

# Sustainability



the forest and paper industry –  
on its way to sustainability

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## 10 Years after Rio The Forest and Paper Industry's Messages

Sustainability has become an essential part of business strategies in the forest and paper industry, which is active in the three interdependent pillars of sustainability.

### The Economic Pillar

The world's forest products industry significantly contributes to the economy as it:

- produces primary products valued at approximately \$750 billion per year.
- has a global reach, but is comprised of thousands of small and large enterprises.
- is highly competitive with affordable products produced on a renewable basis.
- provides millions of jobs and supports thousands of local communities.
- provides continuous innovation through new products and new manufacturing technologies.
- is a high-tech industry requiring highly skilled labour and equipment.

### The Social Pillar

- In many parts of the world, the forest and paper industry makes an important contribution to alleviating and eradicating poverty.
- The forest and paper industry has been closely linked to the development of local communities through the creation of thousands of small and large companies and millions of jobs, primarily in rural areas.
- Private companies often contribute to the maintenance of hospitals, sanitation structures, roads, schools and training networks, health care, etc.
- Several companies have developed principles and policies for Corporate Social Responsibility.

### The Environmental Pillar

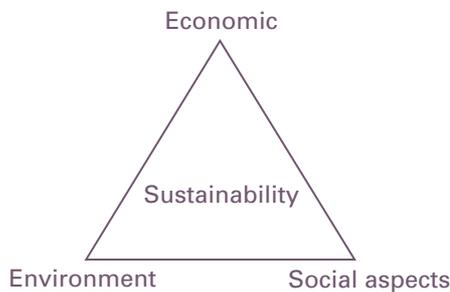
- Forest and paper products are part of an integrated eco-cycle based on photosynthesis conversions of water, carbon dioxide, nutrients and solar energy into a renewable woody biomass. Once consumed and collected separately, many forest and paper products start a new life as a secondary raw material or biofuel.
- Through substantial and continual efforts over the last decades, the forest and paper industry has significantly reduced its impact on the environment.
- A significant and increasing number of forest and paper companies are certified with an eco-management scheme.
- Individual companies are involved in numerous initiatives such as the collection and recycling of all used paper generated during the World Summit on Sustainable Development.

## Introduction

In the last decade, sustainable development has become part of daily business. The challenge no longer only consists in providing goods and services required by society in a cost-effective way, but also in doing so in a sustainable manner that meets the needs of both present and future generations.

The United Nations Conference on Environment and Development (UNCED) held in Rio in 1992 determined that there were three equally important interrelated pillars of sustainability dealing with economic, social and environmental aspects.

### The Three Pillars of Sustainability



The forest and paper industry is active in all three areas. All over the world, it meets essential societal needs by providing sustainable forest and paper products which are part of and contribute to the quality of everyday life. It has also been closely linked to the development of local communities through the creation of thousands of small and large companies and millions of jobs, primarily in rural areas.

The forest and paper industry is also a major contributor to the world economy, in that it produces primary goods valued at approximately \$750 billion per year.

Through substantial and continual efforts over the last decades – partly through regulation, partly on a voluntary basis – the forest and paper industry has significantly reduced its impact on the environment. And it will continue to innovate its operations and work towards strengthening its environmental credentials.

The industry is further committed to improve its performance in key areas including:

- Continual improvement of sustainable forest management practices, including conservation of biodiversity and wildlife habitat.
- Increasing the number of companies that report publicly on their environmental performance.
- Further increasing energy efficiency and reducing greenhouse gas emissions.
- Continued adoption of recognised credible environmental management systems.
- Better communication and dialogue with various stakeholders, including environmental non-governmental organisations.

The industry is taking the challenge of sustainable development very seriously and believes that thanks to its unique profile – the renewability of its raw material, its strong reliance on biofuels, its high energy efficiency, its high recycling rate and the storage of carbon in its products – and to its continual efforts, it has the potential to become the first large scale sustainable industry.



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## The Forest and Paper Industry's Economic Profile

On a daily basis, people depend on the products produced by the world's wood and paper industries. They are all around us: in books, magazines and newspapers, in packaging, sanitary products, in the houses we build and furniture we use, and in thousands of other products. All over the world, wood and paper products contribute to an improved quality of life.

