



ASSOCIATION OF AMERICAN PUBLISHERS, INC.

## **Association of American Publishers**

### ***AAP HANDBOOK ON BOOK PAPER AND THE ENVIRONMENT***

February 2008

#### **Executive Summary**

##### **About the AAP Paper Issues Working Group**

In June 2005, the Association of American Publishers established the Paper Issues Working Group (PIWOG) to provide its members with a forum to discuss environmental issues relating to the production of paper used in books, and a conduit for obtaining concise and accurate information in this area. The Group meets regularly with various constituents with interests in book production and the environment. The AAP PIWOG does not make specific recommendations to members or endorse any particular program or organization; rather, it compiles information and resources that can be used by AAP member companies in making their own decisions regarding paper supply.

##### **AAP PIWOG Membership**

The AAP PIWOG represents a broad cross-section of the AAP membership. PIWOG members include: American Chemical Society, Cambridge University Press, CQ Press, Hachette Book Group USA, Harcourt, HarperCollins USA, Harvest House Publishers, John Wiley & Sons, Keene Publishing, Lantern Books, Macmillan, McGraw-Hill, Pearson, Random House, Scholastic, Simon & Schuster and W. W. Norton.

##### **AAP Book Paper and the Environment Handbook Development**

During the thirty months of extensive consultation since the group's establishment, publishers have reached out, as a group and individually, to meet and engage in ongoing discussions with organizations representing a range of interests, including environmental advocacy organizations, forest certification and standards bodies, environmental industry consortiums and associations, economists, paper mills, and

others, to discuss governmental and environmental issues as they relate to book paper production. Among the organizations consulted were paper manufacturers, the Environmental Protection Agency (EPA), the Green Press Initiative, Metafore, the American Forest and Paper Association, Environmental Paper Network, Printing Industries of America, Magazine Publishers of America, and RISI. The *Handbook* summarizes information shared in those meetings.

The *Handbook* highlights opportunities and challenges facing the industries engaged in the process of creating books and bringing them to market, providing up-to-date information to assist in efforts to balance economic and ecologic realities. The *Handbook* is intended as an informational tool for book production professionals, their staff, and their executive management, interested in creating workable, independent sustainability programs. Areas highlighted include recycling, with pre- and postconsumer recycled fiber distinctions; forestry certification standards; chain of custody; issues facing paper and recycling manufacturers; worldwide practices and economic impacts; green production efforts; reducing consumption and waste; frequently asked questions; and organizational contact information.

The members of the PIWOG recognize that the book industry is but one facet of a global production, energy consumption, and waste disposal system that presents government, industry, and individuals with numerous questions on how to use our natural resources responsibly. The group hopes the *Handbook* will assist industry professionals, trade associations, and concerned citizens in initiating sustainable and viable programs for paper production and use in the future.

The *Handbook* will be updated periodically to keep the industry fully informed about new developments. AAP welcomes input and recommendations from all sources so that the *Handbook* will continue to accurately reflect ongoing areas of education and discussion with respect to paper production and the environment.

## **Key Issues Related to Book Paper and the Environment**

### *How Much of the Paper Generated from Forests is Used in Books*

Although statistics vary, somewhere between 17%<sup>1,2</sup> and 42%<sup>3</sup> of the 3.3 billion cubic meters of wood consumed worldwide each year goes into the production of all types of paper products. More than half the wood harvested globally is used for fuel, mostly for cooking and domestic heating.

In the United States, approximately 23 million tons of paper are made for printing and writing. Of that, roughly 4% went into book paper in 2006.<sup>4</sup> More and more wood is going into disposable products such as paper, shipping pallets, and packing materials.

### *“Recycled” Paper Defined*

For a publisher to claim that a book is recycled, 100% of the content must be made of recycled material. If less than 100% percent of the product is recycled, the statement must specifically indicate the percentage that is recycled (such as "20% percent total recycled fiber"). To the extent that the source of recycled content includes preconsumer material, there must be substantiation for concluding that the preconsumer material would otherwise have entered the solid waste stream. A publisher may (but is not required to) indicate specific percentages of pre- and/or postconsumer recycled fiber (such as “contains XX% total recycled fiber, including YY% postconsumer”).

