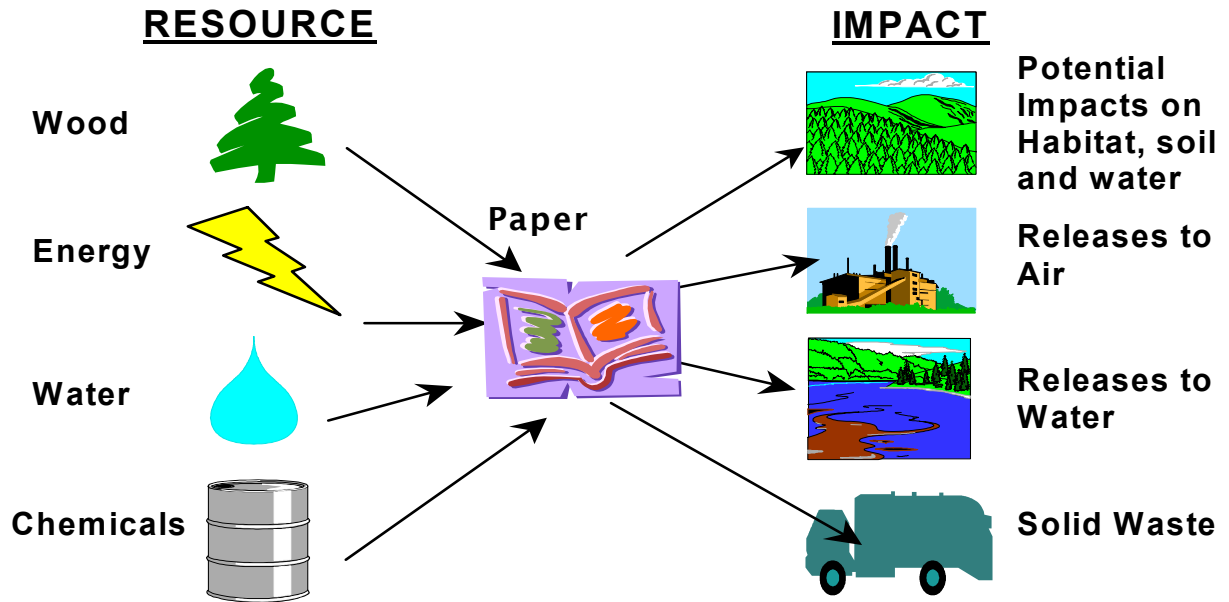


EVALUATING SUPPLIER PERFORMANCE

(Adapted from "A New Norm in Catalogs" Alliance for Environmental Innovation and Norm Thompson Outfitters © 2001)

Producing and disposing of paper creates a range of environmental impacts, from the forest, where virgin fiber is obtained from trees, to the landfill or incinerator, where it typically ends its life.



Incorporating recycled content significantly reduces the environmental impacts associated with paper. But because some virgin fiber still is necessary to maintain the physical properties of paper, it also is important to reduce the environmental impacts associated with harvesting trees and manufacturing virgin pulp.

Supporting Sustainable Forestry

Growing and harvesting trees for lumber or paper production can cause a variety of environmental impacts – from the destruction of habitat for plants and animals, to the degradation of soil and water quality, which also affects human populations. Forests intensively managed for pulpwood or timber production may exhibit less biodiversity and experience a greater degree of soil degradation than do natural forests.¹

There are two ways that companies can help reduce the environmental impacts associated with commercial forestry. The first is to specify paper with recycled content. The higher the level of recycled content, the fewer trees will need to be harvested for paper, and the lower the

environmental burden will be on forests. The second is to support good forest management practices for the virgin fiber that remains necessary to produce the paper.

The term *sustainable forestry* is typically used to mean protecting both the timber and non-timber values of a forest (e.g., biodiversity, soil and water quality, aesthetics). Specific practices may be good or bad depending on how and where they are applied, but the following are some fundamental goals of sustainable forestry:

- **Conserving biodiversity.** Both the amount and variety of plant and animal life can be protected by conserving rare forest types and habitat for endangered species, establishing wildlife corridors (undisturbed or minimally managed areas connecting larger forest preserves), and maintaining a diverse mix of tree species and ages in a given forest.
- **Protecting water quality.** Because forested watersheds are often the source of drinking water for cities and towns, maintaining water quality from forestry operations is critical. Buffer strips of trees bordering streams and other bodies of water help filter and absorb sediments, maintain shade, and protect fish and other wildlife habitats. In coastal areas, careful management of fresh water drainage from forests protects sensitive estuaries that serve as nurseries for fish and other aquatic organisms.
- **Protecting soil quality.** Less intensive harvesting methods can help minimize soil erosion, avoid overcompaction, and maintain soil temperature, moisture levels, and nutrient content.