The world's forest products industry significantly contributes to the economy as it:

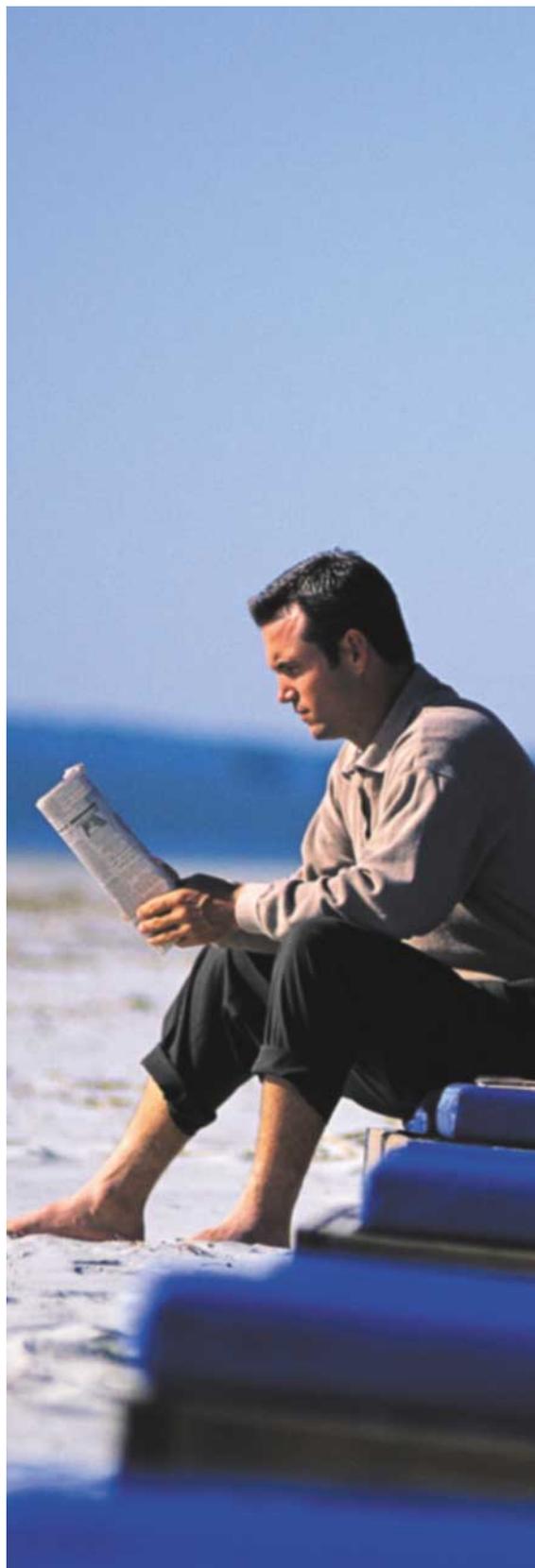
- produces primary products valued at approximately \$750 billion per year;
- has a global reach, but is comprised of thousands of small and large enterprises;
- is highly competitive with affordable products
- provides millions of jobs and supports thousands of local communities;
- provides continuous innovation through new products and new manufacturing technologies;
- is a high-tech industry requiring highly skilled labour and equipment.

### Consumption and Trade of Forest and Paper Products

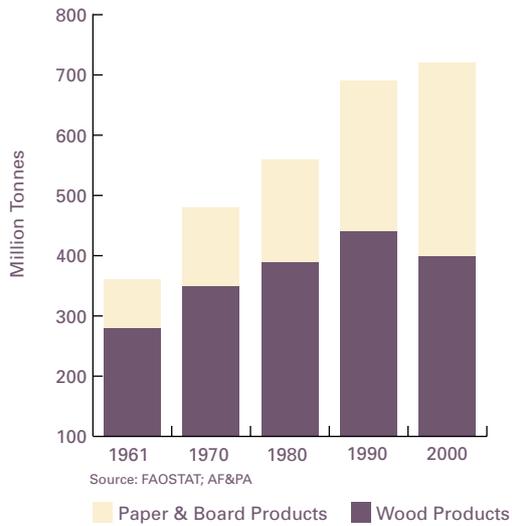
On average, each person on the globe uses the equivalent of about one quarter of a cubic meter of industrial roundwood with the wood and paper they consume per year.

