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The first section of the Report summarises our policy on engagement with stakeholders, materiality, our overall approach to sustainability, and our long term commitments. This is then followed by three major sections covering Environment, Social Development and Sustainability in our Business. The Report concludes with a detailed information section and a glossary of technical terms. In preparing this Report we have followed the Global Reporting Initiative (GRI) 3.1 guidelines.

*Cover image: Volker Funk (L) and Mirja Thimm, both working at our Brühl plant in Germany.*

*Simone Angelini from Smurfit Kappa Vignate, Italy.*



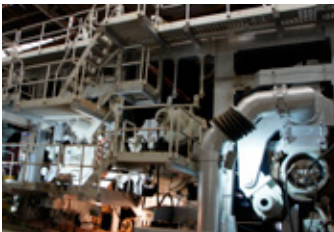




# SMURFIT KAPPA AT A GLANCE

**Totally focused on packaging:** With sales in 2012 of over €7.3 billion, Smurfit Kappa is one of the largest integrated manufacturers of paper-based packaging products. Following the acquisition of Orange County Container Group in late 2012, Smurfit Kappa now has 348 facilities in 32 countries in Europe and North and South America (the "Americas"), where the Group also owns and manages forests. It manufactures, distributes and sells containerboard, corrugated containers and other paper-based packaging products and materials such as solid board, sack paper and bag-in-box.

Smurfit Kappa is fully dedicated to the sustainable supply of paper-based packaging solutions and has no ownership of significant businesses outside this field of expertise.



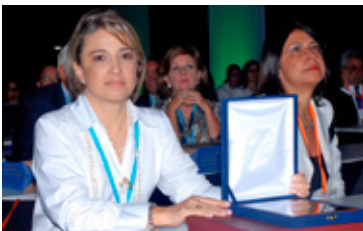
## Mexico

**Energy and CO<sub>2</sub>**  
Cerro Gordo paper mill cuts GHG emissions by using less steam



## Venezuela

**Community Involvement**  
Our forestry workers volunteer as local fire brigade



## Colombia

**Community Involvement**  
50th Anniversary Fundación Smurfit Cartón de Colombia supporting local communities



## Argentina

**Water Treatment**  
A new water treatment plant commissioned in our Bernal paper mill





### Germany

#### Training and Development

Over 1,100 employees have now participated in the German sales training programme



### Russia

#### Supplier commitment

Sustainability an important ingredient in Russian partnership

# A WORLD OF SUSTAINABILITY

### Belgium

#### Product Innovation

The smart dashboard box



### Italy

#### Community Involvement

Fundraising campaign at Panaro



### Spain

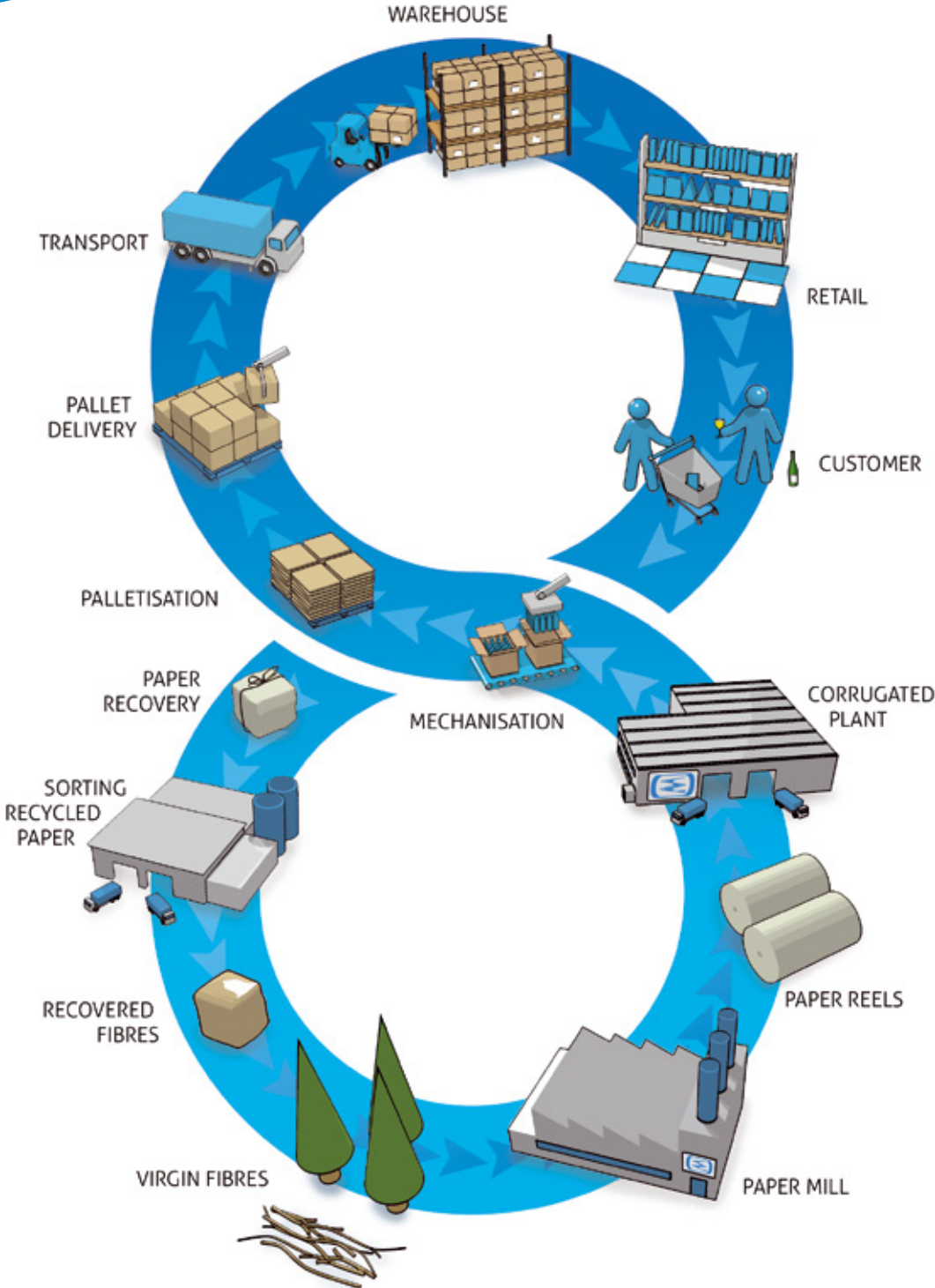
#### Health and Safety

Mengibar paper mill initiated an extensive programme to raise awareness on health and safety at home



# PACKAGING EXPERTISE

The image below illustrates the product life cycle starting with virgin and recovered fibres being processed through the mills to become paper and board; then on to the box converting plants where they become packaging; then entering the supply chain to the eventual user. The recycling process begins when the used packaging is collected, sorted and then returned to the mills for reprocessing.





# HIGHLIGHTS

## CHAIN OF CUSTODY CERTIFICATION

**Europe.** February 2013 successful completion of a three year FSC and/or PEFC certification programme for European converting operations reaching our objective to certify all converting plants in Europe for which a certification is relevant.

**Latin America.** All Mexican operations received Chain of Custody certifications under FSC; the same certifications were also received for our integrated converting operations in Argentina.

**Certified Packaging.** The completion of the European certification programme (see above) also led to over 90% of all Group converting operations being certified thereby achieving the Group's first long term commitment on sustainability two years ahead of schedule.

## CO<sub>2</sub> REDUCTION

Year-on-year, absolute fossil CO<sub>2</sub> emissions for the total Group were reduced by 1.8%. Our global mill system reduced its fossil CO<sub>2</sub> emissions by 3.1% per tonne of paper and board produced.

## COD DISCHARGE REDUCTION

Year-on-year, absolute COD discharges for the total Group were reduced by 1.7%. Globally, our mill system reduced its COD discharges by 4.7% per tonne of paper and board produced.

## INVESTMENTS IN THE ENVIRONMENT

### CO<sub>2</sub> Reduction.

- Installation of a new shoe press in our Cerro Gordo paper mill, Mexico City in January 2012.
- Rebuild of biomass boiler in our Navarra paper mill in Spain and subsequent start-up in September 2012.
- Commissioning of a new CHP installation in our Barranquilla paper mill in Colombia in October 2012.
- Completion of a new lime kiln in our Cali paper mill in Colombia in March 2013.

**COD Water Discharges.** Commissioning of a new water treatment plant in our Bernal paper mill in Argentina in May 2012.

## CODE OF BUSINESS CONDUCT

Revised code approved and awareness campaign initiated.

## SUSTAINABLE PACKAGING

Pack Expert tool extended with environmental parameters, enabling customers to measure and compare the environmental impacts of their supply chain management.

## ACQUISITIONS

Orange County Container Group ("OCCG") was acquired in December 2012, marking our first sizeable acquisition since Smurfit Kappa was formed in 2005. OCCG is a Chain of Custody certified Group active mainly in northern Mexico and the southern USA delivering containerboard and converted corrugated products to the same range of customers as Smurfit Kappa.

# LETTER FROM OUR CEO



## INTRODUCTION BY GARY McGANN

I am pleased to introduce Smurfit Kappa's sixth annual Sustainable Development Report. As is shown in this report, Smurfit Kappa is fundamentally committed to sustainability and social responsibility in its interaction with its customers, suppliers, employees, the communities in which it is privileged to do business and in relation to its impact on the broader environment. Sustainability has become a key business driver and is a platform for differentiation in the market.

As in recent years, economic conditions continue to be challenging. Nevertheless, in 2012 and continuing in 2013, we have shown our commitment to sustainability by not only making significant investments in the environment but also by reaching the first target of our long term sustainability commitments. In 2013, we will continue the drive to demonstrate to our stakeholders that sustainability objectives are achievable, beneficial to our business and economically viable. The best way to do that is by creating economic, social and environmental win-win situations for all stakeholders involved. As a further introduction to the 2012 Sustainable Development Report I would like to highlight a number of developments.

## OUR VISION ON SUSTAINABILITY

Over the past year we have worked to set out our fundamental views on sustainability in a strategic vision statement. In 2010 we made four major long term commitments in the area of sustainability and, as a second step, we have now developed a more strategic vision on sustainability which we have published and entitled "The Smurfit Kappa Vision on Sustainability". In this statement we explain why we consider sustainability to be a key business driver and why

it is very natural for our business. Furthermore, we explain why Smurfit Kappa is committed to sustainability, how we make our commitment to sustainability tangible, and what our objectives and targets are for the seven key sustainability building blocks that we have identified for our business. The scope of our long term objectives and targets has been widened to include (besides the current long term commitments in Chain of Custody certification, reduction of fossil CO<sub>2</sub> emissions and reduction in COD discharges) a number of other areas that we consider important in the area of sustainability. These areas are waste management, water usage, safety at work and our involvement in the local communities where we operate and where we wish to make a difference for the local population. Our vision on sustainability is a dynamic one: as we progress our views will evolve and, if opportune, we will adjust long term objectives and targets accordingly.

## ENGAGEMENT WITH STAKEHOLDERS

We consider open and transparent communication with our stakeholders to be key in building credibility on the issues that are important to our business. We are therefore in continuous dialogue with the different stakeholder groups as we try to deepen our understanding of what significant stakeholders consider to be important in the area of sustainability. Many of our customers want to engage with us about issues in this area on a regular and on-going basis. The mutual benefit of this dialogue is that our customers value what our knowledge brings to their supply chains and we in turn can take advantage of their feedback to drive our sustainability agenda forward.



We also analysed the sustainability reporting of a group of 30 stakeholders, both customers and suppliers, to ascertain which issues they deem to be important in the area of sustainability. Overall, one can conclude that there is a broad overlap between the issues that Smurfit Kappa considers to be important and the issues listed by this group of stakeholders. More detail of this analysis can be found on page 12 of this report. In addition, as in last year's report, we feature short interviews with representatives from our stakeholder base highlighting sustainability aspects that are important to them.

### PROGRESS ON OUR LONG TERM SUSTAINABLE DEVELOPMENT COMMITMENTS

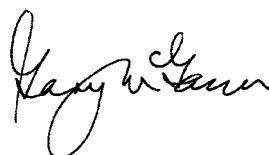
In 2012, good progress was made in the realisation of our long term sustainable development commitments. From February 2013 onwards, over 90% of our converting operations worldwide are Chain of Custody certified under FSC and/or PEFC, reaching one of our commitments on the sustainable use of fibres, two years ahead of schedule. We are also close to reaching our other 2015 targets under this commitment.

Relative fossil CO<sub>2</sub> emissions by our mill system were reduced year-on-year by over 3% partly resulting from the completion of specific investments. Our production-related COD discharges are now more than 25% lower than in 2005, and 5% lower than in 2011. Our Board of Directors approved a revised Code of Business Conduct reflecting our commitment to conduct our business to the highest ethical standards. A comprehensive awareness campaign in 17 languages will be initiated with the ultimate objective of ensuring that all our employees are familiar with the new Code and behave accordingly.

### SUSTAINABLE GROWTH NEEDS 'LEVEL PLAYING FIELD' TRADING CONDITIONS

As we have stated in previous reports, Smurfit Kappa is fully prepared to play its role in meeting the social, environmental and economic challenges that the world is facing in order to develop a much needed sustainable growth model. For us to deliver our part, it is necessary that the EU and the various governments in the countries where we operate create fair and predictable trading conditions. For example, the EU's Emission Trading System is at a crossroads. Even though we fully support its objective to curb climate change, we also would argue that the absence of international agreements on global ETS systems in combination with the increased availability of cheap fuels such as shale gas in the USA, should not result in the EU continuing or even tightening policies that will, in effect, result in inequitable trading conditions for energy intensive industries such as ours. We want the EU to guide its Member States towards becoming less carbon intensive, focusing on renewable energy and resource efficiency while at the same time maintaining the principle of a global level playing field. In other policy initiatives concerning the use of raw materials, the EU has the responsibility to ensure that our industry has access, at affordable and competitive prices, to wood, recovered paper, and the capacity to secure adequate energy and water supply without distortive taxes and/or subsidies. Under such a scenario, we will continue to deliver our share of sustainable growth bringing prosperity to our stakeholder communities.

I hope you will find the content of our 2012 Sustainable Development Report both interesting and informative, and look forward to any feedback that you may have.



**Gary McGann**  
GROUP CHIEF EXECUTIVE OFFICER  
21 June 2013

# CORPORATE GOVERNANCE

The Board and Management of Smurfit Kappa support the highest standards of Corporate Governance and ethical business conduct. It is our view that a culture of high standards of governance must be promoted from the top and must be fostered throughout the whole organisation. The following section describes in summary the Group's governance at Board level insofar as it relates to corporate social responsibility. The full Corporate Governance Statement, together with the Directors' Report and Remuneration Report, is set out in the 2012 SKG Annual Report.

## SUSTAINABILITY GOVERNANCE

Sustainable development is a core principle in all facets of Smurfit Kappa's operations and activities. The Board has overall responsibility for ensuring that the Group plays an appropriate role in promoting a realistic sustainable development agenda in the paper-based packaging sector. The development and implementation of Smurfit Kappa's policies in this area are sponsored by the Group CEO.

At executive management level, a Group Steering Committee sets out our strategy and objectives for sustainable development and reviews the progress made in meeting our commitments. This committee comprises the most senior executives in the Company including the three executive directors (Group CEO, Group COO and Group CFO) and management from each division and from the Group headquarters.

The Group Steering Committee is supported by a Sustainability Working Group comprising key representatives from each of the main operating divisions in Europe and the Americas as well as Group headquarters. This Group's task is to monitor the achievement of targets across a wide range of sustainability indicators and to promote the theme of sustainable development in Smurfit Kappa's interface with customers, suppliers and the general environment. The Working Group is also responsible for the preparation and production of the Annual Sustainable Development Report.

## ORGANISATION AND REPORTING

Sustainability is embedded into our operations and reporting structures in various ways. The sustainability aspects of our packaging solutions and the benefits they can bring to our customers are the prime management responsibility of our sales and marketing teams, both at central as well as at local level. Managing environmental issues such as energy and water, and also people issues such as health and safety and local community involvement, are the responsibility of the management of the local operations and the divisional management to whom they report. Reporting on these aspects takes place through regular monthly and/or quarterly reports to the various management levels or through specific reporting such as the reporting on the progress made on our long term sustainable development commitments. A Board report on our sustainability activities including progress on certain indicators and targets is prepared twice a year.

## CODE OF BUSINESS CONDUCT AND GROUP POLICIES

In 2012 the Board of Directors of Smurfit Kappa approved a revised Code of Business Conduct. Apart from covering new issues such as bribery and anti-corruption, we worked from the Group's original Code of Business Conduct, as well as the various related policies and guidelines (e.g. Environmental Policy Statement, Social Citizen Policy Statement, Model Code, etc.). The new Code embeds the fundamental principles of all of these policies under one umbrella policy covering how we operate ethically as a large multinational. The Code will also be linked, as applicable, to these detailed policies and guidelines. The resulting Code of Business Conduct and the associated policies covering areas related to Smurfit Kappa's management and operations are based upon the following international conventions and codes:

1. International Labour Organisation (ILO) Declaration on Fundamental Principles and Rights at Work (core conventions).
2. UN Declaration on Fundamental Human Rights.
3. OECD Guidelines for Multinational Enterprises.
4. UN Global Compact.



The Group ensures that the key components of internal control are in place through the implementation of policies and programmes which aim to define acceptable business practices, the resolution of conflicts of interest and the expected standards of ethical behaviour. We have also created specific policy statements in key areas of sustainability that are integral to the drive to improve Smurfit Kappa's performance. These policy statements cover Environment, Sustainable Forestry, Sustainable Sourcing, Social Citizenship and Health and Safety issues.

All of these Codes and policies are available on our website [www.smurfitkappa.com](http://www.smurfitkappa.com).

### ETHICAL STANDARDS

Our Code of Business Conduct provides the underlying modus operandi for each and every employee in every jurisdiction. It sets out our position in relation to compliance with the law, adherence to ethical standards and its commitments to those with whom it comes in contact.

Each Group company and its employees, regardless of geographic location, are required to apply the Code and abide by the particular laws and practices applicable to their industry and/or required by the jurisdiction in which they operate.

The Group's Code of Business Conduct makes it clear that personal and professional integrity is the responsibility of each employee.

Complementing the Code of Business Conduct is the Good Faith Reporting Policy Statement ('Whistleblower Code') which enables employees to report concerns about potential wrongdoing.

The revised Code has been published on our website and an awareness programme has been initiated in 2012. This will be rolled-out Group wide and includes an appropriate training programme for current and newly recruited employees.

### AUDITS

Each significant business unit is the subject of an external and independent financial audit conducted by the Group's External Auditors on an annual basis.

Most other business units are the subject of local statutory financial audits.

Our Internal Audit Department has its own extensive work programme in the context of the Group's Financial Risk Management System. During the course of 2012, 86 detailed internal financial and IT audits were completed.

In addition to these internal audits, all operating countries must adhere to the Group's Financial Monitoring Policy. This includes completing risk assessment analyses covering over 50% of the Group's larger facilities carried out by relevant personnel from within each country.

The various audits and analyses include risks primarily related to significant material misstatement of financial results, deliberate or otherwise, arising from a poor control framework. During 2012, no such misreporting was identified.

During 2012, there were no significant incidents reported which the Group considered to be non-compliant with the Code of Business Conduct.

### PUBLIC POLICY

As a multinational organisation, our businesses are subject to legislation and rules determined by the jurisdictions in which they operate.

In that context, Smurfit Kappa adopts positions on a variety of matters that are relevant to its business, making its views known to the parties concerned, either directly or through industry bodies such as the Confederation of European Paper Industries (CEPI), the European Federation of Corrugated Board Manufacturers (FEFCO) and the European Round Table of Industrialists (ERT). It also works closely with the Irish Business and Employers' Confederation (IBEC) and equivalent bodies in other countries.

At all times those representing the views of Smurfit Kappa do so having due regard to its Code of Business Conduct and the local laws and regulations applying to the Group's operations. There were no significant criticisms of the Group in this respect in 2012. In line with the Group's Code of Business Conduct no financial contributions were made to political parties in 2012. No national government is a direct shareholder in Smurfit Kappa.

### COMPLIANCE

It is Group policy to comply at least with the applicable laws and regulations in each of the countries in which it operates and to ensure that its employees are aware of this and conduct themselves appropriately. No significant fines were imposed on the Group in 2012 in respect of any breaches of such laws and regulations.

# ENGAGEMENT WITH STAKEHOLDERS

## OUR STAKEHOLDERS

We consider a continuous, open and constructive dialogue with our various stakeholder groups in all countries and areas where we operate to be of key importance. We believe that frequent interaction with our stakeholder communities offers us a great opportunity to improve and develop ourselves in all aspects of sustainability. By doing so we aim to meet and, where possible, exceed our stakeholders' expectations. Our stakeholders are crucial to the realisation of our sustainability objectives whether their concerns are environmental, social or economic.

We consider any person or entity with whom we engage to be part of our stakeholder community. This ranges from any small local customer or supplier to large multinational companies or NGOs. Many stakeholder interactions such as meetings, fairs, community visits, public hearings, open house events or other events organised by, or for, stakeholders take place at a local level where our teams interact on a daily basis with customers, suppliers, employees and local authorities. We also receive stakeholder feedback through customer satisfaction surveys, dialogue with trade unions and employee questionnaires.

All our stakeholder relations are guided by our Code of Business Conduct and related policy statements setting out the principles that all Smurfit Kappa employees are obliged to follow in their relations with stakeholders. More information about this Code is given on page 9.

The different stakeholder groups we recognise are listed overleaf and a summary of how we engage with them is provided. Short interviews with representatives of different stakeholder groups are included throughout the report.

## MEMBERSHIPS IN ORGANISATIONS

As part of our interaction with various stakeholder groups, we believe it is important to be an active participant, a member, a signatory or to be otherwise supportive of associations, topical initiatives, advocacy groups and institutions that represent or bring together relevant stakeholder groups. The value of these organisations for us can be significant. This ranges from

representation to policy makers as part of an industry group to having access to relevant industry statistics. Our efforts in that regard focus on national and international industry associations such as:

- CEPI, at Group level and through various national paper manufacturer associations,
- FEFCO, at Group level and through a number of national corrugated manufacturer associations,
- CEPI Containerboard,
- the International Corrugated Cases Association (ICCA) and,
- the European sack kraft manufacturers' association (Eurokraft),
- ACCCSA, Asociación de Corrugadores del Caribe Centro y Sur América.

Besides contributing to these associations through annual membership fees, several senior Smurfit Kappa executives are board members of CEPI, CEPI Containerboard and FEFCO. Also, representatives of Smurfit Kappa are typically involved as active participants in committees, issue groups and task forces on specific topics of interest to these associations.

Smurfit Kappa is also actively involved as a member of, participant in or as a signatory to a number of organisations active in the area of environmental reporting and sustainability. These include:

- the Carbon Disclosure Project (CDP),
- the Supplier Ethical Data Exchange (Sedex),
- the Water Footprint Network (WFN)
- the Programme for the Endorsement of Forest Certification (PEFC)
- the Forest Stewardship Council (FSC, until 2013 via our Colombian organisation, since 2013 also from our Group office)
- the World Business Council for Sustainable Development (via its local chapter in Colombia).
- The UN Global Compact (see also page 92).



Membership of or participation in such organisations is not passive and customarily involves providing them with a significant amount of information on our operations, usually in the form of a detailed questionnaire.

The Group CEO is a member of the European Round Table, a forum of approximately 50 chief executives and/or chairmen of major multinational companies of

European parentage covering a wide range of industrial and technological sectors.

Smurfit Kappa's subsidiary companies are also members of a large number of national industry and business associations in both Europe and Latin America.

<b>Customers</b>	As well as the normal business interaction that one would expect, we are continuously intensifying our engagement with our customers and in turn their customers (e.g. retailers) on key sustainability issues. Important areas of interaction are sustainable fibre sourcing, carbon footprint and social compliance. These interactions with customers could be in the form of working together on specific projects in sustainability, attending customer conferences or supporting customers with their specific sustainability initiatives.
<b>Employees</b>	Our employees are the key to our success. We place significant emphasis on their safety, health and well-being. There are numerous training activities for our employees ranging from training on the job to advanced management courses, both internal as well as external. There is extensive interaction between our management and representatives of our employees through the various employee representative bodies. We revised our Code of Business Conduct reflecting how we conduct our business and the important role our employees play in that.
<b>Investors</b>	There is an extensive programme involving road shows and investor days where analysts and investors have the opportunity to engage in dialogue with senior operating management. One-on-one meetings, telephone conferences, and participation in industry-related investor conferences also form part of our investor relations initiative.
<b>Suppliers</b>	As well as the usual levels of communication, there are specific initiatives such as audits and questionnaires. There is specific focus on Chain of Custody certification of our paper suppliers. Supplier programmes are in place that require our suppliers to deliver in conformity with our Sustainability Sourcing Policy. Smurfit Kappa's operations are required to source products and services from local suppliers where possible, consistent with the need to ensure appropriate quality at the right price and support for sustainability.
<b>NGOs</b>	Memberships of, or participations in, organisations like Forest Stewardship Council (FSC), Programme for the Endorsement of Forest Certification Schemes (PEFC), the Supplier Ethical Data Exchange (Sedex), Carbon Disclosure Project (CDP) and Water Footprint Network. Dialogue, both direct and indirect, (through membership organisations) and cooperation on specific topics such as water and CO <sub>2</sub> sequestration.
<b>Local communities</b>	We engage in social projects and health, employment and environmental initiatives in the countries in which we operate. In Latin America, in particular, there are some extensive programmes involving significant expenditure and our employees' time and expertise. The aim is to assist communities in self-help. The Smurfit Kappa Group Foundation targets social responsibility initiatives in those countries in which Smurfit Kappa operates.
<b>Government and society</b>	Membership of industry associations at national and international level, participation in forums related to broader business issues and society in general



# MATERIALITY

Our objective when determining materiality is to identify those issues of significance for Smurfit Kappa. These can then form the basis of our work in sustainability.

In preparing this report, we identified relevant topics taking into consideration the Global Reporting Initiative (GRI) guidance on materiality and completeness. We also used our own Code of Business Conduct, general trends in the marketplace and regulatory and compliance drivers as input for topic identification. As well as the normal interactions one would expect, we also interviewed representatives from the different stakeholder groups for their specific input. These interviews can be found throughout the report and provide examples of issues that are important for our stakeholders as a whole. Furthermore, we performed an analysis of the topics that are material for a group of relevant stakeholders.

The input from the different stakeholder groups was particularly useful in helping us to refine the concept of materiality and enabled us to focus on the sustainability issues that we believe our stakeholders find important for us to both work and report on.

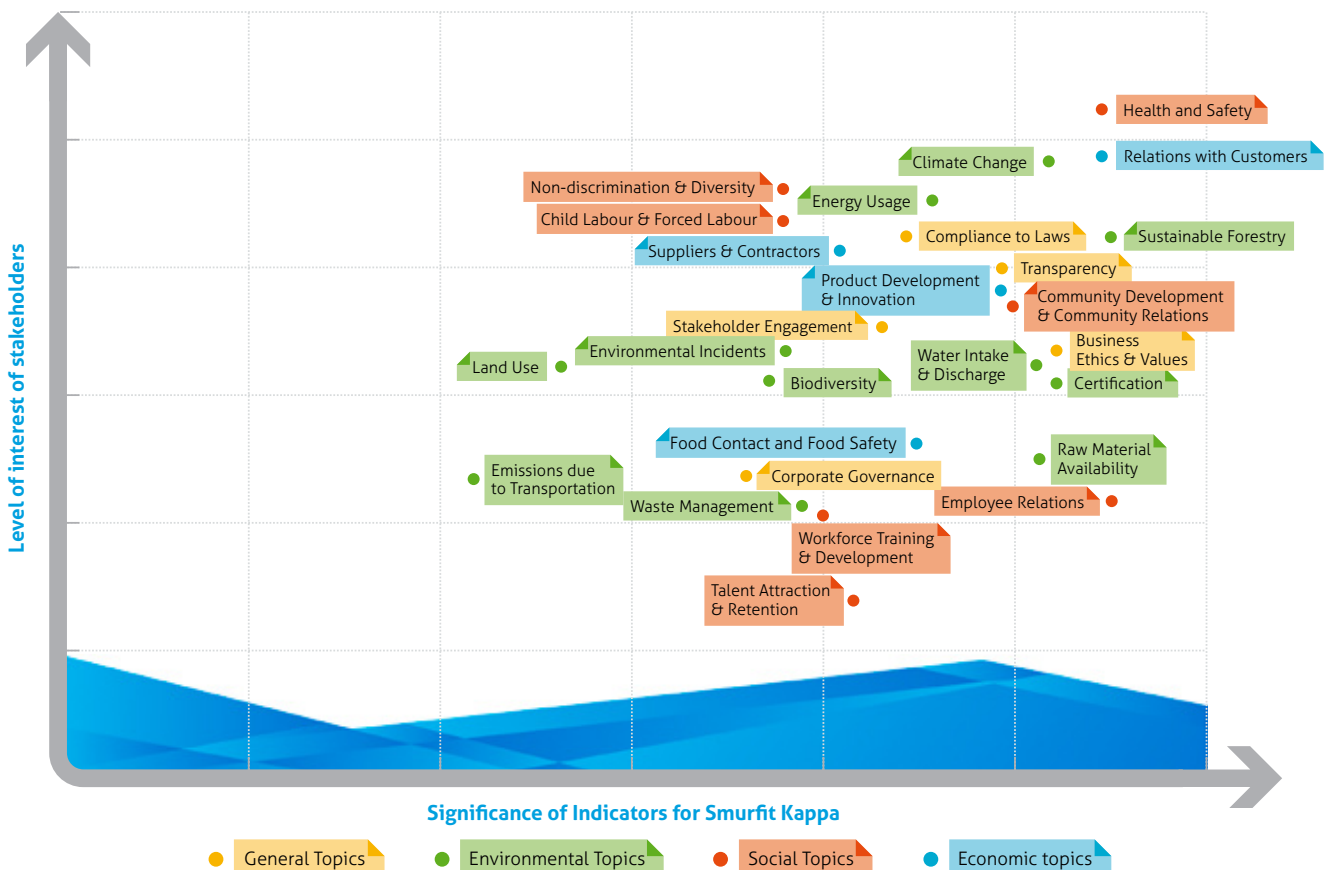
These analyses and interactions resulted in an extensive list of topics that can be classified under four main headings:

- I. environmental,
- II. social,
- III. economic and
- IV. general.

Individual topics we include under each of these headings are highlighted in the graph below.

For this year's report we studied the materiality analysis of a group of 30 companies that we consider important or relevant to us including customers, suppliers and peers and companies that in other ways are relevant to us. Issues that are material for our customers and/or suppliers are considered to be (potentially) material to us as well. As a first step we analysed how many of the companies performed a materiality analysis and we then analysed the frequency with which material issues were mentioned or highlighted. We considered that the frequency with which a topic/issue was mentioned as an indicator of the importance of that topic/issue for the investigated group of companies. The graph below reflects that interpretation while also indicating the significance of these issues to Smurfit Kappa.

Issues as shown hereunder are plotted according to the GRI guidelines.



# STRATEGY

The Group's objective is to deliver superior performance in terms of profitability and returns on capital through the cycle, thereby enhancing shareholder value, and to be the market leader in paper-based packaging in its chosen markets. This objective is underpinned by a focus on delivering superior customer satisfaction, a relentless pursuit of cost and operating efficiency, proactive environmental awareness, and a commitment to the personal development of employees and continuous improvement in the areas of health and safety and corporate social responsibility.

## THE GROUP'S OBJECTIVES AND STRATEGIES ARE:

To profitably build on its market positions in Europe and in the Americas through selective focused growth, including:

- organic growth from increased market share through consolidating, and where appropriate, extending its leadership position in Western Europe. This will be achieved by leveraging the Group's relationships with its customers across its broad product range and enhancing its profitability by maximising synergies and optimising the cost base; and
- acquisition and merger based growth in areas where market share and/or coverage facilitates it, particularly in the higher growth markets such as Eastern Europe and Latin America.