Growing public concern

Paper companies' forest management practices have come under increased public scrutiny in recent years. Polls show that a strong majority of Americans are generally concerned about the environment and are specifically interested in habitat conservation.² A Yankelovich Partners poll in January 1999 found that 62.5% of American consumers believed that companies should not use or sell products made from wood harvested from old-growth forests and that 43.5% said they would be less likely to do business with a company using such wood. In addition, campaigns by activist groups against both forest products companies and their customers have raised the public visibility of forest management as an environmental issue.

As a result, several leading companies including The Home Depot, Lowe's Companies, and Kinko's have made public commitments not to buy forest products from environmentally sensitive areas. For large paper purchasers, having a policy in place to address these issues is not only good for the environment; it also makes good business sense.

Understanding current practices

Forest management issues are complex. It takes time, resources, and expertise to gather information about paper suppliers' practices, make judgments about their performance, and

consistently factor those judgments into purchasing decisions. Few – if any – companies have the expertise to do this on their own. Fortunately, consultants and environmental groups working on forest management issues can provide advice and help evaluate suppliers.

Even if a company currently does not have the resources to hire outside expertise, it can still begin a dialog with its paper suppliers about forest management, visit its suppliers' forestry operations, and take other steps that signal its demand for paper made from sustainably harvested fiber.

Setting priorities for future progress

By talking to a variety of experts in the field – including other paper purchasers, independent experts, and environmental groups – the following have been identified as priority areas for progress in the next several years:

- **Chain of custody control.** Less than one-third of the pulpwood consumed by the typical pulp mill in the United States comes from land owned by that company, with the balance coming from lands owned by other private landowners or public lands.³
- **Independent third-party certification.** Having their forest management practices certified by an independent third party helps paper suppliers provide credible and complete information to their customers. In the United States, standards for forest management include the American Forest and Paper Association's Sustainable Forestry Initiative (SFI) and the Forest Stewardship Council (FSC). At present, FSC is more broadly accepted among environmental groups, while SFI is evolving in ways that may improve its acceptance among those groups.
- **Publication of annual sustainable forestry reports.** Paper purchasers need concise, reliable information about their suppliers' forest management practices. Suppliers who are part of the American Forest and Paper Association's Sustainable Forestry Initiative (SFI) submit this information annually, which is aggregated into a single public report.
- **Phasing out the use of pulpwood from high conservation value and endangered forests.** Such forests may contain rare, threatened, or endangered species or ecosystems; provide critical watershed protection or erosion control; or be of special cultural or ecological significance to local communities.

Joining with other purchasers

The key to sustained environmental improvement on forest management and other environmental issues is a coordinated and consistent demand signal from customers. To this end, a company may join together with other large users of forest products, through such organizations as Business for Social Responsibility and the Certified Forest Products Council, to engage suppliers in a constructive dialog with regard to forest management practices.

Supporting Cleaner Manufacturing

Companies can play an important role in reducing the environmental impacts of pulp and paper manufacturing. By learning about their suppliers' environmental performance, and considering that performance in their purchasing decisions – along with product availability, price, and other factors – they can encourage their suppliers to keep pace with technological advances and to produce paper in the cleanest manner possible.

Gathering information from suppliers

The first step is to set up a system for measuring the paper suppliers' environmental performance now and in the future. An annual supplier evaluation, to be conducted every year before commitments are made for the next fiscal year's paper purchases, would include:

1. Gathering data about the manufacturing processes and releases to the environment at the mills that produce your paper using the Suggested Supplier Evaluation Form.
2. Discussing environmental performance over the past year and expectations for future improvements.

Criteria for evaluating supplier performance

The next step is to establish standards for evaluating suppliers' environmental performance over time.

The goal is to work with paper suppliers that have a vision of and commitment to *minimum-impact mills*. Such mills minimize the consumption of natural resources (wood, water, energy), and minimize the quantity and maximize the quality of releases to air, water, and land.⁴ The minimum-impact mill is a dynamic concept, and can be achieved by using the most advanced manufacturing technologies, the most efficient mill operations, and the most effective environmental management systems.