The forest and paper industry has raised production to meet continuously increasing demand. The world's production (and consumption) of industrial roundwood has increased at an annual rate of 1.1% since 1960 (FAO data).

In 2000, global consumption of paper and board totalled 323 million tonnes, and solid wood products consumption totalled an estimated 767 million m<sup>3</sup>. Wood pulp capacity totalled approximately 150 million tonnes. (data from FAO, PPI, industry associations).

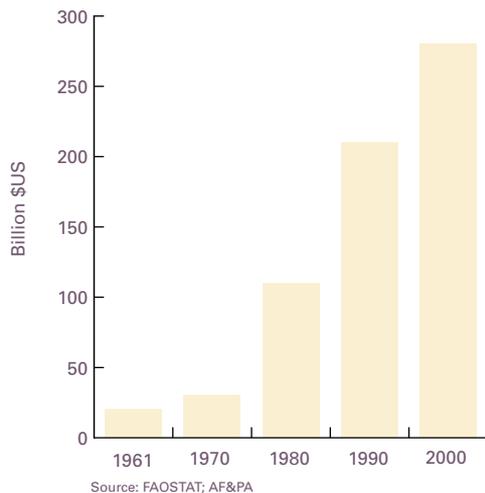


## Consumption of Forest and Paper Products



Demand for lumber and other solid wood products tends to be closely correlated with construction, particularly residential construction, while paper demand tends to track overall economic growth. Trade plays an increasingly important role in this sector – about 30% of forest and paper products enter the international trade markets.

## Trade in Forest and Paper Products



## Population and economic growth are the main drivers of wood and paper consumption.

Approximately 75% of the world's industrial wood production and consumption occur in the industrialised countries. Over the next 50 years, the world's population is projected to increase from 6 billion to over 9 billion people. With most of this growth expected to take place in the developing countries, demand for paper and wood products will experience the sharpest growth in these regions. (data from FAO, industry associations)

Consequently, over the next 50 years, the global demand for paper and board products is expected to grow at an annual rate of over 2.4%, while demand for solid wood products is projected to increase at an annual rate of 1.2%. (data from FAO, industry associations)

The use of recovered paper as a raw material for papermaking has increased on average by 5% per year over the last decades to 150 million tonnes in 2000. Trade in recovered paper is also expanding with exports more than doubling in the 1990-2000 period to 23.3 million tonnes. Globally, the consumption of recovered fibres amounted to some 46% of all fibres used for production in 2000. (data from J. Pöyry Consulting)

## A Key Social Actor

In many parts of the world, the forest and paper industry makes an important contribution to alleviate and eradicate poverty.

According to the World Bank, one billion of the world's poorest people depend on forest resources for their livelihoods. Sustainable management of the forest can perpetuate a way of life and maintain local economies in thousands of communities around the world.

Forest and paper companies are often located in rural communities, which contributes to reducing migration to urban areas by providing jobs locally. Essentially, it means that forest and paper products are at the heart of rural living.

### Employment

The forest and paper industry provides employment for tradespeople and professionals – in the forest, in the mills, and in the marketplace – as well as for those working in businesses that sell goods and services to the industry and in converting operations. This adds up to millions of direct and indirect jobs in the forest and paper sector, most of which are high-skilled and well-paid.

### Financial Support

Private companies play a major role in economic and social development, especially in rural areas where manufacturing facilities require high investments in infrastructure and social welfare. In addition to paying salaries and benefits to employees, companies pay taxes and fees to governments.

Especially in developing countries, private companies often contribute to the maintenance of hospitals, schools and training networks, sanitation structures, roads for use by the industry and the community, and sometimes even airport and port facilities. They also contribute to health care initiatives including drug and alcohol counselling, childcare, disability services, and health education and promotion. Other counselling initiatives have included legal, family, housing, employment and career, homework support, and financial counselling.

### Training and Education

Individual companies support local communities in endless ways, from sponsoring sports teams and youth clubs, to building and supporting local schools as well as other community social services. Workshops have been offered on personal development and job skills, parenting, and employment training. Many companies around the world support literacy programmes for children.



### Commitment to Health and Safety

The industry is working to preserve the physical, mental and social well-being of its employees and their families and is determined to eliminate accidents and risks in the workplace.

