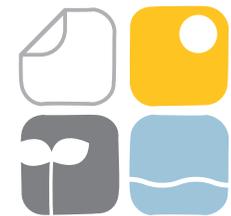


2011 ICFPA  
Sustainability  
Progress  
Report

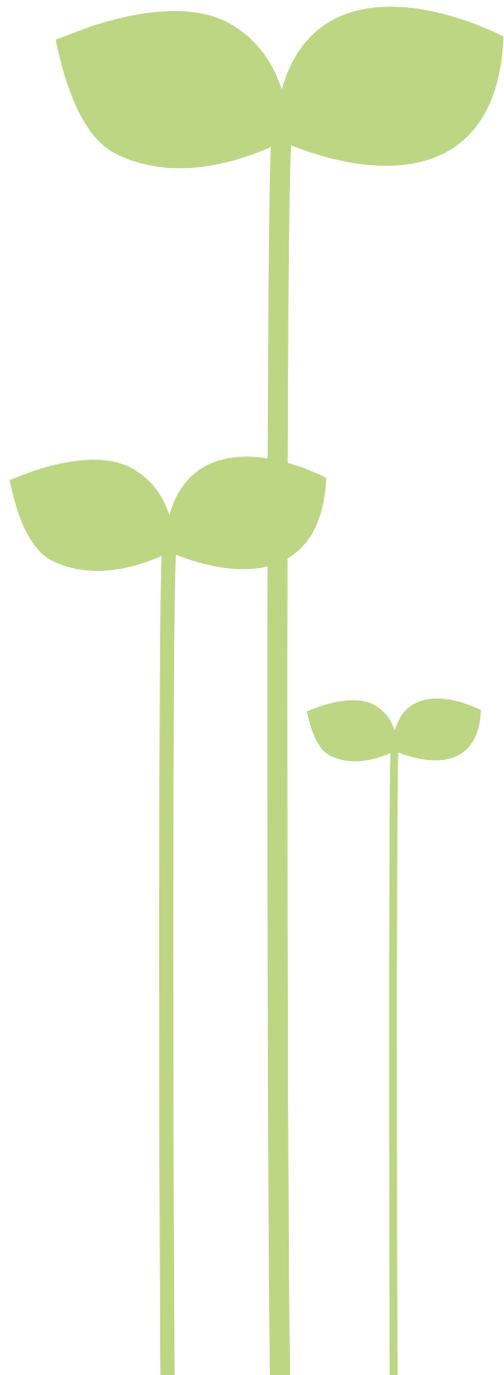


INTERNATIONAL  
COUNCIL OF  
FOREST & PAPER  
ASSOCIATIONS

*Our vision*

**ICFPA is committed  
to the principles  
of sustainable  
development**





*Our mission*

**We work with other stakeholders to ensure that environmental, social and economic benefits are available to current and future generations.**

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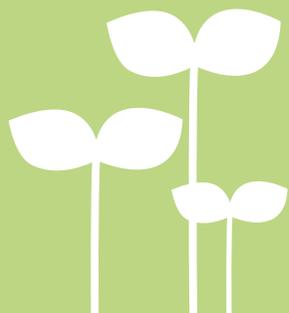
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## EXECUTIVE SUMMARY

**The International Council of Forest and Paper Associations (ICFPA)** is a worldwide network of forest products industry associations that promote cooperation in areas of common interest to its members and serves as the industry's voice at international level. As of January 2011, its membership represents 41 forest and paper associations in 40 countries with more than 90% of the world's paper production, and more than 50% of its wood production.

The ICFPA and its members are committed to sustainable development which ensures that environmental, social and economic benefits are available to both this and future generations.

To demonstrate progress towards this commitment, the ICFPA is pleased to publish its third biennial Sustainability Progress Report. The report highlights member associations' activities and performance in six key areas, as agreed upon in the ICFPA CEO Leadership Statement on Sustainability of 2006:

- Creating solutions to global climate change and energy supply challenges;
- Promoting sustainable forest management worldwide;
- Combating illegal logging;
- Fibre use and recovery;
- Environmental management; and
- Investing in workers and communities.

New to the 2011 report is the inclusion of aggregate indicators which demonstrate ICFPA performance in three key areas: climate change, sustainable forest management and paper recycling.

The report also describes major trends in the forest products industry including:

- The global economic slow down's significant effect on the demand for traditional forest and paper products;
- The availability of future wood and fibre supply as an emerging challenge;
- Increasing Sustainable Forest Management (SFM) certification levels among small land owners requiring further industry attention; and
- The increasing activity around the diversification of materials extracted from forests to address growing competition from other sectors.



### Climate Change & Energy Supply Challenges

Climate change continues to be a key issue for all industries globally. The forest products industry is uniquely positioned to produce products for the marketplace from renewable sources that capture and store carbon, and can sustainably replace other less climate-friendly materials. ICFPA members are addressing climate change through the promotion and implementation of sustainable forest management, while optimizing their use of raw materials, increasing efficiency in their mill processes and developing new, climate friendly bio-energy and forest-based products. Members are also making extensive investments in new technologies, and increasing the use of biomass energy generation. Collectively, reporting ICFPA members have reduced their GHG (Greenhouse Gas) emissions intensity by 8% since 2004.

Since 2004, reporting ICFPA members have reduced their GHG emissions intensity by 8%

### Sustainable Forest Management

Ensuring the long-term health of forest ecosystems and maintaining a sustainable supply of fibre is demonstrated by ICFPA member commitment to sustainable forest management (SFM) certification. Members see credible forestry certification as a significant, voluntary, market-based tool which improves forest management practices, increases community well-being and meets the requirements of the industry's customers. Since 2000, ICFPA members have realized a 346% increase in the total area of certified sustainably managed forests to 273 million ha- representing 53% of the wood supply used by ICFPA member companies. International recognition of SFM criteria, independent third party audits, continual improvement, transparency and stakeholder input all foster the continued credibility of certification systems.

Since 2000, ICFPA members have increased their SFM certifications by 212 million hectares

### Illegal Logging

Illegal logging continues to be a complex issue for the global forestry industry. Solutions vary in different parts of the world based on legislation, infrastructure, and economic conditions. However, all ICFPA members are taking steps to implement their commitment to the ICFPA Statement on Illegal Logging. Since the last report, ICFPA members have collaborated with governments, environmental organizations and community groups to help develop and pass legislation to criminalize the import and trade of products that use fibre harvested in violation of respective country laws. Chain of Custody certifications are used by ICFPA members to increase the level of assurance around product origin and procurement.

### Fibre Use and Paper Recycling

ICFPA members are committed to working with stakeholders to increase paper recycling rates and invest in technology to increase recycled fibre input into paper and wood products, therefore optimizing the use of wood as raw material and reduce the amount of used paper going to landfills. Recycling rates continue to improve as recovery infrastructure becomes more common and public awareness around recovery programs increases. By 2009 global recycling rates have increased to 55.6%.

### Environmental Management

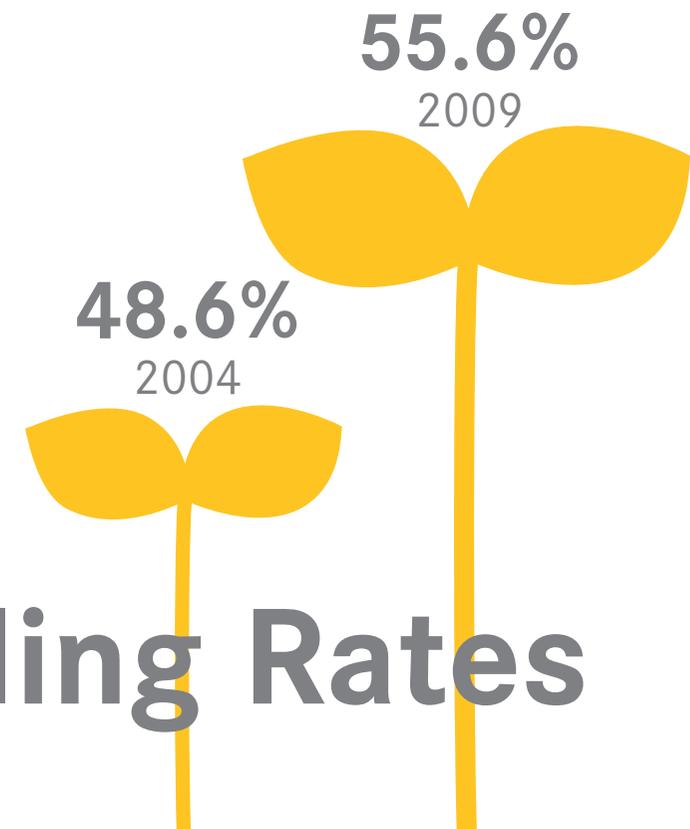
The ICFPA and its members continue to ensure that their activities respect the environment, and maintain and improve the resources on which the industry depends. Since the last Progress Report, ICFPA members have shown improved performance across a range of environmental indicators including: water use; biochemical oxygen

demand and sulphur dioxide, nitrogen oxide, and total particulate matter emissions, while also increasing production. A number of members are investing in innovative ways to transform process waste into useable products; others are creating multi-stakeholder alliances to find alternatives to traditional chemicals.

### Investing in Workers and Communities

Given its critical role in the economic viability of thousands of local communities, the sustainability of the global forestry industry is more important than ever. With the increasing pressures of rapid urbanization on infrastructure, housing and public services, the employment opportunities provided by ICFPA members in rural areas help families avoid migration into cities. ICFPA members support rural communities through salaries and benefits, contracting of local businesses, as well as through donations and sponsorship in support of infrastructure, including schools, roads and hospitals.

The ICFPA and its members recognize the importance of continued management around sustainability issues. The ICFPA will continue to provide biennial progress updates to keep stakeholders informed of the efforts of the industry. As demonstrated with previous reports, ICFPA expects this publication to drive continuous improvement in the environmental and social performance of its members, contributing to further sustainable developments of the forest products industry.



# Global Recycling Rates

## ABOUT ICFPA

The International Council of Forest and Paper Associations (ICFPA) is a worldwide network of forest products industry associations that promotes cooperation in areas of common interest to its members and serves as the industry's advocate at the international level.

The ICFPA was formally launched in 2002, following a series of informal meetings at which international executives of forest and paper associations discussed challenges facing the global industry. This international organization has the following core objectives:

- Coordinate actions in areas of mutual interest;
- Develop and promote common positions in matters of international importance;
- Support and advocate for sustainable forest management (SFM) and sustainable production of forest products;
- Serve as a clearing house for best experiences and practices; and
- Encourage and facilitate dialogue among diverse stakeholders at global level.

As of January 2011, the ICFPA's membership has grown to 41 forest and paper associations from 40 different countries, representing more than 90% of the world's paper production and more than 50% of its wood production.



INTERNATIONAL  
COUNCIL OF  
FOREST & PAPER  
ASSOCIATIONS

## ABOUT THIS PROGRESS REPORT

The 2011 ICFPA Sustainability Progress Report (Progress Report) is the third biennial report that highlights the progress of regional and national member associations in acting on the CEO Leadership Statement. The report focuses on member activities in each of the six core areas identified in the CEO Leadership Statement, and, where available, provides updated data for key indicators presented in the 2007 and 2009 reports.

The full text of the CEO Leadership Statement can be found on the ICFPA's website at [www.icfpa.org/issues\\_statements/statements/ceoLeadership\\_statement.php](http://www.icfpa.org/issues_statements/statements/ceoLeadership_statement.php).

The ICFPA promotes best practices among its membership and believes in leading by example. In an effort to demonstrate and quantify the collective impact of its membership's sustainability programs and activities, the ICFPA has partnered with the National Council for Air and Stream Improvement (NCASI) to identify meaningful aggregate performance indicators. New in the 2011 Progress Report, member associations provide performance data for three key stakeholder and industry sustainability issues:

- 1) **Climate Change**
- 2) **Sustainable Forest Management**
- 3) **Paper Recycling**

Further detail on these indicators can be found in the 'Measuring Our Impact' section of this report.

Also new to this report, the ICFPA is pleased to welcome two first-time reporting members, Lebanon and Russia.

## SUSTAINABILITY AND THE ICFPA

In the shadow of recent economic uncertainty, sustainability continues to be an issue of importance to the ICFPA. The ICFPA also recognizes that sustainability provides a mechanism through which the industry can address economic challenges. Over the past two years, global forest, paper, and packaging companies have operated under challenging conditions, but continue to pursue a transition towards new and innovative forest-based products. The global forestry industry is uniquely positioned to demonstrate leadership in sustainability through the development of innovative products which are not only environmentally sound, but also contribute to the economic and social well-being of rural and urban communities.

This Progress Report, like previous updates, is based on six commitments developed under the ICFPA CEO Leadership Statement on Sustainability. In 2006, member company CEOs and association presidents representing many of the largest pulp, paper and wood companies signed the CEO Leadership Statement on Sustainability. As of the publication of this report, 71 company CEOs and 22 associations have signed the statement, through which signatories commit to achieving and reporting on continuous improvement in sustainability performance through action in six key areas:

- Creating solutions to global climate change and energy supply challenges;
- Promoting sustainable forest management world-wide;
- Combating illegal logging;
- Fibre use and recovery;
- Environmental management; and
- Investing in workers and communities.