When evaluating its suppliers' pulp and paper manufacturing practices, the following are important:

1. Manufacturing Technologies

The first place to look for ways to reduce the environmental impacts of papermaking is in the pulping and bleaching processes for chemical pulp, in which the technology used can make a big difference in energy and water use, air and water pollution, and solid waste.

Table 9 shows the environmental hierarchy of pulping and bleaching processes for chemical pulp – with the shaded areas representing environmentally preferable options.

Table 9: Environmental Hierarchy of Pulping and Bleaching Processes

Process	How It Works	Environmental Advantages
Totally chlorine free (TCF)	Completely substitutes oxygen-based for chlorine compounds.	Further improves quality of wastewater. Enables virtually complete recovery and reuse of wastewater.
Enhanced ECF with ozone	Uses ozone as brightening agent in initial stages of bleaching process (final stage uses chlorine dioxide).	Further improves quality of wastewater. Reduces quantity of mill wastewater by 70% to 90% compared with traditional ECF. Enables recovery of most wastewater.
ECF with extended or oxygen delignification ("enhanced ECF")	Removes more of the lignin before bleaching, thus reducing energy and chemical use during bleaching.	Compared with traditional ECF, reduces energy consumption by 30%, improves quality of mill wastewater, and reduces quantity of mill wastewater by nearly 50%.
Elemental chlorine-free ("traditional ECF")	Replaces elemental chlorine with chlorine dioxide.	Improves quality of wastewater compared to elemental chlorine.
Elemental chlorine	Uses elemental chlorine to bleach pulp.	[Phased out as of April 2001 per EPA's Cluster Rule]

Source: Paper Task Force, Alliance updates

In the United States, the production of bleached kraft pulp is smallest at the top of the hierarchy and rises as one moves down (with the exception of elemental chlorine). While TCF accounts for approximately 25% of Scandinavian bleached kraft pulp production (the balance is ECF), there is currently only one TCF pulp producer in the United States.⁵ Ozone processes are installed at only a few U.S. bleached kraft pulp mills, whereas extended and/or oxygen delignification technologies are more commonly found.⁶ Traditional ECF is the most widely used bleaching process, and is the minimum standard allowed under the U.S. Environmental Protection Agency's Cluster Rule. Some mills that are in the process of completing the technology upgrades necessary to comply with the Cluster Rule may still be using some elemental chlorine.

2. Environmental management systems

Even the most advanced technologies cannot reach their full potential in reducing pollution if a mill is not run cleanly and efficiently; hence the need for an environmental management system (EMS). EMSs can contribute to better environmental performance by improving energy efficiency and controlling pollution.

In reviewing suppliers' environmental management systems, look at the procedures and mechanisms established by such systems for:

- Energy and water conservation.
- Spill prevention and control systems.
- Preventative maintenance.
- Emergency preparedness and response.
- Ongoing training for mill staff in process control to improve environmental performance.

3. Environmental compliance

As part of an annual environmental review of paper suppliers, ask suppliers to provide data on environmental releases from the mills that produce your paper. (Alternatively, such data are publicly available from the permitting board of the state where each mill is located.)

The primary purpose of reviewing these data is to determine whether a mill (or supplier) shows a trend of *continuous improvement* over time. Just as important as a mill's environmental report card in a given year is the supplier's commitment to maintaining strong performance into the future by keeping pace with technological advances and keeping its environmental releases well below regulatory limits.

¹ Paper Task Force report, pp. 134, 138.

² According to a nationwide survey by the *Los Angeles Times* in April 2001, 90% of respondents said it was important that wilderness and open spaces be preserved. Strong majorities supported greater protection of public lands and wildlife. According to the Gallup organization's annual Earth Day poll (April 2001), 77% of Americans worry about the quality of the environment, and 42% worry a great deal.

³ Smith, Brad W. et al., *Forest Resources of the United States*, USDA Forest Service, 2001.

⁴ Paper Task Force report, p. 189.

⁵ Scandinavian bleached pulp production from Alliance for Environmental Technologies, *Trends in Bleached Chemical Pulp Production: 1999-2000*. The one TCF pulp mill in the United States is Samoa Pacific Cellulose in Samoa, CA.

⁶ 2001 Lockwood-Post's Directory, and Alliance interviews with bleached kraft pulp mills, summer 2001. Ozone is used in the hardwood bleached kraft pulp line at Stora Enso North America's Wisconsin Rapids, WI mill, and in one bleached kraft pulp line at International Paper's Franklin, VA mill.