### *Differences between Preconsumer, Postconsumer, and Recovered Paper*

**Postconsumer** waste includes fiber that was used at least once by one or more consumers.

**Preconsumer** waste includes fiber from returned, damaged or obsolete inventory, and printing waste from various sources such as mills and plants—none of which made it through to a sale to an end user.

**Recovered** waste includes both preconsumer and postconsumer fiber.

### *Returns Classifications*

Since they never made it to an end user, books that are unsold and returned to the publisher by bookstores and distributors are not considered postconsumer waste. Currently, bookstore returns are classified by the EPA as preconsumer waste. AAP has encouraged the EPA, as part of the Agency's efforts to increase paper recovery rates, to consider reclassification of returns as postconsumer waste. Presently, the classification under the EPA 1988 procurement guidelines is twenty years old. Returned books need to be diverted from landfills and must be de-inked and processed in the same manner as postconsumer waste. Recycling them provides many of the same environmental benefits as recycled materials currently classified as postconsumer waste.

### *Recycled Paper: Does It Cost More? The Benefits and Concerns*

There are many variables in paper cost, but recycled paper usually costs more than a virgin fiber grade of similar quality. The cost difference, however, may be offset by reducing basis weight, or brightness levels, or changing to a lesser grade groundwood paper. Mills that have de-inking plants and thus are able to produce their own de-inked pulp may include de-inked fiber in some of their grades at no extra charge.

The environmental benefits of using recycled paper include replacing a percentage of virgin fiber, resulting in the harvest of fewer trees, thereby protecting the forest and biodiversity; and reducing the need for landfill space and new incineration plants, resulting in fewer methane and other greenhouse gas emissions.

There is a concern that high-recycled content products incorporate fibers weakened by the recycling process, which could render them insufficient for maintaining quality in low basis weight, bulky (“thick”) products created by the publishing industry. Furthermore, the current supply of recovered fiber used for printing and writing grades has not kept up with demand. The use of fuel for transport of recovered waste and fiber to their destination points is also cited as an item to be factored into environmental impact analyses.

### **Sustainable Forest Management (SFM)**

Sustainable forest management is an approach to maintaining a forest that sets broad social and environmental goals. The Food and Agriculture Organization of the United Nations describes it as “the stewardship and use of forests and forest lands in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity, vitality and their potential to fulfill, now and in the future, relevant ecological, economic and social functions, at local, national and global levels, and that does not cause damage to other ecosystems.”<sup>5</sup>

Threats to sustainability include **illegal logging**, defined as the removal and/or sale of trees in violation of local, state, or national laws; and **deforestation**, defined as the removal of trees from an area with no intention of replanting. Deforestation includes the conversion of forestland for agricultural uses.

**Harvesting** is defined as the removal of trees from an area, but with the intention of permitting it to return to forest either by natural means or by replanting. One type of harvesting is **Clearcutting**, defined as the removal of every tree from a given area at one time. Although aesthetically unpleasing before regrowth begins, and in some cases damaging to the environment, in practice clearcutting can on the other hand be the most appropriate harvest method for certain types of forests. Like natural disturbances such as fires, windstorms, and floods, clearcuts create openings in the forest canopy that shade-intolerant species such as Douglas fir, aspen, and some pines need to regenerate. By concentrating the harvest in a smaller area, thus reducing road-building and harvesting disturbances in a broader area, clearcutting may minimize the impact to the larger surrounding forest. Clearcutting needs to be looked at on a case-by-case basis to evaluate its impact on the forest, either positive or negative.

### How Paper Is Certified/Major Certification Programs

Forest certification is the process of evaluating forests or woodlands to determine if they are being managed according to an agreed set of standards for sustainable forest management (SFM). Chain of custody monitoring is a major component of established standards; it refers to the process of verifying how wood has been sourced, to ensure that it has been acquired legally and from forests that are managed sustainably.

Three major certification programs are:

1. **Forest Stewardship Council (FSC)**, which was originally established by environmental groups to protect endangered forests in tropical, developing countries with few landowners and no sustainable forest management infrastructure, has now developed a set of principles intended to guide development of SFM standards worldwide. FSC principles address legal issues, indigenous and social rights, labor rights, and environmental impacts surrounding forest management. These principles guide specific national and regional standards that are developed through a collaborative, multi-stakeholder process. FSC certification requires independent, third-party audits by FSC-accredited organizations. FSC's controlled wood standard is a wood sourcing requirement, which based on forest area mapping developed by FSC, controls which wood sources that are not FSC-certified can be included in FSC-labeled products.

