



An expanse of the Canadian Boreal Forest.

PHOTO CREDIT: GARTH LENZ

Can't See the Forest for the Tree Farms

Conservation groups say that what boils down to a business decision for many publishers is a question of survival for those living in the forests of North America.

Book publishers have been called upon in recent years by the Environmental Protection Agency and industry conservation groups to improve their environmental impact. But some may not know the full extent of the impact the industry is having on the earth's forests and the life that relies on it for survival. And, they may not know the power they hold in joining or abstaining from the fight to protect the environment.

For instance, some likely do not know that one of the earth's greatest defenses against global warming is being depleted, primarily to supply paper to the United States. Others likely do not know that woodland caribou are fighting for survival because their habitat is being taken over in large part by tree farming for paper production. Or that native peoples rely on these lands for food. These are just a few of the concerns keeping conservationists awake at night.

Over the past few decades, the paper industry has made significant improvements in environmental performance to meet increasingly stringent regulations. Today, it seems as if there is a resurgence of attention focused on the paper industry. This time, it has less to do with air- and water-quality issues and more to do with the last remaining natural forest lands in North America.

While there are many geographic areas where fiber is sourced for paper, this feature explores the impacts on two of North America's priority areas for conservation—Canada's Boreal Forest and the Southeast United States' Cumberland Plateau.

THE BOREAL FOREST: NORTH AMERICA'S AMAZON

Canada's Boreal region is a place of immense beauty and power. Representing 25 percent of the world's remaining intact forests, it is one of the last places left on earth that can maintain a fully functioning ecosystem.

It is home to abundant populations of wildlife—including billions of migrating songbirds and some of the largest caribou herds in the world. Its forests, lakes and wetlands purify our water, produce oxygen, and moderate our climate. Home to more than 600 Aboriginal communities, it is also a source of spiritual renewal and economic livelihood for many Canadians.

PAPER CONSUMPTION AMONG THREATS

The Canadian Boreal stretches nearly 1.4 billion acres from the Atlantic Coast to Alaska, and more than 70 percent of the Boreal is still in a pristine state. However, less than 10 percent is permanently protected, and impacts to the remaining intact areas are increasing.

Paper consumption plays an integral role in the future preservation or degradation of the Canadian Boreal. It is estimated that 65 percent of the trees harvested in the Boreal are cut to make paper products, including direct mail, catalogs, copy paper, newspapers, magazines, books and toilet paper.

The United States is driving much of this demand; with almost 80 percent of Canada's forest-product exports destined for the U.S. market. Sixteen mills located in the Boreal Forest manufacture printing and writing products directly, and many more mills in the southern regions of Canada and the United States use Boreal Forest raw materials in the form of market pulp.

IMPACTS ON INDIGENOUS CULTURES

What boils down to a business decision for many publishers plays out as a question of survival for northern cultures and wildlife. The Grassy Narrows First Nation is one of a number of indigenous groups being impacted by paper consumption. The community learned in the 1970s that inorganic mercury from a pulp and paper mill had contaminated their water and fish—seriously affecting the community's health.

Today, they've set up blockades to address the challenge of keeping their traditional lands from being further cut for products such as paper and lumber. Over half of the tribe's members depend on the land for subsistence hunting, trapping, and gathering berries and medicines. "Over 50 percent of our traditional land has been clear-cut. They plant trees they're going to harvest again. But the land is turning into a monoculture tree farm," says Joe Fobister, spokesperson for the Grassy Narrows First Nation Environmental Committee. The Ojibway Nations of Saugeen, and Mishkeegogamang and other indigenous communities in the



A tree farm in Alabama. A biodiverse forest converted to a managed tree farm supports 90-percent fewer species and can impact local communities from chemical exposure.

Canadian Boreal are also engaged in struggles in North West Ontario and across the Boreal Forest to keep their traditional lands intact.

A HOME TO CRITICAL SPECIES

Nearly 50 percent of all bird species found in the United States and Canada occur in the Boreal Forest. Billions of migratory birds nest and breed in the Boreal Forest before migrating south to winter in the United States and beyond. For example, 89 different Boreal bird species winter in or migrate through New York City. The forest is also home to abundant populations of wildlife that have largely disappeared elsewhere—lynx, wolves, grizzly bears and woodland caribou.