To focus on enhancing its operational excellence, thereby continuing to improve its customer offering, by continuously upgrading its products, processes, services, quality and delivery in all markets by:

- leveraging the Group's increasingly high quality asset base through continuous improvement programmes, transfer of best practice, industrial engineering, innovation and targeted capital investment; and
- increasing the proportion of added-value converting products in the overall portfolio through the use of the Group's development and technology centres, its innovation tools and its pan-European network in greater value areas such as high quality printing, display and litho lamination; and
- ensuring that its operations, whether in the converting or mill divisions, continue to be close to their customers and have a clear market focus rather than being production driven.

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To focus on cash flow and appropriate returns on investment in order to maximise shareholder value.

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To secure and retain the optimal balance between debt and equity capital to facilitate the Group's growth strategy in a cyclical industry, while striking the appropriate balance between risk and return.



*Bert Mik - Smurfit Kappa Solid Board, Netherlands.*





*Aerial view of the Forney paper mill, Texas, USA, part of the Orange County Container Group which was acquired by Smurfit Kappa at the end of 2012.*

## Acquisition of Orange County Container Group further strengthens Smurfit Kappa's position in Mexico and USA

In December 2012, Smurfit Kappa acquired Orange County Container Group, which is an integrated paperboard and paper-based packaging manufacturer operating within northern Mexico and the southern USA. The company, which has been renamed Smurfit Kappa Orange County ("SKOC"), produces recycled linerboard and corrugating medium at its facility in Forney, Texas and a wide range of corrugated and folding carton containers and point-of-purchase displays in a number of converting operations in northern Mexico and California. SKOC also operates recovered paper centres in Texas, Oklahoma, and Arkansas.

From a sustainability perspective SKOC's operations are Chain of Custody certified under the Forest Stewardship Council (FSC) and the Sustainable Forestry Initiative (SFI). SKOC's converting operations produce recyclable packaging solutions and have packaging on offer with a special focus on sustainability aspects. Its Forney papermaking facility is one of the largest producers of 100% recycled containerboard in the United States, producing currently around 300,000 tonnes of recycled paper on two paper machines per year.

The Forney facility operates a wood-fired biomass boiler combusting wood chips that are based on waste wood purchased from third parties. The wood chips would otherwise be landfilled or trench burned. Forney also has a CHP on site. A significant part of Forney's energy consumption in 2012 was based on renewable sources and more than 30% of its electricity needs were generated on site as well.





# OUR COMMITMENT AND APPROACH TO SUSTAINABLE DEVELOPMENT

Our objective is to be a customer-oriented, market-led company where the satisfaction of customers, the personal development of employees and respect for our local communities and the environment are seen as being inseparable from the aim of creating value for our shareholders. We see sustainability as a platform that will help us to reach our objectives. It is therefore an integral part of our operations and part of our daily business life. In our view, sustainability is not about corporate altruism but makes perfect business sense as it can help us grow our business.

## OUR COMMITMENT AND APPROACH

Sustainability for Smurfit Kappa is about improving the quality of life today and in the future, for people and for our planet. It is what we do and always have done: sustainability is about satisfying customers with creative and innovative products and services that extend the longevity of products, using resources and materials responsibly through our forestry and recycling businesses, providing safe working environments, caring for our people, working to benefit the local communities and protecting our reputation. We take our responsibilities in sustainability seriously and care deeply about the environment, our people and the communities where we work.

The above implies a clear commitment to the three important sustainability elements: *Planet*, *People* and *Profit*. Our approach to these three elements is as follows:

- Environment – we operate in an environmentally sound manner.
- People – we are socially conscious and pro-active.
- Business – we remain economically viable, doing business on an ethical basis.

In doing so we will ensure that the social and natural environment within which Smurfit Kappa operates is respected and protected both today and into the future. The Group provides direct income to approximately 41,000 people (including SKOC) and indirectly (via its suppliers) to at least the same number, and it continues to carefully use and recycle a wide range of natural resources.

### 1. ENVIRONMENT

For the first important element – *Planet* – we take a special interest in safeguarding the environment as our products are composed of materials that are natural resource based, recyclable and predominantly made from recycled material. We commit to do so not only in operating our facilities but, at least as importantly, in designing and developing packaging solutions for our customers that improve their environmental performance.

Packaging is part of the complex system of delivering products from where they are produced to where they are consumed. Our packaging products are used to collect, store, transport, distribute, preserve and market goods. Because of these functions paper-based packaging makes a positive environmental impact by preventing products from becoming waste. Research suggests that our products, if properly designed and applied, can decrease the carbon impact of aspects of our customers' supply chains by considerably more than the carbon impact our own products have.

In our drive to safeguard the environment we are committed to:

- Complying with national and international environmental legislation.
- Applying appropriate environmental management systems throughout the Group.
- Using natural resources as efficiently as possible.
- Achieving best practice in environmental management through the focus on continuous improvement programmes.
- Meeting the reasonable expectations of stakeholders concerning environmental performance.
- Driving the entire paper supply chain to reduce its environmental impact.
- Supporting our customers to reduce the environmental impact of their supply chains.

### 2. PEOPLE

For the second sustainability element – *People* – our primary focus is on the safety, well-being and development of all our employees. We do so by permanently investing in their safety at work through training and safety equipment, by providing them with challenging and satisfying jobs and by offering career opportunities. Our other key focus is on the local communities where we have the privilege to operate. Our operating facilities are frequently located in communities where we are seen as an important partner in the local economy, providing jobs to our employees and business for local suppliers. Our managers are encouraged therefore, to actively participate in initiatives at the local community level.

As a Group we are committed to:

- Ensuring that for health and safety standards, all our operations comply with local legislation and with best international practice.
- Applying the principle of equal employment opportunities.
- Managing our business in an ethical and equitable manner and meeting all of our social responsibilities.
- Ensuring that employees and suppliers are aware of the Group's policy on social responsibility.
- Protecting and advancing human rights, particularly those of the indigenous communities where we have operations.
- Promoting and enhancing strong relationships with the communities within which our businesses have the privilege to operate.

### 3. BUSINESS

For the third sustainability element – *Profit* – we have a very simple philosophy. We need profitable growth to reward our stakeholders and to continue our drive for sustainability. Due to the nature of our business, we see many opportunities to combine both the need for profitable growth with the opportunity to advance the various sustainability principles. We consider sustainability natural to our business and to be a key business driver. We see sustainability as a differentiating factor in the market and it is an integral part of our business commitment and product offering.

As a Group we are committed to:

- Meeting shareholders' and other stakeholders' expectations with regard to profitable, sustainable long term business development in the changing local and global economies.

- Working closely with and demonstrating leadership to customers and other stakeholders when it comes to developing and providing packaging solutions with reliable sustainability credentials, taking account of factors such as packaging optimisation, recyclability and Chain of Custody.
- Supporting customers, suppliers and others in the supply chain on their own sustainable development projects.
- Providing packaging solutions that improve our customers' environmental footprint, e.g. by minimising customers' product wastage and optimising distribution and transportation requirements.
- Involving our employees in developing more sustainable and innovative packaging solutions by rewarding and honouring them in a Group-wide competition of Innovation and Sustainability Awards.

When dealing with the environmental, social and business aspects of the Group's sustainability programmes, we are committed to:

- As a minimum, complying with all statutory, regulatory and legal requirements.
- Maintaining codes of business conduct that support our core values of integrity, responsibility and respect, when managing our business activities in all locations.

We recognise that factors such as ethical behaviour, transparency in governance standards, identification of risks and stakeholder engagement are fundamental for the sustainable success of the Group. Our objective is to continuously progress Smurfit Kappa's recognition as a truly responsible company by all stakeholders and other parties. In the remainder of this report information is provided on how we substantiate our commitments and approach to sustainability.



Rosario Nielsen from Smurfit  
Kappa Dyboflex in Denmark.

# KEY RISKS AND CHALLENGES

Sustainability has become one of our key business drivers. Through our packaging solutions, we not only provide marketing and retail ready packaging to our customers, we also help to optimise their supply chains and to minimise waste by securing the durability of products. The latter two are both critical considerations in a world where the supply of natural resources is finite. Therefore, efficient and sustainable use of resources is one of our key objectives. This helps to mitigate climate change and limits, as much as possible, other environmental impacts on air and water systems. From our materiality identification, we concluded that for stakeholder groups such as customers, suppliers and NGOs, the efficient and sustainable use of natural resources is also a key consideration.

The main resources we need in our processes are wood and recovered paper as raw materials, and energy and water for the manufacturing process of paper and board.

Another critical element of our business is that our packaging solutions are fit for use in food contact applications. Food safety is therefore a key concern for us as well.

In this dynamic business environment, risks and challenges regarding the issues of fibre availability, cost of energy, regulation concerning CO<sub>2</sub> emissions and food safety are therefore key issues which we and our industry face as a whole.

## 1. FIBRE AVAILABILITY

Fibres from wood and recovered paper are the fundamental raw materials we need and their availability at competitive prices is key for our business and industry. Sustainable forestry and well-functioning paper recovery systems are of paramount importance for companies such as Smurfit Kappa.

Various factors influence the potential availability of fibre for our business. These factors range from the need for a low carbon, resource efficient economy, and the cost of energy to policies adopted by the EU on the need for the use of renewable energy. Also more general factors such as population growth, changing consumer patterns and food scarcity can also have an impact.

Forecasted global population growth and higher standards of living demand action to secure future availability of sufficient quantities of wood fibre for its various applications. Our industry faces a number of challenges in this respect. Need for land and water to feed an increasing population may limit land availability for growing wood while new applications for the use of wood fibres in the biochemical industry may limit fibre availability for papermaking. On the other hand, population growth and the inherent need to decrease food waste, to which packaging is part of the solution, will increase the demand for (paper) packaging.

Of particular concern is the potential effect of the 2020 EU Renewable Energy Policy targets on the availability of our raw materials. Existing subsidy schemes for wood as a renewable fuel feedstock are of concern, as this drives up the price of our raw materials, negatively impacting the competitiveness of our industry in comparison with alternative packaging materials. We strongly favour the concept of resource hierarchy, with policy support for the highest added value applications for fibre such as producing paper over lower added value applications such as thermal use.

Another reason for adhering to this hierarchy is the fact that the European paper industry is already the single largest user and producer of bio-energy, with further untapped potential as is shown in the Forest Fibre Industry 2050 Roadmap to a low carbon economy 'Unfold the Future'.

Our risk concerning wood fibre availability is mitigated by our ownership of forestry in Latin America and the relationships we have with key suppliers of wood in both Europe and Latin America.

Paper fibres can be recycled between six to nine times and the use of recovered (paper) fibres to produce new paper and board is an important contributor to the sustainable nature of our products. Recovery of used paper is a global necessity and national and international policies should stimulate setting up well-functioning paper recovery systems.

We expect that global collection rates will continue to increase. In Europe, collection rates have reached on average over 70%, with the highest additional potential for recovered paper collection in Eastern European countries. According to Resource Information Systems Inc. (RISI), a leading information provider for the global forest products industry, global demand for recovered paper increased by approximately 70 million tonnes (45%) in the last decade (2001-11). More than 75% of that increase (approximately 60 million tonnes) originates from Asian countries, such as China and India, where demand for recovered paper increases fast. These Asian countries depend to a large extent on recovered fibre imports due to lack of or lagging local recovery systems, putting an upward pressure on global recovered paper pricing.

The quality of recovered fibres is deteriorating as the amount of recycled paper is growing. Fresh fibre inflow into the paper production and recycling system is therefore a necessity, which is another reason why the abovementioned hierarchy of biomass use is important. To ensure the future availability of suitable recovered paper, governments and industry collectively need to continue their drive to increase collection rates.



As for wood fibres, it is also of the utmost importance that recovered paper is first used for producing paper and board and only at the end of its life cycle should fibres be used as fuel for energy generation.

Our risk concerning recovered paper availability is mitigated by our position in the supply chain, through our own recovered paper operations and long term supply agreements with key suppliers.

## 2. COST AND SUPPLY OF ENERGY

Energy policies must focus on security of supply at competitive prices while mitigating environmental effects. The differences in the cost of energy in various parts of the world are of increasing concern to us. Our processes are by their nature energy intensive and the cost of energy therefore is an important competitive factor globally as well as in comparison with alternative packaging materials. Globally, energy costs are dropping. In Europe, energy costs are kept at high levels due to policies that add significantly to the price of energy itself such as costs for the use of grids, subsidies for renewables and other levies, which in a number of countries have outgrown the production costs of energy itself. This is directly negatively impacting the competitive position of European industry in general.

Another concern is the apparent shift in the use of certain types of energy. The near nuclear disaster, resulting from the tsunami in Fukushima in Japan in March 2011, has motivated the German government to move away from the use of nuclear energy. In combination with the shale gas discoveries in Canada and the United States, the global energy 'landscape' has changed significantly in a relatively short period of time. Shale gas and shale oil are expected to bring energy self-sufficiency to North America in the foreseeable future. It has already led to a decrease in energy costs (notably natural gas) for United States industry and led to the export of coal from North America to Europe. This development is making the use of coal economically more attractive in Europe while environmentally it has a greater impact than the use of natural gas.

Within Europe this development has led, in combination with the growing use of (subsidised) renewable energy, to a situation of overcapacity of energy supply. Gas fired power plants, including gas fired combined heat and power installations (CHP), can, in certain market conditions, no longer compete against subsidised renewables and the use of (imported) cheap coal. This development is of considerable concern to us as we who have made significant investments in gas fired CHP installations on the basis of their high energy efficiency and their relative environmental friendliness.

These developments are creating significant challenges for our operations in Europe in particular. To mitigate our risks concerning costs and supply of energy, we focus our efforts on further increasing energy efficiency and the use of biomass where economically feasible. We also support our European industry association CEPI, as well as the ERT, in their advocacy for competitive costs of energy supply in Europe.

## 3. CLIMATE POLICY IMPACT

Europe has taken the lead in addressing the impact of CO<sub>2</sub> emissions on climate change. Apart from Australia, only European countries have accepted binding commitments for the second period of the Kyoto Protocol. Global negotiations on a future climate regime are due to start in 2015 with a formal agreement anticipated by 2020.

Smurfit Kappa supports global efforts to curb climate change if and when a global level playing field is established. We believe that European policies regarding climate change should not be tightened in the absence of international agreements. The current ETS III system is functioning well even though the price of carbon is not at the expected levels as foreseen. In our view, this is partly the result of the investments the European industry has made in energy efficient, non-fossil fuelled equipment.

We recommend that the EU gives priority to providing guidance for the period beyond 2020 on how it intends to realise the objectives envisaged in its 'Roadmap for moving to a low-carbon economy in 2050'. It is also of paramount importance that the biomass used by the forest products industry remains untouched as billions of euros have been invested over time in biomass boilers that operate mostly on residuals such as sawmill dust, bark, black liquor and stumps.

We have made significant steps in reducing our CO<sub>2</sub> emissions and have been instrumental in setting industry benchmarks that are the basis for free allocation of carbon credits to our industry in the 2013-2020 trading period. Given the already disadvantageous position energy intensive industries in Europe have vis-à-vis their competitors in other parts of the world, we believe that the so-called 'carbon leakage' status of our industry in Europe must be maintained for the remainder of the ETS III period.

To mitigate our risks concerning climate policies impact, we focus our efforts on reducing specific types of energy usage and we are also aiming to reduce greenhouse gas emissions by investing in more energy efficient systems such as CHP plants, alternative energy options such as the use of biomass, and by driving production efficiencies.



*Barry Smith (L.) and Mark Winkler from Smurfit Kappa Yate, UK.*

#### 4. WATER

Water availability and the impact of our water usage on the environment are key issues for us. Sufficient availability of good quality water at an affordable cost is fundamental for an industry like ours. Fresh water availability is clearly a growing concern for certain areas of the world. Although the vast majority of our facilities are located in areas where fresh water is currently sufficiently available, as a Group we are committed to reduce our water usage where feasible.

As a consequence of the growing concern regarding fresh water availability, we believe water policy makers will increase their focus on the consumption of water and the treatment of waste water. We treat waste water as a resource containing value that should be recuperated before the water is released to the public water body in compliance with legislation. We already retrieve valuable biogas from waste water sludge and we are developing our insights on how to recover other resources from waste water flows.

Chemicals will be re-evaluated for their impact on waste water flows. Limitations to emissions to water may already arise from the finalisation of the so-called Best Available Technologies Reference document (BREF) by the European Commission this year, with stricter limits on AOX and nutrients in waste water flows.

Since 2008 the water intake of our paper and board mill system has decreased by 10% per tonne of product. Although, as with other paper producers, we process large volumes of water, the paper industry does not actually consume a significant volume of water. After treatment in modern water treatment plants, over 90% of the water intake is returned to the water systems from which it was extracted. We are therefore strongly committed to find ways to further improve water usage efficiency and to improve the quality of the water returned to the environment. Since 2005 we have achieved a reduction of over 25% in the organic load (COD) discharged with the effluents. We are committed to continuing our ambitious programme for reducing the impact of our activities on water.

We also support initiatives that develop methodologies to calculate water footprint accounting, water footprint impact assessment, and water stewardship standards. We are a partner of the Water Footprint Network (WFN) which is a frontrunner in developing such standards. We are also closely monitoring the upcoming ISO standard on water footprinting and the work of the Alliance of Water Stewardship and European Water Partners via our industry association CEPI.

#### 5. FOOD CONTACT AND FOOD SAFETY

In our opinion, it can be objectively proven that paper-based packaging is the most sustainable form of transport and display packaging for food products. It is a clean and hygienic product used for only one delivery. The challenge our industry faces to meet the standard of securing safe and hygienic products is made more difficult by the fact that we repeatedly recycle our paper materials in the interest of environmental sustainability and cost efficiencies. As our raw material is mostly post-consumer recovered paper, it is important that we ensure that the recycled products we produce comply with the European Regulation on materials that come into contact with food.

Smurfit Kappa is actively continuing its efforts to further increase the safety of recycled packaging. Specifically for food packaging Smurfit Kappa follows both Good Manufacturing Practice and hygiene standards such as:

- European Federation of Corrugated Board Manufacturers (FEFCO) International Good Manufacturing Practice Standard.
- International Featured Standards IFS Food version 5 as it relates to packaging together with the IFS Packaging Guidance document from June 2010.
- British Retail Consortium/Institute of Packaging Global Standard for Packaging and Packaging Materials.
- EN 15593, European Standard in respect of the management of hygiene in the production of packaging for foodstuffs.
- ISO 22000, International standard for food safety management systems.

We also engage actively within the European paper and packaging associations, CEPI and FEFCO, to develop industry initiatives and to define best practices to be applied both in Europe and Latin America. Smurfit Kappa has an experienced internal team which is dedicated to food contact and food safety issues.

# OUR LONG TERM SUSTAINABLE DEVELOPMENT COMMITMENTS

Our efforts on sustainability are part of a journey of striving for continuous improvement. To measure the progress we are making on that journey, we have defined specific tangible and measurable targets within certain timeframes.

In 2010, we adopted four long term commitments with measurable targets to state our ambition to be a leading sustainable company and to provide paper-based packaging solutions for our customers in an environmentally and socially responsible manner.

These long term commitments are related to:

- Sustainable use of fibres
- Reducing fossil CO<sub>2</sub> emissions
- Clean water discharge
- Ethical business conduct

In this section we describe the achievements to date, activities in 2012, and current and future activities related to these commitments.

As mentioned in the Letter of the CEO on pages 6 and 7, we have recently made our long term vision on sustainability public in a separate publication called 'The Smurfit Kappa Vision on Sustainability' ([http://www.smurfitkappa.com/Resources/Documents/The\\_Smurfit\\_Kappa\\_vision\\_on\\_sustainability\\_May\\_2013.pdf](http://www.smurfitkappa.com/Resources/Documents/The_Smurfit_Kappa_vision_on_sustainability_May_2013.pdf)). We have widened the scope of our long term objectives and commitments to include, in addition to the current long term commitments, a number of other sustainable development issues that we consider important. These issues are waste management, water usage, safety at work and our involvement in the local communities where we operate and where, as a valued corporate citizen, we want to make a difference for the local population. We intend to report in our next Sustainable Development Report on the progress we are making in reaching our objectives and targets.

## 1. SUSTAINABLE USE OF FIBRES

The sustainable origin of raw material is of the utmost importance for us. Sustainable fibre for us means fibres that are certified or are of a non-controversial origin (see glossary on page 95). We are fully committed to

that principle, both for our virgin fibres as well as our recovered fibres that we use as raw material. Our sustainably managed planted forests are not only productive, they also secure biodiversity (pages 30 to 32).

### COMMITMENT

By 2015:

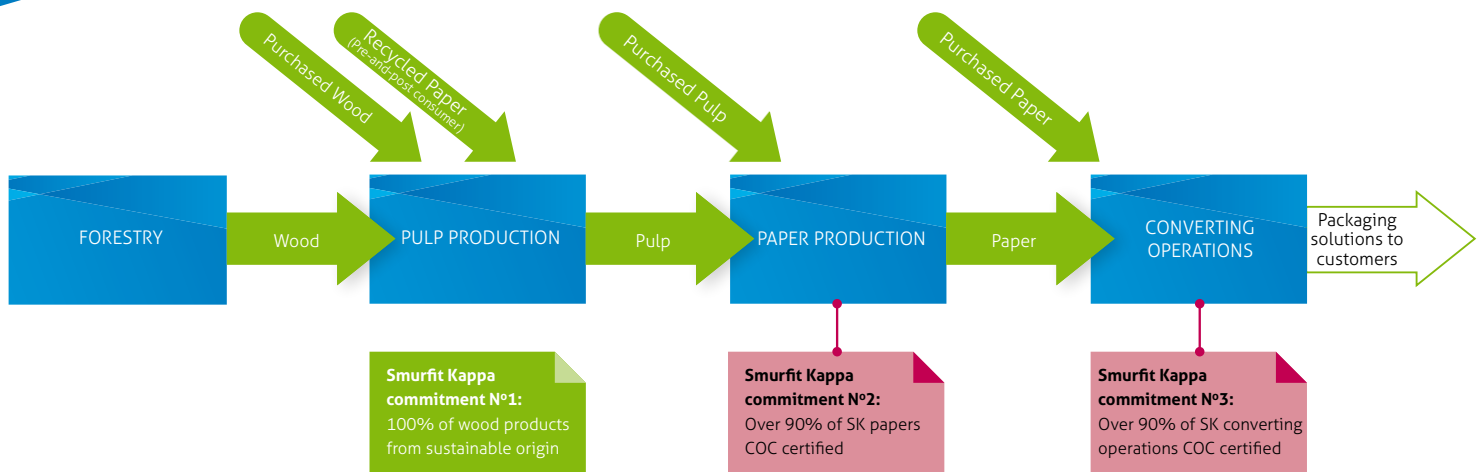
1. All of our fibres produced or purchased will be from sustainable origin.
2. Over 90% of the paper and board produced will be certified Chain of Custody.
3. Over 90% of our converting operations will operate under a Chain of Custody certification.

We aim to deliver packaging solutions to our customers containing only certified fibres and/or fibres of non-controversial origin. Furthermore, at any point in time our products should meet the commitments we make in our various policy statements (Forestry policy, Code of Business Conduct, Social Citizenship etc.). This concerns all fibres and fibre-based products we use or manufacture, whatever the origin or the form of the fibres.

Wood and virgin pulp produced or purchased are preferably Chain of Custody certified with the remainder of non-controversial origin. A total of 55% of the wood used in the Smurfit Kappa mill system for producing virgin paper or pulp is currently Chain of Custody certified under the FSC and/or PEFC schemes and 45% is of non-controversial origin. This status is verified by a third party under the chain of custody scheme FSC and/or PEFC with the exception of the San Felipe mill in Venezuela, due to local conditions.

In addition to the commitment mentioned above our final aim is that all the fibre-based products we deliver to our customers are Chain of Custody certified.





## Origin of Fibre



### Achievements to date

- Our Colombian forests have been certified FSC since 2003.
- The complete Smurfit Kappa paper and board mill system in Europe is Chain of Custody certified under either one or both schemes we support in Europe (FSC and PEFC). This includes mills producing virgin and recycled containerboard, carton and solid board, sack paper and machine glazed papers. This is summarised on page 32 and full details can be found on our website.
- In Latin America, our Colombian mills and converting operations are Chain of Custody certified under FSC.
- In February 2013 we reached our long term commitment to operate over 90% of our global system of converting operations under a Chain of Custody certification scheme.
- All converting operations of Colombia, Mexico and Argentina are Chain of Custody certified under FSC.

### Activities and results in 2012

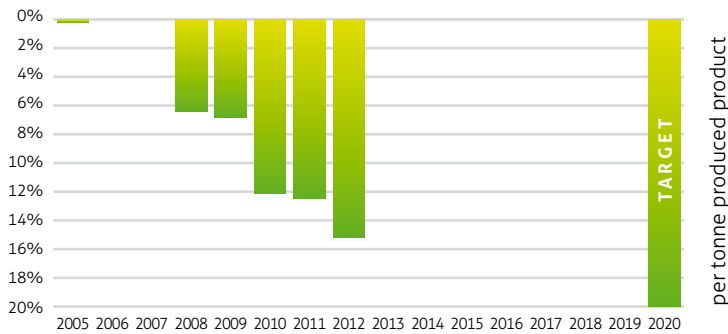
- In 2012, considerable progress was made in the certification process of converting operations in both Europe and Latin America. A total of 97 new plants became Chain of Custody certified during the course of the year resulting in 88% of our global packaging operations being Chain of Custody certified according to either FSC and/or PEFC at the end of 2012 (up from 44% at the end of 2011).
- We completed a three year certification programme for our European converting operations in February 2013 when the last of all designated converting operations in 19 European countries reached Chain of Custody certified status under either a FSC and/or PEFC scheme.

- During 2012, all converting operations in Mexico and integrated converting operations in Argentina reached Chain of Custody certified status under FSC.
- In Latin America, the three Mexican paper mills were Chain of Custody certified under FSC in February 2012.
- At the end of 2012, 86% of paper and board produced in our Group was certified for further labelling Chain of Custody according to either PEFC or FSC, up from 78% at the end of 2011.
- We continued auditing our suppliers to ensure that no wood fibre originates from controversial sources.

### Current and future activities

- In February 2013 we reached a level of 92% Chain of Custody certified converting plants, enabling us and our customers to trace the origin of the fibres we use.
- We plan to start FSC certification activities of our forest holdings and certain manufacturing facilities in Venezuela in 2013.
- In our publication 'The Smurfit Kappa Vision on Sustainability' we introduced further targets in the area of chain of custody certification, committing to 90% of our paper based packaging being labelled as Chain of Custody certified under FSC, PEFC or SFI by 2015.
- In March 2013, the new EU Timber Regulation became effective. We have taken action where necessary in our own supply chain so that we will be compliant at all times with this new regulation. This new EU Regulation is designed to prevent illegally logged wood and products made from such wood from entering the EU.

**FOSSIL CO<sub>2</sub> EMISSION REDUCTION (basis 2005)**



**2. CO<sub>2</sub> EMISSIONS**

Climate change and 'global warming' are widely seen as sustainability issues of high priority. We also consider them to be among the most important sustainability issues as they are closely related to our business. Energy generation very often also involves significant emissions from burning fossil fuels. Therefore our fossil CO<sub>2</sub> reduction programme is to a large extent directed at increasing efficient energy usage and increasing the use of biomass where that is economically viable. We have taken initiatives both in Europe and Latin America to address this subject. We continuously invest in projects that should lead to higher energy efficiency and reduction of fossil CO<sub>2</sub> emissions.

**COMMITMENT**

20% reduction in relative CO<sub>2</sub> emissions from fossil fuels in our global paper and board mill system in 2020 compared to 2005 (CO<sub>2</sub> emissions defined as direct and indirect CO<sub>2</sub> emissions from fossil fuel relative to production).

**Achievements to date**

- We have been switching from fossil fuel to renewable energy where possible and economically feasible (Piteå biomass boiler in Sweden installed in 2007, new black liquor boiler installed at Cali in Colombia in 2008, biomass boiler commissioned at Cellulose du Pin in France in 2010 and use of biogas from the new and/or extended water treatment plants in various paper mills).

- For over two decades we have been focused on reducing CO<sub>2</sub> emissions from fossil fuels relative to production. For example, our Nettingsdorfer mill in Austria and our Roermond mill in the Netherlands have realised over 30% reductions in CO<sub>2</sub> emissions per tonne of paper.
- Between 2005 and 2012, fossil CO<sub>2</sub> emissions per tonne of paper and board produced have decreased by 15.2%. This is illustrated in the graph on this page which shows the annual improvement compared to the base year 2005.

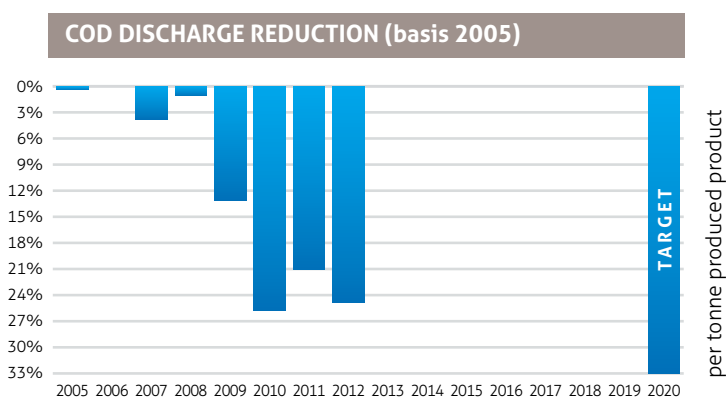
**Activities and results in 2012**

- In 2012, the total CO<sub>2</sub> fossil emissions of our global paper and board mill system decreased by 3.1% compared to 2011. This emission comparison is volume adjusted. In the course of 2012 a number of energy related investments were completed, resulting in another year of good progress towards reaching our objective for 2020. Details of some of these investments are discussed below.
- In our sack kraft paper mill in Nervión in Spain, the investment in a larger steam turbine to increase the production of biomass based electricity has led to less usage of electricity from the grid. The turbine became operational in the first quarter of 2012 and reduction of CO<sub>2</sub> fossil emission is estimated to be 14,000 tonnes per year.
- In our kraft paper mill in Navarra in Spain, the biomass boiler has been rebuilt and is in operation since October 2012. Direct fossil CO<sub>2</sub> emissions are estimated to decrease by 22,000 tonnes on an annual basis as a result of this rebuild.
- In our recycled paper mill in Hoya in Germany a multi-year investment project is progressing. In a first phase, the paper machine was upgraded in 2011, reducing the use of energy. Initial results after the completion of the first phase indicate a reduction of approximately 7% of fossil CO<sub>2</sub> emissions per tonne of paper produced for this mill.

- In our recycled paper mill in Cerro Gordo, Mexico City, a shoe press was installed in the press section of the PM-5 increasing the dryness of sheets entering the dryer section and leading to an average reduction in natural gas consumption of 14% per tonne of product produced on this machine. Even with a production increase of more than 4%, this equates to an annualised absolute reduction of 4,300 tonnes of fossil CO<sub>2</sub> emissions, resulting also in less emissions of NO<sub>x</sub>.
- In our recycled paper mill in Barranquilla in Colombia the installation of one large gas turbine, producing both steam and electricity and replacing older units, will lead to an estimated reduction of fossil CO<sub>2</sub> emission of 13,000 tonnes on an annual basis once the unit is fully operational.