## THE FOLLOWING ICFPA MEMBERS CONTRIBUTED TO THIS REPORT:

**A3P** – Australian Plantation Product & Paper Industry Council

**AF&PA** – American Forest & Paper Association

**Bracelpa** – Brazilian Pulp and Paper Association

**CEI-BOIS** – European Confederation of Woodworking Industries  
(Representing 6 European Branch Federations and 21 National Wood and Furniture Association from the following countries: Austria, Belgium, Denmark, Estonia, France, Finland, Germany, Hungary, Italy, Latvia, Norway, Portugal, Slovenia, Spain, Sweden, Switzerland, United Kingdom)

**CEPI** – Confederation of European Paper Industries  
(Representing 19 National Pulp and Paper Associations from the following countries: Austria, Belgium, Czech Republic, Finland, France, Germany, Hungary, Italy, The Netherlands, Norway, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, United Kingdom)

**CORMA** – Corporación Chilena de la Madera

**FPAC** – Forest Products Association of Canada

**JPA** – Japan Paper Association

**Lebanon** – Syndicate of the Owners of Paper and Packaging Industries in Lebanon

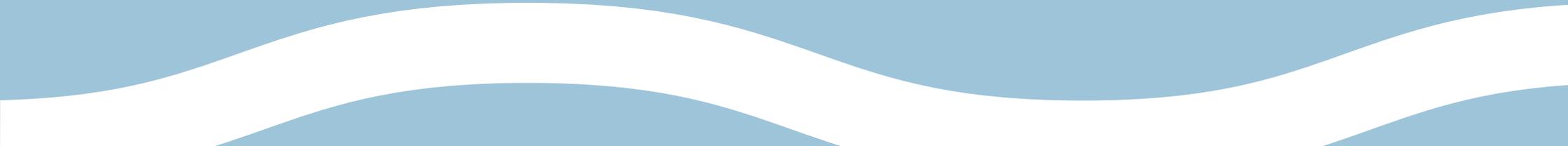
**NZFOA** – New Zealand Forest Owners' Association

**PAMSA** – Paper Manufacturers Association of South Africa

**RAO Bumprom** – The Russian Association of Pulp & Paper Organizations and Enterprises (*Russia*)



# **Industry Trends, Challenges & Opportunities**



## EMERGING TRENDS

Throughout this Progress Report, a number of trends associated with sustainability programs and activities in the global forestry industry emerge. The underlying characteristic of these trends is the creation of economic, environmental and social value across the forest products supply chain.

ICFPA members are responding to customer and other stakeholder requests for products that have lower footprints, with less embedded energy and water, and whose production provide positive benefits to the environment and society. Extensive investments in new technologies and increases in biomass energy generation and use are two examples of how members are addressing these market demands.

Many members are also undertaking research to better understand how the forest and paper products sector can redefine itself through an increasing focus on sustainability and the development of innovative wood products. Some member companies and associations have completed research on new business opportunities, reducing costs through green transformation of mill processes; development of bio-products and bio-energy; new uses for recovered paper; and advancing sustainable forest management

The importance of forest-based bio-refineries is demonstrated by many ICFPA members through increasing activities and research in this area. Bio-refineries help reduce mill effluent discharges and electric power consumption. Bio-refineries also support the development of new chemical by-products (e.g. hemicellulose can be used as an alternative to aluminum in beverage packaging), and generate biomass and bioliquids which can be transformed into energy. Transitioning mature mills into bio-refineries supports the continued generation of revenues from aging assets and provides employment in rural communities.

Since the last Progress Report, a number of partnerships between ICFPA member associations or their member companies and Non-Government Organizations (NGOs) have been established. These collaborative efforts have resulted in shared Sustainable Forest Management (SFM) strategies, national agreements supporting forest conservation and joint positions between NGOs and industry on such issues as illegal logging, climate change and biodiversity). Bio-refineries are currently in their early stages of development and may play a more substantial role in the future of the forestry products industry.

## CHALLENGES

ICFPA members reported that the global economic slowdown has had a significant effect on the demand for traditional forest and paper products. Forest product markets, driven primarily by housing construction, experienced the greatest drop in demand. As a result, some members reported decreased employment numbers during this period. However, during the same period, the demand for renewable biomass energy sourced from residues continued to grow due to government climate change and energy security policies. As this demand continues to increase the industry may see further opportunities for reinvestment in aging facilities and processes which will ultimately result in further improved sustainability performance.

As new uses for forest-based materials are developed, and demand for renewable manufacturing inputs increases, future wood and fibre availability is an emerging challenge identified by ICFPA members. Specifically, increasing demands for wood as an energy source may impact the availability of wood as a raw material for wood and pulp and paper products. Furthermore, changing attitudes on energy security are resulting in government mandates and incentives which promote the use of biomass. Policies that drive the diversion of virgin biomass to subsidized energy production have the potential to undermine existing

renewable energy production at forest products facilities.

These competing demands for forest-based materials highlight the need for strong SFM practices to help ensure appropriate harvest levels and methods. Increasing SFM certification levels among small landowners will require further industry attention. The development of specialized and appropriate certifications standards and collaboration with landowners will help encourage additional certification.

The paper products industry is currently facing strong competition as the demand for end-products is decreasing due to electronic advances. E-readers and the trend towards online media and reporting are having a direct impact on the quantity of paper inputs required. The industry is also facing competition as manufacturers are considering alternative input materials. For example, bioplastics (plastics derived from vegetable oil or corn starch) are being increasingly used for packaging materials that have been traditionally produced using forest products.

**OPPORTUNITIES**

Forest products contribute to carbon sequestration and lower carbon footprint, highlighting their inherent sustainability when appropriately produced, and conveying an environmental advantage over products produced using non-renewable resources. The forest products industry has worked hard to increase understanding of these benefits, and ICFPA members are now seeing an increasing acceptance and recognition of forest product benefits in the marketplace. Members have an opportunity to capitalize on this increasing acceptance by growing market share.

Two member associations (NZFOA, CEI-Bois) identified the increasing and expanding use of wood in construction as part of the solution to climate change, by storing carbon and the substitution of energy and carbon-intensive materials. With increasing understanding of

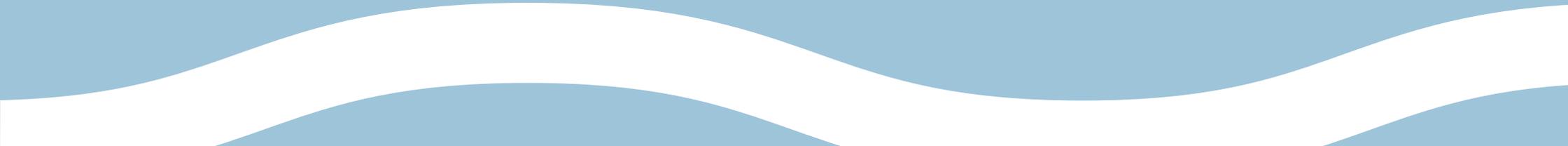
the benefits of wood products, the potential for growth in this area is notable and will help reinvigorate the construction sector following weaker housing starts due to the economic slowdown.

As countries look to reduce their reliance on traditional fossil fuels, biomass energy is becoming an increasingly attractive option. New technologies are being developed that will allow the forest products industry to produce transportation fuels from renewable biomass while continuing to make pulp and paper and lumber products. A number of forest products companies in different parts of the world are undertaking both pilot-scale and production-scale projects that seek to optimize conversion technologies and demonstrate the economic advantages of integrated bio-refineries.





# Measuring Our Impact



In 2010, ICFPA members met in Washington to discuss how to further demonstrate and drive sustainability performance. ICFPA members decided to introduce aggregated performance indicators in the 2011 Progress Report to demonstrate reporting best practice and to encourage expanded sustainability performance among member associations.

The ICFPA identified three key aspects of industry sustainability performance which are both business-critical and of importance to industry stakeholders. For each of the three aspects, a performance indicator was selected:

- 1) **Climate Change** – GHG Emissions
- 2) **Sustainable Forest Management** – SFM Certification, by area
- 3) **Paper Recycling** – Global Recycling Rate

The selection of these indicators was informed by a number of challenges related to reporting on industry performance at the global level, including:

- Differing data collection approaches between regions;
- The need for data comparability; and
- Availability of data (quality, quantity, temporal coverage).

These indicators will allow ICFPA to measure and track performance and ultimately, quantify collective environmental improvements. As reporting coverage from member associations increases and a strong baseline trend is established, the ICFPA will look to develop and include additional performance indicators in future reports.

## **CLIMATE CHANGE**

Climate change is a material issue across the international forest products industry. As deforestation continues to be a major contributor to global climate change, the sustainable management of forests plays a central role in its mitigation. In its Fourth Assessment Report, the United Nation’s Intergovernmental Panel on Climate Change (IPCC) concluded that “in the long-term, a sustainable forest management strategy aimed at maintaining or increasing forest carbon stocks, while producing an annual sustained yield of fibre or energy from the forest, will generate the largest sustained mitigation benefit.” The forest products industry is uniquely positioned to produce products for the marketplace from renewable sources that capture and store carbon, and can sustainably replace other less climate-friendly materials and fuels. Reducing the industry’s carbon footprint contributes to the sustainability of forest products and is necessary to demonstrate carbon benefits in the marketplace

Five ICFPA member associations submitted GHG emission intensity data for both Scope 1 emissions (onsite fuel combustion) and Scope 2 (total purchased minus sold electricity) emissions. These members represent approximately 45% of global paper, paperboard, and wood pulp production. Between the base and reporting year, overall emission intensity decreased by 8% (Figure 1). Scope 1 emission intensity represents most of this decrease with a 12% reduction from 0.515 to 0.455 mt carbon dioxide (CO<sub>2</sub>) equivalent per mt production between reporting years. During the same period, Scope 2 emissions remained relatively steady.

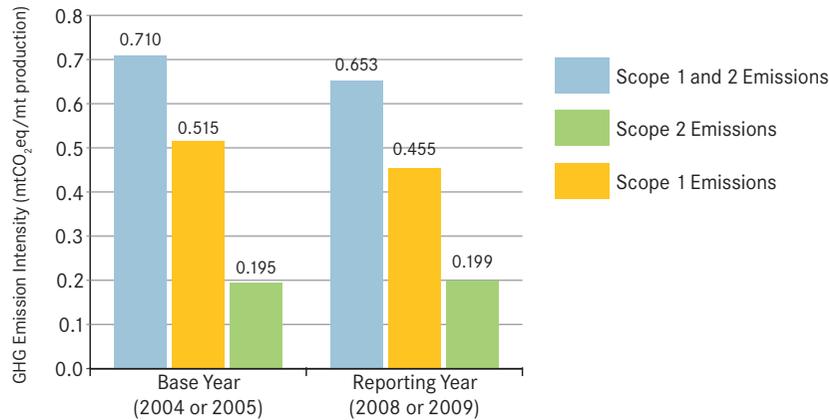


Figure 1 - ICFPA Reporting Member GHG Emissions (AF&PA, CEPI, FPAC, JPA and PAMSA)

Increased utilization of wood wastes as fuel in combined heat and power systems is occurring at many manufacturing locations. This process efficiently generates electricity and steam, and replaces the purchase and combustion of fossil fuels. These increases in biomass energy systems, combined with intensive investments in more efficient and advanced mill technologies, are the main drivers behind the decrease in GHG emissions intensity.

### SUSTAINABLE FOREST MANAGEMENT

Forests that are sustainably managed support the conservation of biodiversity and ecosystem functions involve local stakeholders, provide employment in rural areas, and are a sustainable source of wood fibre. Sustainably managed forests also contribute to the absorption of CO<sub>2</sub>, allow for the manufacturing of products that store carbon, provide an alternative to carbon intensive materials and fuels, and create renewable products made from recyclable raw materials.

For the purpose of this indicator, certified sustainably managed forest is defined as wood that has been certified to a system formally recognized by the Forest Stewardship Council (FSC) and/or the Program for the Endorsement of Forest Certification schemes (PEFC).

More than 50% of the wood supply used by the companies belonging to ICFPA member associations (amounting to a total area of 273 million ha) is supplied from certified sustainably managed forests. Between 2000 and 2009, ICFPA members realized a 346% increase in the total area of certified sustainably managed forests (Figure 2).

This increase and associated progress towards the ICFPA commitment to sustainable forest management can be attributed to the need of forest and paper products companies to meet the business objective of a long-term and sustainable supply of fibre while simultaneously addressing forest conservation. SFM certification meets both these objectives. Growing market demands for third-party certified products has been a key driver of increased certification area.