### Corporate Social Responsibility

In a time of intensified globalisation, growth must develop alongside responsible business conduct. Several companies located in industrialised countries have developed principles and policies for Corporate Social Responsibility as well as the necessary monitoring systems. The UN's Global Compact Initiative and its nine principles of corporate social responsibility launched in 2000 aims to create global awareness on the issue.

### Ongoing Investment in Sustainable Operations

Over the last decade significant investments have been made to improve forest management and the manufacturing processes in forest products mills. This will allow the industry to continue its financial, and therefore, social and environmental, support of communities in the long term. The industry is committed to investing in operations that are based on the principles of sustainable development, and to working with other stakeholders to ensure that the environmental, social and economic benefits of our natural resources are available both today and for future generations.

### Dialogue with Stakeholders

The international forest and paper industry promotes an open dialogue with the public. It seeks opinions on environmental priorities, especially from local communities and from its employees. And it is publicly stating its own environmental objectives, activities and performance. In some countries the industry works with the indigenous communities on projects such as training and education, joint business ventures and contracting to indigenous businesses.

### Some real life examples:

- In Colombia (South America), a large international paper and packaging company producing products from recycled fibres has established an effective paper recycling programme with suppliers, customers and other local institutions through which some 45,000 tonnes of paper have been reclaimed during the last ten years and Euros 3.1 million have been paid to NGOs and other entities involved in social assistance in Colombia.
- In Finland, companies have a long tradition of local co-operation with schools focused on several themes such as sustainability, environment, energy etc.
- In Spain, a large company supports the conservation and water conduction to a local monastery.
- In Canada, the forest products industry has developed various approaches with indigenous groups, such as subcontracting harvesting, transportation of logs, silviculture, capacity building to develop indigenous business expertise and financial capability and joint ventures.
- In South Africa, all major companies run clinics providing medical care to their employees and offering jobs to medical personnel.
- In New Zealand, the Maori people own substantial areas of forested land and are becoming a significant player in the plantation - based forest industry.
- In Brazil, many companies support local communities by providing urban structures.
- US forest products companies in co-operation with the US government, have completed a sustainable forestry development project in Honduras to help the country recover from the destruction caused by Hurricane Mitch.
- Chilean forest companies provide some US \$3 million yearly through a series of projects giving assistance to the local communities. Several also keep private parks for recreational activities on their land.
- In Australia, companies are involved in their local communities and manage their operations to minimise adverse impact on local residents and maintain transparency for example through Neighbourhood Consultative Committees.

## Sustainable Forestry Practices

### Where Social, Economic and Environment Goals Intersect...

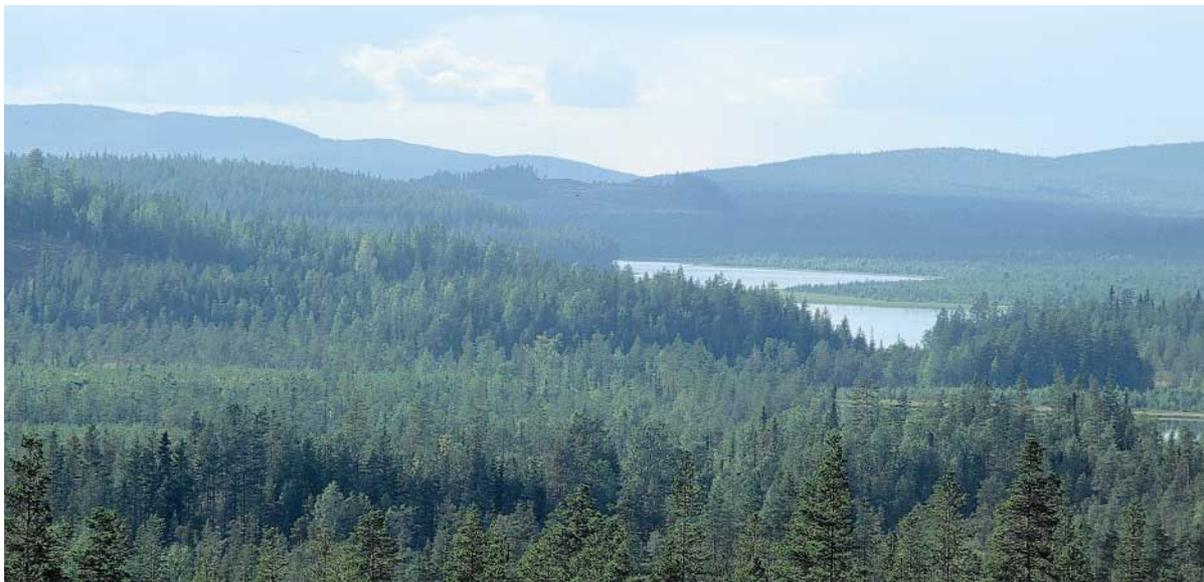
Sustainable forest management (SFM) is achieved by adopting forest management strategies that ensure a long term supply of fibre while also maintaining or improving wildlife habitat and other ecological amenities. SFM is an important community objective as they rely on forests for their social economic and environmental benefits.