#### Current and future activities

- In our kraft paper mill in Cali in Colombia the installation of a new, more efficient lime kiln was completed in the first quarter of 2013. The new lime kiln will use natural gas as fuel whereas the previous lime kiln was using heavy fuel oil. The use of much 'cleaner' natural gas should reduce fossil CO<sub>2</sub> emissions by approximately 13,000 tonnes per year.
- In our recycled paper mill in Hoya in Germany the second phase of a multi-year investment project is currently progressing. This second phase will include the installation of an additional CHP unit which should lead to a reduction of fossil CO<sub>2</sub> emissions. After completion of the second phase, fossil CO<sub>2</sub> emissions per tonne of paper produced are estimated to be reduced (including phase I) by approximately 13%.
- In our recycled paper mill in Townsend Hook in the UK we will replace the two existing paper machines by one new machine with a slightly higher production capacity. This machine will have an improved energy efficiency compared to the two existing paper machines and therefore save on direct fossil CO<sub>2</sub> emissions. The start-up of this machine is planned for Quarter 4, 2014.
- In our recycled mill in Roermond in the Netherlands, a project has been approved to modify the PM-1 into a medium/light weight paper machine and to increase its capacity. The changes to the machine will result in more efficient use of energy and generate relative CO<sub>2</sub> emission reductions.



### 3. WATER

Water is seen as a sustainability issue of increasing importance. Water is abundantly present on Earth: yet the availability of fresh water is limited and according to the Food and Agriculture Organisation of the UN it is decreasing and unequally distributed. Water is also a critical resource for the paper and packaging industry and after fibre, water is the most important natural resource for our business. As we return approximately 90% of the water we take in, our specific commitment for water and our primary investment focus in this area is on the quality of the water that is returned to the public water body. The COD content is a good indicator for the quality of the water returned.

#### COMMITMENT

Reduce the organic content discharged in the process water (COD) of our mill system by one third by 2020 compared to 2005. The reduction is relative to the organic discharge measured by COD, expressed per tonne of paper.

#### Achievements to date

- Investments in water treatment plants took place in a number of paper mills since 2005: Alfa d'Avignon, Cellulose du Pin and Rethel in France, Mengibar and Navarra in Spain, Hoya in Germany, Roermond in the Netherlands, SSK in the UK, Ania in Italy and Bernal in Argentina.
- Since 2008 our Latin American mills have taken initiatives resulting in more than 19% decrease in water intake per tonne of product produced.
- Between 2005 and 2012, COD content in the process water discharged by our global paper and board system has decreased relative to production by over 25%. This is illustrated in the graph above which shows the annual improvement compared to the base year 2005.



### Activities and results in 2012

- In 2012, the total COD discharge of all our paper and board operations decreased by 5% compared to 2011.
- In our recycled paper mill in Ania in Italy the anaerobic stage of the water treatment was extended in July 2012, leading to a significant improvement of the quality of the water discharged (see also pages 40 and 41).
- In our recycled paper mill in Bernal in Argentina the newly constructed water treatment plant was started up in early 2012 and is operating at full capacity since April 2012. COD discharges at the Bernal facility decreased by over 60% in 2012 compared to 2011.
- In our recycled paper mill in Caracas in Venezuela better fibre recovery resulted in a decrease of approximately one third in the discharge of COD in 2012 compared to 2011.
- At the end of 2012, 90% of our paper and board is produced in mills where best practices are implemented. Best practice for water treatment includes at least one step with biological treatment before discharging.

### Current and future activities

- There are several investments in water treatment facilities in both Europe and Latin America which are being planned for implementation in the next few years.
- We are continuing our programme of best practice in the treatment of our process water both in Europe and Latin America.

## 4. CODE OF BUSINESS CONDUCT

As a multinational Group, over the years the employee base has grown considerably not only in size but also in cultural and social diversity. This diversity demands the development and adherence to shared core values and business principles in the area of business practice, health and safety, employee relations, human rights, environment and community involvement. The Group's commitment to these principles is confirmed by our Code of Business Conduct, to which all of our companies and employees alike must adhere.

The Code of Business Conduct is supported, and further expanded upon, by a number of policies and statements detailing the Group's commitment to excellence in our relationships with our employees, shareholders, customers and suppliers, and governmental authorities in the countries in which we operate.

### COMMITMENT

**To continuously emphasise the importance of the Code of Business Conduct to our employees and to integrate these principles into our day-to-day business dealings.**

### Achievements to date

- Established and implemented a number of Group-wide policies in areas like ethical business behaviour, finance, health and safety, environment and sourcing.
- Established a Code of Business Conduct, which is applicable to all employees across the Group.
- Appointed a Group Compliance Officer with an active reporting role to the Group Board (Audit Committee).
- Introduced a Good Faith Reporting Policy Statement ('Whistleblower Code'), which provides channels for all employees to raise confidentially concerns in relation to perceived improper actions.
- Signed up to the UN Global Compact initiative.
- Audited our strategic suppliers on their code of conduct programmes through our Sustainability Sourcing Policy.

### Activities and results in 2012

- A Safety Opinion Survey was carried out in the first half of 2012 in all our European plants to measure safety conditions and to identify areas for improvement.
- Having been benchmarked against an international peer group for best practices and appropriately revised, the Code of Business Conduct was approved by our Board of Directors. The new Code of Business Conduct has been publicised on the Group's internal and external websites.
- In 2012, an internal control questionnaire was completed across our operations. The Group's Code of Business Conduct and Good Faith Reporting Statement have been distributed to the plant management and support staff in every Group facility, which accounts for about 30% of the entire workforce. All plant general managers and financial controllers confirmed their understanding and adherence to the Code of Business Conduct. This process required written certification that all employees had been made aware of the Code of Business Conduct and Whistleblower Code and that any known or suspected violations had been reported appropriately.
- In 2012, an awareness campaign and training programme was undertaken in all our German operations.
- Every level of management throughout the Group has a responsibility to monitor and enforce the Group's guidelines on Competition Policy. Approximately 900 managing and sales directors, sales managers and other senior management across the Group confirmed their understanding of the Group's zero tolerance policy with regard to anti-competitive behaviour. The process required written certification from each manager that he/she had not been engaged in, nor was aware of, any such actions.
- A new Group Foundation for CSR co-investment activity started its initiatives in 2012 and approved participation in two projects in Ireland and one in Colombia.

### Current and future activities

- The Code of Business Conduct is or will be made available in the respective languages on the various national websites of the Group.
- Following agreement on the new Code with the respective Works Councils, an awareness programme will be implemented group-wide.

*Ida Ferrière, Christophe Camin and Joël Cazenave –  
Smurfit Kappa Cellulose du Pin, France.*



# ENVIRONMENT



Respecting the natural environment in which we operate is part of our overall mission. The world is faced today with a number of global environmental challenges such as deforestation, climate change, energy consumption, water shortages and water quality and biodiversity loss. We are dealing with these issues in our own operations every day. We are forest owners, users of wood and paper, and in need of significant amounts of energy and water for our production process. We are committed to operate in an environmentally progressive manner, which is one of our main principles underlying sustainability. While we aim to minimise the impact our activities have on the environment as much as we can, our principle focus is on those areas where our activities potentially have the largest impact. These areas are the use of fibres and the use of wood, the use of energy and fossil CO<sub>2</sub> emissions and the usage and discharge of water. As forest owners we practice sustainable forestry supporting biodiversity, as users of wood and paper fibres we guarantee the sustainable origin of our raw materials and as users of energy and water we invest continuously in making our processes more energy and water efficient.

## 1. SUSTAINABLE USE OF FIBRES

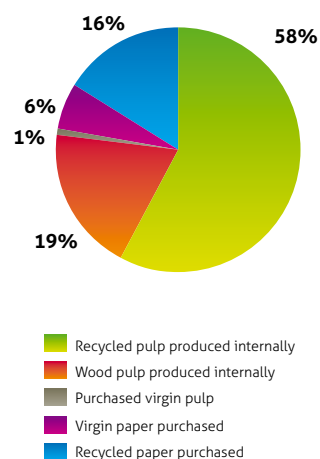
Almost all of the packaging produced by Smurfit Kappa is made from paper. In this section we explain how our products contribute towards sustainability, how we use both virgin and recycled fibres and our overall sustainable use of fibres.

Efficient packaging solutions contribute significantly to the sustainability of the total supply chain of goods. Packaging not only protects products during transit, it often helps to preserve the product, carries important product information for consumers and provides marketing opportunities for both manufacturers and retailers.

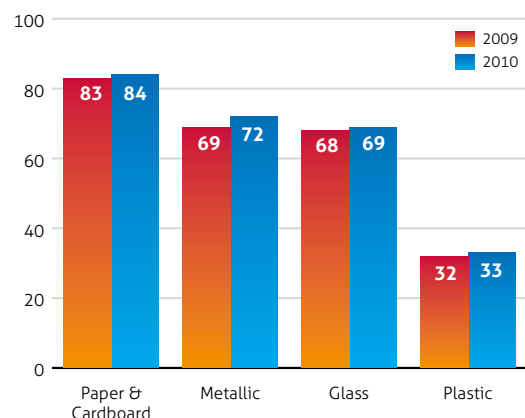
Paper-based packaging is a very environmentally friendly form of packaging as the raw material comes from renewable sources and the end product is fully recyclable.

A major priority of Smurfit Kappa is to provide customers with sustainable and efficient paper packaging. Virgin or recycled papers are the most sustainable choice depending on user requirements and the supply chain specifics.

**Fibre origin 2012**  
ALL OPERATIONS



**Packaging Recycling Rate in EU (%) 2010**



Source: Eurostat



*Dirk Schneider (L) and Alexander Heidland (r.)  
from Smurfit Kappa Zülpich, Germany.*





As wood fibres degrade every time they are recycled, a fresh virgin fibre inflow into the recycling system is required. The length of a wood fibre is shortened during every cycle and after a certain number of cycles, the original fibre is totally degraded. Therefore, virgin fibre is constantly added to the system to compensate for the loss of degraded fibre, archival storage of paper, and the loss through normal use and disposal of certain paper products (e.g. tissues).

Paper-based packaging is almost totally renewable and recyclable. The recycling rate for paper and board packaging within the EU's 27 member states for 2010, which is the latest year for which official Eurostat statistics are available, was 83.5% (see graph page 26) thus showing that paper-based packaging has a higher recycling rate than any other packaging material.

Chain of Custody certification will help us to ensure that the natural resources, which we need and depend upon, are responsibly managed and that we can provide our customers with the sustainably produced products that they require.

#### Use of virgin fibres

Typical products containing virgin fibres are wood, virgin pulp and certain categories of paper and board.

Less than 16% of the wood we use for the production of virgin fibres originates from our own forests. We therefore ensure, together with our external suppliers, that the supply of wood is from sustainable origins and that our suppliers implement strict policies for monitoring the origin of wood fibres thus ensuring the protection of natural resources in the countries from which we source them. The policies in place are based on forest certification systems.

Both our own forest operations and our wood purchasing practices are based on the principles of environmentally compliant forest management schemes. In 2007, we committed to a programme of Chain of Custody certification, giving initial priority to our operations which handle wood. We have extended this management system to our entire mill system (both virgin and recycled paper and board) and to our packaging operations.

We are both the largest producer of virgin containerboard in Europe as well as in those countries in Latin America where we have virgin containerboard production facilities. 69% of the virgin containerboard used for the manufacturing of packaging is produced internally: the remainder is purchased from third parties. Through a verification programme with external suppliers we ensure that the supply of virgin paper is either certified or is of non-controversial origin.

The targets in our long term sustainable development commitment related to sustainable use of fibres show our drive to apply the principles described in this area.

Our Sustainable Forestry statement and our Sustainable Sourcing policy are available at our website and describe our codes of conduct with regard to all supplies of wood products, whether coming from our own forests or purchased from third party suppliers.

#### Use of recycled fibres

In 2012, for our manufacturing operations in Europe, 75% of our fibrous raw materials came from recycled fibres. This figure equated in 2012 for our manufacturing operations in Latin America to 67%.

We consume over 5.1 million tonnes of recovered paper each year. Of this figure, 4.3 million tonnes are in Europe and most of this is supplied through our own recovery and recovered paper supply system which makes us the clear industry leader in this regard. Over 70% of our Latin American needs are also collected within our own system or secured through contracts with third party suppliers. The pie-chart on page 26 indicates the source of fibres used in our operations.

#### Sustainable fibres - Our approach

Smurfit Kappa recognises and utilises the Forestry Stewardship Council (FSC), the Programme for the Endorsement of Forest Certification (PEFC) and the Sustainable Forest Initiative (SFI), the three major international forest certification bodies to qualify the wood and the virgin fibre based products we purchase as well as the paper, board and packaging we produce in our operations.

The Chain of Custody certification process we have implemented in our operations ensures that assessments are performed regularly by independent accredited organisations, providing assurance that the wood and fibres we source externally originate from sustainable and well managed forests and are legitimately sourced. This certification process is important for our own operations, our customers and our suppliers.

Our ultimate aim is to reach Chain of Custody certification for all of our relevant operations and for all the products we deliver to our customers. This shows our commitment to a sustainable managed supply chain ranging from sustainable forest management practices to delivering Chain of Custody certified products to our customers.



ENGAGEMENT WITH STAKEHOLDERS

## Russia: Sustainability important ingredient in Russian partnership

**Dmitry Zylev,**  
General Director of Arkhangelsk

"Arkhangelsk Pulp and Paper Mill has provided the Russian corrugated operations of Smurfit Kappa since the 1990s with kraftliner and fluting. These raw materials are used for the production of corrugated packaging. The long-lasting relationship between the two companies goes beyond the product level and also emphasises the focus on corporate sustainability.

Arkhangelsk's main activities are the logging and the processing of wood into pulp and paper products, such as cardboard, cellulose, and paper. Arkhangelsk is one of the main producers of kraftliner in Russia and an important supplier to Smurfit Kappa in Russia.

Arkhangelsk is supporting Smurfit Kappa in its endeavours for sustainability. In 2006, Arkhangelsk was the first among Russia's pulp and paper companies to operate under the FSC trademark. In March 2013 the scope of the FSC certification was expanded to include also kraftliner and fluting. In addition, a number of its wood suppliers are operating under management systems compliant with FSC requirements. Arkhangelsk aims to reduce the adverse impact on the environment of its activities including the prevention of pollution. Arkhangelsk is a member of the Ecologically Responsible Timbermen of Russia, which is a part of the Global Forest and Trade Network (GFTN), established under the umbrella of the WWF.

Arkhangelsk is also adhering to sustainable social principles. As the largest enterprise in its region it is aware of the exclusive role it has to fulfil in both the social as well as the economic life of its local community. It does so by supporting programmes that should ensure its integration in the local and regional communities. Arkhangelsk also places labour relations at the core: employees are employed strictly in compliance with regulations, with average pay well above the average for the region and with attention to and investments in occupational safety.

Arkhangelsk is looking forward to continuing its cooperation with Smurfit Kappa not only as a supplier but also in sharing the same principles on sustainability."

### Forestry

Smurfit Kappa owns and manages approximately 105,000 hectares of forests in Colombia and Venezuela. These plantations provide our mills in both countries with almost all of their virgin fibre requirements.

We manage forest holdings based on our sustainable development principles, promoting economic growth, a responsible use of natural resources and fostering social equity in the regions where the forest plantations are located.

Smurfit Kappa's largest forest plantations are in Colombia. Here, we have approximately 69,000 hectares, including 6,400 hectares in partnerships with private landowners. This area comprises over 44,000 hectares of commercial plantations, approximately 22,000 hectares of protected natural forest and just over 3,000 hectares for infrastructure. Of the commercial plantations, 60% are pines, 39% Eucalyptus and 1% dedicated to forestry research. We operate our Colombian forest holdings under a management system that has been certified in accordance with the FSC since 2003.

In Venezuela, we own approximately 35,000 hectares in three western states of the country. Of this total, 21,000 hectares are commercial plantations, 13,000 hectares are natural reserves and the balance is given over to infrastructure. Commercial plantations include 12,600 hectares of short fibre (Eucalyptus and Gmelina) while 6,400 hectares are long fibre from pine. The balance is used for research and development such as silviculture, plantation management, forest protection and forestry research.

The forest plantations in Venezuela have not yet been certified but are well advanced in terms of best practice. We plan to start FSC certification activities of our forest holdings in 2013.

The main species harvested in both countries are varieties of Eucalyptus and pine.

During the plantation life cycle, Smurfit Kappa conforms to the numerous governmental legal, technical and environmental regulations, for which, in most cases, annual permit renewals are required.



### *Paper and Board production*

With the exception of our San Felipe mill in Venezuela, all our wood handling operations are Chain of Custody certified by FSC or PEFC. These include all our mills producing virgin fibres and our wood supply companies in France and Spain.

Our complete paper and board mill system in Europe is Chain of Custody certified since early 2011. This mill system consists of mills producing virgin and recycled containerboard, carton board, solid board, sack paper and machine glazed papers. Our European mills are certified both for FSC and PEFC.

Certification of our paper and board mills in Latin America is progressing with FSC Chain of Custody certification of all paper mills in place in Colombia since 2009 and in Mexico since May 2012. Our two paper mills in Argentina are to be certified by the end of 2013.

### *Packaging operations*

Chain of Custody certified packaging guarantees our customers that only sustainable fibres are used in their packaging. For virgin papers, this means that fibres originate solely from sustainably managed forests and, for recycled paper, it means that a significant amount of post-consumer recovered paper is used as raw material. The entire supply chain is traceable to prove this to our customers.

In 2009, we initiated a programme in our packaging operations to supply customers with Chain of Custody certified products. Our target is to be able to offer certified packaging to all our customers from all our packaging production locations.

Considerable progress has been made during 2012 and in early 2013, we reached a level of 92% of our packaging operations in Europe and Latin America being Chain of Custody certified FSC and/or PEFC. This surpassed the targeted level of 90% in our long term sustainable development commitment for the sustainable use of fibres (pages 20 and 21).

### *Overview of certification in place at end of 2012*

The table on page 32 gives a detailed overview of our paper capacity operating under Chain of Custody certification per grade of paper together with the number of converting operations also under Chain of Custody certification.

The first two sections of the table give the percentage of our paper or board production capacity operating with Chain of Custody certification while the last column reports the exact percentage of the paper or board that can be sold as Chain of Custody certified. This information is provided by type of paper and board produced in both Europe and Latin America.

These percentages reflect the situation at the end of 2012. To simplify the calculation, where a mill obtained the certificate during the year, the annual production of the mill is taken into account for calculating the percentage.

The third section of the table relates to the packaging operations. Here the number of sites operating with Chain of Custody certification is reported and the second column gives the percentage of sites with Chain of Custody certification.

### *Suppliers*

To make further progress in the certification of our products, in 2012 we continued our verification programme with external paper suppliers to ensure that, as a minimum, all virgin fibres contained in the supplied papers or board are of non-controversial origin and are preferably Chain of Custody certified under PEFC and/or FSC. This verification process includes all our external paper suppliers and is based on physical audits. At the end of 2012, 79% of all our external virgin supplies in Europe were FSC, PEFC and/or SFI certified or have PEFC and/or FSC controlled wood status. In March 2013, this percentage increased to 95%. The remaining 5% is purchased through agents that are not certified. However, the majority of that 5% has a certified origin while the balance is from non-controversial origin.

### *Biodiversity*

In Colombia, 31% of our total forest area is protected natural forest; in Venezuela 37% of our total forest area is protected natural forest. These protected parts of our forests are kept as natural forest and are not replaced by plantations, thus maintaining biodiversity, preserving watersheds and helping to conserve natural habitats.

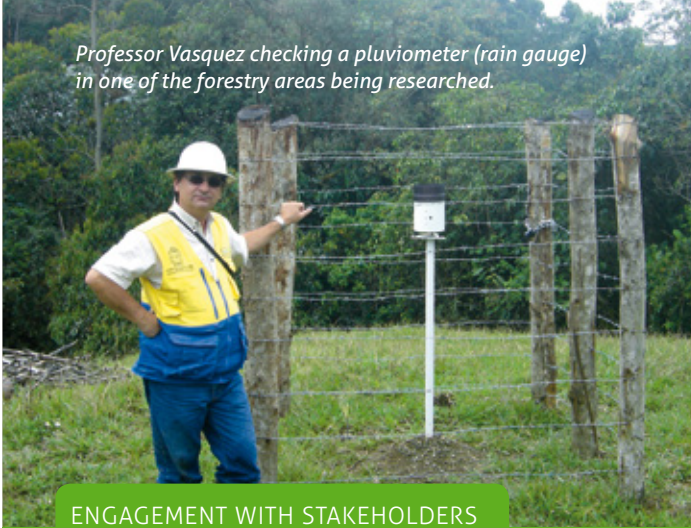
The guiding principles of the Group's forestry policy in Latin America are to:

- Develop continuously and systematically research programmes to preserve and enhance soil productivity.
- Identify appropriate species and forestry practices that will enable an increase in plantation yields while protecting the environment.
- Conserve natural forests located on company lands to ensure the sustainability of forest diversity and thereby contribute to the protection of water sources and habitat of flora and fauna.

In Colombia, we are continuously investing in research projects, frequently in cooperation with other research institutes as the following examples show.

Together with the National Centre for Coffee Research (CENICAFÉ) we worked on the potential carbon sequestration capabilities of the pine and Eucalyptus species planted by Smurfit Kappa. The "3CFix" (Cartón de Colombia Carbon Fix) model was developed and carbon sequestration figures are available since 2007.

Professor Vasquez checking a pluviometer (rain gauge) in one of the forestry areas being researched.



#### ENGAGEMENT WITH STAKEHOLDERS

## Colombia: university

**Guillermo Vásquez Velásquez**

Associate Professor, Forest Hydrology  
and Watershed Management

National University of Colombia (Medellín Campus)

“The relationship between plantation forestry and water resources has often been a controversial one. Scientific research conducted over time never seems to be able to satisfy both advocates and opponents, since the conditions surrounding each plantation are too unique to generalise. In the Colombian Andes, Smurfit Kappa manages 45,000 hectares of plantation forests. These commercial forests are often situated close to urban concentrations and consist of fast growing species like Pine and Eucalyptus trees. The landscape is characterised by a very humid climate, soils susceptible to erosion and steep terrain. More than 550 watercourses originate in Smurfit Kappa’s area of management. These streams supply small farms and medium-sized municipalities with water. Mountain watersheds in the region used to be employed for grazing cattle, but now they have been converted for use in forest plantations. In order to determine the influence of commercial forest plantations with regard to the hydrological response of small watersheds in the Colombian Andes, both the Forestry Sciences Department of the Medellín Campus of the National University of Colombia and the Forest Research Department of Smurfit Kappa in Colombia established a partnership to develop a research programme in forest hydrology. Since its initiation in 2011 the research programme has been visited by many international experts in this field and has brought together researchers, students, politicians, farmers and environmentalists interested in the protective effect of plantations on water resources. As a result the programme not only contributes to practical environmental solutions, but it also helps at an academic level in the search for hydro-solidarity and social sustainability in the Colombian Andes.”

In 2012, the combined growth of pines and Eucalyptus in our Colombian plantations absorbed some 1.1 million tonnes of CO<sub>2</sub> from the atmosphere thereby fixing 300,000 tonnes of carbon within it. The wood harvested in the same period contained approximately 276,000 tonnes of carbon, giving a positive carbon balance of over 24,000 tonnes of carbon or its equivalent of 88,000 tonnes of CO<sub>2</sub>.

Since 1969, when we began our forestry activity in Colombia, we have committed to protect all natural forests located in our expanding land holdings, respecting the existing biodiversity in both types of forests.

In order to effectively protect and promote conservation, since 2009 we have been working with two local universities (Cauca and Quindío) on studies of the flora and fauna populations in our protected natural forests that are within or surround the planted forests. These studies focus on mammals and birds.

Apart from the objective of identifying the existence of the species, we focused on determining which species were categorised as endangered by international organisations such as the International Union for Conservation of Nature (IUCN).

At the end of 2012, we completed a second study of our forest holdings in Quindío together with the local university. Four new endangered species were identified. At the end of 2012 and over the past four years we have identified 1616 species: 905 are flora, 631 birds and 80 mammals. Of these, 26 are endangered to some degree according to IUCN categorisation: 12 species of flora, 9 birds and 5 mammals. From this research it is clear that the forest plantations and the neighbouring protected natural forest form important wildlife corridors which contribute to species conservation in the Andean ecosystem.

The results of this study were presented in our 2012 calendar, which had a 40,000 unit print run and was sent to all our stakeholders. We have also published three handbooks on the study findings. The objective of these handbooks is to promote species conservation through observation and identification. These handbooks have been distributed to surrounding communities and managers of our forestry farms.

Additionally, in 2012 we had meetings with both employees and customers, to share information about the wide range and significant impact of our sustainability actions. Apart from these meetings there is also a frequent dialogue with other stakeholder groups interested in our actions related to forestry and biodiversity. Forestry studies are actively promoted, we have been involved in numerous publications on forestry research on topics related to silviculture, tree breeding and forest health for Eucalyptus as well as tropical and subtropical pines over the past decades.

In Europe we have identified which of our operations are either within or in close proximity to legally protected areas or areas of high biodiversity value. We are taking necessary steps to ensure both the environmental protection and the sustainability of these sensitive areas.

Eleven of our European sites are located within or adjacent to areas that are part of the Natura 2000 which is an ecology network of protected areas in the territory of the EU. The Natura 2000 network has been created through EU legislation in 1992 protecting the most threatened habitats and species across Europe.

Ten other sites are adjacent to or within areas protected by national or local legislation. Additionally, four of our operations draw from or discharge water to watersheds that are protected or classified as sensitive.

The list containing the names and locations of these sites can be downloaded from our website.

#### SMURFIT KAPPA MILLS AND CONVERTING PLANTS CERTIFIED CHAIN OF CUSTODY UNDER PEFC OR FSC OVERVIEW SMURFIT KAPPA CERTIFICATION AT END 2012

VIRGIN PAPER			
	Production Ktonnes	Production capacity with CoC certification	% certified paper
<b>EUROPE</b>			
Kraftliner products	1,485	100%	79%
Other virgin papers (sack paper, MG paper)	252	100%	41%
<b>LATIN AMERICA</b>			
Kraftliner, printing & writing paper, SC fluting	294	90%	90%
RECYCLED PAPER & BOARD			
	Production Ktonnes	Production capacity with CoC certification	% certified paper
<b>EUROPE</b>			
Containerboard	2,934	100%	100%
Solidboard & cartonboard	869	100%	94%
<b>LATIN AMERICA</b>			
Containerboard	640	69%	53%
Cartonboard	131	73%	28%
PACKAGING			
	Number of sites certified	Percentage site with CoC Certification	
<b>EUROPE</b>			
Corrugated packaging	164	90%	
Solidboard and cartonboard packaging	9	100%	
<b>LATIN AMERICA</b>			
Corrugated packaging	19	70%	
Cartonboard packaging	2	67%	
Paper Sacks	4	80%	



## 2 EFFICIENT USE OF ENERGY AND CARBON MANAGEMENT

### Towards a low carbon economy

In 2011, the EU published roadmaps towards a competitive low-carbon economy by 2050 and its energy roadmap. Together with other policy documents, over time this will lead to a new European climate change and energy package. The outcome will be crucial for Smurfit Kappa and our industry as our operations are affected by all these (future) policies. It is clear that the EU can meet its objectives in this area only if there is sufficient biomass availability. Currently our industry is the largest user of biomass in Europe. Our products are, although to a large extent made from recycled material, ultimately biomass based. Our industry is also the largest and most efficient generator of energy based on biomass. This is realised through the extensive use of biomass boilers that are mainly fuelled by biomass residuals such as bark, sawdust, thinnings and stumps. Since 2010 we have made significant investments in biomass boilers in Navarra in Spain, and a steam turbine in Nervión in Spain. Although most of these boilers are connected to the production of pulp and virgin fibre based paper, in several countries such as Spain and France, governments are supporting energy and fossil carbon saving projects connected to recycled paper mills. Smurfit Kappa supports and actively participates in such projects.

90% of our fuel consumption consists of either renewable fuel (biomass) or the relatively low CO<sub>2</sub>-emitting fossil fuel natural gas. In 2012, 42% of all energy used was biomass based.

### Combatting climate change

#### Investing in efficient energy generation

Combined Heat and Power generation (CHP) is the most efficient method of producing electricity and heat (steam). Our industry is very suited to install these co-generation units given our need for both electricity and steam. In 2012, the proportion of our energy coming from CHP installations was unchanged from 2011. This is the result of positive effects from the installation of new CHP installations in a few mills and the negative effects of certain existing CHP installations that operated for various reasons below their performance level of 2011.

Our Navarra mill in Spain was one of the paper mills where we invested in 2012 in a boiler. The grate fired biomass boiler has been rebuilt to a bubbling fluidised bed boiler, resulting in the possibility of generating 100% of the steam capacity by biomass instead of 50% before the re-build. This re-build also resulted in the idling of a relatively small gas fired boiler which means that all steam now passes the steam turbine before being used in the mill, thereby increasing the CHP ratio for this mill.



## Thirty six years of forestry research at Smurfit Kappa Cartón de Colombia

For 36 years the Forestry Research Department ("FRD") has been essential for the development of the forestry division of SKCC. This department has evolved in three main areas.

### Tree breeding and genetic improvement research programme:

The FRD focused its early efforts on the introduction and testing of several tree species to source fibres for the company products. A series of progeny tests were established to compare among the different species. Genetic improvement is based on clonal forestry for eucalyptus in which the best trees are selected and propagated through rooted cuttings of the same tree; and family forestry for pines, in which the best seedlings are obtained through closed or open polarisation of the outstanding trees. No genetic modification practices are used.

### Silviculture and Productivity (S&P) research programme:

With the acquisition of the first farms, new challenges appeared such as, how many trees to plant, how to prepare the land, when and how often to control the weeds and how to supply additional nutrients to preserve or amplify the growth potential obtained through genetic improvement.

The S&P research programme has developed three computerised applications: (i) *SMURFERC establishment*, for calculating and optimising the amount of fertiliser required for planting each of the six working species in the 64 different soil units present in our land holdings; (ii) *SMURFERC maintenance*, that makes it possible to determine, through foliar analysis at an early stage in pine and eucalyptus plantations, the nutritional status and growth, to generate nutritional managements options; and (iii) Cartón de Colombia Carbon Fixation Programme or 3CFix, an application that allows the forestry division to calculate, with local growth-drain calculations and physiological indices, the carbon fix and stocks of the plantations, on a yearly basis.

**Phytosanitary protection research programme:** As the nature of our forest holdings changed, the different species of tree were exposed to a more variable set of environmental conditions. Over time, various diseases and pests appeared, giving rise to concerns over forest productivity and fibre quality. The phytosanitary protection research programme was started in 1988 with the aim of solving these problems. It has three main working components: training, prevention, and disease & pest risk management.

Another example is the investment in a larger turbine in our recycled paper mill in Barranquilla in Colombia replacing two smaller ones. Before the investment, electricity was generated by these two gas turbines without recovering the waste heat. The new turbine also has a waste heat recovery unit installed with it and therefore the amount of electricity generated through a CHP installation has significantly increased.

In our recycled paper mill in Barbosa (Colombia) a waste heat recovery boiler has been installed. This boiler, which is now operating as a stand-alone boiler, will become part of a CHP unit thereby increasing the amount of electricity generated through a CHP installation.

Our recycled paper mill in Birmingham in the UK installed a motor that is fuelled by biogas generated in the on-site waste water treatment facility. The motor also has a waste heat recovery unit installed with it. Previously, the biogas was burned in a steam boiler. This alternative use of the biogas resulted in more electricity generated by a CHP installation than before.

#### Investing in energy reduction initiatives

In 2011, we concluded an internal study that generated an overview of all (theoretical) possible savings on energy needs and fossil CO<sub>2</sub> emissions per paper mill. In that study all our European and Latin American paper mills were analysed. For 2013 we plan to analyse our board mills as well. The list of energy and CO<sub>2</sub> saving opportunities resulting from this study forms the basis for energy and CO<sub>2</sub> reduction related investments in the coming years. Most identified projects to reduce energy use and fossil CO<sub>2</sub> emissions are part of larger investments which will be executed depending on their economic feasibility.

In 2012, several initiatives to reduce the use of energy were approved and/or executed as the following examples show.

