vendors do not meet company needs (use supplier listing: <http://www.greenpressinitiative.org/suppliers.htm>)

**Step 4:** Phase-in increasing amounts of titles on environmental papers, or leverage a full season's volume to decrease prices by making quick and comprehensive shifts

**Step 5:** Market corporate responsibility by providing information about commitment and resource savings on title page or back cover. [Many use Green Press logo provided their company has a strong paper policy and the paper meets or exceeds GPI's minimum criteria]

**Step 6:** Continue to improve, track and report regularly

## Case Studies

### Random House Inc.

In May 2006, after over a year of engagement with Green Press Initiative and supply chain partners, Random House announced plans to increase the company's overall use of recycled fiber from 3% to 30% (measured in tons) by 2010—with postconsumer fiber slated to be a significant portion of this goal. This is equivalent to replacing over 30,000 tons of virgin fiber with recycled fiber—and when accomplished will represent a savings of 550,000 trees and over 80 million pounds of carbon dioxide each year. In addition, Random House committed to eliminating fiber from High Conservation Value Forests, preferencing FSC certified paper, and tracking and reporting their progress. As of Fall 06, they are currently taking steps to better understand their footprint in the forest, talking to a wide array of suppliers, and formalizing their implementation strategy.

### **Harvard University Press: Steady Progress**

Harvard University Press formalized their paper policy in November 2004. Of the over 600 titles (new and reprints) that Harvard University press prints each year, approximately 30% of the list is on 30% to 50% postconsumer recycled paper. Harvard stocks these recycled grades at a majority of their top printers and is fortunate that their digital printers stock these papers on their own and without an upcharge. Despite being a small to midsize publisher, Harvard finds that when they purchase a truckload of paper for stocking at a print house, that they typically save between 5% and 10% compared to if the printer buys the paper. In some instances, Harvard is able to use recycled papers without paying more and in other instances are paying \$3 to \$5 more per cwt for 50% pcw recycled paper—or the equivalent of \$0.03 to \$0.05 cents more per book. When there are higher costs, general management is very supportive, stating that “the increased use of recycled/FSC stock will boost HUP’s image as an environmentally responsible publisher within both the University and the book marketplace.” Harvard is steadily moving towards having half of all titles on paper that is 30% to 50% postconsumer recycled and ideally FSC certified.

### **Baker Publishing Group: A Leader in the Religious Publishing Segment**

Baker Publishing Group is the third largest publisher in the Evangelical Christian publishing market, and it is cited on the Emergent Village website as the only green Evangelical publisher in the U.S. As a first step, Baker made a commitment to the cause through the development of a paper policy in 2003. Their first move was to task their primary printers to locate affordable and reliable source of recycled paper and started with a 30% postconsumer recycled grade. Beginning in December 2006 all eligible trade non-fiction titles, new or reprinted, will be printed on 30% postconsumer recycled paper or higher. Many of these titles will include an eco savings statement on the copyright page.

### **Thomson-Shore: A Book Manufacturer Exceeding Expectations**

Thomson-Shore was the first book manufacturer to make a public commitment to significantly increasing their use of recycled fiber from 5.7% to 25% within a 3 year period. Within two years of making this commitment, they had replaced over 1,500 tons of virgin fiber with postconsumer recycled fiber and exceeded their 25% goal. They established acceptable prices points, partnered with a paper mill, and committed to use a large volume of high postconsumer recycled paper as one of their default house sheets. Their commitment and willingness to commit significant volume enabled Thomson-Shore to meet their environmental goals economically—without passing any cost increases to their customers. There were minimal cost increases (~1%) that were offset by improving efficiencies at the operational level. Thomson-Shore hopes to continue to expand the success of their initiative and to begin using more recycled papers that are FSC certified as the market develops.