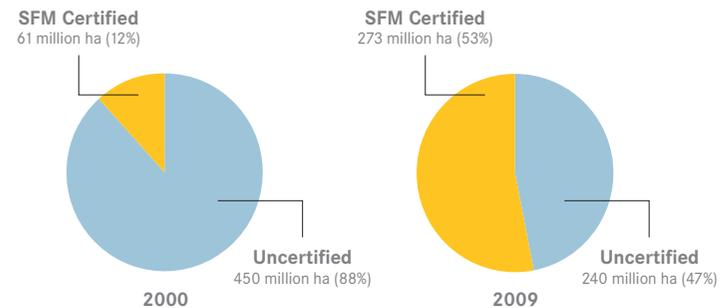


Figure 2 - ICFPA Reporting Member Certified Forest Area (AF&PA, BRACELPA, CEPI, CORMA, FPAC and JPA)

### FIBRE USE AND PAPER RECYCLING

In this report the Global Recycling Rate represents the amount of recovered paper used to produce paper globally as a percent of global paper and paperboard consumption (Figure 3). It includes only recovered paper that is recycled into paper or paperboard. Because the amounts of paper used in other applications is small and seldom reported, however, the global paper recycling rate can be assumed to be equivalent to the global paper recovery rate.



Figure 3 - Recycling Rate Calculation

Increased public participation in recycling programs has improved the quantity of recovered fibre available for reintegration into the processing system in many countries. The amount of fibre which can be reintroduced into the manufacturing process is dictated by a number of factors including availability of recovered paper, cost considerations, the type of processing equipment used in mills, and customer needs around product strength, structure and brightness.

Since 2000 the global paper recycling rate has increased from 46.5% to 55.6% in 2009 (Figure 4). As companies invest in new technologies they will be able to use increasing amounts of recovered paper for their ongoing fibre requirements. This factor is expected to further increase the recycling rate of recovered paper.

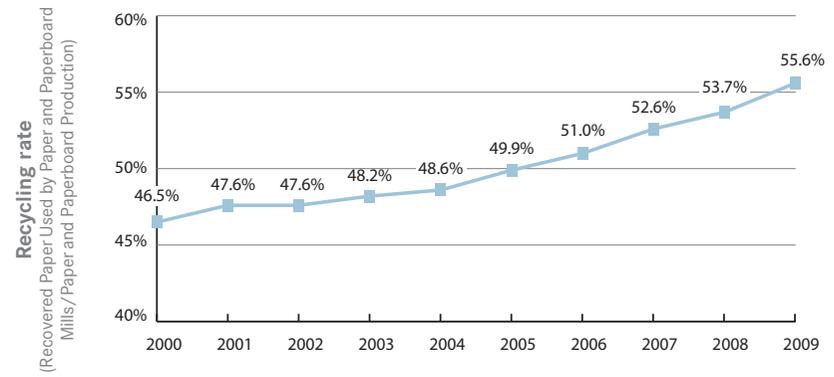
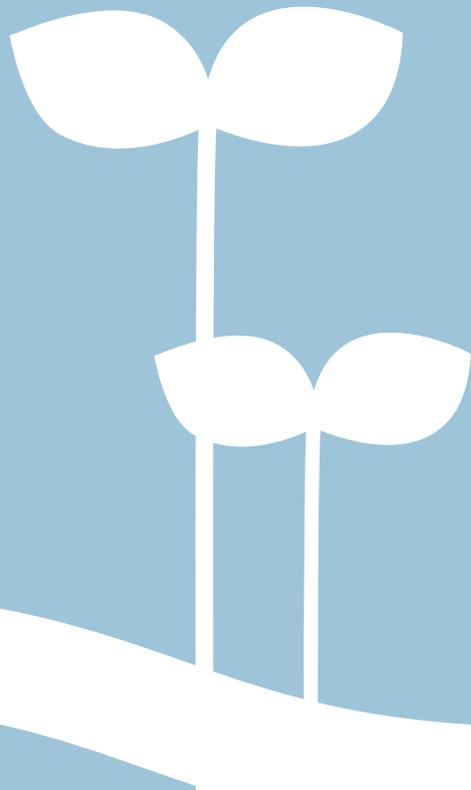


Figure 4 - Global Paper Recycling Rates

However, there are practical and technical limits to paper recovery for recycling. It is important to realize that a significant percentage of paper is not suitable for recovery because it is contaminated in use (tissue papers and certain food contact paper); it goes into permanent or semi-permanent use (libraries, archives and construction paper and paperboard); or is located in remote or sparsely populated areas not reachable by recycling programs. In addition, cellulose fibers tend to become shorter each time they are recycled, limiting their usefulness for papermaking.

# Progress on Our Commitments



### CLIMATE CHANGE AND ENERGY SUPPLY CHALLENGES

As illustrated by the previous Progress Report, which focused on the climate change and energy, the global forest products industry is strongly committed to playing a significant role addressing this issue. ICFPA members are addressing climate change through the promotion and implementation of sustainable forest management, while optimizing their use of raw materials, increasing efficiency in their mill processes and developing new, climate friendly bio-energy and forest-based products. Since 2004, reporting ICFPA members have collectively reduced their GHG emissions intensity by 8%, as reported in the Measuring Our Impact section of this report.

#### Brazil (BRACELPA)

The Brazilian pulp and paper industry has been working to address its carbon footprint by altering the energy mix of its operations to include more renewable energy sources like black liquor (a by-product of the pulp production process) and biomass (Figure 5).

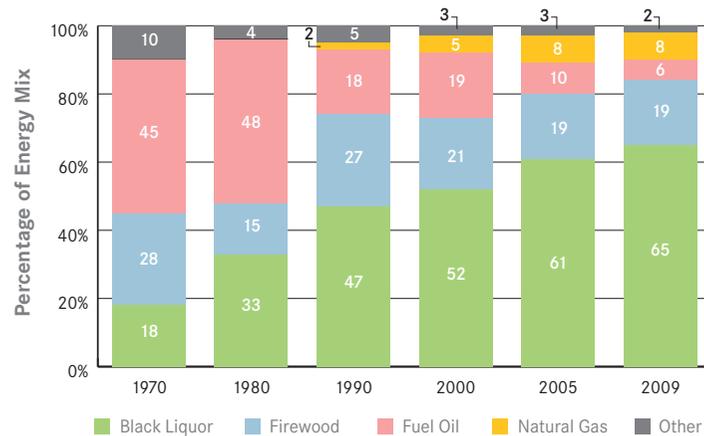


Figure 5 – BRACELPA: National Energy Mix

#### Canada (FPAC)

Committed to reaching the goal of carbon neutrality by 2015, FPAC members continue to decrease their emission intensity and transform their energy mix. FPAC members (pulp and paper) have reduced GHG emission intensity by 8% between 2007 and 2009 and over 66% since 1990 (Figure 6).

Biomass continues to play an important role in the energy mix used at FPAC pulp and paper facilities, accounting for 68% of energy used in 2009, a 10% increase from 2007.

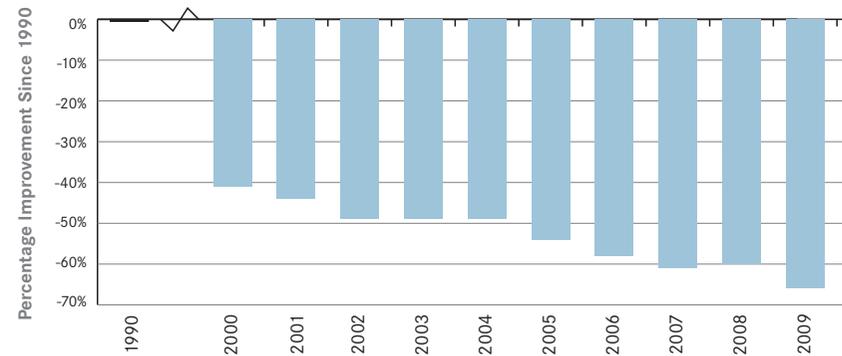


Figure 6 – FPAC: GHG Emissions Intensity of Pulp and Paper Facilities

#### Chile (CORMA)

According to government figures, the forestry sector offsets about 20% of annual national GHG emissions. Furthermore, the average annual afforestation rate is 45,000 ha per year, increasing the retained carbon stock.

Sawmilling and remanufacturing residues are often used as a renewable fuel and over half of the energy used by the forest products industry is provided by carbon neutral biomass. Pulp manufacturing is self-sufficient in terms of its electricity demand, and excess electricity is

supplied to the national electricity grid. Currently, over 720 MW of electricity is generated through cogeneration plants, of which 33% is returned to the national grid.

### Europe (CEI-Bois)

Since the previous Progress Report, the publication “Tackle climate change: use wood” has been revised to include the latest available and updated economic data and is now available in 13 languages. In addition, it has served as a basis for similar publications in North America and China.

### Europe (CEPI)

In 2009, both direct emissions on site, and indirect emissions from electricity purchases from the national electricity grid decreased (Figure 7). Overall, direct emission intensity is down 42% per tonne since 1990. Absolute direct CO<sub>2</sub> emissions have decreased a further 6% in 2009 to 35 mt. However, this is connected to decreased demand during the economic crisis. When correcting for this, emission intensity stabilised when compared to 2008, which is not insignificant given the inefficiencies associated with running below normal capacity. At the end of 2009, 54.3% of energy consumed by member companies was generated using biomass. This represents a slight decrease from 2005 levels of 55% reported in the previous ICFPA Progress Update.

Direct CO <sub>2</sub> Emissions*	1990	2000	2005	2006	2007	2008
Absolute (Mega tonnes)	39.89	41.94	41.29	41.15	39.83	37.26
Specific (kt CO <sub>2</sub> /kt of product)	0.57	0.43	0.38	0.36	0.35	0.34
Indirect CO <sub>2</sub> Emissions*						
Absolute (Mega tonnes)	14.50	14.93	12.23	14.81	13.76	12.81
Specific (kt CO <sub>2</sub> /kt of product)	0.20	0.15	0.11	0.13	0.12	0.11

\*excluding Switzerland

Figure 7 – CEPI: Direct and Indirect Emissions

### Japan (JPA)

In 2009, JPA demonstrated a 22% decrease in fossil energy consumption per tonne over 1990 (Figure 8). This was due to an increase in the amount of renewable energy used; the development of a streamlined production system as low-efficiency mills or equipment was retired; and a decrease in paper and paperboard production for the year. Since the last ICFPA Progress Report, JPA reduced fossil energy consumption per tonne by 2.6%.

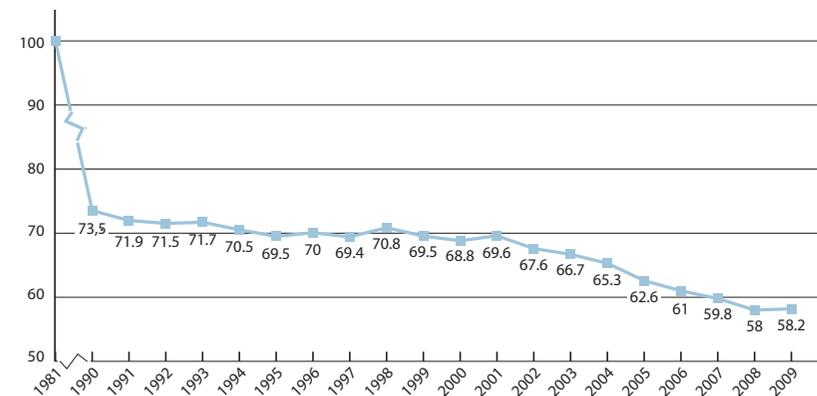


Figure 8 – JPA: Energy Consumption per Tonne of Product

### Lebanon

#### (Syndicate of the Owners of Paper and Packaging Industries)

There are four paper and greyboard producers operating in Lebanon with a combined consumption estimated at 9,400 tons of heavy fuel; 1,500 tons of fuel oil; and 1,000 tons of biomass. As such, biomass energy makes up 8.4% of the energy mix consumed by Lebanese paper and greyboard producers.

### New Zealand (NZFOA)

The forest sector was the first to implement the New Zealand Emissions Trading Scheme in 2008 and is playing a pivotal role in ensuring there is a liquid market for emissions trading. The wood products industry already produces much of its energy from renewable sources. Recently, a 100MW geothermal energy plant was commissioned at a pulp and paper plant, and in 2009, woody biomass was used to generate over 55 PJ of energy – a 15% increase in ten years.

NZFOA has also been working in partnership with the Bioenergy Association of New Zealand to encourage further commitment by government to the development of renewable energy sources, focusing on the role of forestry.

### Russia (RAO Bumprom)

The forestry industry is largely dependent on traditional fossil fuels. Currently, only 5% of energy comes from biomass signaling a substantial opportunity for the forestry industry. There are currently 7 biomass-conversion projects underway.

### South Africa (PAMSA)

The dramatic rise in electricity pricing has driven process changes, energy efficient equipment installations, reducing purchased fuel (electricity and fossil fuel) and increasing the use of renewable energy, among members, all of which ultimately results in a reduction in GHG emissions.

Renewable energy use varies between 35% and 54% across member operations. PAMSA members continue to source carbon-neutral biomass rather than fossil fuels, and to invest in combined heat and power solutions.

