PULP AND PAPER MILLS HAVE LONG BEEN REGARDED AS ENVIRONMENTAL BAD GUYS, HARMFUL TO LOCAL COMMUNITIES AND THE WORLD'S ECOLOGY AT LARGE. BUT DRIVEN BY PUBLIC PRESSURE AND A GROWING ENVIRONMENTAL AWARENESS, SOME MILLS ARE STARTING TO GET THEIR ACT TOGETHER, NOT LEAST IN OUR OWN BACKYARD. *KRISTINA HOLDORF* REPORTS ON THE LATEST DEVELOPMENTS.

WHERE THERE'S A MILL, THERE'S A WAY

Kristina Holdorf

International Paper (IP), the world's largest forest products company, owns the Androscoggin Mill, a large pulp and paper mill in Jay, Maine, in the northeastern United States. Once an object of public opprobrium and conflict, the mill has metamorphosed into a show-case for environmental management.

In the late 1980s, an 18-month strike had left the workers and townspeople embittered and the mill's reputation in tatters. In response to the mill's environmental violations, some of which were considered crimes by state regulators, the town of Jay passed its own environmental ordinance to control mill emissions. Early in the 1990s, new management, including two former corporate-level employees, sought to change the mill's business approach and turn the Androscoggin Mill into IP's best environmental performer.

The initial emphasis on establishing and maintaining compliance was expanded to include aggressive pollution prevention efforts that led to cooperative projects with the Maine Department of Environmental Protection, the US Environmental Protection Agency, and stakeholder groups.

The mill's approach evolved further to follow principles of industrial ecology, focusing on 'closing the loop' by finding beneficial uses for land-fill wastes, replacements for most hazardous chemicals, and reductions in solid and hazardous waste generation. The mill also established relationships with a facility that began using a mill by-product on-site and an on-site natural gas burning facility that provided part of the mill's steam demand.

IP also established a public advisory committee to advise management on operational and 'big-picture' issues, including the application of sustainability criteria to the mill, and has since formed community advisory committees at each of their integrated pulp and paper mills.

DIRTY CHINA

On the other side of the world, in August 2006 paper mills in Shenyang, China, were told they faced suspension and even closure if they did not meet strict wastewater control standards as the local authorities launched a major campaign against polluting paper mills, the biggest water polluters in the area. Statistics from Shenyang environmental protection bureau show that there are 53 paper mills involved in the campaign, and at present only one of them is able to meet the required standards.

So why are some mills advanced in their environmental pursuits while others lag behind? Pulp and paper mills compliance with environmental law has evolved through four distinct phases, each one driven by growing public awareness of environmental issues and government response to public demand.

Phase 1 was characterised by low public awareness, almost no regulation and even less enforcement. The industry was free to grow and operate, unencumbered by environmental concerns. In Phase 2, growing public awareness of the health hazards of pollution drove government to set emission standards. However, no significant enforcement was carried out and industry complied with the law at its discretion.

In Phase 3, the public started demanding and governments delivered tighter emission standards and tough enforcement. This is the case we see with the mills in Shenyang and in some other parts of the world. Industry at first resisted and paid dearly in fines which finally led to improved compliance. By this time, the public had developed a sophisticated understanding of environmental issues and environmental non-government organisations, known as ENGOs, were effective at communicating public concern to governments through lobbying efforts and back to the general public through the media.

In Phase 4, we see a turning point in the industry. The public is informed and exercises its vigilance through mature ENGOs, effective lobby mechanisms and the media. Domestic and global markets apply economic pressure on the industry to make and keep their products green, while government regulation continues to evolve with technological advances.

With all this in mind, what of our own fine paper producer, Australian Paper? How far has it come in this process and what are some of its plans for the future?

READ THE LABELS

Eighteen months ago, Simon Talbot joined Australian Paper as corporate relationships manager. Originally from Hobart, Talbot holds post-grad qualifications in organisational strategy and began his career in sustainability and corporate social responsibility advising many ASX mining corporations. He was recruited to the Australian Paper sector to provide direction and management in corporate social responsibility and market engagement.

In the past two years, Australian Paper has focused strongly on a number of sustainable initiatives. Perhaps the most visible has been the release of a collection of recycled products across the company's vast product range. More importantly, it has overhauled its processes and independently audited its manufacturing operations in Australia to ISO 14001 standard, and has received Forest Stewardship Council (FSC) accreditation.