#### Emergence and Growth of SFM Standards & Certification

The forest industry has taken the lead in developing sustainable forestry programmes. Numerous private and public programmes have been designed to improve forestry practices, some including third-party certification. Examples include the Sustainable Forestry Initiative® (SFI) programme, the American Tree Farm System, the Forest Stewardship Council (FSC), the Pan-European Forest Certification (PEFC), the Canadian Standards Association (CSA), the draft Australian Forestry Standard and many others, such as the Brazilian CERFLOR scheme or the Chilean CERTFORCHILE Standard which will be in place by the end of 2002. While guidelines and standards vary, they all have a common goal in ensuring continuous improvement in sustainable forestry.

**The SFM certified forest area totals over 110 million hectares – four times more than two years ago.** This total includes third-party audited forests under two international systems (PEFC and FSC), and over 40 other national systems that have been developed in countries such as Canada, Malaysia and the United States. Many other schemes are under development. More than half of the certified forest area in the world is located in Europe and approximately 40% in North America. At this time developing countries account for about 8% of the total forest area certified.

The proliferation of SFM schemes has led to the ongoing development by the international forest products industry of a framework for the mutual recognition of SFM certification systems. The concept is widely supported and will provide the marketplace with assurance that recognised systems meet strict criteria and indicators that guarantee credibility. The industry's deep involvement in the development of a mutual recognition framework among credible forest certification systems is expected to expand the global adherence to sustainable forest management.



### Response to Societal Demands

The forest and paper industry has a long history of collaborating with environmental groups to protect and restore sensitive habitats and endangered species. While definitions of endangered forests are numerous, most stakeholders agree that forest areas that represent a high biodiversity value and contain unique or rare communities or plant or animal species, are worthy of special management. The challenge lies in applying scientific and objective methods to identify these sites and develop conservation strategies to protect them, while avoiding any negative impact on the economic and social conditions for the local rural communities.

### Forest plantations are an effective complement to natural forests

to meet the growing demand for large volumes of timber. Forest plantations are established on relatively small areas of land and contribute to the conservation of vast areas of natural forests satisfying the needs for soil conservation, biodiversity, recreation etc. They are a key element in the overall multifunctionality and sustainability of forests. They provide essential environmental services, such as erosion control, soil recovery, carbon dioxide sequestration, regulation of watersheds, improvement of landscapes, and alternative habitats for wildlife. According to FAO, sustainable managed plantations will play an increasingly important role in meeting the expanding global demand for forest products – supplying as much as 40-50% of total wood production by 2050 compared to around 20% at present.

(Source: FAO Global Outlook for future wood supply from plantations. Feb. 2000)

In Brazil, an environmental impact assessment is required for any new forest plantation exceeding 100 hectares. Companies have also adopted various environmental practices, such as the improvement of biodiversity, fire control, restoration of native forests or the maintenance of riparian zones to protect water bodies.

In New Zealand over 99% of industrial wood fibre comes from plantations, enabling nearly 80% of New Zealand's remaining natural forests to be managed for non-timber values such as national parks and reserves.

86% of the two million hectares of Chilean forest plantations have been established on areas with some degree of erosion, which has had a protective effect on soils. Since early 2002, 60% of Chilean plantations are certified through the ISO 14001 standard.