### USA (AF&PA)

AF&PA members' pulp and paper mills reduced direct and indirect GHG emissions intensity by 4.8% between 2004 and 2008, and by 14.1% since 2000 (Figure 9). During the same period, absolute GHG emissions have decreased by 12.2%, and by 26.5% since 2000.

In 2008, member pulp and paper mills generated 65% of their energy requirements from carbon-neutral biomass. Overall, total energy use per metric ton of production at member mills has decreased by 8.2% since 1990. Purchased energy and fossil fuel use per metric ton of production was decreased 26% over the same period but has remained unchanged since the last ICFPA Progress Report (Figure 10). According to the US Department of Energy, in 2008, the forest products industry became the leader among all U.S. manufacturing sectors in the use of cogeneration technology.

As part of the *Better Practices, Better Planet 2020* sustainability goals announced in March 2011, AF&PA has committed to reduce the intensity of the industry's GHG emissions by at least 15% and to improve the industry's energy efficiency in purchased energy use by at least 10% by 2020.

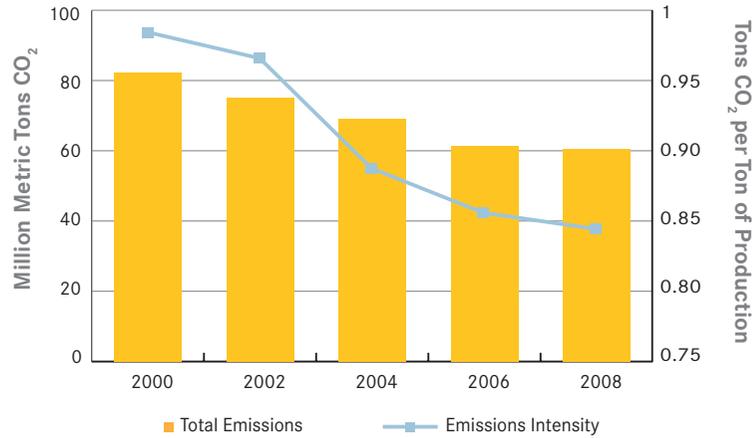


Figure 9 - AF&PA: Pulp and Paper GHG Emissions

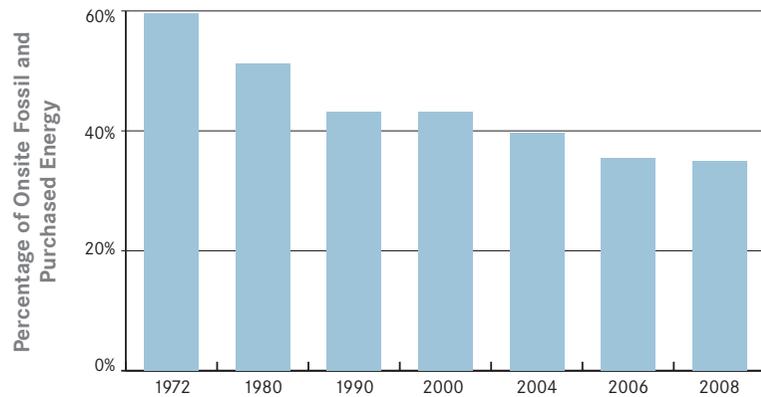


Figure 10 - AF&PA: Total Energy Use

**“Since 2004, reporting ICFPA members have collectively reduced their GHG emissions intensity by 8%”**



## PROMOTING SUSTAINABLE FOREST MANAGEMENT WORLD-WIDE

Sustainable Forest Management (SFM) is demonstrated when the long-term health of forest ecosystems is maintained while providing a sustainable supply of fibre and promoting economic, social and cultural opportunities for current and future generations. ICFPA members demonstrate a commitment towards SFM through the active application of SFM certification systems. These certifications are voluntary, market-based tools that ensure the application of SFM principles, improve on-the-ground sustainable management, and allow consumers to purchase forest products with confidence. In the ICFPA's Statement on SFM, ICFPA members agree that the continued credibility of certification systems depends on the principles of internationally recognized SFM criteria, independent third-party audits, continual improvement, transparency and stakeholder input.

There are numerous global SFM certification systems used throughout the industry, a variety of which are used by ICFPA members. The most common certifications include the Program for the Endorsement of Forest Certification (PEFC - [www.pefc.org](http://www.pefc.org)) and the Forest Stewardship Council (FSC - [www.fsc.org](http://www.fsc.org)). These certification systems also recognize a number of national or region-specific systems.

Between 2000 and 2009, reporting ICFPA members have realized a 346% increase in the total area of PEFC and FSC certified forests, as reported in the Measuring Our Impact section of this report. Importantly, this growth was primarily realized in emerging markets, as fully developed markets have achieved much of their potential for certification.

### Australia (A3P)

In the previous Progress Report, the Australian forest products industry re-affirmed their commitment to achieving certification levels of 70% for both the area of forest certified and the percentage of companies with certification. Of the total 2.01 million ha of plantation area, approximately 1.8 million ha, or 89% is certified. This represents an increase of 600,000 ha since the previous Progress Report. Also, as of the end of 2010, approximately 414 CoC certifications have been issued under PEFC or FSC.

### Brazil (BRACELPA)

In 2010, Bracelpa launched a "Letter of Principles" that commits its members to the principles of responsible forest management. The document will inform industry stakeholders of member sustainable practices and commitments. Brazil's certification levels are largely unchanged since the 2009 report, with 2.0 million ha of all forests being third-party certified. This represents 39% of the 5.1 million ha of forest held by the pulp and paper industry. From this total, 2.2 million ha are used in industrial activities and 2.9 million ha are maintained as native forests.

#### BRACELPA LETTER OF PRINCIPLES – KEY POINTS

**Ethics** We reaffirm our commitment to sustainable forest management, free and fair competition, fighting corruption and the development of strategic forestry partnerships.

**Relationships with Stakeholders** In addition to other important issues, we address our ongoing dialogue with, and the transparency and disclosure of information to, society in general.

**Commitments** We emphasize respect for diversity, social inclusion, employee empowerment, technological improvement and innovation.

**Environment** We include provisions concerning the rigorous use of sustainability criteria in forest management and industrial operations.

**Standards and Legislation** We stress respect for national and international laws applicable to the businesses that compose our sector.

### Canada (FPAC)

In 2006, FPAC made it a condition of membership that all managed forestlands be independently third-party certified to one of three SFM systems in use in Canada: Forest Stewardship Council, the Canadian Standards Association or the Sustainable Forestry Initiative standards. This target was achieved in 2008. Canada has over 150 million ha of certified forestland, with 62% or 93 million ha being managed by FPAC members (Figure 11). Globally, Canada accounts for over 42% of all certified forests, and FPAC member companies alone are responsible for 26% of all global certified forests.

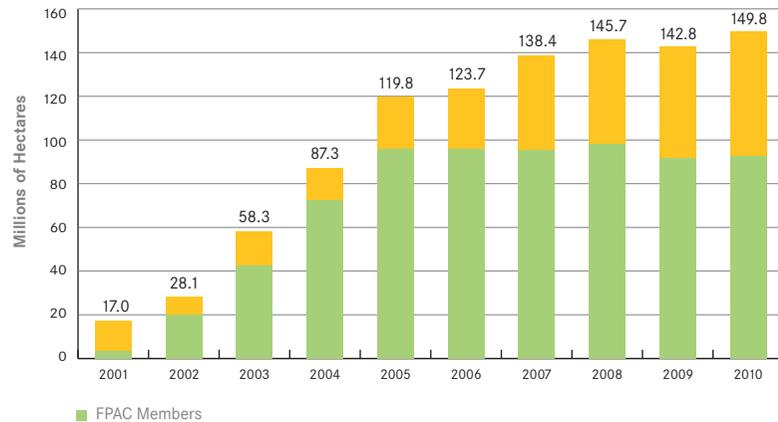


Figure 11 - FPAC: National and FPAC Member Certification Levels

### Chile (CORMA)

CORMA promotes the Chilean Sustainable Forest Management (CERTFOR) for planted forests, a standard recognized by the PEFC. Other certification systems, like FSC, are also used.

Currently, the combined PEFC and FSC certified area covers nearly 2.35 million ha. Of this area, 1.73 million ha are productive planted forests, representing 75% of the total planted area (Figure 12). In addition, the two major forestry companies in Chile – already certified by CERTFOR – are in the process of obtaining FSC certification. Between 2008 and 2009, SFM certifications of planted forest area grew by 8%.

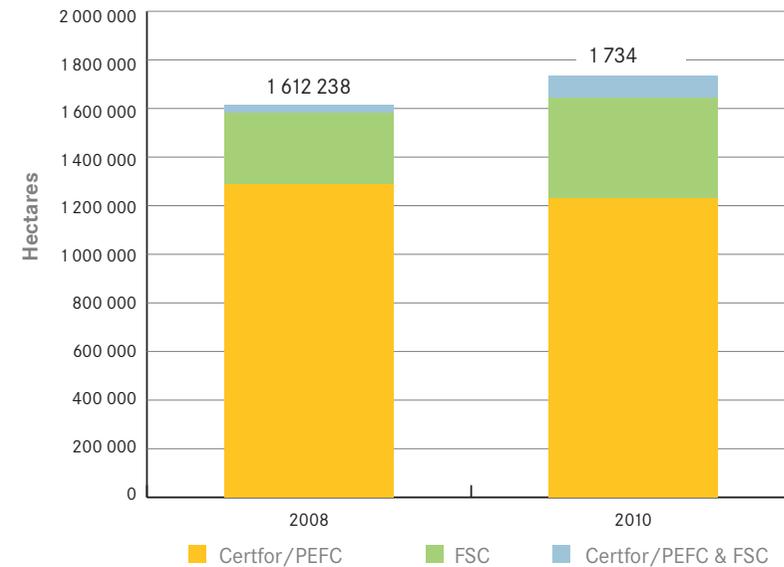


Figure 12 - CORMA: Total Planted Forest Area Under SFM Certification

### Europe (CEPI)

CEPI is a member of both the Stakeholders' Forum of PEFC and the Northern Economic Chamber of FSC. Since 2003, SFM third party certified forest (PEFC and FSC) in CEPI member countries have grown over 18%, to just under 80 million ha, amounting to 82% of company-owned/leased forests in Europe. Furthermore, 56% of round wood chips and sawdust and 69% of external purchased pulp delivered to mills in Europe comes from SFM certified sources.

In CEPI member countries, the total number of chain of custody (CoC) certifications has grown significantly, from 3,720 in 2003 to 11,800 in 2010. Figure 13 shows the percentage of European mills which are CoC certified relative to sales of CoC products. Currently, 90% of pulp mills are CoC certified while 76% of paper, tissue and board mills are certified. Sales of CoC products are 53% and 13% respectively. As the availability of CoC certified fibre increases mills will be able to deliver a higher quantity of CoC certified products to the marketplace.

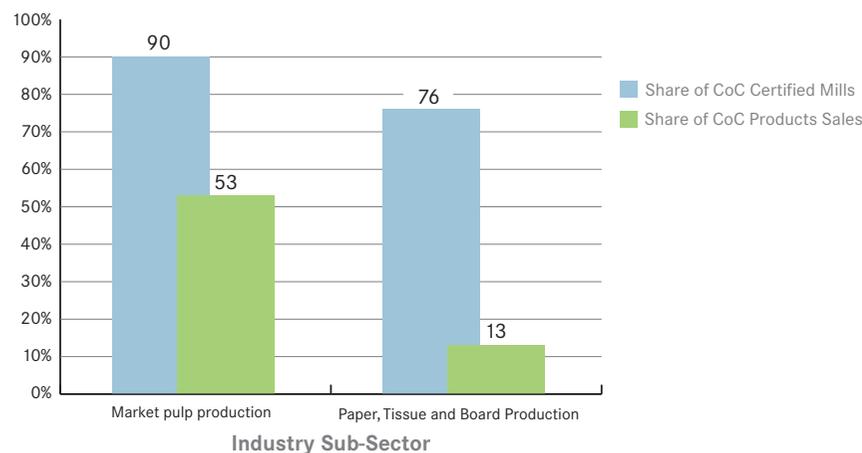


Figure 13 - CEPI: CoC Certifications vs. CoC Sales

In partnership with Eurosite, CEPI published a guide of best practices to enhance biodiversity conservation. Entitled “Sharing experiences - Promoting Biodiversity in the European Pulp and Paper Industry”, the publication was prepared in support of the International Year of Biodiversity 2010. Through this publication, CEPI became a partner of the EU Business & Biodiversity Platform that aims to demonstrate that running a business and biodiversity stewardship are not incompatible, and in fact, is beneficial for companies.

### Japan (JPA)

JPA's members certify overseas plantations through FSC or PEFC, while domestic plantations are certified through the Sustainable Green Ecosystem Council (SGEC), the most common certification in Japan. Since the previous Progress Report, JPA's certified plantation area has increased by 65 thousand ha, an increase of 10% (Figure 14).