### **Green Press Assistance and Resources**

The Green Press Initiative is grant-funded and here to support publishers in their efforts to make paper-use transformations that benefit the common good. We provide tools and resources (see paper, supplier, and printer lists and other tools online), planning and implementation assistance (day-to-day problem solving), and are a resource for support. The GPI also works with printers and mills to continue developing an infrastructure for book publishers that meet production needs with the least environmental impacts.

### **The Challenge as an Opportunity**

Shifting paper policy and operating practices is a new thing for most publishers. When any business prepares to venture in a new direction, the most important step, and perhaps the most difficult, is to set the goal and act as if it is possible. And realistically, switching to papers that preserve Endangered Forests and conserve natural resources is possible...as possible as was the industry conversion to acid free papers.

## Guidelines for Responsible Paper-Use

The following guidelines and recommendations are designed to serve as a basis for publishers as they develop strategies for converting to book papers with improved social and environmental attributes. They are based upon standards developed by both the U.S. EPA and the Environmental Paper Network. Improved paper characteristics will conserve natural resources and help to preserve Endangered Forests. Some publishers will incorporate these policies directly through changes in their purchasing policies and other publishers will implement changes through their printers. (Recommendations are for all new titles and reprints)

### **I Maximizing Postconsumer Recycled Content**

Postconsumer recycled fibers are derived from recovered paper and thus are fibers that are ensured not to be directly sourced from ancient or endangered forests. Publishers committed to eliminating the use of fiber from old growth and endangered forests in their printed books will set goals and objectives to maximize their use of postconsumer recycled fiber. Listed below are standards recommended by the U.S. EPA and the Environmental Paper Network. Publishers are encouraged to meet or, ideally, surpass these minimum standards when using recycled papers.

#### Uncoated Minimum

- **30% postconsumer recycled**

#### Coated Minimum

- **10% postconsumer recycled**

### **II Maximizing the Use of Virgin Fiber Certified to the Best Standards in Forestry (FSC)**

Currently the FSC [Forest Stewardship Council] certification for virgin fiber is widely accepted in the conservation community as the best practice standard for forest management. Accordingly, publishers committed to eliminating the use of paper with fiber from Endangered Forests, preventing forest conversion, and valuing indigenous rights will set goals and objectives that incorporate the recommended strategies below for sourcing environmentally preferred virgin fiber.

- **Where available, the paper will be certified by the Forest Stewardship Council (FSC).**
- **If FSC certified paper is not available, publishers will encourage suppliers to use Chain-of Custody forms to track the source and origin of any virgin fiber, work in partnership to eliminate papers with fiber from Endangered Forests, and set goals for incorporating FSC fiber into paper.**

### Goals and Benchmarks

Publishers have the opportunity, through the products they choose and those they reject, to serve as environmental stewards in improving the production practices of the entire book publishing sector. Establishing goals is the best way to provide clear signals and build alliances with the supply chain. The process for implementation will vary between publishers, however all publisher are encouraged to meet or exceed the following goals:

- By 2012, achieve an aggregate average (based on weight) of 30% recycled content (majority postconsumer), and
- By 2012, utilize FSC (or equivalent) certified papers, for at least 20% of paper-use.

Publishers are also encouraged to develop their own incremental benchmarks which can assist in realizing the above objectives. (For example, 20% recycled content, and 10% FSC certification by 2010; 25% recycled content and 15% FSC by 2011, etc. ).

# Paper Policy Template

## 1 page Policy Template

[Company Name] is committed to protecting the environment and to the responsible use of natural resources. As a book publisher, with paper a core part of our business, we are concerned about the future of the world's remaining Endangered Forests and the environmental impacts of paper production. We are committed to implementing policies that will support the preservation of Endangered Forests globally and advance best practices within the book and paper industries.