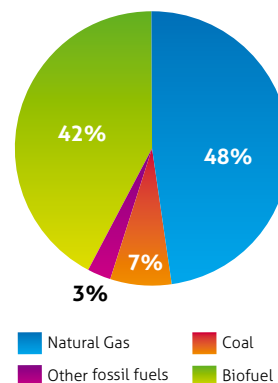
As shown on page 37, at our recycled paper mill in Hoya in Germany, we have invested in the paper machine since 2011, not only to expand the capacity but also to reduce energy usage. For example, a film press was installed in 2011, leading to higher energy efficiency. Another modification made to the paper machine in 2012 was the installation of a heat recovery system in the hood, replacing steam by waste heat. Less energy is now needed to evaporate the water contained in the paper during production.

Another example of energy reduction is the installation of a shoe press in one of the paper machines at our recycled paper mill in Cerro Gordo in Mexico (see page 36).

In 2012, the energy intensity on a per tonne basis of our paper and board production decreased by 3.5% compared to 2011.

Also in our converting operations many initiatives to reduce energy usage are taken. Examples of such initiatives can be found on page 38.

Direct fuel consumption 2012  
ALL OPERATIONS



Energy, CO<sub>2</sub> emissions and other air emissions related data are reported for all our operations (including details for individual mills in Europe and Latin America) in the tables on pages 78 to 84. Those tables report energy consumption for the production of the paper or board manufactured while the two input/output tables on page 76 (European operations) and on page 77 (Latin American operations) report the total energy consumption of the site, taking into account the fuels used to produce electricity and/or thermal energy sold externally. The methods applied for calculations as well as details on specific definitions are given in the glossary on pages 94 to 96.

#### Investing in fossil CO<sub>2</sub> emission reductions

Our total fossil CO<sub>2</sub> emissions (direct and indirect) decreased in 2012 by 63,000 tonnes compared to 2011. Compared to 2009, our total fossil CO<sub>2</sub> emissions have been reduced by 218,000 tonnes representing a decrease of 6%. The reduction in 2012 has been achieved by lower emissions by the mill systems both in Europe and Latin America.

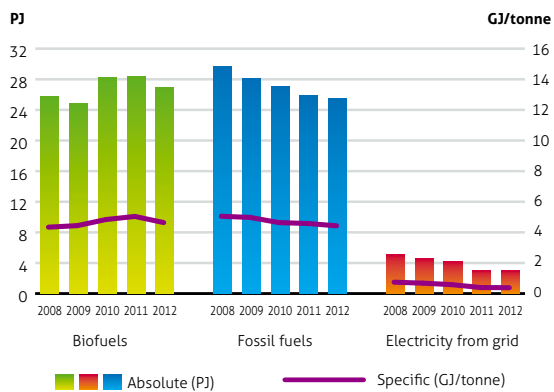
Examples of mills in Europe that contributed to this reduction are Hoya in Germany (heat recovery system), Nervión in Spain (installation of a new steam turbine) and Nettingsdorfer in Austria (shift from the use of heavy fuel oil to natural gas in the lime kiln).

For Latin America, CO<sub>2</sub> emission reductions were achieved by Cerro Gordo (installation of a shoe press), Barbosa (installation of a (waste heat) boiler using natural gas and replacing coal) and Barranquilla (installation of a CHP).

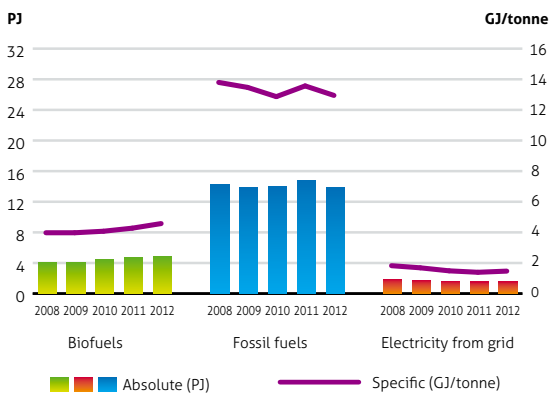
Historic trends in the fossil CO<sub>2</sub> emissions for both Europe and Latin America are shown in the graphs on next page.

To reach the target of 20% reduction of fossil CO<sub>2</sub> emissions relative to production by 2020 there are potential projects identified in two main areas. Firstly, projects that will reduce the need and usage of steam in the paper machines, and secondly those that will bring more efficient use of fossil fuels, mainly by additional investments in CHP capacity. These potential additional investments in CHP installations will decrease CO<sub>2</sub> emissions in Smurfit Kappa and will also contribute to a further shift to biomass usage as fuel.

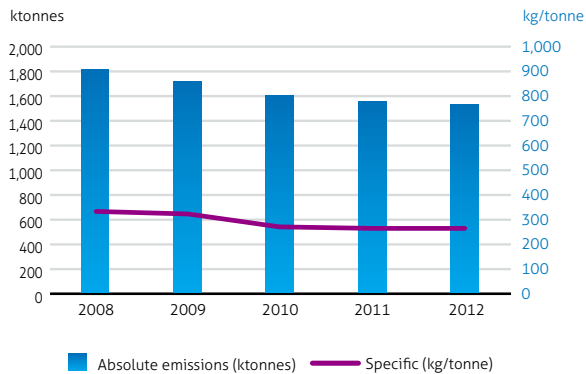
### Biofuels, fossil fuels, electricity from grid EUROPEAN MILLS



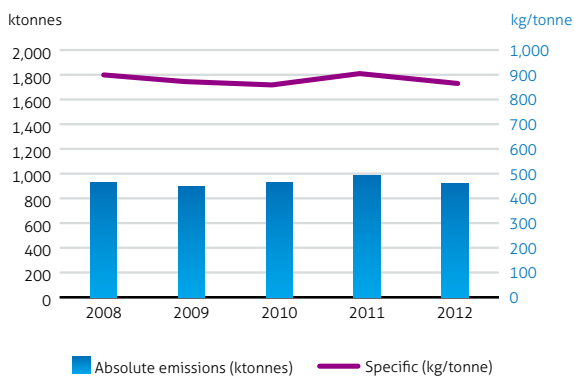
### Biofuels, fossil fuels, electricity from grid LATIN AMERICAN MILLS



### Direct fossil (Scope 1) CO<sub>2</sub> emission EUROPEAN MILLS



### Direct fossil (Scope 1) CO<sub>2</sub> emission LATIN AMERICAN MILLS



#### ENGAGEMENT WITH STAKEHOLDERS

## CDP

**Frances Way**  
Co-Chief Operating Officer Programmes  
Carbon Disclosure Project (CDP)

"CDP is an independent global charity that works with investors, companies, and governments to drive environmental action that will deliver a sustainable economy. We were founded 12 years ago with a focus on catalysing corporate transparency from the world's largest 500 companies on their carbon emissions and energy use. As a result now more than 4,100 of the largest listed companies across most of the major economies disclose their climate change impacts and strategies through CDP. We also have a supply chain programme to allow major multinational purchasing organisations to manage climate risks across their global supply chains. Besides climate change we are now also working on water and forests programmes. Energy, water, climate change and forests are intrinsically linked. The impacts of these issues go beyond the direct operations of a company. Smurfit Kappa has been reporting to CDP on climate change since 2008. In 2012 Smurfit Kappa's emissions reporting was of good quality with breakdowns provided by country, facility and business division, which makes it possible to focus on reducing those emissions. Emissions reductions were achieved through specific reduction activities. Climate change is integrated into the business strategy and this is reflected in Smurfit Kappa's ability to identify opportunities as well as risks. CDP suggests that Smurfit Kappa should strengthen its emissions reduction target to an absolute target and consider awarding incentives for staff responsible for managing these issues. The next challenge should be further reporting on Scope 3, especially emissions from suppliers. Deforestation is a key issue for Smurfit Kappa's business model and ensuring wood is procured responsibly is a challenge Smurfit Kappa should address and report on."





*The new shoe-press on PM5 machine at the Cerro Gordo paper mill, Mexico, helped to realise significant reduction in fossil CO<sub>2</sub> emissions.*

## Mexico: Paper mill cuts GHG emissions by using less steam

Our Cerro Gordo Mill is located in the metropolitan area of Mexico City, one of the most populated areas in the world. Geographically, it is situated in a basin which inhibits the rapid dispersion of air emissions. Industrial operations are therefore subject to stringent environmental regulations regarding greenhouse gas emissions.

Within this strict regulatory environment, the Cerro Gordo mill realised a significant fossil CO<sub>2</sub> emission reduction through an investment in a new shoe-press on its PM5 machine in January 2012. The absolute reduction in fossil CO<sub>2</sub> emissions from the PM5 is over 4,300 tonnes per year.

The Mexican mill produces recycled paper for corrugated boxes and folding carton for packaging for all types of industry. The various grades of recycled paper are now produced with less steam thanks to the new shoe-press. As a result, the paper entering the drying section of the paper machine holds less moisture thus allowing increased production speed and lower steam consumption. Less usage of steam translates into savings on natural gas consumption. In turn this results in less CO<sub>2</sub> emissions and reduces the carbon footprint of the Cerro Gordo Mill.



*The new lime kiln at the Cali mill, Colombia led to a decrease of CO<sub>2</sub> and dust emissions.*

## Colombia: Cali mill reduces CO<sub>2</sub> emissions and improves energy efficiency

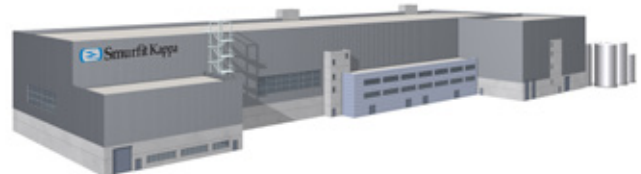
Our virgin pulp and paper mill in Cali recently replaced the existing lime kiln in which Calcium Oxide (CaO) for the pulp production process was produced. The old lime kiln was operating well above its design capacity due to several modifications. Instead of 55 tonnes of CaO per day, it produced between 130 and 150 tonnes. This led to relatively high fuel consumption.

The new lime kiln is fired with natural gas, whereas the old lime kiln was using heavy fuel oil. Both the efficiency improvement of 60,000 GJ and the use of a cleaner fuel will lead to a decrease of approximately 13,000 tonnes of direct CO<sub>2</sub> emissions. Production is expected to increase to 160 tonnes of CaO per day. Odours are reduced by burning non-condensable gases generated in the process. The new lime kiln is also equipped with an electrostatic precipitator which reduces dust emissions.

## United Kingdom: New lightweight paper machine in Townsend Hook will reduce CO<sub>2</sub> emissions

We announced in 2012 that we will install a modern, five metre lightweight recycled containerboard machine at the Townsend Hook mill in the United Kingdom.

By investing €115 million in 2013 and 2014, the two existing paper machines will be replaced by one new, state of the art paper machine, increasing the production capacity of the mill by 20,000 tonnes to 260,000 tonnes per annum. It is expected that this new energy efficient paper machine will save 25,000 tonnes per annum on direct CO<sub>2</sub> emissions. The start-up of the machine is planned for quarter 4, 2014 and its production is intended to meet the growing demand for sustainable, lower weight, high performance packaging papers. Lower weight, high performance packaging papers contribute to optimising the environmental footprint of the supply chain of our packaging customers.



*3D picture of the new building at Smurfit Kappa Townsend Hook which will house the new paper machine.*





*Inside our paper and board mill in Hoya, Germany.*

## Germany: Hoya ready for the future making paper with lower CO<sub>2</sub> emissions

Our paper and board mill in Hoya, Germany has been transformed many times since it began its operations in 1957. The mill produces containerboard and coated board on two machines. Both machines use 100% recycled fibre as their raw material source. To keep pace with ever more demands on speed, output and efficiency, it recently completed a two-phase transformation project of the containerboard machine, thus making it ready to meet future market demands.

The objective of the investments in phase one was to significantly increase the speed and to decrease downtime and maintenance of the machine. These investments in combination with a new energy recovery system in the hood and film press have also led to a significant reduction in specific energy usage and direct CO<sub>2</sub> emissions.

With the completion of the second phase of this multi-year investment project the containerboard machine is now able to produce low basis weight packaging paper, allowing the packaging operations to offer solutions to customers with less environmental impact. Extending the current Combined Heat and Power plant towards the end of 2013 with an additional gas turbine and a waste heat recovery boiler will minimise the use of electricity from the grid and hence decrease significantly indirect fossil CO<sub>2</sub> emissions.

## The Netherlands: Rofire – a first class secondary fuel

We aim to minimise "side stream" volumes sent to landfill. Our paper mill in Roermond, the Netherlands has found an excellent way to capture the value of such side streams. The mill uses 100% recovered paper as raw material to produce recycled paper. Recovered paper contains mainly paper fibres, but also paper clips, staples, textile, ropes, wood and plastic, which constitute "side streams" of extraneous material. The mill uses processes to enhance separation of these side streams and the local crew has identified useful applications for all streams with a 99.5% success rate.

In 2000, the Roermond mill invested in an on-site facility to convert non-useable organic materials into a fuel pellet with a high calorific value: Rofire. This secondary fuel is 50% bio-based and can be used as a substitute for coal in the limestone industry, for example, thereby saving 20,000 tonnes fossil CO<sub>2</sub> emissions annually.



*The on-site facility at the Roermond paper mill in the Netherlands to convert otherwise unusable organic materials into a high calorific fuel pellet: Rofire.*



# ENVIRONMENTAL INITIATIVES

## ENERGY

Most of our energy and water usage takes place in our global paper and board mill system. We operate a manifold number of converting operations that use, compared to our paper and board mills, relatively less energy and water. Nevertheless, in these operations management is committed to be efficient in the use of energy and water discharge as is illustrated by the following examples:

### Czech Republic: Sensor lights make sense

Our Corrugated Converting operation in Žebrák in the Czech Republic investigated whether lighting in part of its buildings could be improved.

New sensor lights were installed in one of the production halls, cutting back on energy used while also reducing the generation of heat resulting from the original lighting system. A total of eleven new light panels now make sure that the energy required to light the hall is reduced by 50%. The sensor lights directly decrease the carbon footprint of Smurfit Kappa Czech and at the same time improve the safety situation, since the lights produce far less heat. Soon other halls will also be fitted with sensor lights.

### Colombia: Corrugated plants reduce use of energy

Thanks to the environmental commitment of all our corrugated plants in Colombia, significant improvements have been achieved with regard to sustainability issues. The focus of the plants on energy reduction and also chemicals, like glue and ink, has been a successful one.

In the Medellín plant steam control valves were installed in the double backer achieving a 20% decrease of natural gas consumption compared to 2011. The changes also improved product quality and reduced operating costs. Similarly the corrugated plant in Bogotá installed a system powered by processors in the boiler, which replaced the traditional mechanical system. The measure optimises the air-fuel ratio, improves combustion efficiency and reduces gas consumption and hence emissions. Furthermore, a pump to recover condensates from the corrugator was installed. Gas consumption decreased by 6% from 2011 to 2012.

### United Kingdom: Sustainable energy and electricity savings

Our sheetfeeding plants in the UK have been reducing their carbon footprint in recent years which is most evident in their energy reduction projects. In 2008, the Sheetfeeding sites set a five year target to achieve savings and reduce carbon emissions through innovation, efficiency and employee engagement at its three manufacturing plants. The process began in 2008 using a single location as a pilot, establishing best practice and rolling it out across the region. The success of the approach resulted in significant savings in energy and water usage. In the three years after go live there was a reduction of 24% in gas consumption and 22% reduction in electricity usage. Many of these ideas for improvement have now been 'rolled-out' through the Smurfit Kappa Group. The achievement of the Carbon Trust Standard in Sheetfeeding was another first in addition to the business being the first sheetfeeder in the UK to gain FSC and PEFC certification. Building on the Sheetfeeding certification, Smurfit Kappa UK became the first major multi-sited packaging company to be awarded the Carbon Trust standard in the UK.

*Steam boiler at our corrugated plant Smurfit Kappa Turnhout, Belgium.*



# IN CONVERTING OPERATIONS

## WATER

### Colombia: Good practices boost sustainable performance

Our Corrugated plant in Barranquilla has accomplished sizeable reductions in the usage of water (32%), the use of electricity (23%) and in the consumption of gas (30%) in 2012 compared to 2011.

The programme in Barranquilla demonstrates that good teamwork and production practices can boost productivity and reduce the environmental footprint of a company at the same time. Awareness programmes for personnel in combination with efficiency checks of various parts of the production process have led to employees pro-actively tackling energy issues, the replacement of non-efficient machinery and unnecessary usage of electricity, gas and water. Simple measures like closing machine sections, switching off un-used machinery and immediate repairs had a significant effect. Continuous monitoring was vital to achieve these goals and is necessary to guarantee a successful continuation of this programme.

### Mexico: Water use efficiency and reuse in Culiacán

Our plant in Culiacán is located in an area with a semi-arid climate. Although annual rainfall is over 600 millimetres, the high average annual temperatures causes significant evaporation. Sustainable water management therefore is an important issue at the plant.

New initiatives have improved the efficiency of water usage by 48% in 2012 compared to 2011. Water consumption decreased from 1.19 m<sup>3</sup>/tonne in 2011 to 0.62 m<sup>3</sup>/tonne of saleable output. Process water discharged was reduced from 0.32 to 0.18 m<sup>3</sup>/tonne saleable output. This was realised by closing water jacket circuits in the corrugator's single facers and by reusing wash water in starch adhesive preparation and the washing of printing plates. For the water treatment process an electrocoagulation process was implemented. The use of potable water in sanitary services, instead of using untreated superficial water, improved health and safety conditions and decreased the sanitary water discharge.

### Ireland: Smurfit Kappa Display on a mission to reduce emission

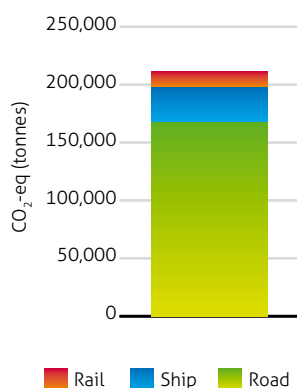
In 2009, Smurfit Kappa Display concluded that their effluent discharges needed to be adjusted to reduce the amount of chemicals entering the South Dublin County Council drains. To help protect the environment the Operations and Health and Safety departments of this Smurfit Kappa plant researched the matter.

Fortnightly samples were taken from the drains and tested to identify any discharges over the permitted limits. The first ten samples in 2010 identified eight such cases, all coming from COD and BOD. Eventually the process by which chemicals were being used was changed. An eight step programme was initiated that entailed measures such as installing new equipment, raising awareness among employees and replacing the ink with a more biodegradable alternative. After introducing these measures in 2012 the site managed to stay within the required effluent limits, to improve efficiency and enhance the protection of the local environment.

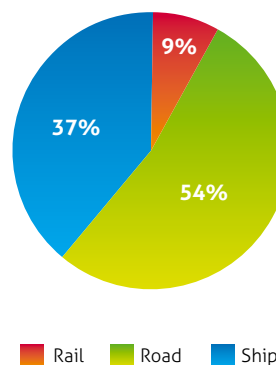
*Water treatment system at our folding carton plant Smurfit Kappa Baden Packaging in Weisenbach, Germany.*



**CO<sub>2</sub> emissions for transport of raw materials 2012**  
EUROPEAN OPERATIONS



**Distribution of transport of raw materials by mode of transport 2012**  
EUROPEAN OPERATIONS



### Emission from transport

In Europe, we calculated the CO<sub>2</sub> emissions related to the transport of the main raw materials to our mills and converting plants. Transportation of our raw materials and products is mostly outsourced to external parties.

This includes transport of wood, recovered papers and market pulp used in our mills. The transport of raw materials to the second stage of the supply chain (reels of paper, corrugated board sheets, solid board sheets, plastic films and other items to the converting plants) is also taken into account.

While the calculation of CO<sub>2</sub> emissions for the transport of paper reels between our own mills and the converting plants (representing 71% of total volume) is accurate, we believe we have made a good estimate of emissions for the transport of the remaining reels of paper supplied to our corrugated plants by external parties.

For 2012, CO<sub>2</sub> equivalents for transport of raw materials amounted to 212 kTonnes. The breakdown by mode of transport is shown in the graphs above. The CO<sub>2</sub> emission factors by transport mode are extracted from the European Reference Life Cycle Database version II (ELCD). Transportation for the above activities represents 6.2 billion tonne-kilometres and the pie-chart displays the split by type of transport. 54% of our transport needs are carried out by road, 37% by sea with the balance carried out by train.

We have not been able to do a similar exercise for Latin America due to the structure of our supplier base. We are in the process of establishing the parameters of the journeys to and from our paper mills.

### 3. WATER MANAGEMENT

Water is a vital element in our manufacturing process. As fresh water availability is a growing global concern, we strive to limit water intake where we can, even though the vast majority of our production locations are located in areas with no foreseen water scarcity. We are also committed to return the water used in our processes as clean as possible to the public water systems. 90% of the water used is actually returned to these systems in good condition and most of the remaining water evaporates and

returns at a later stage as precipitation into the global (fresh) water systems. Furthermore, in general, the water we take in, is used multiple times before it is treated in our water treatment facilities. For example, of all water that is in use by a paper and board mill at any point in time, 98% is being re-used before being treated.

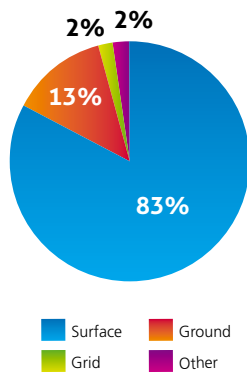
Underpinning our commitment, we invest in the best available techniques to treat the water before returning it to the water source. Since 2005, we have made considerable efforts and sizeable investments in upgrading its water treatment facilities. One of our largest paper mills, Zülpich in Germany, is operating a 100% closed loop process water system.

### Water performance

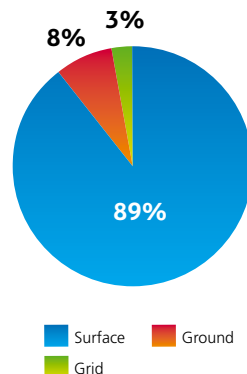
Our global paper and board mill system used 124 million m<sup>3</sup> of water in 2012, over 98% of our total water intake. The balance was used in our global converting system which requires very limited amounts of water relative to production volumes. Our total intake of water is practically stable since 2010, but is 10% lower compared to 2008. There are two regions, where our operations face water scarcity. Mexico and the southern part of Spain (Andalucía). Our mills in those regions place special attention to limiting their water intake as much as possible. For example, our recycled mill in Monterrey, located in Northeast Mexico in a so called semi-arid climate region, initiated a programme two years ago to lessen its water intake achieving a decrease of 40% in water intake per tonne of paper produced, see details on page 43.

Following investments of over €31 million in water treatment facilities since 2005, the quality of water discharged by our global paper and board mill system has improved on a relative basis by 25%. We use the COD (Chemical Oxygen Demand) content as measure for water quality. Compared to 2011, our COD performance improved in 2012 by 5% mainly resulting from the commissioning in April 2012 of a new water treatment facility in the paper mill in Bernal in Argentina. The new facility allowed the relative COD content of Bernal to decrease by over 60% in 2012 compared to 2011. Another significant improvement was realised in our paper mill in Ania in Italy. Through the extension of the water treatment

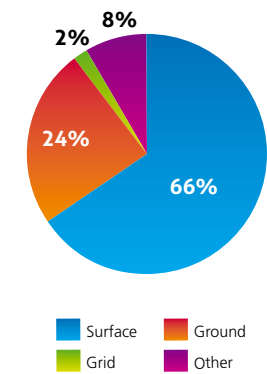
**Water sources 2012**  
ALL OPERATIONS



**Water sources 2012**  
EUROPEAN OPERATIONS



**Water sources 2012**  
LATIN AMERICA OPERATIONS



facility, Ania reduced its COD discharge by 18% in 2012 compared to 2011. Other paper and board mills operated their water treatment facilities according to expected levels.

The two other indicators measuring the organic content of water discharged are BOD (Biological Oxygen Demand) and TSS (Total Suspended Solids). These indicators showed the same performance trend as the COD indicator. The so-called eutrophication indicators (nitrogen and phosphorus) remained stable in 2012 compared to 2011.

In general, the water that we discharge from our paper and board mills has been treated in water treatment facilities on-site. In some instances water is being discharged to community water discharge facilities. In general, after the water is treated on-site, it is discharged to the surface water systems such as rivers, lakes and/or sea.

Over 50% of the volume of the process water discharged by our paper and board mill system is biologically treated, approximately 10% is discharged to external community treatment facilities and the balance receives physical and/or chemical treatment before being discharged.

### Water data

The treatment of the process water used in the mills is either carried out on-site, as is the case of the majority of our mills, or is subcontracted to an external third party. For the latter, in all disclosures relating to the process water content (COD, BOD, TSS), we report levels in the water discharged by the mills prior to this external treatment.

To provide a correct overview of the Group performance for all water indicators, BOD discharged is estimated for our paper mill in Nervión in Spain by using COD discharge in combination with the ratio COD/BOD obtained from a survey performed during 2012 in this mill.

Water related data for all our operations (including details for individual mills in Europe and Latin America) are shown in the tables on pages 76 to 83.

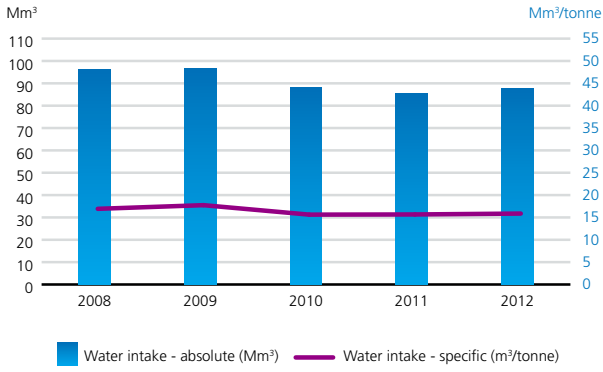
### Cellulose du Pin

In 2012, our Cellulose du Pin kraftliner mill located in Biganos in France, faced the collapse of one of the black liquor storage tanks resulting in the release of effluent onto the grounds of the facility. Immediate action was undertaken to contain the spillage.

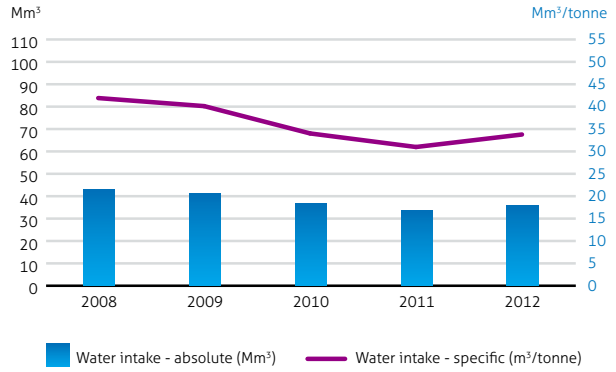
No physical injuries were reported, however limited pollution of the nearby river waters did occur. This was detectable only for a short period thanks to the limited quantity of effluent (approximately 100 m<sup>3</sup> of black liquor) that spilled into the river waters. This spillage resulted in a relative limited quantity of approximately 300 kg of dead fish collected. Site management kept in close contact with the local authorities. Bruno Lafon, Mayor of Biganos, stated: "The dialogue with the factory management was constructive and their efforts to resolve the problems that resulted from the incident were extensive." To ensure a safe mill restart, all tanks concerned were audited by a third party. This action led to a seven week shutdown of the mill. A committee comprising Smurfit Kappa representatives and local stakeholders will monitor the mill's operations by meeting at least once per year. The mill will also initiate and fund an independent and public survey on the impact of the production activities on the environment. Despite uncertainty as to the causes of the collapse of the black liquor tank, the mill immediately covered the direct financial losses of surrounding businesses affected by the spillage.

The environmental data related to Cellulose du Pin reported on page 78 are inclusive of the water discharges and the wastes generated during the clean-up period for the incident. Data also include the water discharged which was used to remove the effluent kept in the on-site emergency pond after the incident, in compliance with Cellulose du Pin's environmental permit. A total of 5,063 tonnes of liquids containing black liquor resulting from the incident was eventually incinerated externally and is reported as hazardous waste.

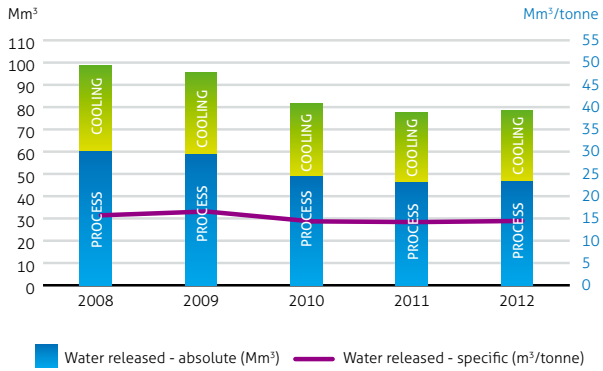
**Water intake**  
EUROPEAN PAPER MILLS



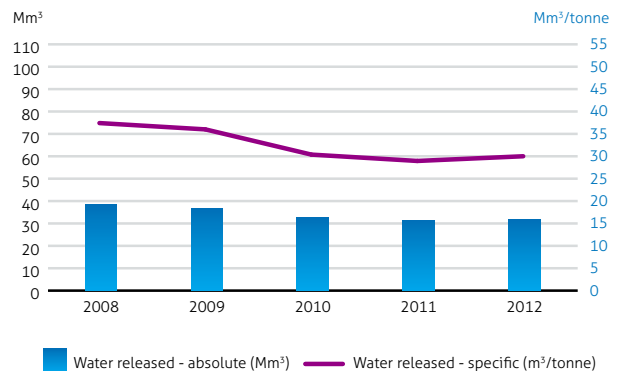
**Water intake**  
LATIN AMERICAN PAPER MILLS



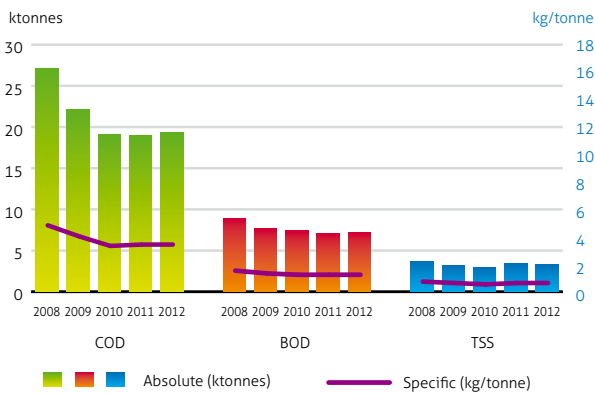
**Water released**  
EUROPEAN PAPER MILLS



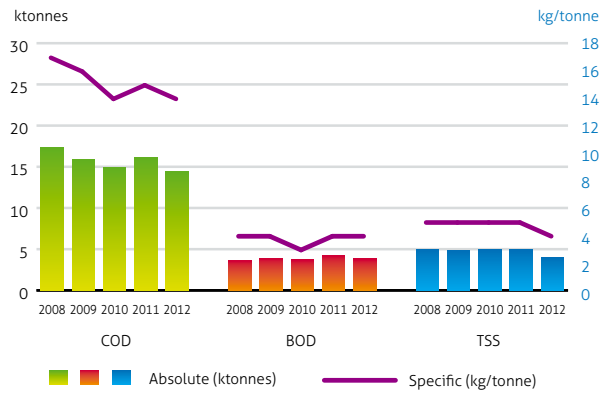
**Water released**  
LATIN AMERICAN PAPER MILLS



**Process water discharges**  
EUROPEAN PAPER MILLS: COD, BOD, TSS



**Process water discharges**  
LATIN AMERICAN PAPER MILLS: COD, BOD, TSS







*Riggers of PM9 pulpers collect large amounts of strips of plastic and other materials, which require specialised recovery.*

## Mexico: Monterrey Mill saves water in a water sensitive area

The Mexican city of Monterrey is geographically located in an area which has suffered severe droughts in recent years. As a result there are strong pressures on water resources and water usage is expensive. To save water our paper mill in Monterrey has initiated a two-year programme which has decreased the fresh water intake needed to produce one tonne of paper by over 40%.