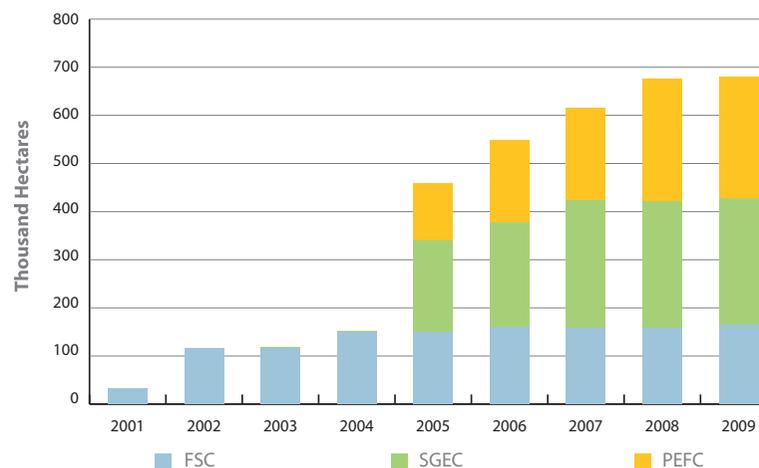


Figure 14 - JPA: Certified Forest Area

### New Zealand (NZFOA)

The industry is currently awaiting FSC approval of a National Forest Stewardship Council agreement between local stakeholders which reflects the particular risks (i.e. invasive species) and opportunities (i.e. expanded habitat) related to conservation of New Zealand's plantation forest estate. As part of the FSC accreditation, managers are constantly reviewing management practices to reduce chemical use. This has resulted in a number of biological controls being implemented to target pest species. As of July 2010, 1.15 million ha or 52% of New Zealand's total plantation forest estate was certified by FSC.

### Russia (RAO Bumprom)

Though voluntary, certification has become increasingly important in the Russian forestry industry. As of October 2010, 17.7% of the 134.2 million ha of managed forests are third party certified. Russian forestry operators currently have 137 CoC Certificates.

### South Africa (PAMSA)

Currently, over 80% of all plantation forestry is certified to the FSC standard (1.6 million ha). Also, all members who own processing plants have chain of custody certification.

### USA (AF&PA)

All AF&PA members sourcing fibre directly from forests are required to adhere to the association's Sustainable Procurement Principles (see box). In addition, all AF&PA members owning forestland must obtain certification from one or more of the major certification systems employed in the United States, including FSC, the Sustainable Forestry Initiative (SFI) program, and other systems endorsed by PEFC. In 2010, over 47.6 million ha of forestland in the United States was certified under these systems.

As part of the *Better Practices, Better Planet 2020* sustainability goals, AF&PA has committed to increase the amount of fibre procured from certified forest lands or through certified fibre sourcing programs in the U.S.

#### AF&PA SUSTAINABLE PROCUREMENT PRINCIPLES

- Best management practices
- Reforestation
- Afforestation
- Visual quality management
- Management of harvest residues
- Conversion of critical wildlife habitat
- Threatened and endangered species
- Forest with Exceptional Value



## COMBATING ILLEGAL LOGGING

Illegal logging causes tremendous damage to forests and related industries, local communities, and local and national economies. Illegal logging contributes to deforestation, environmental degradation, loss of biodiversity and undermines responsible forest management. While advancements in methods to scientifically identify and track the geographic origin of timber continue to be developed, the identification of illegal wood remains technically difficult. As of 2009, it was estimated that more than 100 million cubic meters of illegal timber were still being felled worldwide each year.

ICFPA members express their commitment to combating illegal logging via their Statement on Illegal Logging (2002), which includes the use of sustainable forest management practices according to internationally agreed principles; supporting the conservation of forest areas which have been designated for protection by law; abiding by domestic laws pertaining to logging and harvesting and supporting the establishment and enforcement of such laws and regulations in countries where none currently exist; and supporting government monitoring and assessment of forests are essential to devising appropriate and effective measures to counteract illegal logging and trade of illegally harvested wood.

Since the last report, ICFPA Members have collaborated with governments, environmental organizations and community groups to help develop and pass legislation to criminalize the import and trade of products that use fibre harvested in violation of respective country laws. Additionally, members are working to develop programs and tools to support the elimination of illegal logging from their wood supply chains. One method common to the ICFPA membership is the promotion of CoC Certifications, a timber and timber products traceability system that ensures that certified products come from a sustainably managed source.

## Australia (A3P)

A3P provided input to the Government in its development of the Illegal Logging Prohibition Bill, which should be passed in mid 2011. The draft legislation will: prohibit the importation and trade of illegally logged timber; implement a code of conduct to ensure timber suppliers undertake proper tests to confirm the legality of the sourced wood; and introduce trade descriptions for legally verified timber products.

## Brazil (BRACELPA)

In 1965, the Brazilian government passed the “Forestry Code” into law. This code sets forth rules for the use of land in the country, addresses the importance of Legal Reserve Areas (RL) and Permanent Preserved Areas (APPs), with the objective of preventing deforestation and the illegal use of Brazilian land. Bracelpa is closely following the current review of this code.

## Canada (FPAC)

FPAC members have agreed to only purchase and use wood from legal sources and have implemented a system to trace the origins of all fibre used in their operations to demonstrate legal sourcing. As of 2010, FPAC members have been issued a total of 1,292 CoCs (for PEFC, FSC certificates). In 1999, there were virtually no certificates issued to FPAC members.

### Chile (CORMA)

CORMA encourages its members to obtain CoCs that verify the timber they process is sourced legally. At the end of 2010, CoC certificates were awarded to 104 companies through two operating sustainable forest management standards, PEFC or FSC. As shown in Figure 15, the rate of CoC certification has grown steadily, and has more than doubled since the previous Progress Report.

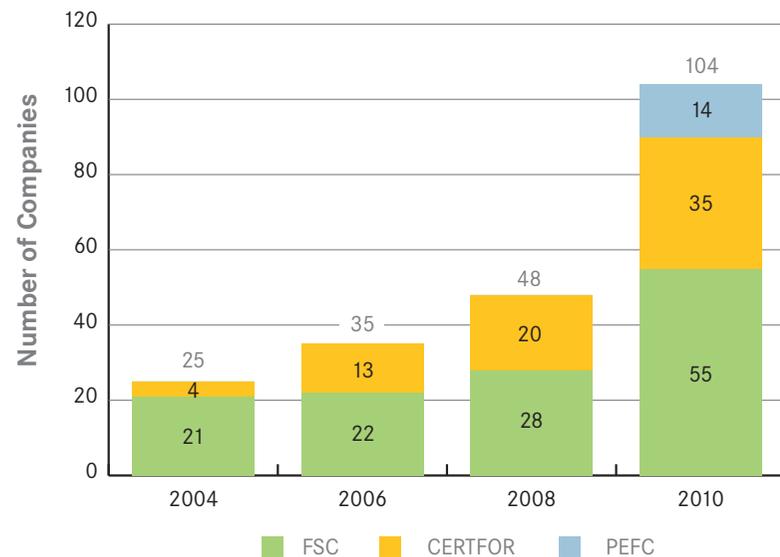


Figure 15 – CORMA: Total CoC Certifications in Chile

### Europe (CEI-Bois)

For practical and enforcement reasons, CEI-Bois did not implement the code of conduct on illegal logging referenced in the last Progress Report, but rather focused on contributing to the development of European legislation, to be enforced as of March 2013, which will prohibit the sale of illegally harvested timber and timber products, and will require EU traders to exercise due diligence. The legislation also includes an obligation to keep supply and sales records to facilitate traceability.

### Europe (CEPI)

In 2005, CEPI adopted a Code of Conduct (6 Principles for Legal Logging) that was rapidly implemented. A 2009 implementation review revealed:

- 100% adoption of procurement policies with a legal sourcing requirement;
- 66% inclusion of legal sourcing requirements in purchasing contracts;
- 90% Environmental Management System (EMS) certification among wood procurement organizations;
- 95% use of tracing systems, 66% of which are third party verified; and
- Close to 100% maintenance of wood procurement documents.

### Japan (JPA)

Following the March 2007 implementation of the Committed Action Plan on Environment, JPA began monitoring illegal logging activities in order to enhance the credibility of its membership. The most recent monitoring took place in the fall of 2010 and the number of participants grew to 17 companies (from 13 in 2007). About two-thirds of participants use this monitoring system as means to objectively demonstrate the use of legally sourced pulp.

### New Zealand (NZFOA)

NZFOA is promoting collaboration between industry and ENGOs and is currently planning work with the New Zealand Forest Accord Partners to potentially:

- Lobby for legislation to require chain of custody certification of imported timber
- Implement a code of conduct to ensure that wood suppliers who provide timber for the domestic market have carried out the proper tests to certify that imported wood has been legally harvested

An Illegal Logging accord has been signed between NZFOA and a key ENGO which can be seen here: [http://www.nzfoa.org.nz/file-libraries-a-resources/cat\\_view/25-agreements-and-accords](http://www.nzfoa.org.nz/file-libraries-a-resources/cat_view/25-agreements-and-accords)

### Russia (RAO Bumprom)

The estimated volume of illegal logging in Russia has increased substantially since 2005 (Figure 16). This high rate is associated with low employment rates in highly forested areas, absence of the necessary infrastructure and tools to prevent illegal logging, as well as a lack of appropriate legal consequences. Elements of the national plan of action to address this issue include:

- Increasing investments in job creation and infrastructure;
- Increasing the area covered by remote monitoring to 100% (from 120 million ha (2010) to 300 million ha); and
- Expanding certified forest area to 23.8 million ha.

Year	2005	2006	2007	2008	2009
Million cubic meters	0.7	1.02	1.2	1.36	1.45

Figure 16 – RAO Bumprom: Volume of Illegally Harvested Wood

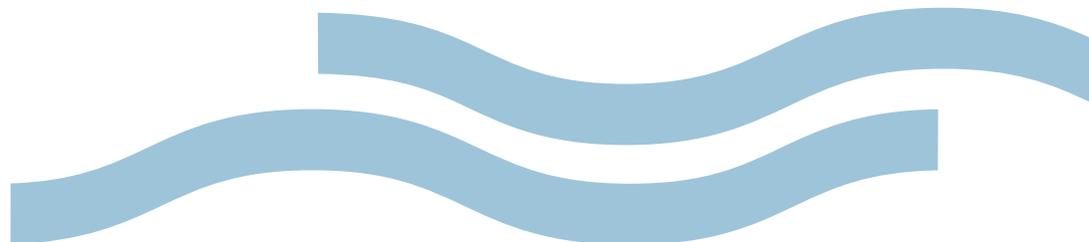
### South Africa (PAMSA)

All timber used in South Africa comes from plantations (i.e. no timber is sourced from indigenous forest, or woodland with a high conservation value). PAMSA’s member policy is to only purchase timber from suppliers whose timber plantations have been registered with the responsible regulatory authority.

### USA (AF&PA)

Since AF&PA’s active role in the passage of the 2008 amendment to the Lacey Act, the association has been working with a coalition of industry and environmental groups to ensure that the Act is implemented fully, without disrupting legitimate trade, and that federal agencies responsible for implementation and enforcement receive sufficient funding. AF&PA is also a founding member of an industry advisory group to the Forest Legality Alliance. Founded in 2010, this Alliance is developing online tools to assist importers and other entities involved in the forest products supply chain to comply with the Lacey Act.

As part of the *Better Practices, Better Planet 2020* sustainability goals, AF&PA has committed to work with governments, industry and other stakeholders to promote policies around the globe to reduce illegal logging.



### FIBRE USE AND RECOVERY

Recovering increasing amounts of paper and integrating it back into the product manufacturing system has an influence on the use of raw wood materials, product sustainability and material costs. This complementary fibre source helps to reduce the amount of paper in the waste stream, thus reducing greenhouse gas emissions generated through paper decay. Given the critical importance of public engagement in recycling activities, ICFPA members have also made substantial efforts to raise public awareness of paper recovery programs and their benefits to society and the environment. Global recycling rates continue to rise and in 2009 RISI reported a worldwide recycling rate of 56%, as reported in the Measuring Our Impact section of this report.

#### Australia (A3P)

In Australia, half of the fibre used in pulp and paper facilities is recovered fibre, 30% is supplied by plantation forests, and around 13% is sourced from “new growth” native forests. There is a strong environmental movement against native forest harvesting in Australia due to the perceived negative environmental impacts of managing native forests for timber. Much of the native forest estate has been placed in nature conservation reserves and is no longer harvested; this trend appears set to continue.

In 2007-08, around 3 million tons of paper and paperboard were collected, equaling about 64% of paper produced (the recovery rate for newspapers was the highest at 77%). The price of recovered paper in Australia has been driven up by global demand; in 2007-08 1.3 million tons of recovered paper was exported to China and other Asian nations. A new national waste policy is expected to encourage greater recycling rates.