At present, the demand for FSC papers by ASX corporations is strong and it is an emerging brand that is becoming widely recognised and accepted. When asked 'Why "FSC"', Talbot states:

"There are a number of other 'eco labels' around but they do not have the same strict environmental, social and economic standards or such a rigorous chain of custody tracking timber from the forest to the final user. The FSC is the only one endorsed by the major environment and social groups including WWF.

"As of December 2006, we are the largest user and largest importer of FSC material in Australasia."

SHOWING RENEWED ENERGY

Another area in which Australian Paper is driving market leadership is through it's 'sustainable futures philosophy' in the use of renewable energy. Renewable energy is derived from sources that cannot be depleted or can be replaced, such as solar, wind, biomass (waste), wave or hydro. Clean, renewable sources don't produce greenhouse pollution.

Annually, over 60 percent of Australian Paper's energy need are met from renewable sources—these include hydroelectric power, wind power and biomass (black liquor, agricultural waste and sawmill residues).

In 2006 less than five percent of Australia's energy needs were generated from biomass fuels despite their availability as a significant renewable energy. At Australian Paper, biomass contributes to some 30 percent of its energy needs and, across Maryvale in Victoria and its Tasmanian operations, the company has modified its boiler systems to utilise material that in many cases would otherwise go to landfill.

The making of paper requires a source of cellulose fibres which can be as varied as cotton rags, straw, sugar cane and wood. Modern papermaking in Western countries is mainly based on wood, due to factors such as quality, availability and economics.

Separating cellulose fibres from wood is difficult and there is a range of chemical and mechanical processes utilised, depending on the wood type and the end use required. One of the dominant industry processes used for pulping is the kraft process. This system relies on high temperatures to dissolve the lignin and release the fibres. After the treatment, the fibre is washed to remove the dissolved lignin and chemicals and this is then referred to as 'black liquor'. Black liquor is recognised by the Commonwealth Government as a renewable energy source.

The Maryvale mill currently generates steam and electricity from black liquor in two recovery boilers which are supplemented by three natural gas-fired boilers. By 2009, the mill expects to be producing approximately 900,000 GJ of renewable energy.

TASSIE'S TALL POPPIES

Australian Paper's Tasmanian operations have some of the highest levels of renewable energy usage within the global paper industry. Australia's most significant hydro-electricity plants and adjacent wind farms supply the Burnie and Wesley Vale mills.

In addition to these mainstream renewable sources, AP's Tasmanian engineers have successfully retrofitted on-site boilers to accept agricultural and sawmill wastes. As of 2005, 92 percent of the energy at AP's Tasmanian mills was derived from renewable sources.

One unique renewable energy partnership is in the area of waste poppy plants. Tasmania is one of the world's major suppliers of medicinal opiate products, strictly controlled by the Federal and State Governments. After the medicinal opiate has been extracted from the poppy flower, large volumes of plant waste remain. This waste is collected and transported to AP's on-site boilers for use as biofuel, directly replacing fossil fuels such as coal and oil.

In late December 2006, the Federal Government announced funding of almost $1 million to help Australian Paper's Wesley Vale mill to reduce energy costs, as well as reduce greenhouse gas emissions by some 9,000 tonnes per year. Forestry and Conservation Minister, Senator Eric Abetz, said that the funds will "assist Australian Paper to replace expensive and polluting oil-fired boilers with new gas-fired boilers, totaling almost $4 million."

WOOD IS GOOD

The on-going debate about recycled-v-virgin fibre is still a hot issue, especially from Australian Paper's perspective.

"I believe we are in a strong position to comment on this issue," says Talbot. "Most people think the major benefit from recycling is forest preservation. While the practice does reduce the amount of virgin timber required, trees are in fact a renewable resource and today, most ethical paper producers, including Australian Paper, have adopted sustainable forest management practices."

As an industry, Talbot believes we need to promote paper and wood products as positive societal 'items of benefit to the planet.

"Managed correctly with associated chain of custody, they are a natural and renewable source that, in print form, has many significant aesthetic and educational values compared with many communication alternatives."

The links between global warming and the paper, print and graphic design industries are clear and they start in the forest. The choice of paper that you sell, print, design and use can impact significantly on climate change and the loss of the earth's biodiversity. Remember, you can and do make a difference.

Kristina Holdorf is an advocate for environmental innovations within the print and paper industry with an in-depth understanding of environmental certification systems, corporate social responsibility and green procurement policy writing. She is also a registered FSC chain of custody auditor for Scientific Certification Systems, California. For further information, visit www.urbanfreshservices.com