2. **Sustainable Forestry Initiative (SFI)** is a system of principles and performance measures developed by professional foresters, conservationists, scientists, and others that combines the perpetual growing and harvesting of trees with the long-term protection of wildlife, plants, soil, and water quality. The SFI Standard is based on considerations of economic, environmental, cultural, and legal issues, to improve sustainable forest management. It is the most broadly used certification in North America today. SFI requires producers to promote best management practices among the independent landowners and loggers from whom they purchase wood, and to do risk assessment and mitigation for fiber sourced outside North America, ensuring that it was legally harvested and comes from countries with laws protecting workers' health and indigenous rights. SFI certification requires third-party audits by accredited organizations. All members of the American Forest and Paper Association are SFI certified.

3. **The Canadian Standards Association (CSA)** is an independent, not-for-profit entity specializing in standards development, product certification, management system registrations, and forest certification. CSA's current SFM standard outlines requirements for managing Canada's forests to ensure their long-term viability, and addresses protected areas, biodiversity, aboriginal rights, soil and water protection, and

maintenance of forest ecosystems. Since Canadian forests are primarily publicly owned, the CSA-SFM standard places great emphasis on public participation at all levels down to the local community in identifying forest values and developing management plans that address the environmental, social, and economic concerns of all stakeholders. Certification to the CSA-SFM standard requires independent, third-party audits by an accredited organization, with mandatory annual reviews and a full audit every three years.

### **Where a Majority of the Book Paper Is Generated**

Old growth forests form part of the forest harvest in most regions of the world. There are few remaining in Europe and the United States, however, as a result of the history of land use and development in those regions. The forests of Canada were not cut as extensively in the past and remain mostly old growth. Canadian boreal forests comprise some of the largest, relatively undisturbed forest areas in the northern hemisphere, and there is concern that development activities (such as mining, oil and gas development, agricultural clearing, logging, and housing) could fragment these large ecosystems, changing the forest structure and threatening wildlife habitats and biodiversity. Boreal forests occupy the subarctic zone and are generally coniferous; 93% of Canada's forests are protected under provincial regulations ensuring regeneration under sustainable forest management practices.

Fiber for paper used to print books comes from various types of forests that are usually located near the paper mill. In North America, book paper is made in mills in Quebec, Ontario, Wisconsin, Michigan, Pennsylvania, Ohio, Maryland, Tennessee, New Hampshire, Maine, North Carolina, and Washington. All mills that manufacture book paper in North America are certified under one or more of the three main sustainable forest management systems in this part of the world: CSA, FSC, or SFI.

### **Use of Recycled Fiber**

China is a large and rapidly-growing consumer of recycled fiber, with much of it coming from the U.S. Although this offers an enormous market for U.S. recycling companies, the majority of such recyclables go to producing tissues, cardboard, and other nonbook products, and are of limited use for book publishers, who need a high grade of paper on which to print. Papermakers in China have increasingly turned to Europe and Japan to satisfy their ever-growing demand for recovered fiber, because of limitations in the U.S. supply. Paper supply for printing books in China comes largely from Japan, Europe, North America, China, and Taiwan. Currently, Chinese and Japanese paper is used the most; North American paper is not frequently used because coated varieties are less available.

## **Industry Practices and Climate Change**

Global warming is a process that raises the air temperature in the lower atmosphere because of heat trapped by greenhouse gases, such as carbon dioxide, methane, nitrous oxide, chlorofluorocarbons (CFCs), and ozone. It can occur as a result of natural influences, but the term is most often applied to the warming believed by many to occur as a result of human activities causing the emission of greenhouse gases.

Paper manufacturers are employing a variety of measures to minimize harmful emissions, as well as to reduce water, energy, chemical, and wood use. These include specific timetables for reducing emissions; containment and re-use of water and chemicals through the implementation of closed loop systems; monitoring and reporting on particle discharges; use of biomass and other carbon-neutral energy sources; elemental chlorine-free bleaching of pulp; and obtaining certification from one or more prevalent sustainable forest-management certification systems.