#### Brazil (BRACELPA)

Brazil’s consumer paper recycling rate has grown 49.9% over the past ten years, from 2.6 million tons to 3.9 million tons. Currently, BRACELPA’s paper recovery rate is 46% (Figure 17). The main driver behind this increase is improved environmental awareness and suitable paper collection mechanisms.

The recently adopted National Solid Waste Policy [Política Nacional de Resíduos Sólidos] is an effort to increase recycling initiatives in Brazil. This legislation was designed to strengthen the recycling production chain through selective waste collection, infrastructure development, and the stabilization of paper scrap prices. BRACELPA and member companies followed the development of this Policy and provided information and industry data to help inform the legislation.

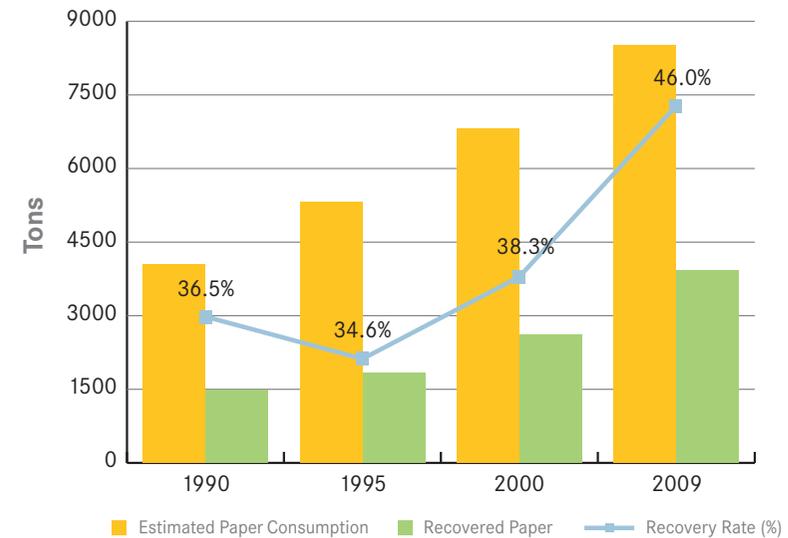


Figure 17 – BRACELPA: Brazilian Recovery Rate

### Canada (FPAC)

In 2003, FPAC members committed to reaching a 55% recovery rate by 2012. As reported in the previous Progress Report, this goal was met in 2007. In 2009, the Canadian paper recovery rate was 66%, a further 8% increase over the previous Progress Report (Figure 18). The key drivers behind Canada's ever-increasing paper recovery rate are a steady demand for recycled products and increasing demand for recovered paper exports.

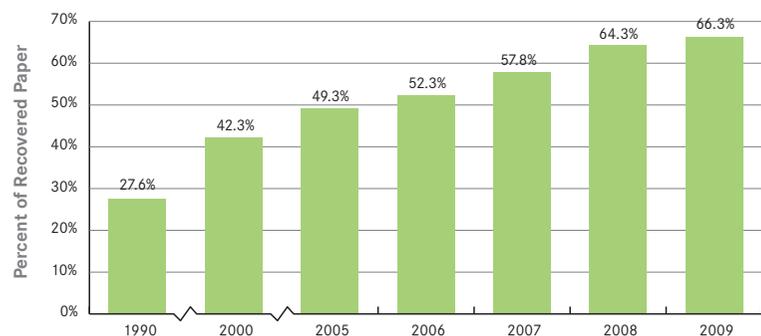


Figure 18 – FPAC: Canadian Paper Recovery Rate

### Chile (CORMA)

CORMA continues to promote paper recycling and the utilization of wood residues. In 2009, 44% of all the paper and paperboards were produced using recycled materials. This is a 2% increase from the 2006 rate of 42%.

### Europe (CEI-Bois)

Within the European woodworking industries, the primary user of recycled wood is the wood-based panel industry, in particular in the production of particleboard and wood pellets. CEI-BOIS promotes the principle of a cascaded use of wood and wood products, extending the lifecycle and the carbon storage. This cascade use has the following steps:

1. Primary product;
2. Re-use and repair (e.g. wood pellets);
3. Recycling (e.g. wood-based panels); and
4. Carbon neutral fuel for electricity and heating.

### Japan (JPA)

In the previous Progress Report, JPA announced a target of 62% recovered fibre utilization rate by 2010. This goal was achieved with a recovery rate of 62.6% at the end of 2009. JPA has revised its target to 64% by March 31, 2016 with a view to further reducing waste and preserving forest resources for the purpose of recovered paper recycling and utilization.

In early 2008, it was found that several paper manufacturers exaggerated claims about the recycled content of their paper products. In order to regain credibility, JPA established and implemented a verification system. This system is currently in place and is conducted through third party audits.

### Europe (CEPI)

In 2006, 18 CEPI members made a commitment to achieve a 66% recycling rate by 2010. CEPI has met this commitment and, at the end of 2009, the recycling rate within Europe (29 countries) was 72.2% (56.6 million metric tons), up from 64.5% reported in the last Progress Report (Figure 19). This rate covers all paper and board products and is verified by a third party using ISAE 3000 standard.

CEPI developed guidelines on responsible sourcing and quality management of recovered paper and, in 2008, launched a traceability system for recovered paper. In 2009, over 33% of all recovered paper supplied in Europe was identified through this traceability system and CEPI continues to monitor and promote its use.

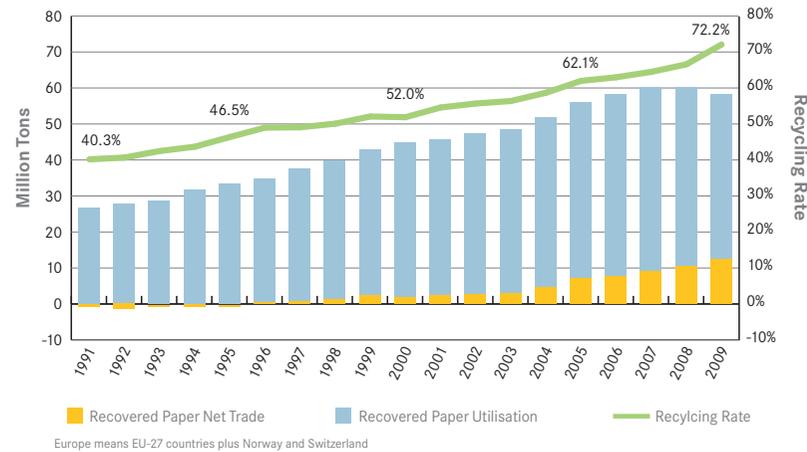


Figure 19 – CEPI: Recovered Paper Utilization, Net Trade and Recycling Rate in Europe

### New Zealand (NZFOA)

As a member of the Bioenergy Association of New Zealand (BANZ), NZFOA actively promotes the use of forest and wood processing residues for the production of process heat and, on a development scale, liquid fuels. Increasing volumes of wood from the cutover, and residues from processing are being used for energy production. NZFOA has also collaborated with the government’s Energy Efficiency and Conservation Agency to increase the utilisation of fibre, especially by public agencies. Bioenergy generated from woody biomass (processing plant residue) continues to grow, increasing 15% over the last ten years from 47.9 PJ in 1999 to 55 PJ in 2009.

### Russia (RAO Bumprom)

In 2009, the paper recovery rate in Russia was 30.6%, a 4.7% increase over 2006 (Figure 20). A number of factors contributed to this increase, including: the price of virgin forest products; changing consumer preferences; and increasing energy costs. Russia’s recovery rate is lower when compared to European countries, largely due to the lack of a formal paper recovery system and a lack of standardized paper recovery data between companies.

%	2006	2007	2008	2009
Recovery Rate	25,9	25,4	25,0	30,6
Utilization Rate	22,8	23,6	25,6	33,1

Figure 20 – RAO Bumprom: Russian Paper Recovery and Utilization Rates

### South Africa (PAMSA)

Most of PAMSA members' products are made from fibre that can be recycled easily. Despite some members being in the coated fine papers market, significant amounts of recycled fibre are used across PAMSA's membership, ranging from 8% to 100%. Individual members have their own specific targets for recycling and recovery of fibre.

One member has developed its own Green Ambassador Accreditation Awards to acknowledge companies, organisations, and individuals genuinely making an effort to recycle.

### USA (AF&PA)

In 2009, a record 63.4% of the paper consumed in the U.S. was recovered for recycling, exceeding the industry's 60% recovery goal three years ahead of schedule. This represents a 13.2% increase in the quantity of paper recovered and a 7 percentage-points increase from the 2007 recovery rate of 56%. In March 2011, AF&PA announced a goal to increase the paper recovery for recycling rate to exceed 70% by 2020 under the new *Better Practices, Better Planet 2020* Program.

To balance growing global demand for U.S. recovered fibre, increasing the recovery of used paper remains a priority for AF&PA. AF&PA has also created a variety of print and online resources about paper recovery and recycling and has worked with schools and other stakeholders to encourage further increases in paper recovery.



Figure 21 – AF&PA: U.S. Paper Recovery Rate

**Global recycling rates continue to rise and in 2009 RISI reported a worldwide recycling rate of 56%**



**ENVIRONMENTAL MANAGEMENT**

The ICFPA and its members continue their commitment to ensuring their activities respect the environment and maintain and improve the resources on which the industry depends. Since the last Progress Report, ICFPA members have shown continued improvement across a range of environmental indicators including water use, biochemical oxygen demand (BOD), sulphur dioxide (SO<sub>2</sub>), nitrogen oxide (NO), and total particulate matter emissions, while showing increased production. A number of members are also investing in innovative ways to transform process waste into useable products, and are creating multi-stakeholder alliances to address complex issues like global climate change and alternatives to traditional chemicals. Some challenges remain around the significant capital investments required to upgrade aging facilities to more efficient processes. As the shift towards the green economy continues, the industry will be able to achieve further improvements in this area.

**Brazil (BRACELPA)**

BRACELPA is focused on reducing water consumption and minimizing the environmental impact of industry operations. Between 2008 and 2009, water reuse by BRACELPA members increased from 39% to 40.2%. Pulp & paper companies are investing in technology to improve the quality of liquid waste and transforming waste into usable by-products. For example, the sludge generated in Effluent Treatment Stations [Estações de Tratamento de Efluentes] (ETEs), is subsequently used to manufacture fertilizers.

**Canada (FPAC)**

Since the last Progress Report, FPAC members have reduced their total particulate matter from pulp and paper facilities by 27%, from 0.72 to 0.53 kilograms per ton of product (Figure 22). Additionally, total reduced sulphur has decreased by nearly 15%, from 0.20 to 0.17 kilogram per ton of product. FPAC members recognize the potential energy savings that can be realized through water reduction programs. Between 2007 and 2009, FPAC member water use remained nearly the same, with a 0.3% reduction. Members recognize that more work is necessary. A concentrated effort is required to remove barriers to water use reduction if the industry’s goals for water conservation are to be met.

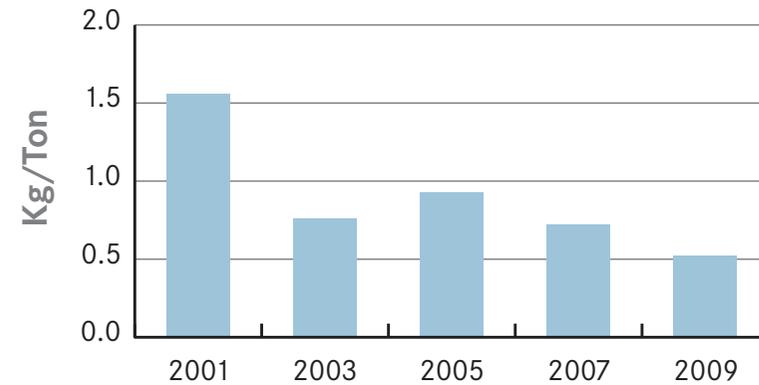


Figure 22 – FPAC: Total Particulate Matter (Pulp and Paper facilities)

### Chile (CORMA)

In 1999, 7 member companies signed an Environmental Certification Accord, which called for the implementation of ISO 14000 Certification. In its first year, 60% of all of Chile's planted area was certified, approximately 1.2 million ha. CORMA is encouraging new companies to join this initiative. Work is being done to help small and medium sized forest owners achieve conditions necessary for certification.

The forest products industry has signed a number of Clean Production Accords, which are voluntary agreements between companies and relevant environmental authorities to meet specific environmental targets, in order to improve performance. These Accords cover the following: pulp (1999), sawmilling and remanufacturing (2004); newsprint paper (2006) and plywood, veneers and panels (2007). Since the 2009 report, a new industry is covered: small and middle-sized sawmilling and remanufacturing businesses.

### Europe (CEPI)

Among members, approximately 90% of production capacity is either certified or registered under one of two internationally recognized Environmental Management Systems (EMS): ISO 14001 or the Eco-Management and Audit Scheme. This performance represented an increase of more than 5% since the last Progress Report. CEPI has established a visionary goal of 100% EMS certification or registration amongst its members.

Performance across a range of environmental indicators has improved (Figure 23). This demonstrates a reduction in total environmental impact of the industry as well as a relative decoupling of production and environmental impact.