Toward these ends, [Company Name], as of [date] hereby establishes the following policy goals:

1. For books printed and bound in the U.S., [Company Name] shall endeavor to eliminate the use of papers that may contain fiber from Endangered Forests as soon as possible.
2. By 2012 we will endeavor to utilize an annual aggregate average of 30% recycled fiber (a majority to be postconsumer)
3. By 2012 we will endeavor to utilize FSC (or equivalent) certified papers, for at least 20% of paper-use.\*
4. [Company Name] will communicate these long-term policy goals with current and future supply-chain partners by circulating this letter and including relevant language in bid solicitations and contract negotiations.
5. [Company Name] will communicate these goals as a first step in the process of reaching our environmental objectives. We will encourage vendors to explore challenges and find solutions. If vendors are unwilling to engage in the necessary process to meet our product and pricing needs, then we will consider doing business with alternative vendors.
6. Where feasible, we will give purchasing preferences to papers that meet the criteria outlined in goal number two. Additionally, we will give purchasing preference to papers produced without the use of chlorine compounds.
7. [Company Name] will aggressively pursue efforts to minimize paper-use through efforts to maximize efficiencies and reduce waste.
8. As a means of accomplishing our goals [Company Name] will develop a plan of action with clear benchmarks and timelines. We will also track and report our progress towards reaching the stated goals.
9. We will make our best effort to implement policies that are consistent with accepted standards for responsible paper use. (Book Industry Treatise, Green Press and Environmental Paper Network Guidelines).
10. [Company Name] will accomplish the objectives stated above provided they can be achieved within our economic parameters.
11. We will pursue the steps listed above with non-U.S. suppliers and printers.

\* Note from #3. Currently, the Forest Stewardship Council (FSC) certification is widely accepted as the best practice standard for forest management. At such time that additional certification standards meet the rigorous criteria of the FSC, then [Company Name] will also utilize paper with fiber that is certified by according to these additional standards.

In recognition of the need to preserve natural resources and protect Endangered Forests, we also commit to encourage other publishers and suppliers to develop similar strategies and policies.

Signed,  
[President, Vice President, or Publisher]  
[Publisher Name]

# Forest Stewardship Council (FSC) Certification

*-A Best Practice Standard for Virgin Pulp and Paper*

*-Comparison to SFI (pg. 2)*

## **Background**

The Forest Stewardship Council is an international non-profit forest certification organization with members from over 70 countries whose interests reflect a unique combination of biodiversity conservation, environmental protection, civil society, indigenous rights, and wood and paper production. The FSC program is widely accepted as setting the highest standards for protecting people and the environment while allowing for the deliberate and careful logging of forests to support the continued use of the planet's most renewable resource—forests. Since 1993 FSC has certified forest operations in over 70 countries and has been a key driver in the transformation of the forest industry's logging practices.

## **Clear Differences Between FSC and Other Forest Certification Systems**

The Forest Stewardship Council (FSC) is widely accepted by the conservation community and even many in industry as the best-practice standard for forest management and for certified forest products such as wood or paper. FSC is the only forest certification system mentioned in the Environmental Paper Network's treatise for a sustainable paper production system which has been signed by nearly 85 environmental organizations internationally. If the differences between FSC and the many other systems out there such as the Sustainable Forestry Initiative (SFI) or the Canadian Standards Association (CSA) were negligible, then forest certification would be a non-issue. But this isn't the case. The key principles which set FSC apart from the rest include:

- **FSC ensures adequate protections for Endangered and High Conservation Value Forests**
- **FSC ensures that biodiverse forests have not been and will not be converted to plantations**
- **FSC adequately respects and integrates social concerns including the rights of indigenous communities**
- **FSC significantly reduces clear-cut size and chemical use**

## **FSC Fiber Availability**

In the past two years, FSC certification has grown at about 25 percent per year both in the U.S. and globally. In North America, there are approximately 30 million acres of forestlands that are FSC certified and this is expected to double to 60 million acres by early 2008.

To view reports that compare major forest certification schemes, go to:

<http://www.greenpressinitiative.org/tools.htm> and view hyperlinks to reports under the "Forest Certification" section.