Again, survival is at stake. In Ontario, where woodland caribou were declared a threatened species in 2002, the historical range of woodland caribou has been cut in half. In fact today, healthy woodland caribou populations are almost entirely restricted to areas of undeveloped Boreal Forest found in the most northern logging license areas and to the north.

In the Trout Lake forest license area, some of the last prime caribou habitat is being logged to produce paper and wood products, much of it being purchased by U.S. consumers. In Alberta, three of 18 caribou herds are at immediate risk of being wiped out, according to a recent government report, with only three herds listed as stable. Across the Boreal, caribou are disappearing and have been listed as nationally threatened, and, like canaries in the coal mine, their demise is signaling to conservation groups the mismanagement and growing controversy in the Boreal Forest.

CRITICAL TO GLOBAL WARMING

With its abundant and largely intact landscape of forests and bogs, the Canadian Boreal stores 7 percent to 10 percent of the earth's biospheric carbon (the primary greenhouse gas constituent)—more than any other forest on earth. Second to the oceans, the global Boreal ecosystem is the largest storehouse of carbon, and therefore one of the earth's most important defenses against global warming.

A CONSERVATION PLAN

Given the Boreal's significance, some assume that the goal is to lock it up from development forever. While many might applaud this kind of move, the vision for conservation in the Boreal is different.





The Boreal Leadership Council—an unlikely coalition of industry, hunters, conservation organizations and First Nation—has developed a realistic vision for conservation. In 2003, it developed the Boreal Conservation Framework—a vision which outlines parameters for protecting 50 percent of the region in a comprehensive network of protected areas and promoting world-leading industrial practices on the remainder of the landscape where appropriate.

The Framework represents what its creators see as a balanced conservation solution that offers the opportunity to meet ecological objectives, uphold the rights and interests of Aboriginal peoples and accommodate appropriate development. It is a national vision and goal for the region that its constituents feel can be achieved.

THE CUMBERLAND PLATEAU

Southern forests are the most biologically rich ecosystems in North America. From the Gulf Coast, Ozark Mountains and Southern Appalachians to the pine woods and swamps of the East Coast, southern forests house an abundance of plants and animals, and pristine watersheds. Many of the region's plant and aquatic species can be found nowhere else in the world. Southern forests contain the highest concentration of tree species diversity in North America, and the highest concentration of aquatic diversity in the continental United States, including one of the richest temperate freshwater ecosystems in the world.

The Cumberland Plateau—stretching through Kentucky, Tennessee and Alabama—is the most intact forested ecosystem in the Southern United States. Each spring, millions of birds migrating north descend on the forests of the Cumberland Plateau before pushing on to Canada's Boreal Forest. This ecosystem has evolved undisturbed by glaciers for hundreds of millions of years.

It is home to more than 3,000 native plant species—including more than 160 tree species—and nearly 1,000 animal species. The Cumberland Plateau has gained attention in the past several years as one of the highest priorities for conservation efforts in the United States.

LARGE-SCALE CLEAR-CUTTING

Yet the Southern United States is the largest paper-producing region in the world, supplying more than 15 percent of the world's paper. According to the U.S. Forest Service, nearly 6 million acres (an area larger than Massachusetts) of southern forests are logged each year, primarily for paper production.

Large-scale clear-cutting, the conversion of natural forests to tree plantations, and the aerial spraying of chemical fertilizers and herbicides are all impacting the landscape. Industrial forestry is progressing without landscape-level conservation plans, leaving endangered forests in the region vulnerable. Book paper is one of the top 10 types of paper produced in the region.

According to the U.S. Forest Service, 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.

Additionally, many communities are fighting to enact legislative reform for the aerial application of chemical fertilizers and herbicides because of experiences with drifting chemicals that have missed the intended target, leaving citizens concerned about contaminated private land, farms, and water supplies. Tennessee, for example, has no laws to establish buffer zones to protect residences and communities from misplaced chemical applications.

FOREST CONVERSION TO PLANTATIONS

The conversion of natural forests into sterile tree plantations is of major concern to conservationists in the region. While some argue that plantation forestry, growing trees on fast rotation, can ease pressure of natural forests, the U.S. Forest Service has documented that in the past 20 years in the Southern United States, 75 percent of the tree plantations have been established at the expense of natural forests. According to Harvard biologist E.O. Wilson, plantations have 90-percent to 99-percent less diversity than a natural forest.