In 2007, a commitment was made to minimize residue directed to landfill, which in 2009, was estimated to be approximately 17 kg per ton of product. Since the last Progress Report, this has decreased by nearly

0.5kg per ton of product.

CEPI became one of the few industry associations partnering with the European Institutions in the EU Business & Biodiversity Platform with a view to promote the positive contribution of the paper industry to biodiversity conservation and restoration.

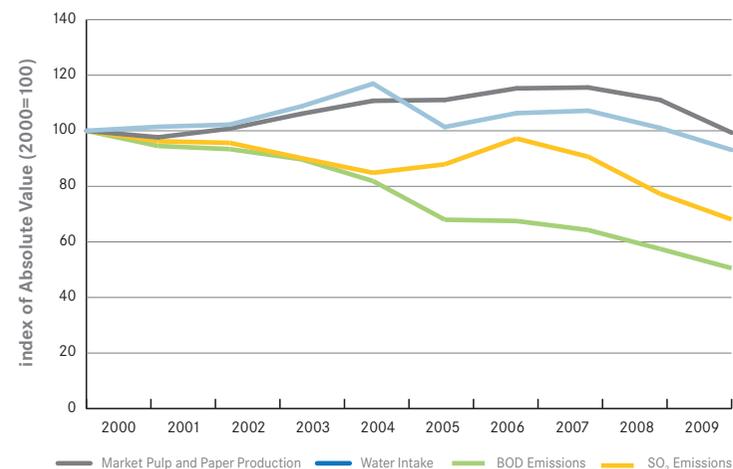


Figure 23 – CEPI: Pulp and Paper Production and Selected Environmental Indicators (1990 baseline)

### Japan (JPA)

According to JPA's Committed Action Plan on Environment, all member mills must obtain ISO 14001 certification. As of 2009, 94.9% of all qualified mills are certified, down from 98% in the previous report. This decrease is a result of mill closures during the same period. JPA members have successfully reduced the disposal of industrial waste by 6% over the last Progress Report (an 87% reduction over 1990 levels). This is largely due to efforts to use facility waste as cement material and an increase in biomass as alternative fuel.

**New Zealand (NZFOA)**

NZFOA is closely involved in a number of initiatives that will help enhance the environmental management of New Zealand’s forest and paper products industry. These initiatives include:

- The negotiation and drafting of a National Environmental Standard for Plantation Forestry;
- Funding the development of a National Forest Stewardship Certification Scheme; and
- A joint program between industry and government to look at alternatives to the current use of methyl bromide as phytosanitary treatment, e.g. heat and recapture technology.

A 2010 survey of forest owner members indicates that most forestry operations are utilizing methods that minimise microbial and sediment deposition in waterways.

**Russia (RAO Bumprom)**

Over 75% of pulp, paper and paperboard production is generated in facilities certified by ISO 14001. Reduced access to capital and the rising cost of energy and raw materials have resulted in companies using best available technologies to reduce ecological impacts of their operations. As a result of these actions, effluent decreased by 9% between 1995 and 2009, while production doubled during the same period (Figure 24).

2005	2006	2007	2008	2009
172	162	155	151	152

Figure 24 – RAO Bumprom: Effluent Emissions

**South Africa (PAMSA)**

PAMSA’s policy is to promote the implementation of internationally accepted Environmental Management Systems in all operations and to conform to best environmental practices and all relevant environmental legislation. ISO 14001 EMS is the preferred choice, and majority operations (forest and forest products) are certified under this program.

Overall, environmental improvements are site - and member - specific. For example, a major PAMSA member has reduced emissions of absorbable organic halogens (AOX) by 30% since 2005 by stopping the use of elemental chlorine during bleaching. They have also reduced total reduced sulphur (TRS) compounds emissions by 71% since 2005.

PAMSA forest owner members are also involved in the South African National Biodiversity Institute’s Grassland Program which aims to mainstream biodiversity best practice into the forestry sector. In addition, a program is in place to declare selected unplanted areas within the forestry holdings as protected areas to provide formal recognition. Approximately 500,000 ha are available for this program, but the focus is on priority areas at this stage.

**USA (AF&PA)**

AF&PA members are required to adhere to the association’s Environmental, Health & Safety (EHS) Principles as a condition of membership. Improved process controls, installation of new air pollution control equipment and the use of biomass and low sulphur fuels have resulted in substantial improvements in environmental performance. Specifically, between 2006 and 2008, air emissions from AF&PA members decreased by 14.6% and total reduced sulphur (TRS) emissions decreased by 18.6% (Figure 25).

Advances in mill process technologies, enhanced water recycling and reuse practices, and active conservation efforts continue to reduce the amount of water used in production. Between 1995 and 2008, pulp and paper mill effluent discharge volume decreased by 20%, and across all pulp and paper mills the USA, releases of core chemicals captured under the EPA's Toxic Release Inventory decreased by 14% between 2006 and 2008.

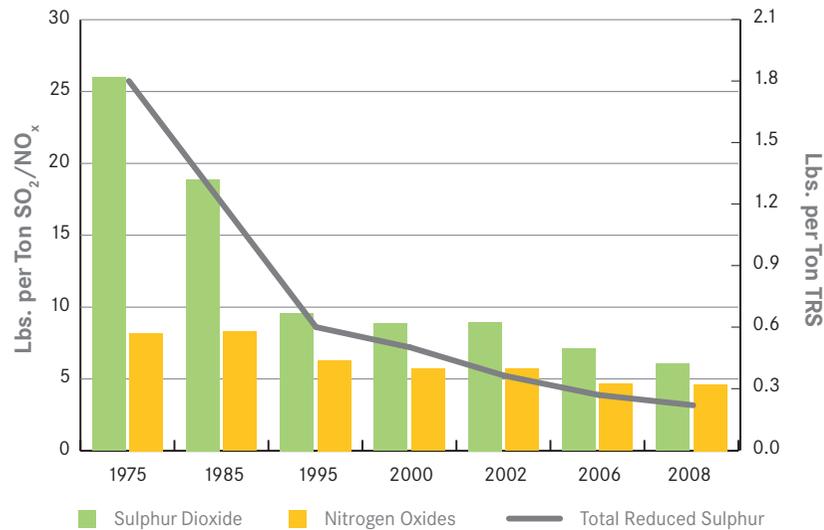


Figure 25 - AF&PA: Pulp and Paper Mill Air Emissions

### INVESTING IN WORKERS AND COMMUNITIES

Directly employing 13 million people in nearly 200 nations, the global forest products industry plays a critical role in the economic health and wellbeing of thousands of local economies and communities, particularly in rural areas. With the increasing pressures of rapid urbanization on infrastructure, housing and public services, the employment offered by ICFPA members in rural areas offers critical opportunities for families to avoid migration into cities. ICFPA members support rural communities through salaries and benefits, contracting of local businesses, as well as through donations and sponsorships in support of infrastructure, including schools, roads and hospitals.

Members also facilitate capacity development by working with local communities in areas such as training and education.

#### Brazil (BRACELPA)

Currently, pulp and paper companies contribute to Brazil's economic development by providing 115,000 direct and 575,000 indirect jobs. Brazilian companies look to recruit and select people from the communities where new factories are being built as a way to promote local development. Companies regularly offer training and/or qualification courses co-sponsored by the National Service of Industrial Education - SENAI [Serviço Nacional de Aprendizagem Industrial], technical schools, universities and suppliers. In 2009, the average training hours per year per employee was 31.7 hours.

#### Canada (FPAC)

FPAC members continue to demonstrate strong performance in employee and workplace safety. The industry's overall recordable incident rate continued its downward trend in each of the industry's four operational segments, specifically dropping by 30% between 2007 and 2009 (Figure 26). The greatest decrease was seen at forestry operations with 49% over the same period.

The forestry industry continues to be the economic foundation of rural Canadian economy, directly employing 240,000 people, in over 230 communities. The average forestry industry wage is 9% above the national total employment average. The industry also employs over 17,000 Aboriginal peoples, making forestry the largest industrial employer of Aboriginal Canadians.

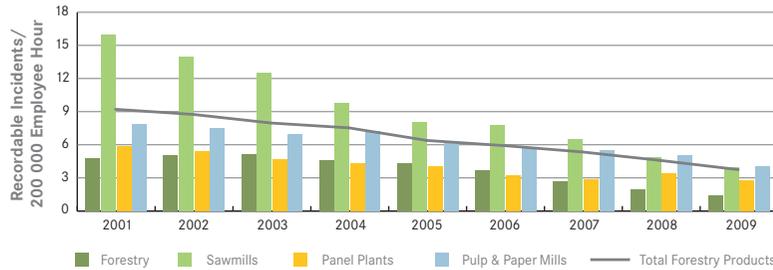


Figure 26 – FPAC: Member Employee Recordable Incident Rate

### Chile (CORMA)

CORMA has developed a voluntary system of Competence Certification, which evaluates worker capacities, knowledge and aptitudes. Upon successful evaluation, a certificate recognized by the labour market is issued. Since 1994, more than 35 thousand certificates have been issued to nearly 20,000 workers (Figure 27).

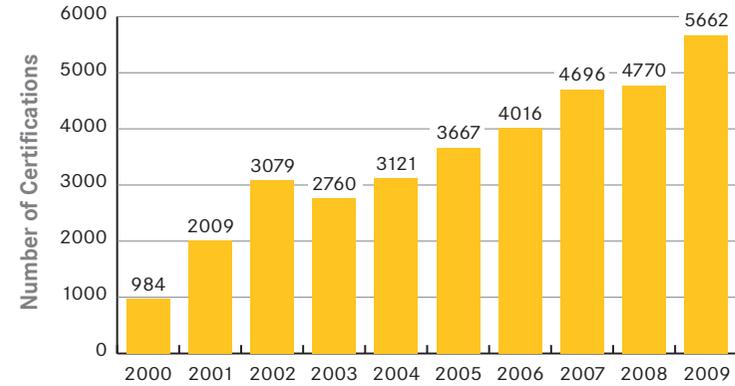


Figure 27 – CORMA: Working Competencies Certifications Awarded

The accident rate (number of accidents per average number of workers) of member companies has been decreasing, reaching an average of 1.33% in 2010. For silviculture, the rate accident rate was 1.72%; in pulp and paper 0.36%; in wood-based panels 1.58%; and sawmills and remanufacturing was 1.38%, as shown in Figure 28.

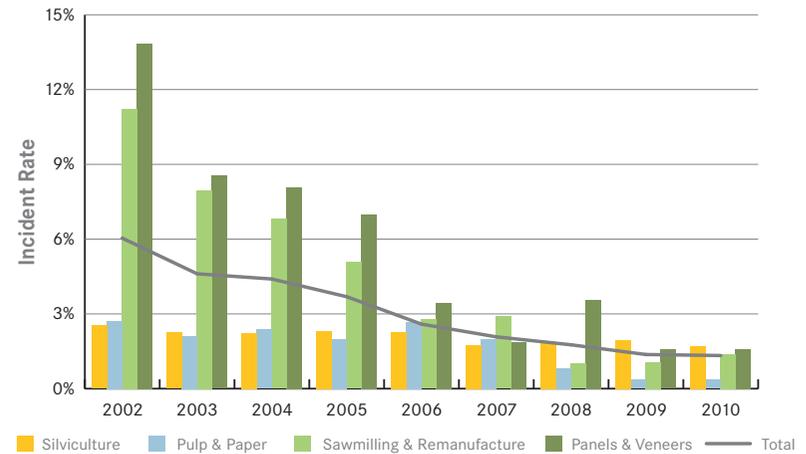


Figure 28 – CORMA: Accident Rate of Member Companies

### Europe (CEI-Bois)

As reported in the last ICFPA Progress Report, CEI-Bois partnered with the European Federations of Building and Woodworkers (EFBWW) on two joint projects. The aim of the program Less Dust was to minimise wood dust exposure in the different branches of the woodworking sector. The conclusions from the work were collected in a brochure which, next to providing general information about the potential effects of wood dust on health, also provides a host of best practices to reduce wood dust exposure. The second initiative, a social partner project called REF-Wood (Reduction of formaldehyde exposure in the woodworking industries), was a co-operation between CEI-Bois, its member organisation EPF (European Panel Federation) and EFBWW. The results of the work performed included an exposure measurement campaign in various production facilities targeted at selecting a scientifically validated measurement method and representative workplaces for measuring exposure. This work is a new step in the co-operation between both organisations in the context of the social dialogue, involving also manufacturers and suppliers of woodworking machinery in pursuit of common goals.

### Europe (CEPI)

In 2010, CEPI initiated a paper sector social dialogue with the European Mining, Chemical and Energy workers Federation (EMCEF); the focus of which is the improvement of the policy context in which the industry operates and provides jobs, in particular, health and safety at work. CEPI has also joined a European campaign promoting best practices in the field of health and safety in maintenance work.

Since the last Progress Report, CEPI members' incident rate continued to decline to a rate of 18.6 accidents per 1,000 people employed (Figure 29).