### Preventing Illegal Logging and Encouraging Sustainable Practices

The forest and paper industry worldwide is strongly opposed to illegal logging. It not only contributes to deforestation but also undermines the viability of legally harvested and traded forest products and is a serious detriment to forest sustainability.

The forest and paper industry acknowledges that forest law enforcement is the responsibility of domestic authorities, but concedes that such practices are not always easy to control. In order to ensure a predictable wood supply, the establishment of laws and regulations that promote and advance sustainable forest management, as well as the correct enforcement of these laws is welcomed by the forest and paper industry. In addition, practices such as certification of sustainable forest management, as well as the use by the industry of new technologies (GIS, GPS, electronic marking, etc.) to trace harvested wood, all contribute to the fight against illegal logging.



## In Tune with the Environment

The process of producing forest and paper products – as is the case with any other production process – generates atmospheric emissions, effluents to water and solid wastes. But the industry's constant efforts to minimise its environmental impact and improve its energy efficiency have substantially reduced emissions over the years.

Forest and paper products are part of an integrated eco-cycle based on photosynthesis conversions of water, carbon dioxide, nutrients and solar energy into renewable woody biomass. Once consumed and collected separately, many forest and paper products start a new life as a secondary raw material or biofuel.



### Virgin and Recycled Fibres

Virgin and recycled fibres and products are complementary – the latter cannot exist without the former. The optimum level of recycling depends on a number of economic, social and environmental aspects, such as the geographical location, the collection potential and the technical limitations to recycling. Recycling is an economic and technical reality for the forest and paper industry, an industry that has become one of the world's best recyclers.

Globally, the consumption of recovered fibres amounted to nearly 46% of all fibres used for production in 2000. (data from J. Pöyry Consulting)

### Climate Change

Climate change is a global issue, requiring global solutions. The forest and paper industry is strongly committed to meeting the climate change challenge and has a strong basis for doing so. Trees, wood and paper products are renewable and recyclable resources that help reduce greenhouse gases by storing CO<sub>2</sub> from the atmosphere. Additionally, the industry is committed to innovative energy solutions that will increase efficiency, reduce reliance on fossil fuel, and expand the use of renewable energy sources.

Carbon dioxide emissions from pulp and paper mills declined in the range of 8% to 37% per tonne of product between 1990 and 2000 depending on the region. These emissions reductions, on top of significant reductions achieved in the previous decade, were due to greater energy efficiency, switching to cleaner burning or lower carbon emitting fuels, and most importantly, greater use of biomass fuels.

Forest and paper products are used and reused by society over long periods of time, which represents an expanding reservoir of carbon removed from the atmosphere. On average, one tonne of paper contains about 1.33 metric tonnes of carbon equivalent CO<sub>2</sub>.



### Improving Water Quality

**Water** is used in nearly every stage of the pulping and papermaking process, in varying quantities according to the type of paper produced. However, thanks to improved technology, the industry has reduced overall water consumption by one third on average over the last decade. The processed water and additives are reused so that the volume of effluents is also reduced. The large majority of pulp and paper mills apply a primary and secondary water treatment and in some cases, a tertiary treatment.

Concerns have often been raised about the impact of **chlorine bleaching** on the environment. The industry has undertaken efforts to produce paper bleached without elemental chlorine and therefore chlorine compound discharges are now a mere fraction of their previous levels. Bleaching is no luxury – it improves the binding capacity, printability and reproduction capability of strong coloured images. In addition, it safeguards paper's strength and durability (archives), and slows down the 'yellowing' process.

Major reductions in the **discharge of BOD** (biological oxygen demand, representing the concentration of organic substances in effluents) per tonne of product have been achieved in the past years. In Europe, for example, an overall reduction has been achieved of more than 75% over the last ten years and in Canada, mills have reduced their BOD emissions by 94% since 1989.

### Residues Management

Many of the forest and paper industries' residual products are valuable – their recovery rate is impressive: spent liquors, sludges, bark, chips and sawdust are almost fully utilised in energy generation and pulp manufacturing, while sawdust and chips also serve as raw material for pulp mills.

Residual products which cannot be used on the site can be used in other ways: recycling to soil conditioner, building material, road building material or for the sealing layer on landfills. The industry therefore sends less and less of its waste to landfill.