The non-profit organization Metafore's Environmental Paper Assessment Tool (EPAT)<sup>®</sup> provides a standard way for suppliers to communicate environmental performance to buyers, and a portal for buyers to assess and measure the environmental impacts of a supplier's products based on areas of concern specified by the buyer (such as energy use, emissions, use of recycled material, etc.).

While young, rapidly-growing forests may remove carbon from the atmosphere at a higher rate than older forests, older forests may hold more carbon overall—in the larger trees themselves and in the soil. However, older forests often contain more dead and decaying wood and more animal life, which releases carbon into the atmosphere, which might reduce the effectiveness of these forests as carbon sinks. Responsible forestry includes analyzing the impacts that logging will have on the role of the forest in keeping carbon out of the atmosphere.

If the trees are sourced responsibly, there are environmental advantages to using products made from wood. Trees are a renewable resource. Most alternative materials come from nonrenewable resources, such as the petrochemicals used in making plastics and the ores used to make aluminum, iron, and other materials.

## **Assessing Suppliers' Sustainable Forestry Management Practices/Questions Publishers Can Ask Their Suppliers**

Publishers may question their paper suppliers regarding their sustainability practices, including their objectives and plans for the reduction of carbon footprints, the percentage of post- versus preconsumer waste used, whether they adhere to particular certification standards or programs, and whether they have conducted an energy audit (and if so, what were the results).

Smaller publishers using printer-supplied paper may ask similar questions of their printers: what house papers do they stock that have various percentages of pre- and postconsumer content; what recycled paper options are offered by mills the printers work with; and does the printer have a samples binder that includes "green" papers? Smaller publishers may also wish to consider cooperative buying arrangements for purchases of recycled paper.

Companies can refer to the Environmental Defense Fund's Environmental Paper Calculator (<http://www.environmentaldefense.org/papercalculator>) or Metafore's Environmental Paper Assessment Tool (<http://www.metafore.org> or <https://www.epat.org>), both of which assess suppliers' sustainability management systems and the environmental impacts of different papers across their full life cycle. Publishers may also request that mills supply them with the mill's individual environmental calculator.

### **Book Industry Treatise on Responsible Paper Use**

This treatise, coordinated by the Green Press Initiative, stipulates goals for the use of certain levels of recycled fiber (both pre- and postconsumer) and FSC-certified fiber. The treatise's stated goals match those advocated by the Green Press Initiative, a non-profit program whose stated mission "is to work with publishers, industry stakeholders and authors to create paper-use transformations that will conserve natural resources and preserve endangered forests."<sup>6</sup> The Green Press Initiative is funded primarily by grant foundations. The treatise can be found online at [www.greenpressinitiative.org/](http://www.greenpressinitiative.org/)

### **Reducing Consumption and Waste**

Publishers can also pursue several strategies to minimize paper waste. **Smaller layoffs**—printing fewer books in the initial run—reduce the number of copies that might be returned if a book does not sell as anticipated. **Managing reprint quantities** by matching them to current demand helps publishers avoid having too much inventory on hand when demand drops off. Fast reprint turnaround capability time is critical for these strategies to succeed if a title sells well. Other ways of reducing consumption and waste include standardizing book trim sizes and the types of papers used in different books, reducing trim sizes, and reducing paper basis weights.

### **For More Information**

For more information on the AAP PIWOG and the *AAP Handbook on Book Paper And The Environment*, please contact Ed McCoyd at [emccoyd@publishers.org](mailto:emccoyd@publishers.org) or Tina Jordan at [tjordan@publishers.org](mailto:tjordan@publishers.org).

#### Endnotes

1. [http://www.tappi.org/paperu/all\\_about\\_paper/faq.htm](http://www.tappi.org/paperu/all_about_paper/faq.htm)
2. <http://www.worldwatch.org/node/1497>
3. <http://www.conservatree.org/paperlisteningstudy/Forests/question64.html>
4. AF&PA Annual Report (1/25/07); [http://www.afandpa.org/Content/NavigationMenu/About\\_AFandPA/Annual\\_Report/Annual\\_Reports.htm](http://www.afandpa.org/Content/NavigationMenu/About_AFandPA/Annual_Report/Annual_Reports.htm)
5. <http://www.fao.org/forestry/site/13087/en>
6. [www.greenpressinitiative.org/](http://www.greenpressinitiative.org/)

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