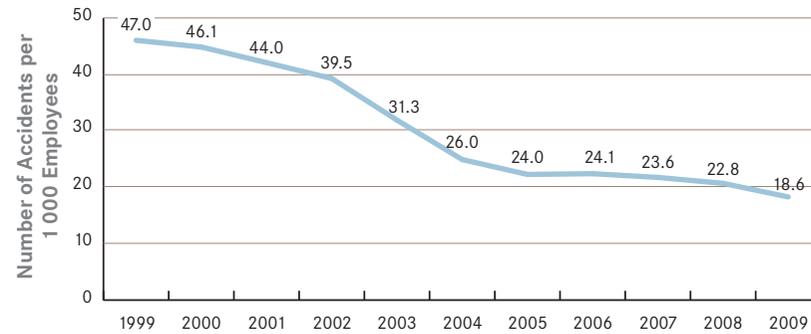


Figure 29 – CEPI: Incident Rate

### Japan (JPA)

Worker health and safety is the priority issue for JPA. Over the past three years accident rates have seen an all time high. JPA has taken this issue very seriously and is placing maximum priority on safety and health not only in member operations, but also in member subsidiaries. Additionally, mental health and depression are recognized as issues which require special attention. In a recent court ruling, a depression-related suicide in the forestry sector was classified as an industrial accident. To prevent further incidents, companies have been developing programs to encourage communication between workers and reduce the stigma surrounding mental illness.

### New Zealand (NZFOA)

Forestry and first stage processing employed 16,809 people in 2009, a reduction of 12% over 2008, reflecting the global economic downturn. This is a drop of almost 10,000 employees from the peak employment year of 2003.

The forest industry training organisation (FITEC) has an active training program based upon nationally recognised qualifications. As of

December 2010, a total of 8,428 individuals received training across the four industry sectors (Figure 30).

Wood panels	791
Solid wood processing	2,381
Pulp and paper	688
Forestry	4,630

Figure 30 – NZFOA: Number of Individuals Receiving Training

Investment in an “Incident Reporting Information System” (IRIS) allows individual companies to compare their accident rate against industry averages and is used to target strategies to address incident rates. A recent strategy has targeted the “Breaking Out” operation and tree-felling, both of which were identified as significant contributors to national industry accident rates.

#### South Africa (PAMSA)

One member company has partnered with an enterprise development NGO which supports ‘independence through enterprise’ by providing business expertise and funding to Broad-Based Black Economic Empowerment (BBBEE) small and medium enterprises (SMEs). To date, the member has invested in 15 businesses, providing funds and supporting the transfer of skills and knowledge that enable BBBEE SMEs to join the member company’s value chain. Investments have also been made in community food schemes, the facilitation of infrastructure development, and HIV Aids support for communities and member employees.

One PAMSA member has formed a strategic partnership with WWF-SA on an eco-tourism program designed to protect sensitive biomes and establish sustainable business ventures for rural communities. To date, projects including: birding centres; aerial board-walks in indigenous forests; a conservation centre for cranes and a beach lodge and

campsite have been developed and are co-owned with communities who receive regular dividend payments and job opportunities.

#### USA (AF&PA)

The forest products industry contributed approximately 5% to the U.S. gross domestic product (GDP) in 2009. The industry is among the top 10 manufacturing employers in 47 states and its nearly 900,000 employees earn \$50 billion annually in wages and salaries.

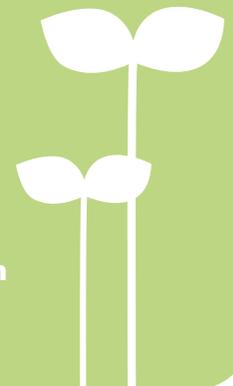
In 2008, safety programs at 84 pulp and paper mills were enrolled in the U.S. Department of Labour’s prestigious worker safety Voluntary Protection Program along with 67 wood products facility programs. Pulp and paper mill worker accident and illness total case incidence rates were 16.6% lower in 2008 from 2006 levels and lost work cases decreased by 12.6%.

Under the Better Practices, Better Planet 2020 report released in March 2011, the industry has stated a vision of zero injuries, and progressing toward that vision by improving the safety incidence rate by 25% by 2020.

#### Russia (RAO Bumprom)

In 2007, RAO Bumprom participated in the development and signing of an agreement which establishes general conditions of payment, worker safety, indemnification and worker rights in the forest products industry.

**Between 2009 and 2010, and despite the global financial crisis, the average forestry sector salary in Russia increased by 14.5%. During this same period, inflation has grown by 8.8%, demonstrating a substantial increase in employee benefit.**



#### **ARGENTINA**

##### **Asociacion de Fabricantes de Celulosa y Papel (AFCP)**

Buenos Aires, Republic of Argentina  
[www.afcparg.org.ar](http://www.afcparg.org.ar)

#### **AUSTRALIA**

##### **Australian Forest Products Association (AFPA)**

Deakin West ACT, Australia  
[www.ausfpa.com.au](http://www.ausfpa.com.au)

#### **AUSTRIA**

##### **Vereinigung der Osterreichischen Papierindustrie - Austropapier**

Vienna, Austria  
[www.austropapier.at](http://www.austropapier.at)

#### **BELGIUM**

##### **Association of the Belgian Pulp, Paper and Board Producers (COBELPA)**

Brussels, Belgium  
[www.cobelpa.be](http://www.cobelpa.be)

#### **BRAZIL**

##### **BRACELPA - Brazilian Pulp & Paper Association**

Sao Paulo, Brazil  
[www.bracelpa.org.br](http://www.bracelpa.org.br)

##### **Sociedade Brasileira de Silvicultura (SBS) - Brazilian Forest Association**

Sao Paulo, Brazil  
[www.sbs.org.br](http://www.sbs.org.br)

#### **CANADA**

##### **Forest Products Association of Canada (FPAC)**

Ottawa, Ontario, Canada  
[www.fpac.ca](http://www.fpac.ca)

#### **CHILE**

##### **Corporacion Chilena de la Madera (CORMA)**

Santiago, Chile  
[www.corma.cl](http://www.corma.cl)

#### **CHINA**

##### **China Paper Association (CPA)**

Beijing, China

#### **COLOMBIA**

##### **Asociacion Nacional De Industriales - Camara de Pulpa, Papel y Carton (ANDI)**

Cali, Colombia  
[www.andi.com.co](http://www.andi.com.co)

#### **CZECH REPUBLIC**

##### **Czech Pulp and Paper Industry Association**

Hostiva, Czech Republic  
[www.sppac.cz](http://www.sppac.cz)

#### **EUROPE**

##### **Confederation of European Paper Industries (CEPI)**

Brussels, Belgium  
[www.cepi.org](http://www.cepi.org)

##### **European Confederation of Woodworking Industries (CEI-Bois)**

Brussels, Belgium  
[www.cei-bois.org](http://www.cei-bois.org)

#### **FINLAND**

##### **Finnish Forest Industries Federation (FFIF)**

Helsinki, Finland  
[www.forestindustries.fi](http://www.forestindustries.fi)

#### **FRANCE**

##### **Confédération de l'Industrie Française des Papiers, Cartons et Celluloses (COPACEL)**

Paris, France  
[www.copacel.fr](http://www.copacel.fr)

#### **GERMANY**

##### **German Pulp and Paper Association (VDP)**

Bonn, Germany  
[www.vdp-online.de](http://www.vdp-online.de)

#### **HUNGARY**

##### **Federation of the Hungarian Printers**

Budapest, Hungary  
[www.dunapack.hu](http://www.dunapack.hu)

#### **INDIA**

##### **India Paper Manufacturers' Association (IPMA)**

New Delhi, India  
[www.ipma.co.in](http://www.ipma.co.in)

#### **ITALY**

##### **Associazione Italiana fra gli Industriali della Carta, Cartoni e Pasta per Carta (ASSOCARTA)**

Rome, Italy  
[www.assocarta.it](http://www.assocarta.it)

#### **JAPAN**

##### **Japan Paper Association (JPA)**

Tokyo, Japan  
[www.jpa.gr.jp](http://www.jpa.gr.jp)

#### **LATIN AMERICA**

##### **Confederacion Industrial de la Celulosa y del Papel Latinoamericana (CICEPLA)**

[www.andi.com.co/cicepla](http://www.andi.com.co/cicepla)

#### **LEBANON**

##### **Syndicate of the Owners of Paper and Packaging Industries in Lebanon**

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#### **MALAYSIA**

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#### **MEXICO**

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Mexico City, Mexico  
[www.cnicp.org.mx](http://www.cnicp.org.mx)

**MOROCCO**

**Fédération des Industries Forestières,  
Association des Arts Graphiques et de  
l'Emballage**

Rabat, Morocco

**NETHERLANDS**

**Vereniging van Nederlandse Papier-en  
Kartonfabrieken (VNP)**

Kruisweg, Netherlands

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**NEW ZEALAND**

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Wellington, New Zealand

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**NORWAY**

**Federation of Norwegian Process Industries (PIL)**

Majorstua, Norway

[www.pil.no](http://www.pil.no)

**POLAND**

**Association of Polish Papermakers**

Lodz, Poland

[www.t-system.com.pl/~spp](http://www.t-system.com.pl/~spp)

**PORTUGAL**

**Associacao da Industria Papeleira (CELPA)**

Lisbon, Portugal

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**ROMANIA**

**Romanian Association of Corrugated Board  
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**RUSSIA**

**The Russian Association of Pulp & Paper  
Organizations and Enterprises (RAO Bumprom)**

Moscow, Russia

[www.eng.bumprom.ru](http://www.eng.bumprom.ru)

**SLOVAK REPUBLIC**

**Union of Pulp and Paper Industry of the Slovak  
Republic (ZCPP SR)**

Banska Bystrica, Slovak Republic

[www.paper.sk](http://www.paper.sk)

**SOUTH AFRICA**

**Paper Manufacturers Association of South Africa  
(PAMSA)**

Johannesburg, South Africa

[www.pamsa.co.za](http://www.pamsa.co.za)

**SOUTH KOREA**

**Korea Paper Manufacturers' Association (KPMA)**

Seoul, Korea

[www.paper.or.kr](http://www.paper.or.kr)

**SPAIN**

**Asociacion Nacional de Fabricantes de Pastas,  
Papel y Carton (ASPAPEL)**

Madrid, Spain

[www.aspapel.es](http://www.aspapel.es)

**SWEDEN**

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**THAILAND**

**Thai Pulp and Paper Industry Association**

Bangkok, Thailand

**UNITED KINGDOM**

**The Paper Federation of Great Britain**

Swindon, UK

[www.paper.org.uk](http://www.paper.org.uk)

**UNITED STATES OF AMERICA**

**American Forest & Paper Association (AF&PA)**

Washington, DC, U.S.A

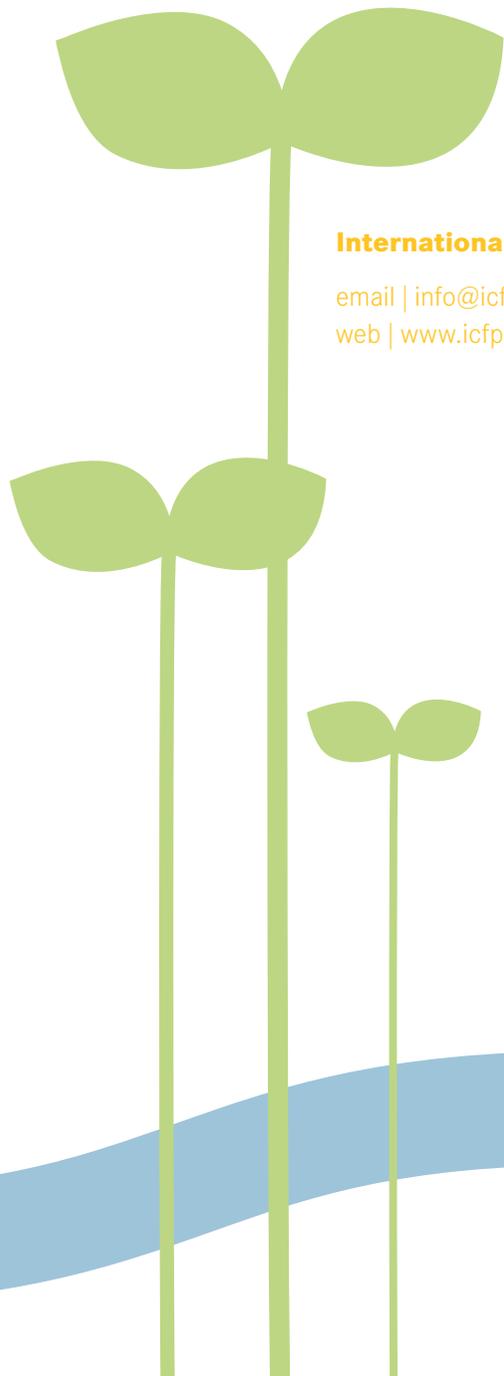
[www.afandpa.org](http://www.afandpa.org)

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