In Australia, a large company has signed a ten-year contract to collect a range of residues from the paper mill, including sludges, wood knots, reject pulp, and twigs. The residues are to a great extent composted which has allowed the production of new products and their sale on the market (e.g. animal bedding and boiler fuel).

### Eco-Management Schemes (EMS)

In 1992, the World Business Council for Sustainable Development (WBCSD) identified the concept of eco-efficiency as a way in which business can contribute to sustainability. The forest products industry is meeting the goals of eco-efficiency in a variety of ways. ISO 14001 and the EU Eco-Management and Audit Scheme (EMAS) provide useful tools to improve environmental performance and to assess the progress made by focusing on areas which require further attention. Achieving accreditation is not easy, nor are all objectives achieved within one year, but they do show targeted improvements.

An increasing number of forest and paper companies are certified with an EMS scheme or are preparing for it.

- In Canada, Europe, Japan and South Africa, a significant number of companies, on a purely voluntary basis, have decided to certify with an Eco-Management Scheme: respectively some 65%, 63%, 67% and 60% of the pulp and paper produced in these regions comes from certified mills (either ISO 14001 or EMAS).
- In Australia, the industry, through the Australian Paper Industry Council (APIC), has entered a three-year "Eco-efficiency Agreement" with the Australian government. The agreement includes a number of measures such as an annual eco-efficiency survey of APIC members, an annual public eco-efficiency report and an assessment of the greenhouse gas impacts of the paper manufacturing industry.
- In 1995, the first Brazilian market pulp mill was certified with ISO 14001. By the end of 2002 almost all Brazilian market pulp mills will be certified (representing 88% of total production).
- In the US, the industry's commitment to environmental health and safety stewardship is demonstrated in the "Environmental Health and Safety Principles (EHS) Verification Program", which tracks the industry's progress, communicates on performance and promotes continuous improvement.

In addition, many pulp and paper producers around the world are certified with ISO 9000.

### Voluntary Initiatives to improve the Industry's Environmental Performance

The industry continues to strive to reduce its environmental footprint. Some examples:

- In Europe, the industry has voluntarily committed to increase its recycling rate to 56% by 2005 – a very ambitious target in view of the continuous increase in paper consumption.
- Several European paper industries have adopted voluntary agreements to reduce their greenhouse gas emissions (e.g. the UK, Germany, the Netherlands, Finland).
- In 1991, representatives of New Zealand's environmental organisations and the forest industry signed the New Zealand Forest Accord which recognised the conservation benefits of plantations to natural forests by providing a renewable, alternative source of wood fibre. It also committed the industry to avoid clearing natural forests to actively manage them for non-timber values.
- In Canada, an Alberta-based paper company developed a database of some 1,170 stream crossings in their forest management area. This has allowed the company to avoid or eliminate any harvesting impacts on local fish populations.
- In British Columbia (Canada), government, industry, environmentalists First Nations and other stakeholders hammered out a voluntary framework agreement (i.e. Coast Forest Conservation Initiative) to balance economic, social and environmental objectives across a 4.8 million hectare swath. The agreement includes the creation of a 96,000 hectare protection area for the rare Kermode bear.
- In the US, participants in the Sustainable Forestry Initiative programme have trained more than 60,000 loggers in sustainable forest management practices.
- In Chile, forest companies committed to a "Declaration of Environment Principles" aimed at sustainable growth alongside joint efforts with the local communities. In 1999, pulp producers signed a "Clean Production Agreement" with the local administration with concrete environmental objectives.

In addition, the International Council of Forest and Paper Associations (ICFPA) is developing "**Calculation Tools for Estimating Greenhouse Gas Emissions from Pulp and Paper Mills**". This methodology aims to provide improved and more consistent tools for estimating GHG emissions from pulp and paper mills and to assist companies in preparing transparent emissions estimates, compatible with existing international protocols, such as the United Nations' Intergovernmental Panel on Climate Change (IPCC) protocols. The tools can also facilitate tracking of improvements.

Individually companies are involved in numerous initiatives, such as the collection and recycling of all used paper generated during the World Summit on Sustainable Development.