To realise this reduction, changes were made to the water circuits and cleaning showers of the paper machine PM9. The mill has also increased the reuse of process and primary treated water, thus increasing the closure of the water circuits and decreasing fresh water usage for preparation of process chemicals. Besides the decreased water intake, water costs dropped by 36% and the saleable production increased by almost 10%.



*The anaerobic reactor with biogas desulphurisation was installed at the Ania paper mill in Italy during 2012.*

## Italy: Ania paper mill upgrades water treatment plant

During 2012 an anaerobic reactor with a biogas desulphurisation unit has been commissioned and installed at the Ania paper mill in Tuscany, Italy. Compared to the previous year the mill achieved a significant reduction of 18% of the Chemical Oxygen Demand (COD) load in the effluent.

According to the records of the first five months of operation, the Ania mill obtained an overall reduction of fossil source energy usage of about 100 tonnes of oil equivalent per month. This was the result of making use of the generated biogas burned in the boiler house instead of natural gas, and also a consequence of a reduction in the use of electricity in the rest of the water treatment plant area compared to the previous situation.

# SOCIAL DEVELOPMENT

For the second sustainability element – *People* – our primary focus is on our employees. Our own employees are the key to our success and they are at the heart of our business. We operate in highly competitive markets and we cannot succeed without a highly skilled, well trained and committed employee base. To operate in a productive way, it is a pre-requisite that our employees can work safely. By developing and empowering our people, we aim to create a work environment in which top performance and personal growth of our employees go hand-in-hand.

To reach these pre-requisites and objectives we aim to be socially conscious and pro-active on social issues with a commitment to continuous improvement in the areas of health and safety and focus on the well-being and development of our employees. Safeguarding human and other elementary rights that govern labour relations with our employees also form a key element of our social responsibility.

Involvement in local communities is another key priority for us, as we are often seen as an important partner in the local society and economy. Our objective is to contribute positively to the economic and social development of these communities where we are privileged to operate by providing jobs and responding to the communities' social needs. We strive to be an integral part of the communities where we are located, by supporting community activities and community support programmes.

## 1. HEALTH AND SAFETY

Occupational health and safety is one of our key sustainability priorities. We are aiming for zero accidents and we are addressing the various aspects of health and well-being at work. Increasingly we are broadening our efforts to also make people aware of Health and Safety issues outside work and in their private lives. Therefore, our Health and Safety Policy, designed in accordance with the OHSAS 18001 Health and Safety Management System, contains a Declaration of Intent in which we commit to conduct our business in a responsible manner: taking care of the health, safety and wellbeing of everyone affected by our activities.

Key elements in ensuring that this commitment has become and remains a day-to-day focus include:

- Having Health and Safety as an important agenda item on all relevant management and employee meetings.
- Having Health and Safety as a key element by which all managers are measured.
- Benchmarking of internal Health and Safety performance through monthly measurements.
- Seeking improvements in our current working practices in order to reduce risk and help to protect employees, visitors, contractors and the public from injury and ill-health by continuously assessing our processes.
- Taking all practical steps to develop and maintain an appropriate safety culture throughout Smurfit Kappa. This includes:
  - Circulating reports of all significant accidents to every manufacturing plant General Manager and onward to our employees. In this way, experiences are shared in order to help the prevention of similar accidents elsewhere in Smurfit Kappa.



Bent Petersen, Bent Mærkmose, Bo Asmussen, Birgitte Dam and Jane Østergaard from Smurfit Kappa Denmark.





- Conducting cross audits in Health and Safety using our own in-house Health and Safety coordinators.
- Providing Health and Safety briefings and training sessions to all new employees.
- Constantly reinforcing to all employees the Company's expectation, that in the course of their work, each and every employee will follow all safety policies, use all relevant safety systems and continually seek out ways to improve processes to ensure the Health and Safety of all.

For more information, see the Health and Safety Policy Statement on our website: [www.smurfitkappa.com](http://www.smurfitkappa.com).

In 2012, Group-wide initiatives included:

- Emphasis on risk analysis and hazard identification across our plant structure:
  - Many of our plants have equipment for which maintenance or checking activities need to be carried out on the roofs of their buildings. In 2010, we initiated a programme to equip our roofs with safety and security devices to safeguard the safety of those performing maintenance and checking activities. The majority of our plants have now equipped their roofs with collective protection to permit access without restriction.
  - The restriction of access to stores/warehouses when forklift trucks are in use is being implemented in many of our operations. Pedestrians are allowed to access warehouses only after receiving notification that activity of the forklifts has been suspended. In addition, all new forklift trucks are now equipped with speed governors/speed limiters and other devices to reduce the risk to both the drivers themselves and to pedestrians. Additional devices such as obstacle detection or "blue light" devices have been installed in order to increase the safety level of our operations with fork lift trucks.
  - Continued emphasis is being placed on the separation of pedestrian pathways and vehicles, both indoor and outdoor.
  - Introduction in our plants of Group-wide standards in respect of safety-related painting and signage design and display.

- The first Biennial Safety Opinion Survey held initially in 2010, in both Europe and Latin America, aimed at collecting our own employees' opinions on their perception of safety inside their department and/or plant. The results of this survey enabled us to identify opportunities to further improve the efficiency of our safety management. A second survey was carried out in 2012. The results were benchmarked against the first survey from 2010 and showed that, at a global level, we were improving. Our operations are now identifying what additional actions in the area of safety should be taken to reach a further improved level of safety and safety perception in our 2014 survey.

- Continued focus on activities such as standardisation of the approach to risk analysis in operations and a "STOP/THINK/GO" approach to/for assessing risk in certain situations.
- The reporting of near misses is now part of standard reporting in our plants. We consider this a key development to achieve further safety improvements. In addition, our Group accident reporting tool was upgraded in 2012, so that these near misses would also be reported centrally, allowing us to share information immediately throughout all of our facilities.
- The use of E-Learning for safety is currently being developed as a complementary tool to traditional training of our employees and subcontractors.

In addition to these Group-wide and Regional initiatives, individual plants have introduced their own Health and Safety initiatives during 2012 such as health check-ups for employees and their family members, first-aid training for employees' families and safety risk assessments of employees' houses.

In addition, employees are being encouraged to become more conscious of the importance of their personal Health and Safety in a wider context and to develop awareness of risks not only during working hours and in commuting to and from the workplace but also in their homes and non-work related social/sporting activities.

In this regard, we have supported a number of initiatives across Europe and Latin America focussing on increasing awareness and fostering appropriate behaviour with regard to safety.

Several campaigns have been launched both in Europe and in our Latin American facilities to promote a healthy life style and the benefits of health checks.

The safety of people on our premises is a key priority. We devote considerable time and efforts promoting an awareness of health and safety so that our employees and also subcontracted workers follow the appropriate procedures. It is with great regret, therefore, that we report two fatalities of subcontract workers during 2012, one in Europe (Spain) and one in Latin America (Venezuela).

In Spain the fatal accident occurred when the subcontract worker, who was employed by one of our cleaning contractors, tried to perform a cleaning task on a belt conveyor system which had not been stopped. In Venezuela the subcontract worker was part of an electrical contractor crew; the work to be performed was to initiate some electrical connections in an area that had been isolated, unfortunately the victim approached the incorrect electrical panel, which was fully electrified and sustained fatal injuries.

During 2012, 50% of our European facilities remained free of any lost-time accidents and 22% of these facilities have succeeded in maintaining a zero lost-time accident record over the last three years. For Latin America these percentage were 32% and 7% respectively.

Overall, safety performance of Smurfit Kappa employees improved by more than 10% regarding the number of accidents in 2012 compared to 2011, and the number of lost working days due to accidents decreased by nearly 20%. A lost working day is counted when an employee misses the next regular working day or shift. In the graphs on page 48 severity and frequency rates are split by region and by activity for our own employees. Converting also includes Smurfit Kappa News Press, EdCo and DLRS Security Concepts.



*State of the art forklift truck designed and equipped to improve Health and Safety at the workplace.*

#### ENGAGEMENT WITH STAKEHOLDERS

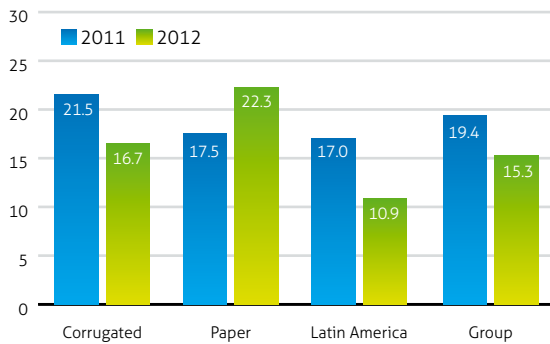
## Trucks lift Health and Safety level at the workplace

Leading forklift truck producers Hyster and Linde both have a long partnership history with Smurfit Kappa. Their state of the art forklift trucks are not only very dependable performance machines, the vehicles are also designed and equipped to improve Health and Safety at the workplace.

Richard Root, major accounts manager of Hyster: "During the most recent tendering process, Smurfit Kappa has been particularly conscientious in the consideration of materials handling equipment and pro-active in the standard and optional features available. First we identified the minimum lift capacity and height requirements. Then we formulated the standardised features on each machine including a reverse alarm, a flashing beacon, a traction speed limiter, password protected operator access and internal mirrors to help reduce blind spots. Plants were also given the choice to add optional features to tailor the forklift trucks to their own specific work environment."

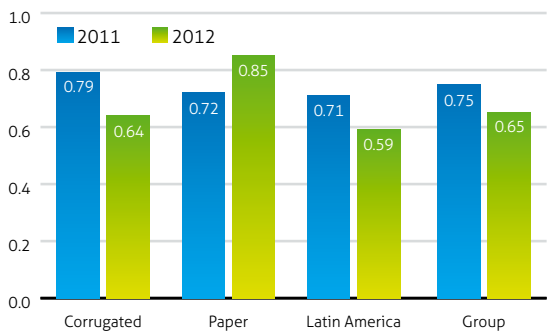
International key account manager Robert Kovacs of Linde: "Smurfit Kappa ranks amongst the companies in the industry with the most professional approach with regard to safety efforts. The industry would be better off if Smurfit Kappa's standardised list of minimal safety specifications was common practise. Unfortunately, we seldom receive such a detailed safety list when managing similar international tenders. The list covers most safety issues. We do keep in close contact with Smurfit Kappa to inform the company when new safety features and technologies become available to constantly help improve Smurfit Kappa's safety standards."

**Severity Rate: Full Year 2011 vs 2012**



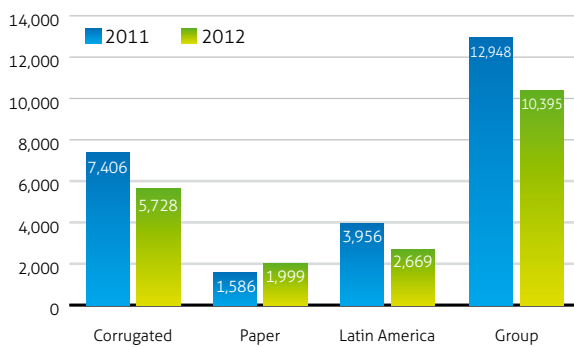
Severity rate:  $\text{Number of days lost} \times 100,000 / \text{Number of hours worked}$

**Frequency Rate: Full Year 2011 vs 2012**

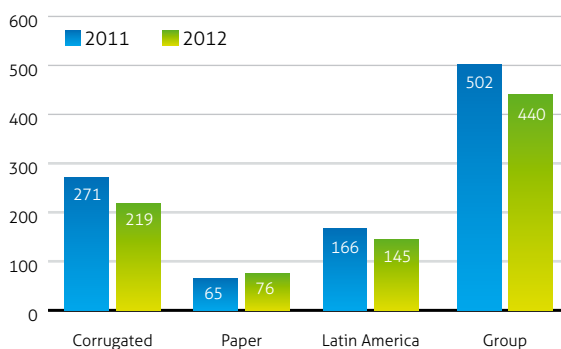


Frequency rate:  $\text{Number of accidents} \times 100,000 / \text{Number of hours worked}$

**Days Lost Due to Accidents: Full Year 2011 vs 2012**



**Number of Accidents: Full Year 2011 vs 2012**



Employees from Smurfit Kappa Orange County's Tijuana plant undergoing training at the Health and Safety Day.



Employees at the Smurfit Kappa Medellin corrugated plant in Colombia reviewing safety procedures.





Tony Smurfit (front row left) with his colleagues attending the Health and Safety Day at Smurfit Kappa Lübeck, Germany.



Bill Barden (L.) - Get Set Training, explaining safe moving and handling with Chris Canavan - Smurfit Kappa Lurgan, Northern Ireland.



## Annual Health and Safety Day

In April 2012, a Safety Day was organised in all our European plants. An address by Tony Smurfit, the Group's Chief Operating Officer, highlighting the importance of health and safety for employees, was screened in all operations. During the day many activities were organised for and with employees, and all senior executives attended at operating plants on the Safety Day.

The Safety Day was a resounding success, drawing on the active participation and intense involvement of management and interaction with our employees, and in many cases with their families.

A Health and Safety Day will now be organised every year in all our plants in Europe and the Americas. For the Health and Safety Day in 2013, a video was produced with the help of three employees who had suffered an accident at work. They shared stories from their accident and what they have learned from these experiences. The video was shown to all employees in order to highlight the importance of always putting safety first.





*Creating awareness among employees and their families about the importance of health care and well-being at the Smurfit Kappa Health Day held in Yumbo, Colombia.*

## Colombia: Smurfit Kappa Health Day in Colombia

Our main production facility in Colombia is based on the outskirts of Cali in a small town called Yumbo. On 14 July 2012, the mill welcomed 570 people who participated in the Smurfit Kappa Health Day. The theme of the event was: 'Cartón a todo corazón' or 'Carton with all your heart'.

This health awareness day was organised by employees from the Medical Services department which had valuable support from other areas such as HR, Marketing and Communications, and the Forestry Division. The objective of this event was to create awareness among employees and their families about the importance of health care and well-being. In order to learn how to promote and live a healthy life style, adults and children participated in physical activities and sports. Families enjoyed games, theatre presentations and challenging physical exercises. At the Health Fair, stands were hosted by institutions and companies providing relevant information while all of those who participated had the opportunity to buy products and collect brochures and manuals related to health, physical activity and wellbeing.



*Safety Bridge is the name of a unique concept aimed at reducing risks in the home environment of employees organised by Smurfit Kappa in Italy.*

## Italy: Smurfit Kappa Italy helps employees to create safer homes

Safety Bridge is the name of a unique concept aiming at reducing risks in the home environment of employees. With the support of an Italian consultant company, Smurfit Kappa Italy has adapted and promoted such a risk analysis tool successfully.

The idea is simple and effective: why not use the expertise Smurfit Kappa Italy has gained professionally to help employees reduce hazardous situations at home? In short, risk prevention by transfer of knowledge and tools. Safety Bridge stimulates employees to assess the safety level of their homes by making use of a questionnaire. Employees are trained to make a proper assessment and receive personalised feedback. By creating a link between safety at home and safety at work Smurfit Kappa Italy wants to help employees to realise safer home environments and at the same time improve their safety awareness and perception of risks at work.

## Venezuela: Smurfit Kappa Venezuela takes Customer Service to the next level

Working together with a customer is not only a commercial endeavour. It is about building a mutually beneficial relationship that goes much further than market performance. For instance the mill division of Smurfit Kappa Venezuela has been very successful in helping its customers improve their own Health and Safety situation.

Feedback of South American customers has been excellent. They value the time, effort and expertise Smurfit Kappa Venezuela dedicates to promoting safety and education. The programme has been underway for almost three years and has become a monthly routine. Safety is an important issue within Smurfit Kappa Venezuela which is demonstrated by the regular safety checks at the work place, monthly safety themes, workshops and transportation safety evaluations. The Sales and Customer Service Department has extended the Smurfit Kappa philosophy on safety to its customers by offering training and exchanging best practices. Besides developing closer relationships with customers, the main objective of this initiative is to further improve safe working conditions for Smurfit Kappa Venezuela's customers.

*National and local customers value the time, effort and expertise that Smurfit Kappa in Venezuela dedicates to promote safety and education.*



## Spain: Health and Safety is a way of life in Andalucía

Why is Health and Safety conduct often restricted only to the work place? The Andalusian Smurfit Kappa plants asked themselves this question and together they came up with an answer. Their opinion: Health and Safety should be an integral part of the daily life of everyone resulting in better quality of life for families.

To accomplish this the plants initiated an extensive awareness programme consisting of promotional media, training and awareness activities, guided tours, contests for kids and education about personal protection equipment. All aspects were linked to home risk prevention, safety at school or preventive measures in the work place. The project, originally started by the Mengíbar Mill, has been successfully extended to the rest of the Andalusian plants in Huelva, Córdoba and Almería. The initiative has been recognised by the Andalusian Government and its promotional poster received an international award.



*Smurfit Kappa plants in Andalucía, Spain initiated an extensive programme to raise awareness on health and safety at home. The poster received an international award.*



*Helmut Lerche and Klaus Schultz - Smurfit Kappa Zülpich developed an award-winning special tool which can be mounted at the end of a high pressure hose.*

## Germany: Thinking out of the headbox improves safety

Cleaning the razor-sharp, five metres wide, headbox lamella of a paper machine with a high pressure cleaner is not without risk as it is located in a tight, hot and wet environment, thus increasing the risk of injuries. After an incident where one of their colleagues incurred serious cuts, Helmut Lerche and Klaus Schultz from Smurfit Kappa Zülpich took it upon themselves to prevent this from happening again.

The two employees managed to develop an award-winning special tool which can be mounted at the end of a high pressure hose. This device enables operators to clean the area of the lamella in a safe way. Special rolls lock and guide the device along the lamella while the water jet is positioned for optimal cleaning. The invention improves safety and ensures machine efficiency and product quality by optimising the cleanliness of this critical part of the machine.

This project earned the 2012 Special Award of the "German Employers" liability insurance association for the sectors of 'raw materials and the chemical industry'.



*Smurfit Kappa employees and their families celebrating Fathers' Day in the Mexico City Metropolitan area with a performance of Peter Pan. Recognition was given to employees a) with a record of 'Zero Accidents', or b) with an exemplary sick leave record and c) also to employees with the largest number of creative participation proposals.*

## Mexico: Safety takes centre stage in Mexico

To celebrate Fathers' Day, employees and families of all the different Smurfit Kappa operations based in the Mexico City Metropolitan area were invited to a theatrical performance of the play 'Peter Pan'. As a recognition, priority was given to employees with a record of 'Zero Accidents' during their employment with Smurfit Kappa, to those employees with an exemplary sick leave record and also to personnel who had contributed with the largest number of creative participation proposals.

Four performances were booked by Smurfit Kappa Mexico to accommodate all the families. They were welcomed by highlighting the importance of safety and giving recognition to the safe parents. The children were offered the opportunity to have their faces painted with their favourite animal or character, while the family enjoyed lunch. At the end of the play, actors and families sang the Mañanitas, which is a celebratory song, to celebrate the safe parents.



## 2. SOCIAL CITIZENSHIP

### Guiding principles

We are committed to managing relationships with fellow employees, business partners and host communities in a socially responsible manner.

We comply with the principles expressed in the United Nations Declaration of Human Rights and the fundamental Principles and Rights at Work developed by the International Labour Organisation in all of the countries in which we have a presence.

In keeping with this Declaration and these Principles:

- We prohibit discrimination on the grounds of race, colour, gender, sexual orientation, age, religion, national origin, disability or other legally protected status in the countries in which we conduct business. No issues of discrimination in any of these categories were identified in 2012.
- We support freedom of association. Our employees have the right to become (and remain) a member of a Trade Union, have their representatives negotiate and bargain on their behalf and assist them in grievance and disciplinary matters.

The Collective Agreements currently applying in some 90% of the Group's sites are the result of either local and/or national negotiations in the countries concerned in both Europe and Latin America.

We are not aware of either the association or bargaining rights of any individual or group(s) of employees being denied to them during the course of 2012.

- We prohibit child labour. We will not employ, in any capacity, anyone who has not either reached the mandated school leaving age or the minimum age set for employment in any country in which we operate. No issues under this heading were identified in 2012.
- We treat employees humanely. We do not approve of or tolerate forced labour or physical abuse. We do not tolerate any other form of abusive behaviour, whether it originates from within our business (and is directed internally or externally) or its source is an individual (or organisation) with whom (or with which) we have a business relationship. No issues under either heading were identified in 2012.

- We compensate fairly and review wage and salary levels at regular intervals. Where appropriate we use expert methodologies and input from the current jobholder, solely taking the function under review into account. We ensure that pay rates in each country in which we operate match or exceed the minimum standard set by its government or legislature.
- We celebrate the wide variety of skills, abilities, backgrounds, experiences and perspectives represented by every employee in our Group. We respect employee contributions. We operate as a meritocracy. We promote on the basis of suitability, reward fairly, encourage personal and professional development and promote effective communication at every level of the business.

In the context of the above, we select, and promote people, solely on the basis of suitability for the position in question.

### Compensation and Benefits

The Group does not discriminate between men and women in terms of salary, benefits or any other consideration. The Group applies the policy of 'same job, same pay'. There is no formal system at Group level that allows us to measure the precise ratio for remuneration by gender.

While the basic salary of an individual manager may be different from that of a colleague in an identical or similar role, the difference will generally be a reflection of the difference in experience, size of the job, performance, etc. and not as a result of nationality or any other such reason.

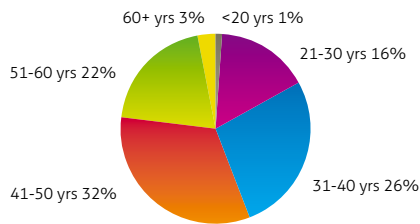
In common with many large businesses, Smurfit Kappa provides a range of employee benefits. Some, such as, maternity and paternity leave, are provided under the legislation of the country in question.

Other employee benefits, such as Pension Plans and Life Insurance, form an integral part of the employee's remuneration package provided by the Group in various countries.

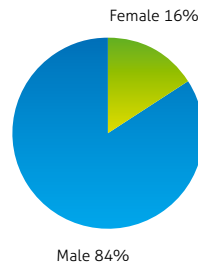
### Employee Demographics and Turnover

At the end of 2012, the Group had some 41,000 employees. This figure includes both our own employees as well as contracted labour, and also includes 2,900 employees in SKOC that was acquired in 2012. For the remainder of this section the SKOC employees are excluded as that company was acquired only in December 2012.

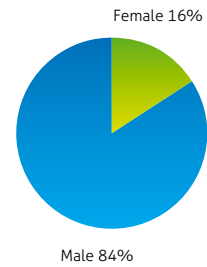
### Total Employees by Age 2012



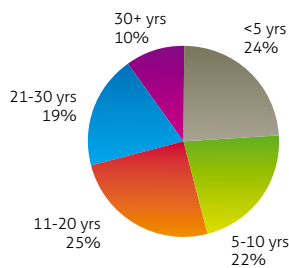
### Total Employee Gender 2012



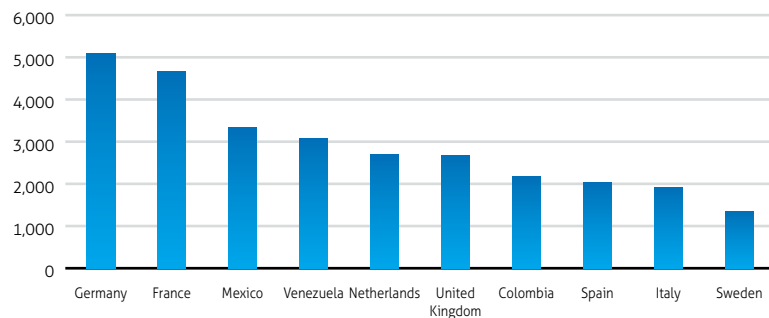
### Management Gender 2012



### Length of Service Total Employees 2012



### Top 10 Countries Headcount 2012



As can be seen in the graphs above, some 43% of our employees are 40 years of age or under, with almost a third of the total between the age of 41 and 50 years.

As shown above, approximately 55% of our employees have been with us for 11 years or more. More than 10% have been with Smurfit Kappa for over 30 years. Just under 70% of our workforce is involved in production and manufacturing activities categorised as direct labour, with the balance of the employees engaged in management activities and in activities such as sales and marketing, finance, human resources and procurement: all categorised as indirect labour activities. Approximately 5% of our employees are engaged under a temporary contract.

Almost 82% of our people were employed in ten countries (Germany, France, Mexico, Venezuela, Netherlands, United Kingdom, Colombia, Spain, Italy and Sweden), with the remaining 18% of the workforce employed in the remaining 22 countries where we have a production and/or a sales and marketing presence. This distribution generally is in line with Smurfit Kappa's distribution of activities.

During 2012, some 17 nationalities were represented at the most senior levels in the organisation. Although we do not have a policy of selecting local residents and it is our policy to select the best person available for any position, in practice, by far the greater proportion of senior operational positions are held by local managers (same nationality as the country where the operation is located). In general, the composition of the Group's

workforce typically reflects local ethnic diversity, thereby enhancing the bond with local communities.

In 2012, 16% of all Smurfit Kappa employees were female and 84% were male – see graph above. Of all management functions, 16% are performed by women versus 84% by men. Of the indirect positions in areas such as sales and marketing, finance, human resources, procurement and administration, almost 40% are occupied by women.

Smurfit Kappa's policy is to increase the level of participation of women in management roles in the company. In that context we are reviewing the areas and roles where the retention level and further advancement of women has the greatest potential for success.

In relation to return to work and retention rates after parental leave we do not keep central records. In 2012, we analysed the situation in two countries (Poland and Sweden) and the statistics for the year 2012 are shown for illustrative purposes in the table below.

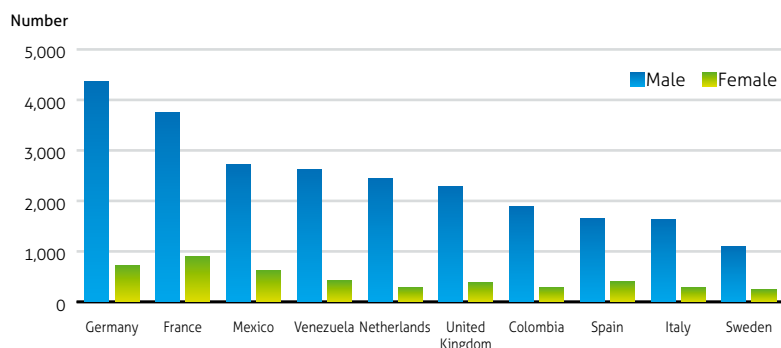
#### Poland

- on parental leave: 10 (of which 1 man)
- return to work after parental leave during 2012: 10 (retention rate 100%)

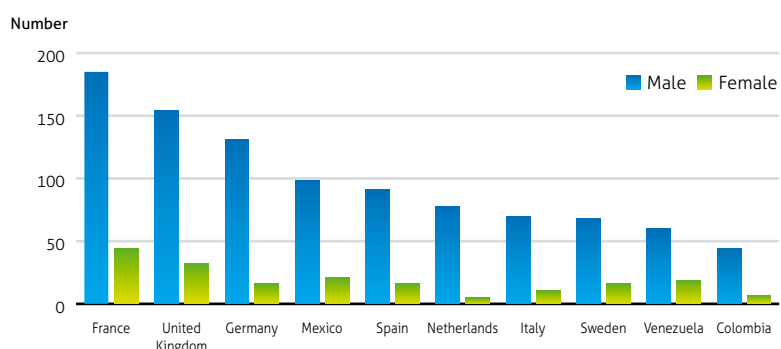
#### Sweden

- on parental leave 13 (of which 5 men)
- return to work after parental leave during 2012: 8, of which 4 men (retention rate 62%)

**Total Employee Gender: Top 10 Countries 2012**



**Management Gender: Top 10 Countries 2012**



At the end of 2012, the total percentage of employee turnover in the organisation had increased from 4.4% in 2011 to 4.6% in 2012. Retirements as well as the pursuit of other careers or interests were the reasons for the departure of more than half of the employees in 2012, while rationalisation and redundancies accounted for a further one seventh of the departures in 2012. There were 2,321 new entrants to the Group during 2012, of which 63% in Europe and 37% in the Americas.

### Employee Training and Development

Our people are the driving force behind our business and Smurfit Kappa is committed to the continuous training and development of employees seeking to achieve their full potential. Apart from our commitment to facilitate the personal development of our employees, training and development needs to be seen to further raise the standards of business performance needed to compete as a company in the markets in which we operate. Our training and development programmes focus on areas such as knowledge of best practice, skill transfer, and health and safety compliance. These programmes are complemented by a range of efforts aimed ensuring that our business ethics and standards are fully understood by all employees and are reflected in their day-to-day conduct. The ultimate aim of our training and development programmes is to have a workforce that is:

- Performing well
- Highly committed
- Working as a team
- Constantly learning
- Promoted based on merit.

In 2012, the average number of training hours (including the entire range of learning and development initiatives) was 20 hours per employee.

During 2012, there were numerous training and development activities, both centrally and locally. The total direct expenditure on training and development during the year amounted to approximately € 2.5 million, with further significant indirect costs.

On a central level, the Advanced Management Development (AMD) Programme is an example of a development activity which has evolved over more than a decade throughout the Group in Europe and Latin America in conjunction with the UCD Smurfit Business School.





In 2012, a new programme has been developed and was added to the central group programme portfolio. The General and Mill Manager (GM) Programme is the first of its kind in the company and aims to provide participants with both internal and external perspectives on leadership and provides insight into their current approach. The programme provides the new GM's with the valuable opportunity to learn not just from the senior management team and subject matter experts, but also from each other.

In addition to these programmes, the working relationship with two leading European Business Schools (London Business School and INSEAD) has been further strengthened, providing executive education for our Senior Executives to continue their learning and development.

Another programme managed from the Group's head office - and one which has gained great momentum with over 350 participants since its introduction in 2007 - is the English Immersion Programme. Now an established event in our training and development calendar, it is fully integrated with local language activities, be it e-learning or classroom-based learning. This customised programme brings together individuals from various functions to boost their confidence in using business English in their day-to-day work. During the course of 2012, a further 65 participants were catered for.

During 2012, one of our European divisions conducted on a European level, a "360 Degree Feedback" appraisal system and made use of professional external coaching support to provide those executives concerned with a greater knowledge of their strengths and to highlight areas of development.

The Junior Management Team Programme concept developed in our paper mill in Nettingsdorfer, Austria, has been successfully transferred and applied to other parts of the business, e.g. in our paper mill in Piteå, Sweden. This programme provides an environment for junior managers to explore new approaches.

In our Roermond mill in the Netherlands, our on-going programme called "Project Paper Train", enables experienced employees to pass on their knowledge to colleagues with less experience. This initiative is now well established ensuring that valued knowledge/ expertise is not lost over time.

The organisation currently undertakes an annual Performance and Development Review of 90% of its managers. Typically, these are conducted on a one-to-one basis involving the individual concerned and his/her immediate manager. Performance reviews are also conducted with non-managerial employees, currently applying to some 50% of this category of personnel.

ENGAGEMENT WITH STAKEHOLDERS

## German Sales training programme: Sales Training Programme welcomes 1,100<sup>th</sup> participant



**Boris Maschmann,**  
CEO Smurfit Kappa  
Germany

"We first introduced our sales training programme in 2007. The idea for the programme was to lift the general level of know-how. Our company stimulates the personal development of employees. As potentials need support to develop, we offer training programmes in many different areas of expertise. Up till now we have trained almost 1,100 employees. The target was to establish a "best in class" rate in our sales activities to ensure a very high quality level in our customer relationship. To stay on top we will continuously develop existing and additional trainings to cope with the changing demands of our environment – company, customers and employees."



**Julia Kullmann,**  
Key account manager  
Smurfit Kappa  
Southwest

"I participated in the programme during my traineeship and took part in all the sales modules. I quickly got to know the corporate philosophy, learned the business fundamentals and how to deal with customers and people in general. The seminar leaders created a relaxed but efficient atmosphere which stimulated the learning experience. Games were implemented in the programme in an interesting and educational way. I think it is very important to get trained regularly and Smurfit Kappa facilitates that very well. The variety of the programme is remarkable. I already found some seminars I am interested in for the future."