Conservationists are now calling on the industry to stop converting natural forests to plantations and instead focus new plantation development on abandoned agricultural land.

CASE STUDIES FOR SUCCESS

Bowater, one of the largest groundwood paper producers in the region and the biggest timber company operating in the Cumberland Plateau, recently set a precedent on this issue by committing to stop converting natural forests into plantations over the next three years. Additionally, Bowater will not purchase fiber from lands that have been converted from natural forests to plantations after 2007.

Bowater also is undertaking a study to identify its lands that are of ecological, geological or historical significance, and although it has recently announced that it will sell its landholdings in the United States, it will not sell the areas that are part of this study. Its commitment to upholding the high conservation values in the Canadian Boreal Forest is still uncertain.

In the past few years, both Staples and Office Depot, leaders in the office supply industry, adopted paper-procurement policies in response to citizens' concerns about southern forests. Both companies have made commitments to increase average postconsumer-recycled content across all of their paper products to 30 percent, to phase out products originating from the most ecologically valuable forests (endangered forests), and to work with their suppliers to end unsustainable forestry practices such as the conversion of forests to plantations.

A VISION FOR CONSERVATION

The conservation vision for the Southern United States

includes permanent protection for endangered forests in the region, starting with endangered forests in the Cumberland Plateau—putting an end to large-scale clear-cutting, the conversion of forests to plantations, and the routine use of chemical herbicides and fertilizers. The Forest Stewardship Council (FSC) certification currently is the only certification scheme that meets these criteria for forest management practices.

“In order for our cultural and natural heritage to be preserved, we need a big change in the way companies are doing business,” says Danna Smith, policy director for Dogwood Alliance, a network of more than 70 groups around the Southern United States working to end unsustainable industrial forestry practices in the region and to advance transformations in the paper marketplace.

Since most states in the Southern United States have few or no laws governing forestry operations on private land, and 90 percent of the forest land is privately owned, the marketplace is critical to catalyze reform in industrial forestry operations.

“Many conservation organizations, including the Green Press Initiative, work to educate and engage the marketplace because, in some instances, market innovations can lead to solutions much more quickly than government regulations,” says Tyson Miller, Green Press Initiative’s executive director.

According to conservation groups, publishers have an opportunity to help shift the market and preserve natural forests by choosing not to buy paper with fiber that comes from the Cumberland Plateau, unless the company they are buying from has a policy in place prohibiting the conversion of forests to plantations and logging in endangered forests.

WHAT CAN THE BOOK INDUSTRY DO?

The book industry is comprised of both large and small paper producers and consumers—many of whom have direct ties to the Boreal Forest, the Cumberland Plateau, and other critical areas. Companies interested in supporting the integrity and preservation of the unique values of these priority conservation areas should engage in one or more of the following, suggested by conservation groups:

1. Make sure you know who is producing your paper, which mill(s) it comes from, and the forest where it originated (including overseas).
2. Ask for paper with the highest amount of recycled and



Native people from the Grassy Narrows block a logging truck in the Boreal.

FSC-certified fiber available.

3. Encourage paper mills to formally support regional conservation plans.

4. Encourage paper mills to obtain FSC-certification for their forest lands (this also serves to incorporate social concerns such as indigenous land claims).

GAINING MOMENTUM

Change takes time, but it has gained momentum in recent years. Mills are making more products to fulfill market demand. Ninety-five U.S. book publishers and approximately the same number of Canadian publishers currently have formal environmental policies in place, publishing tens of millions of books on recycled paper. In addition, a consensus-based Book Industry Treatise for Responsible Paper Use, designed to guide book paper production and consumption, is in the process of being finalized.

Future changes will continue to involve collaboration and compromise among all those involved—conservation groups, publishers, printers, paper mills and manufacturers. “Progress in recent years has been steady, and that’s a good thing. But we need more,” says Miller. “Continued collaboration and meaningful innovation and leadership will be the key drivers for real improvement.”

The Green Press Initiative, the Boreal Songbird Initiative, ForestEthics, the National Wildlife Federation and the Dogwood Alliance contributed to this article.