**See side-by-side analysis chart comparing forest certification schemes on next page**

## Forest Certification Schemes

### Comparison of Forest Stewardship Council (FSC), Canadian Standards Association (CSA), Sustainable Forestry Initiative (SFI), and Program for the Endorsement of Forest Certification (PEFC)

	FSC	CSA	SFI	PEFC
Allows for best identification and protection of endangered, and High Conservation Value Forests	Yes	No	No	No
Prevents conversion of natural forests to monoculture plantations	Yes	No	No	No
Requires consensus solution when conflicts arise with affected indigenous communities	Yes	No	No	No
Prohibits use of illegally sourced wood	Yes	Yes	Yes	Yes
Prohibits use of both controversial wood sources and High Conservation Value Forests	Yes	No	No	No
Location where certification is available	Worldwide	Canada	USA and parts of Canada	Worldwide
Prohibits use of genetically modified trees	Yes	No	No	No
Total area of certified forestland (hectares)	75 million	74 million	52 million	>200 million (includes sum of FSC, SFI and CSA)
Requires an <b>equal</b> balance of social, economic, and environmental considerations	Yes	No	No	No
Is internationally recognized as the best standard in forest management by a wide range of environmental NGOs	Yes	No	No	No
Most widely preferred certification system by U.S. book publisher and printers*	Yes	No	No	No

Data obtained from the following sources:

EEM, Inc. "A Paper Buyers Guide to Forest Certification Schemes" 2007.

<http://www.greenpressinitiative.org/documents/Certification%20Comparison.pdf>

FERN. "Footprints in the Forest" 2004. [http://www.fern.org/media/documents/document\\_1890\\_1900.pdf](http://www.fern.org/media/documents/document_1890_1900.pdf)

\*Data obtained from surveys conducted by an independent party for the Green Press Initiative/Book Industry Study Group Environmental Trends Report

## Environmental Benefits of Recycled Paper

Using recycled fiber (postconsumer and deinked preconsumer) ensures that the paper comes from old paper instead of new trees. The Food and Agriculture Organization (FAO) estimates that deforestation accounts for 25 percent of the annual emissions of carbon caused by human activity.

Post-consumer fiber is only collected to about 48% so specifying post-consumer will keep more paper out of the landfill. That matters because 30% of municipal waste is paper.

Postconsumer recycled fiber accounts for a mere 5% of the fiber used in printing and writing paper (includes book paper) while the paperboard sector is at 47%, the newsprint sector is at 59%, and the tissue sector is at 50%. [AF&PA Statistical Highlights, 2004]. The place where demand needs to grow is in the printing and writing sector.

In the landfill, where 80% of discarded paper ends up, the decomposition of paper produces methane—a greenhouse gas with 21 times the heat trapping power of carbon dioxide [Environmental Defense, 2003, Q&A on Recycled Paper]

Postconsumer recycled fiber also requires 30-40% less energy in it's lifecycle and conserves 2,000 – 3,200 pounds of carbon dioxide for each ton of virgin fiber that it replaces.

Calculations Based on Each Ton (2000 lbs.) of Postconsumer Recycled Fiber That Replaces a Ton of Virgin Fiber Uncoated Freesheet [[www.papercalculator.org](http://www.papercalculator.org)]

<b><u>What</u></b>	<b><u>Enviro Savings</u></b>	<b><u>% Better</u></b>
<b><u>Energy Consumption</u></b>	<b><u>17 million BTU's</u></b>	<b><u>41.4%</u></b>
<b><u>Greenhouse Gas Emissions</u></b>	<b><u>2,108 pounds</u></b>	<b><u>38.8%</u></b>
<b><u>Hazardous Air Pollutants</u></b>	<b><u>2 pounds</u></b>	<b><u>92.7%</u></b>
<b><u>Water Utilization</u></b>	<b><u>8,750 gallons</u></b>	<b><u>49.7%</u></b>
<b><u>Solid Waste Generation</u></b>	<b><u>1,124 pounds</u></b>	<b><u>49.3%</u></b>
<b><u>Typical Trees</u></b>	<b><u>24 trees</u></b>	<b><u>10</u></b>