**Monika Schaper,**  
Sales manager  
Smurfit Kappa  
Herzberger Wellpappe

"Between 2003 and 2010 I attended training programmes that covered a wide range of topics like health and safety, and sales and finance. I experienced a very effective learning method in a pleasant atmosphere. We participated in various activities and read many case studies. We completed numerous quizzes with the support of our creative and professional trainers. In the end I feel I got a lot of helpful suggestions for my daily business as well as new insights into my relationship with our customers and in dealing with our own sales team. My expectations were exceeded! This training is very important for continuous improvement."



**Torsten Antosik,**  
Account manager  
Smurfit Kappa Brühl

"My expectation was to extend my horizon. In the four modules I participated in I experienced a well thought out training set-up. All subjects discussed were clear and easy to remember. The training programmes were really helpful in my daily work. I use many small pointers each day and still remember most of the training content. Networking with the colleagues from our other plants is another great advantage. During each training module you usually exchange your own professional experiences with the other participants. In my opinion the training promotes working in a team as well as supporting the personality of each individual participant."

## Graduates

Graduate Trainee Programmes within Europe and Latin America continue to provide opportunities for trainees joining the Group on completing their university programmes to kick-start their careers. Over the past years the intake has increased gradually and amounted to a total of 139 in 2012.

Many who have joined the company as Graduate Trainees have successfully progressed their career within the company. We have seen the great contribution that graduates and students can make to our business, adding value and maximising their potential, while helping us to build for the future.

## Retired employees

Our retirees have a special relationship with Smurfit Kappa which is grateful for their contribution to its growth and success over many years. Today there are approximately 13,000 pensioners from Smurfit Kappa and there are a variety of different associations in different countries that manage a host of social activities which greatly help to maintain the bonds the pensioners enjoyed as working colleagues.

Whilst most of the activities are managed by the pensioner associations themselves, there is also on-going Group support at local level.

## Internal communication

We value regular, timely and efficient communication with our employees and their representatives, conducted in an open and constructive manner, to exchange views on all matters affecting our business. Topics include Health and Safety, working conditions, terms and conditions of employment, the performance of the business, the business outlook, investment decisions and acquisitions and disposals.

We are committed to providing our employees with regular updates on the overall performance of Smurfit Kappa and the individual business units, and on any issues that may potentially have an impact on them. In doing so, we make use of appropriate media which include departmental and function meetings, site general briefings and management/employee representative meetings at local, national and regional levels. The internet and Smurfit Kappa's internal intranet are also used extensively.

Most of our operations have internal communications via newsletters, announcements and local intranet messages, these media promote a constant flow of news and employee interchange.

## European Works Council

Smurfit Kappa recognises the right of employees to freely associate and all Smurfit Kappa employees are free to join trades unions. In many countries, Smurfit Kappa conducts formal employee consultation processes with the local Works Councils.

By far the largest representative group in Smurfit Kappa Europe is the European Works Council (EWC), which represents about 80% of our employees from the 21 countries in Europe where we have operations.

The Agreement, renewed in 2011, governing the functioning, rights and duties of the EWC, will remain in place for two more years until 2015.

During 2012 and as per our Agreement, we had our two regular EWC forums and three Select Committee meetings.

The EWC consists of 30 members, representing all employees. The procedure for the nomination and selection/election of its members is in accordance with national regulations and practice in each of the countries involved. Although the EWC is not a negotiating forum, it does complement existing local and national structures where information dissemination and consultation occurs.

Typically, the topics covered at such meetings include:

- The Group's financial status.
- Prospective developments.
- Relocation, production curtailments or business closures in any country where there are transnational implications.
- Environmental protection.
- Employment opportunities.
- Health and Safety.

When queries arise from our employees and/or their representatives or meetings are requested, our policy is to respond in a timely manner.

When a decision is taken to introduce change, employee consultation takes place promptly. During the course of such discussions, the impact of the proposed changes, together with the implementation plans, are discussed with employees and their representatives.

The outcome, reflecting local and/or national custom and practice or legislation, will result in one or more of the following: severance pay, career counselling, job search workshops, financial advice (including pension) and early retirement where appropriate.

The periods of notice, measured in terms of the time between the initial communications to the employees concerned and the introduction of the changes, range from 6 weeks to 24 weeks.

## Acquisition and procurement practices

A key aspect of due diligence in any acquisition process involving Smurfit Kappa is an examination of the target organisation's human resource policies and practices, both in terms of their compliance with local, national and international laws and in their day-to-day interpretation and application in the organisation.



In the event of any potentially serious issue arising as a result, such as child labour, the acquisition process will be reviewed as to the appropriateness of continuing with it.

There were two acquisitions during the course of 2012 and no such issues arose.

Smurfit Kappa is committed to the principles reflected in both its Code of Business Conduct and its Sustainable Sourcing Policy Statement in all of its dealings with its suppliers and contractors.

In keeping with the Sustainable Sourcing Policy Statement, Smurfit Kappa aims to work with suppliers who share its declared values of good social citizenship in particular in such areas as compliance with the relevant regulations, the provision of healthy and safe work environments and demonstrable adherence to human rights in all its aspects.

Of equal significance to Smurfit Kappa is the commitment of these same suppliers and contractors to similar socially responsible behaviour in the conduct of their own businesses.

Strategic suppliers are being encouraged to join the UN Global Compact initiative and the Social and Ethical Data Exchange. They are also being encouraged to disclose relevant data in this regard, either directly to Smurfit Kappa or through a recognised organisation.

Since 2010, we audit key suppliers in respect of a number of indicators including human rights.

In Europe, as part of a rolling programme, just over 80% of our significant suppliers have so far been audited, including screening for human rights. At the end of 2011, 16 out of a total of 55 strategic suppliers had been audited. During 2012, 30 more strategic suppliers were audited. The remaining strategic suppliers are planned to be audited in 2013. Typically, each audit results in a list of action points for the supplier of which the result is then further discussed with our audit teams after six months.

Smurfit Kappa's Sustainable Sourcing Policy and Social Citizenship Policy Statements, together with the Code of Business Conduct, can be downloaded from the Smurfit Kappa website.

### Group Awards

Through our Smurfit Kappa Awards competitions in both Europe and the Americas regions, we strive to stimulate the ambition of our people and our business units to always do better. The various award competitions serve several purposes. The core objective is to encourage, recognise and reward entrepreneurship, innovation and superior performance, whether it is in the area of

operations, innovation, safety or sustainability. The awards are visible to the organisation's entire workforce and this helps in sharing the objectives of the organisation, creating an aspirational climate and enforcing its priorities.

In Europe, we have internal competitions for Overall Plant of the Year, Health and Safety Awards, Innovation Awards and Sustainability Awards, each with their own objectives and purposes. For 2012, our Litho laminated printed packaging solutions operation LithoPac in Nybro in Sweden was awarded Overall Plant of the Year for its excellent and above market performance, vision, desire to innovate and its commitment to outperform at the high end of the printing market.

In Health and Safety, the Awards for Excellence in Safety were awarded to our recycled paper mill in Mengibar in Spain, our corrugated operation in Soest in the Netherlands and in Waren in Germany. These operations achieved a multiyear record of working without any lost time injuries or accidents and showed their commitment to clean and tidy housekeeping while having a local management team that demonstrated commitment to Health and Safety. The Award for Excellence in Safety Improvement was awarded to our recycled paper mill SSK in Birmingham and our corrugated operation in Diss, both in the UK, for their excellent safety record and their respective safety improvement programmes.

The Innovation Awards and the Sustainability Awards are European competitions spanning a period of approximately 18 months. The next Awards will be presented in September 2013.

In the Americas there are internal competitions for the Award Plant of the Year by region/country and for the Americas as a whole. Our Folding Carton operation in Mexico was named Overall Plant of the Year in the Americas for its excellent commercial and operational performance over a period of 7 years. In Argentina and Chile, our corrugated plant in Chile was awarded for its resilience after the earthquake in 2010 and its operational recovery since. In Colombia, our corrugated operation in Barranquilla was awarded for its operational improvements and its excellent safety record of zero accidents in 2012. In Mexico, our Guanajuato corrugated operation was awarded for good operational performance and recognitions from both the Mexican government for their social responsibility program as well as from a number of important customers. In Venezuela, our corrugated operation in Caracas was awarded for its sustained good operational performance and its good relations with its employees despite challenging local economic, social and political conditions.



*Our COO, Tony Smurfit (front middle standing), amid employees celebrating 150 years of paper making at the Smurfit Kappa SSK mill in Birmingham, United Kingdom. The SSK mill today plays a vital role in providing local employment.*

## United Kingdom: 150 years of paper making in Birmingham

Founded back in 1862 by three Victorian entrepreneurs, the Smurfit Kappa SSK paper mill today plays a vital role in providing local employment as well as reducing the Birmingham's carbon footprint. Almost 40,000 tonnes of paper and cardboard (recycled by Birmingham's residents in their Birmingham City Council kerbside collection boxes or in Smurfit Kappa Recycling paper banks) is taken to the paper mill every year which is then used by the mill as a raw material to make new packaging papers.

Sharon Lea, Strategic Director for Environment and Culture, Birmingham City Council: "Being able to recycle Birmingham paper and cardboard in Birmingham whilst creating local jobs for Birmingham people was a fantastic good news story for the City and that recycling continued to be a very important part of the Council's strategy to further reduce the amount of waste that goes to landfill. Recent initiatives between the City Council and Smurfit Kappa Recycling have targeted Birmingham schools to provide information and local recycling facilities to young people and work is starting to encourage local businesses to recycle recovered paper and cardboard. From 1993, when just 750 tonnes of paper was segregated for recycling, the relationship between both organisations had become increasingly important to the local economy and helping to reduce harmful greenhouse emissions.

### 3. OUR INVOLVEMENT IN THE COMMUNITY

Community involvement is a key corporate responsibility already practised in many locations where we have operations.

Our objective is to contribute positively to the economic and social development of the communities of our host countries where we are privileged to operate. While our biggest contribution to our communities is in the jobs we create through our investments, we are also committed to respond to the communities' social needs. We strive to be an integral part of the communities where we are located, by supporting activities and community support programmes focusing on areas such as education and health programmes and areas of our specific expertise.

We do this in two fundamental ways, through making financial contributions and/or by volunteering.

In the course of our business transactions, we also take into account the concerns of the wider community, including international, national and local interests. Each plant manager is expected to represent the company as part of the local community and play a positive part in its development.

It falls to each plant manager to maintain an active dialogue with the communities living in close proximity to his/her facility, respond in the first instance to any complaints or issues of concern and initiate appropriate remedial action where necessary and possible.



Antonella Baldini, Mayor of Camposanto, Italy.

ENGAGEMENT WITH STAKEHOLDERS

## Italy: Fund raising campaign Panaro

Antonella Baldini, Mayor of Camposanto, Italy

"In the night of 20 May 2012 an earthquake came into our lives with unprecedented violence. We never expected a catastrophe of this kind, but the fact that the earthquake had caused no victims was a new starting point for the 3,300 inhabitants of the City of Camposanto. We immediately started to restore our buildings, but it was the second earthquake of 29 May that literally brought us to our knees. About 230 people found refuge in an emergency camp. Almost all Smurfit Kappa employees suffered damages from earthquake: the houses of 61 people were seriously damaged and 63 more lightly affected. Despite this, many of them volunteered to help others. People went on working in spite of the damages. The management team focused on its people first also helping them to cope financially with this catastrophe. The company has demonstrated great commitment to our community by remaining in the town and contributing to its rebirth. I want to thank Smurfit Kappa, particularly the plant manager Moreno Donati, on behalf of myself and the whole community. He never failed to help where the need was urgent. The plan of reconstruction will be long and difficult, but we must view this terrible earthquake as an opportunity to rebuild our city even better than before. We must pass a better future on to our children, the citizens of tomorrow."



Wilson Obando, father of two students at ITAF.



William Lopez, former student of ITAF.

ENGAGEMENT WITH STAKEHOLDERS

## Colombia: "Smurfit Kappa School has improved my standard of living"

Smurfit Kappa fully recognises the responsibility that comes with its participation in the rural communities surrounding its forestry land base. In conjunction with the Smurfit Kappa Cartón de Colombia Foundation, Smurfit Kappa helps to improve the living condition of the communities within the area of influence of the forestry operations. In addition, continuing education and training programmes are held for forestry workers, with forestry skills and health and safety at work being the most important. The Instituto Técnico Agropecuario y Forestal Smurfit Kappa Cartón de Colombia (ITAF) provides formal high school level education to teenagers of the communities surrounding the Smurfit Kappa forestry operations. William Lopez is a former student and Wilson Obando is the father of two students. They tell us how education, that was made possible by Smurfit Kappa, impacted their lives.

William Lopez: "I studied agriculture, livestock and forestry practices at the ITAF. It not only helped me to improve the production of our family farm, but also to raise our crop quality and to become more competitive. We grow Pergamino coffee that is exported. At the Smurfit Kappa School I learned about environmental, social and economic sustainability issues. I apply that knowledge on a daily basis at our farm and volunteer for social projects."

Wilson Obando, father of two ITAF-students: "My two girls are now studying at the University. It is a great experience. Through special loans, I was able to expand my activities like farming beans and coffee beans, and operating a bakery and a paper and supplies shop. This made it possible to earn enough to fund the education of my daughters. Access to ITAF services, like training for me and my wife, has improved my standard of living. At ITAF people care about us and motivate us."





Smurfit Kappa TWINCORR in the Netherlands aimed for a practical solution, special book-like boxes, in which the local community could participate and be encouraged to visit the new library.

## The Netherlands: Putting books in their box - the Library project

Smurfit Kappa TWINCORR in Hoogeveen found a very creative approach to help its community. It was asked to support an initiative in which five local libraries closed their doors to form one large library.

The challenge was to remove and store more than 100,000 books and CD's for a period of five weeks. Instead of making a financial contribution Smurfit Kappa TWINCORR aimed for a practical solution in which the local community would participate and eventually would be stimulated to visit the new library. In cooperation with the library management and sponsors, Smurfit Kappa TWINCORR developed 10,000 special book-like boxes. Library customers could fill the boxes with books and CD's and return them to the new library five weeks later. To involve the youth as well, a book (box) cover drawing competition was organised. Together these boxes formed a huge wall as part of an exhibition at the new library.



Companies and people can contribute to the 'Seeds for El Caracolí' so that more children will have a better future.

## Colombia: El Caracolí welcomes 108 new children

El Caracolí, the Centre for Integral Early Childhood Development, is located close to Smurfit Kappa Cali in the municipality of Yumbo. The centre which offers help to in total approximately 150 young children has the support of the Fundación Smurfit Cartón de Colombia and some other institutions.

El Caracolí seeks to generate a positive and essential change in children, younger than five years of age, and their families. To achieve this El Caracolí promotes integral care and early education in low income communities. Companies and people can contribute to the 'Seeds for El Caracolí' so that more children will have a better future. Employees of Smurfit Kappa in Colombia can make additional contributions to El Caracolí by joining the initiative 'Zero Waste'. Each kilo less of food wasted from the cafeterias of the Cali, Bogotá, and Medellín plants, results in more healthy food for the children provided and sponsored by Sodexo, the company that manages the cafeterias in those plants.

## Colombia: Biofuel Briquettes open a world of opportunities

Smurfit Kappa in Colombia, Gases de Occidente and the training organisation, Centro de Capacitación Don Bosco have joined forces on a local project for the production of biofuel briquettes. By using forestry residues from local trees such as pine and Eucalyptus trees and the stumps of coffee plants as raw material for these biofuel briquettes multiple sustainability objectives were realised. The project generates employment and income for the community, prevents logging of natural forests and recycles waste products. The briquettes are also an innovative and environmentally friendly fuel for heating boilers and cooking stoves. A thirty centimetres briquette can generate heat for six hours.

Most raw materials come from the forestry plantations of Smurfit Kappa Cartón de Colombia. The coffee stumps are supplied by local farmers. The production plant for the biofuel briquettes is located in Santander de Quilichao and the necessary machinery was donated from Switzerland.



Checking on the local project, for the production of biofuel briquettes, between Smurfit Kappa in Colombia, Gases de Occidente and training organisation Centro de Capacitación. From left to right: Paula Andrea Vivas - Centro de Capacitación, Arturo Gutierrez - Gases de Occidente, Bernardo Guzman - Smurfit Kappa Cartón de Colombia, and Fr. Germán Londoño - Don Bosco Centre.



*Smurfit Kappa's Group head office in Dublin, Ireland organised a multi-day charity cycle event with all the proceeds raised going towards LauraLynn, Ireland's only children's hospice.*

## Ireland: Smurfit Kappa charity cycle in aid of LauraLynn, Ireland's first children's hospice

Smurfit Kappa's Group office in Dublin organised a multi-day charity cycle event from Edinburgh to Dublin in September 2012 with all proceeds raised going towards LauraLynn, Ireland's only children's hospice.

The volunteer cyclists completed a 50 km climb from Edinburgh to Lanark on day one, day two entailed a 160 km cycle to Stranraer and finally they completed the almost 400 km that divides Edinburgh from Dublin with a cycle of 180 km from Belfast to Dublin where they were joined and cheered by a large number of colleagues from the Group head office completing a successful event.

The joint effort raised over €52,000 for LauraLynn, who plan to use part of this money to build a Multi-Sensory Garden. LauraLynn has been described as a 'home from home' that cares for children and their families living with life-limiting and life-threatening conditions. LauraLynn strives to put life into a child's day, making the most of their short and precious lives. Supporting initiatives such as LauraLynn is how Smurfit Kappa makes its commitment to invest in local communities tangible.



*Richard Ellerbeck at work at Smurfit Kappa in Zwiesel, Germany. The systematic involvement of stakeholders with different backgrounds in a special six month programme, called Joblinge, is designed to help young people to start a career.*

## Germany: Smurfit Kappa South Germany fights youth unemployment

About 10% of all young adults in Germany cannot find entry into vocational training. Thanks to the systematic involvement of stakeholders from industry, government and society a special six months programme, named "Joblinge", is able to help young people start a career.

Smurfit Kappa Wellpappe Zwiesel, part of Smurfit Kappa South Germany with integrated corrugated plants in Plattling, Neuburg and Feucht, supports the programme that was initiated by The Boston Consulting Group and the Eberhard von Kuenheim Foundation of BMW AG. The results are remarkable: 60% of the young participants manage to enter a company training programme. Smurfit Kappa Wellpappe Zwiesel is dedicated to help fight the growing youth unemployment problem in Germany. Their focus is to support the young adults to learn to trust their own talents, develop new skills and secure employment, so that they can improve their social circumstances.

## Venezuela: Control vegetation fires – extinguish community problems

The Venezuelan Forestry Division of Smurfit Kappa has found another way to help the community around forest farms near to the town of Ospino. Twenty years ago the Forestry Division initiated a vegetation fire brigade to combat the fires that occur during the dry season from December to April.

The fire-fighters from the "Forest Protection Centre" are very motivated to give their services to the nearby communities to protect people and crops. The Venezuelan western plains and its savannah are very prone to woodland fires. During 2012 the Smurfit Kappa fire brigade assisted the local community by fighting 81 fires outside our own forests. These fires typically occur in natural forests or on agricultural land.



*The Forestry Division of Smurfit Kappa in Venezuela assisted the local community by fighting 81 fires outside our own forests.*





*"The Sunchales Municipality acknowledges the support from Smurfit Kappa for the programme called "a better life". From left to right: Ezequiel Bolatti - Mayor of Sunchales and Gerardo Lattanzi - Plant Manager of the Smurfit Kappa Sunchales plant in Argentina."*

## Argentina: Smurfit Kappa in Sunchales cooperates with municipality in Quality of Life project

Smurfit Kappa Sunchales together with a number of other local stakeholders signed an agreement with the municipality of Sunchales aimed at improving the standard of living in the city and the region.

Through this cooperation, which is initially for a period of three years, the involved parties commit themselves to cooperate on issues like electricity supply, the handling of city waste, transportation, logistics, and the development of sustainable production areas. Efforts will be made to realise an agri-food industrial park, a cogeneration power plant, a logistical hub and a treatment plant for solid and liquid waste. Furthermore the parties will cooperate on adopting common policies to protect the environment, conserve natural resources, promote sustainable development and exchange information on environmental issues. In addition the parties have agreed to promote scientific research and the development of clean technologies.

## Italy: Solidarity in aftermath of major earthquake

In May 2012 the region around our plant in Camposanto sul Panaro, close to Bologna and Modena in Italy, was struck by two earthquakes measuring 6.0 and 5.8 on the Richter scale. Many people died or were injured. Churches, factories and houses collapsed, leaving 14,000 people homeless.

To provide immediate help to those colleagues who suffered damage to their homes, Smurfit Kappa Italy organised a fund-raising campaign. A total of €157,000 was raised for Smurfit Kappa employees who were victims of the earthquake. This sum was achieved through an initial donation by Smurfit Kappa's 1,300 Italian employees of around €60 each. The total employee donation was then doubled by Smurfit Kappa. Two-thirds of the total sum was divided among 15 colleagues who had suffered major damage to their homes. Local authorities had prepared "safe/unsafe declarations" for the houses in the area, and these provided objective criteria for the fully transparent process of deciding where the funds were most needed. The remaining one-third of the money was granted to 46 employees whose homes had suffered minor damage.



*In 2012, Smurfit Kappa in Mexico (picture above) and Smurfit Kappa in Venezuela (top picture) supported education by sponsoring the renovation of some neighbouring schools. Support ranged from providing tools, expertise and the finances to renovate facilities.*

## Venezuela/Mexico: Building the future by renovating schools

In 2012, Smurfit Kappa in Venezuela and Mexico supported education by sponsoring the renovation of some neighbouring schools. Support ranged from providing tools, expertise or the finances to renovate facilities.

The sales department of our Valencia paper mill of Smurfit Kappa in Venezuela, initiated a self-financing project to help High School Bolivariano, located close to the mill. Two classrooms were remodelled, woodwork materials and tools donated, and Smurfit Kappa helped the school to set-up a programme to sell their woodwork so they can generate income themselves with which more apprenticeship programmes can be financed. Another example is School Vicente Guerrero in Mexico located next to the Smurfit Kappa Cerro Gordo paper mill. More than 900 students, parents, teachers and Smurfit Kappa employees came together for a festive opening of the refurbished bathrooms that were made possible by Smurfit Kappa. The school itself did not have the finances to undertake the project.



## Colombia - 50<sup>th</sup> Anniversary Fundación Smurfit Cartón de Colombia

Sustainable development management practices have been an integral part of Smurfit Kappa in Colombia since its operations started in 1944, long before the term was introduced in the business world. For example, 50 years ago the company founded Fundación Smurfit Cartón de Colombia.

The foundation was initially established to improve the living standards of the local personnel and their families, and to help their children get an education. Over the years the latter has become the main focus of Fundación Smurfit Cartón de Colombia.

### Development of local community

When the Forestry Division was established in 1969, the scope of the Fundación broadened, also assuming responsibility for facilitating the development and improvement of communities located in proximity to its plantations.

"The economic strength of the Fundación has been noteworthy", states Edgar Muñoz, an attorney and former employee of Smurfit Kappa in Colombia, who actively participated in the development of the Fundación. "In addition to being a shareholder in Smurfit Kappa Cartón de Colombia, we have secured the commitment of domestic and international organisations with whom we have implemented programmes for farmers and urban communities."

### Education, Income Generation and Empowerment of Citizens

Education continues to be one of the priorities for the Fundación. Through education people can truly become part of their society and attain the social equity the country needs. It makes people competitive, provides helpful social responsibility and reinforces democratic values. Formal and non-formal strategies have been implemented ranging from basic high school education, to university scholarships and continued education for adults.

The Fundación also contributes towards the eradication of poverty by improving the income of the neighbouring communities. The Income Generation programme stimulates local start-up initiatives run by local citizens who learn to show leadership through these initiatives. It offers technical assistance and advisory services, and promotes social and community networks. In this way the Fundación ensures effective use of resources and mixes it with social support measures that generate empowerment and autonomy in people and Grass Root Organisations; values the Fundación will continue to pursue in the coming years.



From left to right: Oscar Rojas and Beatriz Eugenia Mejía - Fundación Smurfit Cartón de Colombia, Germán Jaramillo - Fundación Empresarial para el Desarrollo de Yumbo, María Eugenia Carvajal - wife of Cali mayor, Andrés Felipe Muñoz and Nicolás Pombo - Smurfit Kappa Cartón de Colombia.

## Colombia - 50<sup>th</sup> Anniversary Fundación Smurfit Cartón de Colombia

### LANDMARKS

#### 1959

Educational fund for children in memory of MD Frank C. Carder (deceased).

#### 1962

Predecessor of Fundación Smurfit Cartón de Colombia (non-profit) established.

#### 1969

Forestry programme in Cauca region, foundation aware of regional social reality.

#### 1984

Founding of high schools and medium technical education institutions.

#### 1995

Various partnerships and establishment of financial independence through ownership of company shares.

#### 2002

Social contributions to schools close to customers and grassroots participation.

#### 2003

Continued education for forestry employees, their families and communities.

#### 2004

FOCUS fund and Public Private Partnership project with contribution of GTZ.

#### 2008

Productive Partnerships to improve agricultural technology. Won award.

#### 2009

Smurfit Kappa Social Responsibility Award for PPP Project funded by GTZ.

#### 2010

Co-founding of El Caracolí Integral Early Childhood Centre Foundation.

#### 2012

The Fundación celebrates its 50<sup>th</sup> anniversary.



*Early Learning Initiative: The ELI focuses on helping marginalised communities through the provision of innovative parent and child-learning support programmes.*

*Caracoli: the Foundation supports El Caracolí, an early childhood development centre created by the Smurfit Cartón de Colombia Fundación, in close cooperation with other foundations working in the country.*



*Fledglings: The Foundation also supports Fledglings - Early Years Education & Care project that provides education and after-school care to children in the local area. The Irish Minister for Children and Youth Affairs, Frances Fitzgerald, is shown with some of the participants.*



## International - Update on the Smurfit Kappa Foundation

The Foundation was established in February 2011, when the Board of Smurfit Kappa agreed to establish a €3 million fund and, over the subsequent three years, €500,000 could be invested annually to finance projects that came within the objectives of the Foundation. The remainder of the funds are now invested and the interest will continue to be available to fund worthwhile projects.

The Foundation supports projects in the countries where we have the privilege to operate, with the initial focus on projects involving young disadvantaged children (some 7 years of age and under) in the areas of health and nutrition, basic care and early education. Currently the Foundation supports three such projects - two in Ireland and one in Colombia.

One of these is the Early Learning Initiative (ELI) at the National College of Ireland. This is a community-based education initiative in Dublin's inner-city. The ELI focuses on helping marginalised communities through the provision of innovative parent and child-learning support programmes. Its aim is to widen the participation in education for all and to allow children to take advantage of the Irish education system and have the same opportunities as children from more affluent areas.

The Foundation also supports Fledglings - Early Years Education & Care. This project is based in an under-privileged part of Dublin and provides education and

after-school care to children in the local area. This service offers parents the chance to return to education or work and also provides employment in the local area. With the support of the Foundation, Fledglings plans to open four new centres each year, over the next three years. This social enterprise aims to be self-sustainable by 2016, transforming the lives of hundreds of children and families in the process.

In Colombia, the Foundation supports El Caracolí, an early childhood development centre created by the Fundación Smurfit Cartón de Colombia in close cooperation with other foundations working in the country. It is located in Yumbo, on the outskirts of Cali, where Smurfit Kappa's main production plant in Colombia is based. The centre provides an integrated programme which includes education, nutrition and basic care. The Smurfit Kappa Foundation has pledged to provide funding for El Caracolí to construct a new centre for 300 under-privileged children in the region.

The Foundation created its own website in 2012: [www.smurfitkappafoundation.com](http://www.smurfitkappafoundation.com), providing information on the type of projects the Foundation is focusing on and how to apply for funding.

# SUSTAINABILITY IN OUR BUSINESS

Smurfit Kappa aims to make the difference in its key area of expertise: providing creative and innovative paper-based packaging solutions that support our customers' growth and development.

As a customer-focused innovation-driven integrated company our principle objective is to create economic value for our customers and other stakeholders while acting responsibly in all aspects of our business. We consider profitable growth as a pre-requisite to advance our drive for sustainability. We believe that when we can develop our business in a sustainable way it will also allow us to provide our stakeholders with the contribution they are looking for.

Better packaging solutions will help our customers advance their own business, progressive dividends and share price growth will reward investors for their financial support, fair pay, other benefits and personal development will compensate our employees for their contributions, payments for delivered goods and services will help suppliers to develop their products and their business.

As a significant employer in many of the communities and regions where Smurfit Kappa operates we stimulate the economic development of these communities. Our involvement in local community projects through financial support or volunteering activities contributes to local economies. Our tax payments locally and to country governments further contribute to economic, social and environmental development in the countries in which we operate.

Providing paper-based packaging solutions is our core business. Packaging allows the global population to have access to essential products such as food, clothes or medicines. We help millions of consumers to minimise waste by securing the durability of products they purchase, while providing that support in a most sustainable way as our packaging solutions rely on renewable raw materials and are fully recyclable.

## 1. OUR BUSINESS

Smurfit Kappa is one of the world's largest integrated manufacturers of paper-based packaging products, with operations primarily in Europe and the Americas. We manufacture, distribute and sell containerboard, a wide variety of corrugated packaging and other paper-based packaging products and materials such as solid board, bag-in box, sack paper and machine glazed paper.

In 2012, the Group's total revenue was €7,335 million, generating an operating profit of €634 million and earnings per share of €1.08 (pre-exceptional). Total employee wages and other benefits amounted to €1,818 million. Approximately €4,000 million was paid to suppliers for products and services such as raw materials, energy and transportation services. For the year 2012 a final dividend of 20.5 cents per share was declared and our corporate income tax amounted to €71 million.

Smurfit Kappa's end customers primarily use our packaging products to transport their goods and as a marketing, display and merchandising aid. Approximately 60% of our corrugated products customers are in the fast moving consumer goods sector comprising food, beverage and household consumables, the remainder being split across a wide range of different industries.









ENGAGEMENT WITH STAKEHOLDERS

## Ireland: Sustainability and Investors

Barry Dixon, Head of Research, Davy Research

Growth, returns and value remain the key criteria for the investment community. At this point, Corporate Social Responsibility or sustainability is relatively low on the list of criteria employed by most investors.

What is emerging however is a new segment on the investment market whose main focus is to find growth, returns and value among companies who are more environmentally aware. Thus we have seen the emergence of a number of environmental indices, such as the FTSE4Good series, designed to measure the performance of companies "that meet globally recognised corporate responsibility standards". Or the Dow Jones series of Sustainability indices. Equally, we have seen the emergence of a number of sustainability-focused funds and investment houses. While small currently, we believe this is a fast growing part of the investment market.

So what are potential environmental investors looking for in addition to the core financial valuation metrics? Often sustainability issues feed into financial metrics, like the number of accidents at a company. This reflects the corporations caring (or otherwise) attitude towards its workforce, but accident-related downtime also impacts margins and returns. Equally, energy efficiency is a critical factor for many company's profitability in an environment of steadily rising fuel costs and an important factor for investors.

Smurfit Kappa is well positioned to further develop this theme. Paper-based packaging is one of the few truly renewable packaging media. Through significant investments Smurfit Kappa is actively improving the production efficiency of energy and water intensive kraftliner. This will help improve margins and attract managers of sustainability funds.

There is no doubt in my mind that the issue of sustainability and respect for the environment will continue to grow in importance among the investment community. Partly driven by genuine altruistic reasons, partly because sustainability adds to the bottom line.