## The Forest and Paper Industry's Energy Profile

### The Forest and Paper Industry is Energy Efficient

The pulp and paper production process is energy intensive – energy can represent up to 25% of the production costs. This has always been a serious incentive for the industry to improve its energy efficiency through measures such as:

- (1) A more efficient use of electricity and steam thanks to improvement in the production process.
- (2) An efficient production of electricity and steam through the implementation of combined heat and power technologies.
- (3) An increased use of biofuels as an alternative to fossil fuels.
- (4) An increased use of low carbon energy.

### Significant Energy Savings

The industry's efforts to save energy started long before the 1990s. In Japan, specific energy consumption declined by 44% between 1970-1990. Other large paper-producing countries have also significantly achieved major savings in specific energy consumption since 1990.

### Reduction in Specific Energy Consumption (per tonne of product)

Europe	31%	1990-2000
Japan	7%	1990-2000
Canada	36%	1990-1999

### Impressive Introduction of Combined Heat and Power (CHP)

The pulp and paper industry has instituted the widespread use of CHP technologies which perfectly meet the industry's need for both steam and electricity. CHP installations allow savings of some 30-35% of primary energy compared to conventional boilers. Most of the electricity produced on pulp and paper sites is produced through CHP technology.

### Percentage of Electricity Produced on-site from CHP

Europe	90%	2000
Japan	70%	2000
USA	88%	2000

### Use of Biomass

The pulp and paper industry is the single largest producer and user of biomass fuels (residual woods, bark, black liquor, sludge). Pulp and paper mills recover energy from their waste stream by using biomass as a primary energy source in the manufacturing process. Energy-rich biomass – derived from wood chips, bark, sawdust and pulping liquors recovered from the harvesting and manufacturing processes – is atmospheric carbon dioxide sequestered by trees during growth and transformed into carbon. When these biomass fuels are burned, the CO<sub>2</sub> emitted during the manufacturing process is the atmospheric carbon dioxide that was sequestered during tree growth. This carbon cycle is a closed-loop. New tree growth absorbs carbon dioxide; therefore there is no net contribution to the atmospheric CO<sub>2</sub> level.

Biomass is a major energy source for the pulp and paper industry, accounting for more than 50% of the total energy consumption in Europe, Canada and USA.

Europe	52%	2000
Japan	36%	2000
Australia	28%	2000
Canada	54%	1999
USA	55%	2000

### Increased Use of Low Carbon Energies

The pulp and paper industry has been promoting the shift to such low carbon energies as natural gas where economically feasible. For example, the European pulp and paper industry has significantly increased its use of natural gas – 60% of fossil fuels are now used by the industry – which has led to a reduction in the share of coal and oil in the total energy consumption from 29% to 15% over 1990-2000.

### Substantial Reduction in Specific CO<sub>2</sub> Emissions

Thanks to the aforementioned measures, the industry has been able to significantly reduce its specific CO<sub>2</sub> emissions between 1990 and 2000, on top of important reductions in CO<sub>2</sub> emissions in the previous decade.

Europe	31%	1990-2000
Japan	7%	1990-2000
Canada	36%	1990-1999
US	11%	1990-2000

### The Industry's Energy Consumption: a Sound Balance

The paper industry is using both wood pulp from trees – which besides its raw material, also provides the industry with large amount of biofuels – and recovered paper that generally requires less energy to produce paper. The industry's energy balance is also served by the high proportion of biofuels used by the industry and by its high energy efficiency, thanks for example to the production of combined heat and power. The industry will continue to strive to improve its energy efficiency although it has to be recognised that the cost efficient technological potential has become rather limited. The industry will continue to promote an increased use of biomass and of low carbon fossil fuels.



Australia  
Brazil  
Canada  
Chile  
Colombia  
Europe  
Japan  
Latin America  
Malaysia\*  
Mexico\*  
Morocco  
New Zealand  
Poland  
Russia  
South Africa  
Thailand\*  
United States of America

The International Council of Forest and Paper Associations consists of trade associations in 39 countries representing industries accounting for 75% of the world's paper production, and more than 50% of the world's wood production. The ICFPA is committed to the principles of sustainable development and to working with other stakeholders to ensure that environmental, social and economic benefits and our natural resources are available to current and future generations. The main goal of the ICFPA is to serve as a forum for joint action in areas ranging from communications to data collection. The co-operation will be on international matters and on developing and promoting common positions. The ICFPA will also represent the industry in multilateral organisations.

\*Did not comment on the brochure