### 2012 Financial Performance Overview

	2012 €m	2011 €m
Revenue	<b>7,335</b>	7,357
EBITDA before exceptional items and share-based payment expense ('EBITDA')	<b>1,020</b>	1,015
EBITDA margin	<b>13.9%</b>	13.8%
Operating profit	<b>634</b>	590
Profit before income tax	<b>331</b>	299
Free cash flow	<b>282</b>	394
Net debt	<b>2,792</b>	2,752
Net debt to EBITDA	<b>2.7x</b>	2.7x
Basic earnings per share (cent)	<b>111.2</b>	93.0
Pre-exceptional earnings per share (cent)	<b>108.3</b>	100.1

### 2. WORKING TOGETHER WITH CUSTOMERS

For Smurfit Kappa, packaging is not only about collecting, storing, transporting, distributing preserving goods and optimising supply chains. It is even more so about enabling. Our packaging solutions enable our customers to make things happen, to put their business models to work. We are part of the supply chain of responsible and reputable customers who are committed to sustainability. We are proud to be the partner of choice in our field of expertise for many of these customers. Our commitment to sustainability will strengthen the partnerships we have and help to form more. It will put us in a position to develop even better and more sustainable packaging solutions for our customers, enabling them to meet their own targets and commitments.

Increasingly, customers require packaging to be sustainable, innovative, fit for purpose, as well as cost effective. Smurfit Kappa works closely with customers to make supply chains more sustainable. For example, to completely protect the packaged product during its trip through the supply chain, we deliver "right-weighted" packaging. By taking both primary and secondary packaging requirements into account our transit packaging often allows the primary packaging to be optimised leading to an overall lower sustainability impact of our customers supply chain. Our creative design teams explore what is possible in the most open minded way.

Working innovatively together with customers on packaging design and supply chain optimisation has two main sustainability aspects to it.



Firstly, Smurfit Kappa credibly guarantees its customers that the packaging it supplies is produced sustainably, using materials from sustainable sources and utilising the collective design skills of our global team of designers.

Secondly, we also focus on how our packaging can minimise the total sustainability impact per unit of customer product delivered to the consumer. According to a study done by INCPEN, the energy component and hence the CO<sub>2</sub> impact of packaging products is less than 5% in a typical customer's supply chain. The packaging related positive indirect impact (less damage/destruction of the packed product, optimised logistics, less waste, disposal, etc.) is much more significant for the sustainability of a customer's supply chain.

It is in these two aspects – packaging design and optimising our customers supply chain – where our packaging can make the delivery of our customers' product to consumers more sustainable.

In practice this means that for many customers we carry out evaluations with the help of the Smurfit Kappa web-based suite of design software, Innotools (Pack Expert, Paper-to-Box, Innobook), seeking to optimise the direct and indirect impact of our packaging on sustainability through the entire supply chain of our customers. For example, by changing the pallet pattern or case count, it is possible to increase the quantity of products loaded on a pallet, reduce the number of road trips, and thereby reduce the CO<sub>2</sub> emissions from transportation.

### Customer satisfaction

As Smurfit Kappa strives to be a customer-oriented and market-led company, the satisfaction of our customers is of utmost importance to us. Besides aiming to provide our customers with optimal packaging solutions, we also want to ensure that they are satisfied with our proactive approach and services. In a number of our mills, we have a 'first time right' monitoring system in place measuring the percentage of production delivered to the customer's satisfaction.

In our converting operations, major customers perform routinely quality checks on our delivered products and also perform regular audits on our operational processes and services, and other quality related performance indicators. To ensure customer satisfaction, each customer is served by dedicated teams of designers, sales and service people and this important consideration is frequently discussed with every customer.



## ENGAGEMENT WITH STAKEHOLDERS

# International: Joint Responsible Sourcing Nestlé and Smurfit Kappa

"Responsible sourcing is part of the top 3 priorities of Nestlé Procurement. Smurfit Kappa, being one of Nestlé's long lasting and prominent corrugated box suppliers, has been fully engaged in responsible sourcing since 2010", says Mr Vincent Quilici, European Lead Buyer from Nestlé.

"The aim of the Responsible Sourcing Audit is to demonstrate that all of Smurfit Kappa's conversion plants comply with Nestlé's ethical and sustainability requirements. It also involves assessment with regard to the Nestlé Responsible Sourcing Guidelines specifying requirements for practices throughout the supply chain, such as fibre traceability and mill management."

"Since the beginning, Smurfit Kappa has been fully committed to support Nestlé in its Responsible Sourcing approach. We have achieved great results together since the initiation of the programme in 2010 up to the present in 2012. To continue this journey and ensure further progress, a joint three year working plan has been implemented by Nestlé and Smurfit Kappa. It is monitored on a monthly basis."

"Looking ahead of us, the focus of our upcoming activities will concentrate on traceability, water and energy consumption, our carbon footprint and the impact on biodiversity", concludes Mr Quilici.





*The new water resistant liner, which includes a 100% biodegradable PE layer, has helped to save a significant number of catalogues from the waste bin every year for Home Retail Group.*

## UK: The 'Aquashield' Case saves catalogues from spoilage

Home Retail Group is the UK's leading home and general merchandise retailer. Home Retail Group produce millions of Argos catalogues each year for distribution throughout their customer base. The catalogues are generally stored outside in often damp conditions at the distribution warehouses and at stores which result in large numbers of catalogues being written off each year due to water damage.

To solve this problem Smurfit Kappa UK Abercarn worked closely with the Packaging Managers at Home Retail Group to develop a corrugated solution which incorporated an 'Aquashield' liner which is waterproof, secure, durable and 100% recyclable. The new water resistant liner, which includes a 100% biodegradable PE layer, has helped to save a significant number of catalogues from the waste bin every year for Home Retail Group, thereby reducing carbon emissions in both transport and printing processes. Aquashield not only protects paper products throughout the supply chain, it also reduces the assembly time of the catalogue pallets, generating significant cost-savings.



*Adconnect pallets are delivered to clients as flat sheets of corrugated board. As a result, only one truck is needed to transport the same number of pallets that used to take eight trucks.*

## Germany: Flat pallets, high rewards

Six years ago innovation processes at Smurfit Kappa Wellit Wellpappenwerk in Delbrück in Germany resulted in a special glue named adconnect. During the last six years this product has enabled our German operation to realise various sustainable packaging solutions, the most recent one being the adconnect pallet.

Adconnect pallets are delivered to customers as flat sheets of corrugated board. As a result just one truck can transport the same number of pallets that used to take eight trucks. Customers need far less storage space and the pallets are ideal for recycling, because they only consist of one material: recyclable board. Assembly is easy, quick and does not require any tools. The areas which need to be interconnected are coated with the self-adhesive glue, which is activated by being pressed against another part with adconnect. Once connected the areas become inseparable. Adconnect pallets are unique and reduce the carbon footprint of our customers.

## Belgium: The smart dashboard box

Smurfit Kappa Olen, in Belgium, designed a new sustainable packaging solution with far less CO<sub>2</sub> emission for their customer 4Flow, by optimising the packaging for Mercedes Benz dashboard frames.

The dashboard frames were originally packed in F0201 packaging with PE-foam and plastics. The PE-foam is not only expensive and non-sustainable, it also makes the packaging rather bulky thereby limiting the number of products that can be shipped in a container. Smurfit Kappa Olen was able to replace the PE-foam and plastic components with fully recyclable material. This provided 4Flow with sustainable packaging with far less CO<sub>2</sub> emission and a significant cut in the costs of logistics. To package the same quantity of dashboards 4Flow now achieves a reduction of almost 6,000 boxes and some 180 less container shipments, saving Mercedes Benz considerable costs in transportation.



*Smurfit Kappa in Olen, Belgium was able to replace the PE-foam and plastic components with fully recyclable material. This provided 4Flow with sustainable packaging resulting in far lower CO<sub>2</sub> emissions and a significant cut in the costs of logistics.*

Our marketing communications are essentially business-to-business by nature. In this regard we ensure on a continuous basis that these are in line with all generally accepted ethical and cultural standards such as avoiding privacy intrusion or dual standards, not influencing vulnerable audiences such as children or portraying gender roles in a disrespectful way. As part of our Code of Business Conduct, we voluntarily adhere to the OECD Guidelines for Multinational Enterprises which explicitly mentions consumer interests. Smurfit Kappa has no recorded incidents of non-compliance with regulations or voluntary codes concerning marketing communications.

### Innovation in sustainable packaging solutions

As a market-focused company, Smurfit Kappa knows innovation is of strategic importance in securing and retaining our customers' business. Innovative design is a unique selling point for Smurfit Kappa and serves to differentiate us in the marketplace. To foster innovation, we share best practice among the plants and divisions in Smurfit Kappa using our web-based tools such as Innobook. We hold Innovation Award competitions to assess the effectiveness and originality of our joint developments with customers. The competitions are held in both Europe and Latin America, with judging panels drawn from our key customer base. These measures promote the pursuit of excellence in design and, most crucially, a close alignment with the needs of our customers. We introduced a Sustainability Award competition in 2012 to show our ability to combine innovation and sustainability in the design and development of high quality customer products. The 2013 Innovation and Sustainability Awards will be announced in September of this year and will be featured in our Sustainable Development Report 2013.

When using design innovation as a means of developing sustainable packaging, we focus with our customers on the following aspects:

- Design packaging solutions that are both efficient and user friendly.
- Optimise the supply chain, including palletisation, transportation, warehousing and distribution.
- Develop fit for purpose "right-weighted" packaging based on experience and empirical modelling instead of historical data.
- Reduce complexity in the packaging portfolio thereby achieving higher productivity, less material usage and less waste.

### 3. CONTRIBUTION TO LOCAL ECONOMIES

We favour procuring our products and services from local suppliers where possible. Procurement of goods and services represents the largest single category of expenditure. In 2012, the Group purchased almost €4 billion of products and services such as raw materials, energy and transportation. The procurement of a number of major items of expenditure like recovered paper, paper, energy, chemicals, starch and inks is coordinated centrally to achieve economies of scale. Still, a significant part of the actual supplier deliveries for these categories could be considered as local deliveries as many of the goods and services are provided to us from suppliers' production locations in the same geographical area as our operations. Due to their nature, the remaining goods and services are sourced locally by our operations. In total approximately 70% of our suppliers' deliveries can be classified as local. These interactions between our operations and local operations of suppliers provide support for local economies.

### 4. PRODUCT RESPONSIBILITY AND PRODUCT SAFETY

As a business-to-business company, we produce both the raw material for packaging and the packaging itself. Most packaging produced by us is used for distribution, transportation and retail display purposes.

We have always demonstrated a strong commitment to product safety. Not only will we comply with any legislation on health and safety aspects of our products, we also have agreed to voluntary codes of conduct which, among others, are based on the OECD Guidelines for Multinational Enterprises.

In 2012, there were no recorded incidents of non-compliance with regulations or voluntary codes in the area of product safety and product responsibility.

At all stages in our production process, from the design of our product to its delivery to the customer, we assess product safety. As many of our products are used as transport packaging, product safety mainly ensures that our products are safe and easy to use for those handling and using them. A significant part of our packaging is intended for the agri-food industry. For this sector, the product safety aspects mainly involve ensuring that food can be safely packed in our products whether there is direct or indirect contact between the packaging and the food. All our products are therefore assessed for health and safety considerations.

Our Product Safety Department was set up to manage such issues, in particular with regard to packaging in direct contact with food. The department is equipped with a laboratory that tests the purity of our products (papers, boards, corrugated and solid board packaging). It conducts research and implements development projects in the area of food contact. We regularly submit our products to the set of analyses recommended by various European and national legislation applying to our products. This department is third party accredited according to the ISO 17025 standard.

The knowledge developed here has been transferred throughout all our production operations in both Europe and Latin America. We follow the evolution of regulations in all countries and are active at European and national industry association level with regard to product safety issues.

European regulations that apply to packaging intended for food contact have been revised and reinforced over recent years. As required by the European regulation that applies to packaging intended for food contact, the implementation of Good Manufacturing Practises (GMP) in paper mills and converting operations producing packaging for food applications is mandatory. GMP that fulfils the requirements of EU regulation has been implemented since 2007 at all our European paper and board mills. Since September 2012, all our European paper and board mills are third party certified. 79% are certified according to the European standard on the management of hygiene in the production of packaging for foodstuffs (CEN-EN 15593) and the remaining 21% are certified according to the International Good Manufacturing Practice for Corrugated and Solid Board Packaging standard (FEFCO/ESBO GMP Standard).

In response to customer needs, some 54% of our converting plants now have processes in place and are certified by one of the following recognised hygiene codes or standards: ISO 22000, CEN 15 593, British Retail Consortium (BRC), American Institute of Baking (AIB) or International Good Manufacturing Practice for Corrugated and Solid Board Packaging (FEFCO/ESBO GMP Standard).

It is our aim to certify all our converting plants for which this is relevant.

As a result of our central set-up, we are able to monitor our progress in performance with regard to both safety and hygiene for food and this in turn allows us to respond to any market concerns. Our Product Safety department is keeping a close watch for any food safety alert issued by the European Commission or national authorities. Our analyses and knowledge permit us to modify our papers in response to these alerts in the shortest possible time.

In the course of 2010 some research indicated that traces of undesirable mineral oil could enter packaged food possibly resulting from mineral oil present in the recycled raw material for paper making and/or the inks used for printing the packaging. At the end of 2011 CEPI, together with some other trade associations, published a voluntary commitment calling on paper and board producers and converters to phase out the use of mineral oils in paper additives and printed inks. Several public authorities have reviewed the published research. In May 2012, the Bundesinstitut für Risikobewertung (BfR, or German Federal Institute for Risk Assessment) published an analytical method for mineral oils analyses for testing by the various European laboratories.

According to the BfR, the research is still incomplete. Also, the UK Food Standards Agency's position is that there is no concern for consumers' health. In June 2012, The European Food Safety Authority (EFSA) identified food packaging as one of the many sources of mineral oil in food and suggested setting up a monitoring programme to identify sources of mineral oil at various stages of food production. EFSA also suggested that in cases where exposure to these mineral oils can be attributed to packaging, methods should be developed that would effectively prevent mineral oils from migrating from the packaging into the packaged food.

Although none of the research and opinions so far published indicates that there should be any concern for consumers' health, we are together with the European industry association CEPI, cooperating with the various parties involved to develop adequate solutions for this issue.

### Registration, Evaluation, Authorisation and Restriction of Chemicals: (REACH)

We are mainly affected by REACH as downstream users of chemicals and we therefore liaise closely with the suppliers of chemicals to ensure that they fulfil their obligations with regard to assurances that the chemicals we introduce in our products do not contain any Substances of Very High Concern (SVHC) in concentrations above the level of 0.1%. Our centralised procurement organisation provides us with an efficient way to accomplish this task.

The overarching objective of REACH is to minimise or ban the use of SVHC, most of which are already identified for the tonnage band of 1000.

These substances will be thoroughly re-examined and will then be added to the SVHC candidate list for further measures. The SVHC candidate list is updated once or twice a year.

When the updated SVHC-list is published on ECHA's web site, our customers routinely request information whether our products contain SVHCs or not. We have procedures in place that enable us to issue such statements continuously.





Ross Howat, Global Marketing Director from PPI Award sponsor Elektrokemiska AB assisted by PPI Award host Laura Esposto presented the Global PPI Award in the category 'Advances and Innovation in Sustainable Packaging' to Miguel Angel Franco, Smurfit Kappa Spain.



Charles Thwaites, Executive Director, Forest Stewardship Council UK (left), presents the FSC 2012 Outstanding Contribution Award to Mike Fadden, Smurfit Kappa Regional Director East.

## 5. RECOGNITIONS

### Spain - Global PPI Award for innovative Eco Tray

The PPI (Pulp & Paper International) awards are the only global awards dedicated to recognising achievements in the pulp and paper sector. Smurfit Kappa won an award in the 'Advances and Innovation in Sustainable Packaging' category for the Eco Tray, a special corrugated tray that offers a 'green' alternative to traditional polystyrene and plastic trays.

The experts at Smurfit Kappa developed a thermo-formed corrugated board solution for the fruit and vegetable market, which can also be applied in other sectors. The Eco Tray is 100% recyclable, optimises storage space and leads to savings on CO<sub>2</sub> emissions. Moreover, as it is suitable for flexographic print, high quality print and pre-print, it can be customised to fit the customer's wishes thus enabling an improved point-of-sale profile for the consumer.

### United Kingdom - Recognition for raising awareness of responsible forestry

Smurfit Kappa UK has been recognised for its outstanding contribution to raising awareness of responsible forestry following its nationwide support for the Forest Stewardship Council's international awareness day.

FSC Friday, the international awareness day, is a celebration of the world's forests and helps to raise awareness of the importance of managing these forests responsibly, and the role that FSC plays in this. Smurfit Kappa was chosen to receive the FSC UK award in recognition of the educational and awareness raising activities it undertook on FSC Friday 2012 and has been commended for its success in reaching out to local communities. A number of Smurfit Kappa sites took part in celebrating FSC Friday, many working with local schools and communities to educate the children on the importance of responsible forestry. Internal communications and activities were also organised to further raise awareness among our own employees.



*From left to right: Orlando Cañaveral – Unilever, José Joaquín González – Smurfit Kappa, Luis Fernando Gomez – Unilever, Laura Realpe – Unilever, Jorge Parra – Smurfit Kappa, Angela Aguilar – Smurfit Kappa, William Muñoz – Smurfit Kappa, Andres Arango – Smurfit Kappa.*

### Colombia – Smurfit Kappa Colombia approved supplier for Unilever

In September 2012, representatives of Unilever visited the Smurfit Kappa Colombia manufacturing plants in Cali, Medellín and Bogotá with the objective of identifying synergies and to discuss how both companies could mutually benefit from those improvement opportunities.

Smurfit Kappa is a leader in the production of corrugated packaging, pulp and paper in Colombia and was very pleased to host the visit. As a result of the visit and because of its solid performance in Colombia, Unilever has acknowledged Smurfit Kappa as an approved supplier. The Smurfit Kappa companies were able to meet the requirements regarding performance and continuous improvements demanded by Unilever during twelve consecutive months. Smurfit Kappa in Colombia has a clear focus on innovation and quality, and a long term strategy on sustainability. The company is proud to be an official partner of Unilever.

### Colombia - Actively involved in good forest management

According to the Forestry Certification Guidelines of World Wildlife Fund (WWF) in Colombia, Smurfit Kappa in Colombia was actively involved in the formulation of the Generic Indicators for voluntary certification of forestry plantations and has been working closely with the Forest Stewardship Council (FSC) national office in Colombia for over ten years. WWF Colombia mentioned Smurfit Kappa in Colombia as a successful story on forestry certification in South America.

Since 1997 Smurfit Kappa Cartón de Colombia has been an active member of the FSC and in 2003 the FSC label was granted to our forest plantations in Colombia. We have one of the first companies to receive such accreditation for its forest holdings. We have been instrumental in helping the FSC national office over that period, through regional workshops in the harmonisation of indicators for voluntary certification of forestry plantations, as well as participating during the revision of Standards and Principles as a member of FSC. Our plantations in Colombia measure approximately 69,000 hectares, with an annual net growth of approximately 100,000 cubic metres in 2012.



Smurfit Kappa employees (left to right): Hugo Romero, Luis Fernando González, Juan Pablo Perez, Maritza Ochoa, Sergio Segura, Alvaro Zambrano were presented with the prestigious award for recognition for Smurfit Kappa's sustainability efforts and results in central Colombia.

### Colombia - Public recognition for environmental excellence

For the second year in a row Smurfit Kappa employees in Bogotá received public recognition for their sustainability efforts and results in central Colombia from the environmental authorities who handed the company a prestigious award.

Smurfit Kappa was awarded the trophy for its continuous improvements during the year 2012 with regard to sustainability and for its environmental management system. To stimulate sustainable efforts the district has set up an Environmental Excellence Programme. The Mayor of Bogotá, on behalf of the District Environmental Department, publicly recognised Smurfit Kappa's win in the Environmental Excellence category and stated that the company is a leader in environmental management and environmental performance in the district. The jury evaluated various aspects such as: environmental management, cleaner production and corporate social responsibility.

## 6. SUPPLIER INITIATIVES

### International - Ink supplier Siegwark colours the planet green

Siegwerk is a world-leading supplier of printing ink for packaging and publication purposes with its headquarters located in Siegburg, Germany. The company recently introduced a new generation of sustainable ink products based on innovative hybrid technology.

The breakthrough was realised after extensive research in a partnership with major chemical companies. Siegwark concluded that environmental and economic advantages can very well be achieved through a combination of renewable materials with classical chemical production and/or fossil products. A totally new polymer, a 'hybrid' of bio-monomers, is utilised as a binder with 'standard oil derivate' acrylic monomers. This allows the formulation of premium quality ink. To increase the renewable

content of its ink even more, without losing performance or increasing costs, Siegwark will further research its hybrid technology. It strives to demonstrate that water borne inks can make the world greener and still perform satisfactorily for commercial usage.

We welcome suppliers that continuously search for and develop products that help to make our packaging solutions more sustainable.

### International - Sustainability key element in relationship with Flint Group

Flint Group is one of our largest ink suppliers in Europe and has been a supplier for many years. The two companies have developed a long term constructive relationship with a focus on a number of key aspects of the sustainability agenda like anti-corruption, labour, human rights and the environment.

Jan Paul Van der Velde, Senior Vice President Procurement, Sustainability, Regulatory and IT, Flint Group, elaborates: "Fundamentally, we believe that our partnership revolves around sharing best practices and finding a 'better way' together. With the help of Smurfit Kappa we have already initiated a programme to develop an even greater range of "environmentally friendlier" inks and while I believe that the two companies can both be proud of what we have already achieved - I also believe that we have greater achievements ahead of us as we look to share a sustainable future for our industry."

"Flint Group has adopted the UN Global Compact framework and a very modern Code of Conduct. Furthermore, it utilises the Dow Jones Sustainability Index to report on its progress in an annual Sustainability Report. This combination of Flint Group's own mission and guiding principles, adopted by all employees and aligned to the world's leading sustainability models, ensures that we 'not only do what we say, but say what we do'."



# INPUT/OUTPUT FOR 2012

## ALL EUROPEAN OPERATIONS

### INPUT

Wood and fibre		
Wood <sup>(1)</sup>	4,690	kTonnes ar
Market virgin pulp	104	kTonnes ar
Other pulp	21	kTonnes ar
Recovered Paper	4,300	kTonnes ar
Paper or Board purchased	1,602	kTonnes ar
Plastic films, other plastic item (BIB)	18	kTonnes
Starch (all types)	255	kTonnes ar
Inorganic raw materials	232	kTonnes ar
Other organic raw materials	186	kTonnes ar
Energy		
Energy from fossil fuels	30,605	TJ
Energy from biofuels	5,229	TJ
Electricity from grid	1,707	GWh
Water		
Water intake <sup>(2)</sup>	90	Mm <sup>3</sup>

kTonnes ar: kiloTonnes as received

<sup>(1)</sup> wood & sawmill chips as delivered to the mill

<sup>(2)</sup> water intake includes rainwater and waste water from another organisation

### OUTPUT

Production		
Papers (All grades)	4,671	kTonnes
Corrugated Packaging *	4,490	kTonnes
Board and laminated Boards *	869	kTonnes
Converted Board *	312	kTonnes
Sacks	-	kTonnes
Other packaging	17	kTonnes
Direct emissions to air		
CO <sub>2</sub> fossil	1,827	kTonnes
CO <sub>2</sub> biogenic	3,169	kTonnes
Dust from fuels	0.4	kTonnes
SO <sub>x</sub> from processes	0.6	kTonnes
NO <sub>x</sub> from processes	3.8	kTonnes
Energy output		
Electricity to third party	305	GWh
Thermal energy to third party	226	TJ
Biomass sold	2,040	TJ
Wastes		
Hazardous wastes	10	kTonnes
Non Hazardous Wastes sent to landfill	248	kTonnes
Non Hazardous wastes recovered	292	kTonnes
Other Non Hazardous wastes	29	kTonnes
Discharges to water		
Water released	82	Mm <sup>3</sup>
COD	21	kTonnes
BOD	7.6	kTonnes
Total Suspended Solids	3.7	kTonnes
N	0.5	kTonnes
P	0.07	kTonnes

\* partly produced with Smurfit Kappa paper or board

The table reports total energy consumption of the site, taking into account the fuels used to produce electricity and/or thermal energy sold externally. This results in different figures for these parameters compared to those on pages 78 to 83. The latter pages show the energy consumption for the production of the paper or board manufactured.

# INPUT/OUTPUT FOR 2012

## ALL LATIN AMERICAN OPERATIONS

### INPUT

Wood and fibre		
Wood <sup>(1)</sup>	1,000	kTonnes ar
Market virgin pulp	4.9	kTonnes ar
Other pulp	-	kTonnes ar
Recovered Paper	856	kTonnes ar
Paper or Board purchased	231	kTonnes ar
Plastic films, other plastic item (BIB)	1.9	kTonnes
Starch (all types)	27	kTonnes ar
Inorganic raw materials	94	kTonnes ar
Other organic raw materials	39	kTonnes ar
Energy		
Energy from fossil fuels	14,832	TJ
Energy from biofuels	-	TJ
Electricity from grid	554	GWh
Water		
Water intake <sup>(2)</sup>	36	Mm <sup>3</sup>

### OUTPUT

Production		
Papers (All grades)	896	kTonnes
Corrugated Packaging *	743	kTonnes
Board and laminated Boards *	168	kTonnes
Converted Board *	61	kTonnes
Sacks *	51	kTonnes
Other packaging	1.9	kTonnes
Direct emissions to air		
CO <sub>2</sub> fossil	988	kTonnes
CO <sub>2</sub> biogenic	483	kTonnes
Dust from fuels	0.2	kTonnes
SO <sub>x</sub> from processes	2.7	kTonnes
NO <sub>x</sub> from processes	0.9	kTonnes
Energy output		
Electricity to third party	-	GWh
Thermal energy to third party	-	TJ
Biomass sold	-	TJ
Wastes		
Hazardous wastes	2.5	kTonnes
Non Hazardous Wastes sent to landfill	317	kTonnes
Non Hazardous wastes recovered	31	kTonnes
Other Non Hazardous wastes	2.4	kTonnes
Discharges to water		
Water released	32	Mm <sup>3</sup>
COD	15	kTonnes
BOD	3.9	kTonnes
Total Suspended Solids	4.0	kTonnes
N	0.2	kTonnes
P	0.02	kTonnes

kTonnes ar: kiloTonnes as received

<sup>(1)</sup> wood as delivered to the mill

<sup>(2)</sup> water intake includes rainwater and waste water from another organisation

\* partly produced with Smurfit Kappa paper or board

The table reports total energy consumption of the site, taking into account the fuels used to produce electricity and/or thermal energy sold externally. This results in different figures for these parameters compared to those on pages 78 to 83. The latter pages show the energy consumption for the production of the paper or board manufactured.

# EUROPEAN MILLS 2012

## ENVIRONMENTAL DATA

		Nettingsdorfer, Austria	Navarra, Spain	Cellulose du Pin, France	Piteå, Sweden	Morava, Czech Republic	CD Haupt, DE	Hoya, DE	Viersen, DE	Zülpich, DE	Mengibar, ES	
		bkl, tl	tl, mg paper	bkl, wtkl, wttl	wtkl, bkl	tl, fl	fl, tl, sb, wttl	fl, tl, cart	fl, tl	fl, tl	fl, tl, wttl	
<b>PRODUCTION</b>												
<b>PRODUCTION</b>	<b>kTonnes</b>	<b>434</b>	<b>105</b>	<b>394</b>	<b>658</b>	<b>60</b>	<b>316</b>	<b>395</b>	<b>75</b>	<b>470</b>	<b>202</b>	
<b>ENERGY</b>												
<b>Electricity</b>												
Co & Self Generation	GWh	155	58	322 <sup>(1)</sup>	339	-	67	91	-	172	108	
Hydro power	GWh	0.1	-	-	-	2.0	0.2	-	-	-	-	
Net Grid supply	GWh	141	80	-	249	22	31	72	23	20	-(2)	
Total electricity	GWh	296	139	322	588	24	98	163	23	192	108	
<b>Fuel usage</b>												
Biofuels	TJ	3,687	1,989	7,819	9,987	17	40	67	-	256	-	
Fossil fuels	TJ	1,106	441	449	303	319	1,567	2,218	344	3,243	1,488	
Total fuels	TJ	4,793 <sup>(3)</sup>	2,429	8,269	10,290 <sup>(3)</sup>	336	1,607	2,285	344	3,499	1,488	
<b>WATER WITHDRAWAL</b>												
Surface	Mm <sup>3</sup>	13	5.2	8.4	34	0.4	0.4	-	-	2.0	1.6	
Ground	Mm <sup>3</sup>	-	-	0.9	-	-	0.8	2.1	0.3	0.4	-	
Grid	Mm <sup>3</sup>	0.05	0.01	0.02	0.10	-	-	0.2	-	0.01	0.1	
Total water <sup>(4)</sup>	Mm <sup>3</sup>	13	5.2	9.3	34	0.4	1.2	2.3	0.3	2.4	1.7	
<b>DISCHARGES</b>												
<b>To air</b>												
CO <sub>2</sub> fossil direct	kTonnes	63	28	27	26	18	88	124	19	261	84	
CO <sub>2</sub> fossil indirect	kTonnes	23	24	-	11	11	13	31	10	8.8	-	
CO <sub>2</sub> biogenic	kTonnes	396	221	900	1,191	1.3	3.5	5.6	-	22	4.7	
Dust	Tonnes	54	20	49	277	0.15	-	0.4	-	0.4	0.2	
NO <sub>x</sub> as NO <sub>2</sub>	Tonnes	234	109	603	785	10	50	95	6.4	262	381	
SO <sub>x</sub> as NO <sub>2</sub>	Tonnes	25	28	132	91	5.3	0.2	1.4	0.3	73	12	
<b>To water</b>												
Process water	Mm <sup>3</sup>	5.3	2.8	8.8	13	0.3	0.4	1.7	0.3	-	1.4	
Cooling water	Mm <sup>3</sup>	7.1	2.2	-	21	-	0.4	0.02	-	1.3	-	
COD	Tonnes	7,076	321	4,293	2,151	39	97	334	N/A	-	229	
BOD	Tonnes	4,273	60	1,182	294	2.4	4.5	17	N/A	-	18	
Total Suspended Solids	Tonnes	457	75	593	572	4.1	2.6	-	N/A	-	90	
Total N	Tonnes	41	10	88	66	6.3	0.3	19	N/A	-	43	
Total P	Tonnes	3.4	0.6	11	16	0.3	0.2	1.2	N/A	-	2.7	
<b>Solid wastes</b>												
Total non-hazardous wastes	Tonnes	23,618	18,837	33,012	40,002	7,523	18,167	30,114	7,694	24,144	31,994	
<i>Landfill</i>	Tonnes	3,288	1,123	11,611	5,863	3,743	89	-	-	11,821	31,857	
<i>Recovery</i>	Tonnes	20,097	17,714	21,384	34,139	3,780	18,078	30,114	7,693	1,416	137	
<i>Other</i>	Tonnes	233	-	18	-	-	-	-	0.2	10,907	-	
Hazardous wastes	Tonnes	136	31	5,294	235	1.5	80	90	2.4	42	15	

bkl : brown kraftliner  
cart: carton board  
fl : recycled flute

mg : machine glazed  
sb : solid board  
tl : testliner

wtkl: white top kraftliner  
wttl : white top testliner

*water emissions in grey italics: external waste water treatment*



	Alfa D'Avignon, FR	Rethel, FR	Saillat, FR	Ania, IT	Roermond, NL	SSK, UK	Townsend Hook, UK	Baden Karton, DE	Herzberger, DE	Oude Pekela, NL	Hoogkerk, NL	Coevorden, NL	Nieuweschans, NL	Nervión, ES	Total Mills
	tl	tl	fl, tl	fl, tl	tl, fl	tl, fl	fl, tl	cart	sb	sb	sb	sb	sb	sack paper	
	<b>70</b>	<b>60</b>	<b>248</b>	<b>207</b>	<b>568</b>	<b>203</b>	<b>218</b>	<b>138</b>	<b>245</b>	<b>57</b>	<b>73</b>	<b>92</b>	<b>106</b>	<b>147</b>	<b>5,541</b>
	-	-	59 <sup>(1)</sup>	34	117	65	82 <sup>(1)</sup>	61	76	16	-	12	29	110	<b>1,974</b>
	-	-	1.5	-	-	-	-	1.7	-	-	-	-	-	-	<b>5.5</b>
	30	21	60	41	35	0.3	8.8	-(2)	10	-(2)	14	13	-(2)	81	<b>954</b>
	30	21	120	75	152	66	91	63	87	16	14	24	29	192	<b>2,933</b>
	-	15	124	12	140	50	-	-	-	-	-	-	-	2,733	<b>26,935</b>
	368	286	1,475	1,149	2,849	1,376	2,081	1,055	1,571	359	310	344	605	121	<b>25,430</b>
	368	301	1,599	1,161	2,990	1,426	2,081	1,055 <sup>(3)</sup>	1,571 <sup>(3)</sup>	359	310	344	605	2,854	<b>52,364</b>
	0.7	-	1.9	1.5	2.2	-	1.2	1.5	3.4	0.0	0.3	0.3	0.4	2.6	<b>80</b>
	-	0.5	-	-	-	0.9	0.3	-	0.0	0.2	-	0.2	-	-	<b>6.6</b>
	-	0.01	0.01	-	0.1	0.1	0.02	0.03	0.01	0.01	0.01	0.1	0.1	0.02	<b>1.0</b>
	0.7	0.5	1.9	1.5	2.3	1.0	1.5	1.5	3.5	0.2	0.3	0.6	0.4	2.6	<b>88</b>
	21	16	84	64	161	78	117	59	88	20	18	20	34	7.8	<b>1,528</b>
	2.7	1.9	5.4	16	13	0.6	4.0	-	4.5	-	5.2	4.7	-	24	<b>215</b>
	1.0	1.2	18	0.9	11	4.6	4.6	-	-	-	-	-	0.6	338	<b>3,124</b>
	0.3	0.8	-	-	-	-	-	-	0.45	-	-	-	-	41	<b>443</b>
	17	28	86	77	130	128	374	32	72	21	6.0	16	40	174	<b>3,735</b>
	11	5.3	1.5	0.5	27	1.7	70	0.5	11	0.05	0.03	0.1	2.3	91	<b>590</b>
	0.6	0.4	1.6	1.2	1.7	0.6	1.2	1.3	1.3	0.2	0.2	0.1	0.3	1.9	<b>47</b>
	-	-	-	-	-	-	-	0.1	1.9	-	-	0.3	-	-	<b>34</b>
	74	48	954	125	316	1,026	161	161	175	25	35	868	51	795	<b>19,355</b>
	10	5.1	252	9.1	10	460	7.3	10	13	0.7	1.6	379	2.2	189	<b>7,200</b>
	17	6.4	398	22	24	916	40	12	22	4.1	4.7	22	4.9	71	<b>3,358</b>
	2.7	2.6	87	23	31	23	4.4	0.8	1.8	1.1	2.0	3.8	1.7	9.5	<b>468</b>
	3.3	0.5	15	1.8	3.0	11	0.3	0.1	0.3	0.1	0.3	0.2	0.2	0.8	<b>72</b>
	4,083	5,215	23,312	22,225	37,761	23,400	35,297	12,258	19,091	5,470	2,095	4,950	7,535	82,501	<b>520,297</b>
	4,079	1,532	20,279	12,274	602	21,909	26,686	-	79	-	-	-	-	78,291	<b>235,125</b>
	4.2	3,683	3,033	9,952	37,071	1,491	8,611	311	19,012	5,470	2,095	4,950	7,407	4,169	<b>261,809</b>
	-	-	-	-	89	-	-	11,947	-	-	-	-	128	41	<b>23,363</b>
	4.7	7.2	6.8	9.0	21	37	64	231	14	8.3	3.3	20	10	65	<b>6,429</b>

(1) CHP is outsourced

N/A: not available

(2) net electricity exported by CHP

(3) part of heat exported

(4) Total water includes rainwater and waste water from another organisation

Individual cell entries have been rounded. The figures in the total column may not tally due to rounding differences.

# EUROPEAN OPERATIONS 2012

		PAPER & BOARD MILLS	INTEGRATED CORRUGATED OPERATIONS	OTHER PACKAGING OPERATIONS	OTHER OPERATIONS	TOTAL OPERATIONS
<b>PRODUCTION</b>						
	<b>kTonnes</b>	<b>5,541</b>	<b>4,234</b>	<b>586</b>	<b>1,924</b>	
<b>ENERGY</b>						
<b>Electricity</b>						
Co & Self Generation	GWh	1,974	15	-	-	<b>1,988</b>
Hydro power	GWh	5.5	-	-	-	<b>5.5</b>
Net Grid supply	GWh	954	489	81	2.8	<b>1,526</b>
Total electricity	GWh	2,933	503	81	2.8	<b>3,520</b>
<b>Fuel usage</b>						
Biofuels	TJ	26,935	138	-	-	<b>27,073</b>
Fossil fuels	TJ	25,430	4,137	201	83	<b>29,851</b>
Total fuels	TJ	52,364	4,275	201	83	<b>56,923</b>
<b>WATER WITHDRAWAL</b>						
Surface	Mm <sup>3</sup>	80	-			<b>80</b>
Ground	Mm <sup>3</sup>	6.6	0.4	0.01		<b>7.0</b>
Grid	Mm <sup>3</sup>	1.0	1.3	0.1	-	<b>2.4</b>
Total water <sup>(2)</sup>	Mm <sup>3</sup>	88	1.7	0.1	-	<b>90</b>
<b>DISCHARGES</b>						
<b>To air</b>						
CO <sub>2</sub> fossil direct	ktonnes	1,528	239	12	6.1	<b>1,785</b>
CO <sub>2</sub> fossil indirect	ktonnes	215	151	27	1.2	<b>394</b>
CO <sub>2</sub> biogenic	ktonnes	3,124	15	-	-	<b>3,139</b>
Dust	tonnes	443	4.5	0.2	0.01	<b>448</b>
NO <sub>x</sub> as NO <sub>2</sub>	tonnes	3,735	95	3.9	4.1	<b>3,837</b>
SO <sub>x</sub> as SO <sub>2</sub>	tonnes	590	53	2.8	3.8	<b>649</b>
<b>To water</b>						
Process water	Mm <sup>3</sup>	47	0.6	0.1	-	<b>47</b>
Cooling water	Mm <sup>3</sup>	34	0.1	-	-	<b>34</b>
COD <sup>(1)</sup>	tonnes	19,355	1,806	N/A	N/A	<b>21,160</b>
BOD <sup>(1)</sup>	tonnes	7,200	397	N/A	N/A	<b>7,597</b>
Total Suspended Solids <sup>(1)</sup>	tonnes	3,358	350	N/A	N/A	<b>3,708</b>
Total N <sup>(1)</sup>	tonnes	468	15	N/A	N/A	<b>483</b>
Total P <sup>(1)</sup>	tonnes	72	0.6	N/A	N/A	<b>72</b>
<b>Solid wastes</b>						
Total Non hazardous wastes	tonnes	520,297	31,347	7,467	9,982	<b>569,093</b>
<i>Landfill</i>	tonnes	235,125	9,912	1,336	1,885	<b>248,258</b>
<i>Recovery</i>	tonnes	261,809	16,683	5,698	8,009	<b>292,199</b>
<i>Other</i>	tonnes	23,363	4,753	433	88	<b>28,636</b>
Hazardous wastes	tonnes	6,429	3,310	592	1.0	<b>10,333</b>

N/A: not available

<sup>(1)</sup> sum of available data (for mills details are reported in the individual tables)

<sup>(2)</sup> Total water includes rainwater and waste water from another organisation.

*Individual cell entries have been rounded. The figures in the total column may not tally due to rounding differences.*

# LATIN AMERICAN MILLS 2012 ENVIRONMENTAL DATA

		Bernal, AR	Coronel Suarez, AR	Cali, CO	Barranquilla, CO	Barbosa, CO	Los Reyes, MX	Cerro Gordo, MX	Monterrey, MX	Caracas, VE	Valencia, VE	San Felipe, VE	Total mills
		fl, tl	fl, tl	P&W, Sack paper, cart, virgin pulp, tl, bkl, sc fl, wttl, wtkl	tl, fl	fl, wttl	fl, cart, tl, wttl	tl, cart, fl	fl, tl	tl, cart, wttl	cart	tl, sc fl, fl	
<b>PRODUCTION</b>													
	kTonnes	69	48	263	62	73	75	284	40	16	36	98	<b>1,064</b>
<b>ENERGY</b>													
<b>Electricity</b>													
Co & Self Generation	GWh	-	-	242	31	-	-	-	-	4.4	35	104	<b>416</b>
Hydro power	GWh	-	-	-	-	-	-	-	-	-	-	-	-
Net Grid supply	GWh	34	19	95	2.1	40	50	162	21	5.7	10	3.1	<b>442</b>
Total electricity	GWh	34	19	337	33	40	50	162	21	10	46	107	<b>858</b>
<b>Fuel usage</b>													
Biofuels	TJ	-	-	4,422	-	-	-	-	-	-	-	441	<b>4,864</b>
Fossil fuels	TJ	470	230	5,605	920	384	535	1,172	202	209	1,084	2,995	<b>13,804</b>
Total fuels	TJ	470 <sup>(1)</sup>	230	10,027	920	384	535	1,172 <sup>(1)</sup>	202	209 <sup>(1)</sup>	1,084	3,436	<b>18,668</b>
<b>WATER WITHDRAWAL</b>													
Surface	Mm <sup>3</sup>	0.8	-	21	1.1	0.6	-	-	-	0.5	-	-	<b>24</b>
Ground	Mm <sup>3</sup>	-	0.3	0.1	-	-	0.2	1.6	0.1	-	1.0	5.3	<b>8.5</b>
Grid	Mm <sup>3</sup>	-	-	-	0.01	-	-	-	0.04	0.3	0.1	-	<b>0.5</b>
Total water <sup>(2)</sup>	Mm <sup>3</sup>	0.8	0.3	24	1.1	0.6	0.3	1.6	0.1	0.8	1.1	5.3	<b>36</b>
<b>DISCHARGES</b>													
<b>To air</b>													
CO <sub>2</sub> fossil direct	kTonnes	27	13	448	52	31	30	66	11	13	62	172	<b>924</b>
CO <sub>2</sub> fossil indirect	kTonnes	12	6.7	17	0.4	7	23	74	10	1.1	2.1	0.6	<b>152</b>
CO <sub>2</sub> biogenic	kTonnes	0.4	-	430	-	-	-	-	-	-	-	53	<b>483</b>
Dust	Tonnes	-	-	187	8.9	0.9	0.7	1.9	-	-	0.06	15	<b>215</b>
NO <sub>x</sub> as NO <sub>2</sub>	Tonnes	15	13	248	72	22	30	51	4.8	47	92	230	<b>825</b>
SO <sub>x</sub> as SO <sub>2</sub>	Tonnes	2.0	0.3	2,582	1.3	109	0.05	0.6	0.02	1.0	17	6.0	<b>2,718</b>
<b>To water</b>													
Process water	Mm <sup>3</sup>	0.7	0.2	24	1.0	0.3	0.2	0.7	0.06	0.8	0.6	3.5	<b>32</b>
Cooling water	Mm <sup>3</sup>	-	-	-	-	-	-	-	-	-	-	-	-
COD	Tonnes	272	53	7,197	2,058	1,541	32	165	59	1,246	170	1,610	<b>14,404</b>
BOD	Tonnes	117	8.5	1,276	1,027	606	2.3	8.1	15	589	32	145	<b>3,825</b>
Total Suspended Solids	Tonnes	59	5.8	2,168	657	95	2.4	21	19	724	50	228	<b>4,029</b>
Total N	Tonnes	4.8	1.6	166	11	3.7	1.0	4.2	3.1	12	3.2	15	<b>226</b>
Total P	Tonnes	0.5	0.1	11	0.2	0.2	0.4	2.5	0.2	1.3	0.4	1.5	<b>18</b>
<b>Solid wastes</b>													
Total non-hazardous wastes	Tonnes	6,462	6,272	218,615	2,690	6,926	1,998	44,417	6,271	853	9,103	38,124	<b>341,732</b>
<i>Landfill</i>	Tonnes	6,348	6,272	216,694	2,616	5,398	1,888	19,162	5,966	816	8,943	37,987	<b>312,091</b>
<i>Recovery</i>	Tonnes	112	-	1,406	72	1,521	111	25,255	305	37	159	137	<b>29,116</b>
<i>Other</i>	Tonnes	1.9	-	515	1.5	6.7	-	-	-	-	-	-	<b>525</b>
Hazardous wastes	Tonnes	12	4.4	208	19	6.5	8.3	39	6.6	1.3	15	985	<b>1,304</b>

bkl : brown kraftliner  
cart: carton board  
fl : recycled flute

P&W : printing and writing grade  
sc fl : semi-chemical flute  
tl : testliner

virgin pulp: virgin pulp sold externally  
wtkl : white top kraftliner  
wttl : white top testliner

Individual cell entries have been rounded. The figures in the total column may not tally due to rounding differences.

<sup>(1)</sup> part of heat exported

<sup>(2)</sup> Total water includes rainwater and waste water from another organisation.



# LATIN AMERICAN OPERATIONS 2012

		PAPER & BOARD MILLS	OTHER OPERATIONS	TOTAL OPERATIONS
<b>PRODUCTION</b>				
	<b>kTonnes</b>	<b>1,064</b>	<b>2,434</b>	
<b>ENERGY</b>				
<b>Electricity</b>				
Co & Self Generation	GWh	416	-	<b>416</b>
Hydro power	GWh	-	-	-
Net Grid supply	GWh	442	113	<b>554</b>
Total electricity	GWh	858	113	<b>971</b>
<b>Fuel usage</b>				
Biofuels	TJ	4,864	-	<b>4,864</b>
Fossil fuels	TJ	13,804	1,028	<b>14,832</b>
Total fuels	TJ	18,668	1,028	<b>19,696</b>
<b>WATER WITHDRAWAL</b>				
Surface	Mm <sup>3</sup>	24	0.05	<b>24</b>
Ground	Mm <sup>3</sup>	8.5	0.3	<b>8.8</b>
Grid	Mm <sup>3</sup>	0.5	0.2	<b>0.7</b>
Total water <sup>(1)</sup>	Mm <sup>3</sup>	36	0.6	<b>36</b>
<b>DISCHARGES</b>				
<b>To air</b>				
CO <sub>2</sub> fossil direct	ktonnes	924	64	<b>988</b>
CO <sub>2</sub> fossil indirect	ktonnes	152	38	<b>191</b>
CO <sub>2</sub> biogenic	ktonnes	483	-	<b>483</b>
Dust	tonnes	215	1.8	<b>217</b>
NO <sub>x</sub> as NO <sub>2</sub>	tonnes	825	26	<b>851</b>
SO <sub>x</sub> as SO <sub>2</sub>	tonnes	2,718	27	<b>2,745</b>
<b>To water</b>				
Process water	Mm <sup>3</sup>	32	0.1	<b>32</b>
Cooling water	Mm <sup>3</sup>	-	0.01	<b>0.01</b>
COD	tonnes	14,404	100	<b>14,504</b>
BOD	tonnes	3,825	51	<b>3,876</b>
Total Suspended Solids	tonnes	4,029	15	<b>4,044</b>
Total N	tonnes	226	2.4	<b>228</b>
Total P	tonnes	18	0.4	<b>19</b>
<b>Solid wastes</b>				
Total Non hazardous wastes	tonnes	341,732	8,258	<b>349,991</b>
<i>Landfill</i>	tonnes	312,091	4,997	<b>317,088</b>
<i>Recovery</i>	tonnes	29,116	1,397	<b>30,513</b>
<i>Other</i>	tonnes	525	1,865	<b>2,390</b>
Hazardous wastes	tonnes	1,304	1,176	<b>2,480</b>

Individual cell entries have been rounded. The figures in the total column may not tally due to rounding differences.

<sup>(1)</sup> Total water includes rainwater and waste water from another organisation.

# TOTAL GROUP OPERATIONS

		All operations			
		2012	2011	2010	2009
<b>ENERGY</b>					
<b>Electricity</b>					
Co & self Generation	GWh	<b>2,405</b>	2,401	2,250	2,169
Hydro power	GWh	<b>5.5</b>	5.5	8.3	11
Net Grid supply	GWh	<b>2,081</b>	2,049	2,321	2,446
Total electricity	GWh	<b>4,491</b>	4,456	4,580	4,626
<b>Fuel usage</b>					
Biofuels	TJ	<b>31,936</b>	33,102	32,769	29,391
Fossil fuels	TJ	<b>44,683</b>	46,046	46,628	47,134
Total fuels	TJ	<b>76,619</b>	79,149	79,397	76,525
<b>WATER WITHDRAWAL</b>					
Surface	Mm <sup>3</sup>	<b>104</b>	103	109	121
Ground	Mm <sup>3</sup>	<b>16</b>	15	15	16
Grid	Mm <sup>3</sup>	<b>3.1</b>	3.0	3.2	3.8
Total water <sup>(3)</sup>	Mm <sup>3</sup>	<b>126</b>	122	127	141
<b>DISCHARGES</b>					
<b>To air</b>					
CO <sub>2</sub> fossil direct	kTonnes	<b>2,773</b>	2,851	2,861	2,917
CO <sub>2</sub> fossil indirect	kTonnes	<b>584</b>	568	658	658
CO <sub>2</sub> biogenic	kTonnes	<b>3,622</b>	3,606	3,517	3,100
Dust	Tonnes	<b>665</b>	699	772	1,004
NO <sub>x</sub> as NO <sub>2</sub>	Tonnes	<b>4,688</b>	4,767	5,595	6,566
SO <sub>x</sub> as SO <sub>2</sub>	Tonnes	<b>3,395</b>	3,893	3,691	3,832
<b>To water</b>					
Process water	Mm <sup>3</sup>	<b>79</b>	78	82	96
Cooling water	Mm <sup>3</sup>	<b>34</b>	32	33	32
COD <sup>(1)</sup>	Tonnes	<b>35,665</b>	36,278	35,024	38,961
BOD <sup>(1)(2)</sup>	Tonnes	<b>11,473</b>	11,638	11,404	11,875
Total Suspended Solids <sup>(1)</sup>	Tonnes	<b>7,752</b>	8,504	8,033	8,384
Total N <sup>(1)</sup>	Tonnes	<b>711</b>	643	653	420
Total P <sup>(1)</sup>	Tonnes	<b>91</b>	97	109	86
<b>Solid wastes</b>					
Total Non hazardous wastes	Tonnes	<b>919,084</b>	906,389	888,775	918,692
<i>Landfill</i>	Tonnes	<b>565,345</b>	525,854	453,239	453,498
<i>Recovery</i>	Tonnes	<b>322,712</b>	329,880	377,493	337,529
<i>Other</i>	Tonnes	<b>31,026</b>	50,655	58,043	127,666
Hazardous wastes	Tonnes	<b>12,813</b>	10,717	12,448	10,289

<sup>(1)</sup> sum of available data (for mills details are reported in the individual tables)

<sup>(2)</sup> Nettingsdorfer BOD's values from years 2011, 2010 and 2009 have been adjusted, with the accurate ratio COD/BOD measured in 2012.

<sup>(3)</sup> Total water includes rainwater and waste water from another organisation.

# MANAGEMENT SYSTEMS CERTIFICATION

## FORESTRY

### Latin America

		Forest Management
CO	Colombia Forest	<b>FSC</b>
VE	Venezuela Forest	

## WOOD SOURCING

### Europe

		Chain of Custody
ES	Central Forestal	<b>PEFC &amp; FSC</b>
FR	Comptoir Du Pin Aquitaine	<b>PEFC &amp; FSC</b>

## EXTERNAL PAPER SOURCING

### Europe

		Chain of Custody
European Paper Sourcing (EPS)		<b>PEFC &amp; FSC</b>

## EUROPEAN MILLS

### Virgin mills

		Quality Management System <b>ISO 9001</b>	Environmental Management System <b>ISO 14001</b>	Health and Safety System <b>OHSAS 18001</b>	Chain of Custody
AT	Nettingsdorfer	•	•		<b>PEFC &amp; FSC</b>
ES	Navarra	•	•		<b>PEFC &amp; FSC</b>
	Nervión	•	•		<b>PEFC &amp; FSC</b>
FR	Cellulose du Pin	•	•	•	<b>PEFC &amp; FSC</b>
SE	Piteå	•	•		<b>PEFC &amp; FSC</b>

### Recycled mills

CZ	Morava	•	•	•	<b>PEFC &amp; FSC</b>
DE	Baden Karton	•	•	•	<b>PEFC &amp; FSC</b>
	CD Haupt	•	•	•	<b>PEFC &amp; FSC</b>
	Herzberger	•	•	•	<b>FSC</b>
	Hoya	•	•	•	<b>PEFC &amp; FSC</b>
	Viersen	•	•	•	<b>PEFC &amp; FSC</b>
	Zülpich	•	•	•	<b>PEFC &amp; FSC</b>
ES	Mengibar	•	•		<b>PEFC &amp; FSC</b>
FR	Alfa d'Avignon	•	•		<b>PEFC &amp; FSC</b>
	Rethel	•	•		<b>PEFC &amp; FSC</b>
	Saillat	•	•	•	<b>PEFC &amp; FSC</b>
IT	Ania	•	•		<b>PEFC &amp; FSC</b>
NL	SBM Coevorden	•	•	•	<b>PEFC &amp; FSC</b>
	SBM Hoogkerk	•	•	•	<b>PEFC &amp; FSC</b>
	SBM Nieuweschans	•	•	•	<b>PEFC &amp; FSC</b>
	SBM Oude Pekela	•	•	•	<b>PEFC &amp; FSC</b>
	Roermond	•	•	•	<b>PEFC &amp; FSC</b>
UK	SSK	•	•	•	<b>PEFC &amp; FSC</b>
	Townsend Hook	•	•	•	<b>PEFC &amp; FSC</b>

## LATIN AMERICAN MILLS

### Virgin mills

CO	Cali		•		<b>FSC</b>
VE	San Felipe				

### Recycled mills

AR	Bernal				
	Coronel Suarez				
CO	Barbosa		•		<b>FSC</b>
	Barranquilla		•		<b>FSC</b>
MX	Cerro Gordo	•	•		<b>FSC</b>
	Los Reyes	•	•		<b>FSC</b>
	Monterrey	•	•		<b>FSC</b>
VE	Caracas				
	Valencia			Feb 2013	



# ABOUT THE REPORT

The information in this report covers all the international activities of the Smurfit Kappa Group for the calendar year 2012 and also includes some information for early 2013 when mentioned specifically. Data included are for the year 2012 only.

The report describes Smurfit Kappa's vision and activities on sustainability in the environmental, economic and social areas.

At the end of 2012 our operations included 348 facilities in 32 countries in Europe and the Americas. This includes a small number of joint ventures and minority holdings, none of which is material. Information from all those operations is included in this report except for Smurfit Kappa Orange County (see below). For this company data are only included when specifically mentioned in the relevant section of the report.

## Acquisitions and Divestitures 2012

In January 2012 Smurfit Kappa acquired Baguin, a bag-in-box packaging solutions company in Buenos Aires, Argentina. For 2012, only environmental data of this company are included in this report. In December 2012, we acquired Orange County Container Group, a corrugated and containerboard manufacturer with operations in northern Mexico and the southern United States. This company was then renamed Smurfit Kappa Orange County ("SKOC"). There were no divestitures in 2012. Apart from the acquisitions mentioned, no significant changes in the scope, boundary and measurement methods were applied to the report compared to previous years.

## Topics, issues and targets

Smurfit Kappa fully recognises that sustainable development embraces social and business subjects as well as environmental topics. These subjects and topics have been selected on the basis of input from the various stakeholder groups. Smurfit Kappa collected data from all its manufacturing operations that were operational at the end of 2012 with exception of the SKOC as mentioned above.

When quantified performance or targets are mentioned in this report, they are related to production levels. Other information is reported in absolute figures, unless otherwise stated.

## Reporting guidelines, data collection

Among the various references used for the development and identification of baseline data included in this report are the G3.1 Sustainability Reporting Guidelines issued by the Global Reporting Initiative (GRI), an independent institution whose mission is to provide a trusted and credible framework for sustainability reporting. Smurfit Kappa applied the GRI at an A+ level.

Every effort has been made to provide data that is as accurate as possible. Data relating to environmental matters are gathered through a Group-wide IT based

reporting system implemented in all operations of Smurfit Kappa.

This tool is integrated into the Group's intranet, enabling sites to report their environmental data online according to the GRI guidelines. As the information is stored centrally, this allows for easier and faster processing.

We make continuous effort to introduce new functionality to allow the individual operations to compare their performance with the previous reporting periods, to extract data for further and individual processing of their own data, and to alert them where significant deviation occurs. Reporting procedures have been revised and further strengthened during 2012.

In 2012, we developed specific protocols for reporting energy and air emissions data for certain paper and board mills. Our intention is to develop such protocols for all other paper and board mills in the next two years. Intention is to develop protocols not only for energy data but for the reporting of all environmental indicators, contributing to our objective to ensure continuous consistency of reported data across our global operational system.

For the most part, data is based on measured or metered quantities, or on best estimates based on industry knowledge and established calculation factors. CO<sub>2</sub> emission calculations have been based on established fuel consumption and specific CO<sub>2</sub> emission factors. Definitions and calculations for the performance indicators can be found in the glossary on pages 94 to 96.

We are making on-going efforts to further standardise the data gathering system in Smurfit Kappa to improve data quality and consistency in the use of Group definitions and scope requirements of our key indicators.

We requested an external assurance provider, KPMG, to provide limited assurance on the data and the text of the report. The assurance report of KPMG can be found on page 93.

# RELATIONSHIP TO GRI GUIDELINES

The Global Reporting Initiative (GRI) is a large worldwide network of experts whose mission is to provide global standards for sustainability reporting.

The GRI network has developed a Sustainability Reporting Framework, the core of which is the Sustainability Reporting Guidelines. The Guidelines consist of principles for defining report content and ensuring the quality of reported information as well as standard disclosures comprising performance indicators and other disclosure items. These guidelines provide an internationally recognised framework for voluntary reporting on an organisation's economic, environmental and social performance.

The index below has been prepared using the current GRI Sustainability Reporting Guidelines (version G3.1) and it provides a list of the GRI indicators reported by Smurfit Kappa for 2012. All core Indicators have been addressed and are included in the table. The index refers to information in our 2012 Sustainable Development Report (SDR), our 2012 Annual Report (AR), our website: [www.smurfitkappa.com](http://www.smurfitkappa.com) and the Carbon Disclosure Project website.

We declare that our 2012 reporting applies to a GRI "A+" application level. An "A" application level requires reporting on a specified range of criteria, on the management approach to disclosures for each indicator category and a response on each core G3 indicator. We have sought assurance from an external party which expands the application level to "A+".

GRI-G3.1	DESCRIPTION	LEVEL OF REPORTING	SOURCE/COMMENT	PAGE(S)
<b>Profile</b>				
1.1	CEO Statement on relevance of sustainability to the organisation and its strategy	Full	SDR	6-7
1.2	Description of key impacts, risks and opportunities	Full	SDR	17-19
<b>Organisational Profile</b>				
2.1	Name of the organisation	Full	SDR	Cover
2.2	Primary brands, products, and/or services	Full	AR	3-5
2.3	Operational structure of the organisation	Full	Website	
2.4	Location of organisation's headquarters	Full	SDR	Inside back cover
2.5	Countries where the organisation operates	Full	AR	3-5
2.6	Nature of ownership and legal form	Full	AR	114-115, 117
2.7	Markets served	Full	Website	
2.8	Scale of the reporting organisation	Full	AR	2-5
2.9	Significant changes during the reporting period in size, structure and ownership	Full	AR	113-114
2.10	Awards received in the reporting period	Full	Website	
<b>Report Parameters</b>				
3.1	Reporting period (e.g. fiscal/calendar year) for information provided	Full	SDR	85
3.2	Date of most recent previous report (if any)	Full	SDR	6
3.3	Reporting cycle (annual, biennial, etc.)	Full	SDR	6
3.4	Contact point for questions regarding the report or its contents	Full	SDR	Inside back cover
3.5	Process for defining report content	Full	SDR	85
3.6	Boundary of the report	Full	SDR AR	85 3-5
3.7	Any specific limitations on the scope or boundary of the report	Full	SDR	85
3.8	Basis for reporting on joint ventures, subsidiaries, etc.	Full	SDR	85
3.9	Data measurement techniques and the bases of calculations	Full	SDR	34, 85
3.10	Explanation of effect of re-statements of information provided previously	Full	SDR	83
3.11	Significant changes in scope, boundary, or measurement methods	Full	SDR	83

GRI-G3.1	DESCRIPTION	LEVEL OF REPORTING	SOURCE/COMMENT	PAGE(S)
3.12	Table identifying the location of the Standard Disclosures in the report	Full	SDR	86-90
3.13	Policy and current practice on seeking external assurance for the report	Full	SDR	86, 93
<b>Governance, Commitments, and Engagement</b>				
4.1	Governance structure of the organisation	Full	AR	38-44
4.2	Indicate if Chair of the Board is also an executive officer	Full	AR	40
4.3	The Board members that are independent and/or non-executive members	Full	AR	38
4.4	Ways for shareholders and employees to provide recommendations or direction to the Board	Full	SDR AR	57 43
4.5	Link between compensation of Board and management with SDR performance	Full	AR	47
4.6	Processes in place for the Board to ensure conflicts of interest are avoided	Full	Website	
4.7	Process for determining the qualifications and expertise of the Board	Full	AR	39
4.8	Internally developed statements of mission or values, codes of conduct, and principles	Full	SDR AR Website	8-9 13, 38-43
4.9	Procedures of the Board for overseeing identification and management of performance	Full	AR	40
4.10	Processes for evaluating the Board's own SDR performance	Full	SDR AR	8 40
4.11	Explanation of whether and how the precautionary approach or principle is addressed by the organisation	Full	AR	43
4.12	Externally developed economic, environmental and social charters & principles	Full	SDR	8
4.13	Memberships in associations	Full	SDR	10-11
4.14	List of stakeholder groups engaged by the organisation	Full	SDR	11
4.15	Basis for identification and selection of stakeholders with whom to engage	Full	SDR	6, 10, 12
4.16	Approaches to stakeholder engagement	Full	SDR	10-12, 16
4.17	Key topics and concerns raised through stakeholder engagement	Full	SDR	10-12
<b>Economic Indicators</b>				
	Disclosure on management approach	Full	SDR AR	6, 10-12 13, 30-33, 64-73
EC1	Direct economic value generated and distributed	Full	AR	74-76
EC2	Financial implications and other risks and opportunities for the organisation's activities due to climate change	Full	CDP 2012 Investor	Section 5
EC3	Coverage of the organisation's defined benefit plan obligations	Full	AR	70, 72, 93-97
EC4	Significant financial assistance received from government	Full	AR	58, 69
EC6	Policy, practices and proportion of spending on locally-based suppliers at significant locations of operation	Full	SDR	11,70
EC7	Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation.	Full	SDR	53
EC8	Development and infrastructure provided primarily for public benefit	Full	SDR Other than local community involvement, no engagement by Smurfit Kappa	59-64
<b>Environmental Indicators</b>				
	Disclosure on management approach	Full	SDR	8, 15-16, 85
EN1	Materials used by weight or volume	Full	SDR	76-77
EN2	Percentage of materials used that are recycled input materials	Full	SDR	28
EN3	Direct energy consumption by primary energy source	Full	SDR	34-35, 76-83
EN4	Indirect energy consumption by primary source	Full	SDR	35, 76-83
EN5	Energy saved due to conservation and efficiency improvements	Full	SDR	34, 38
EN6	Energy-efficient or renewable energy products and services	Full	SDR	33-36, 38
EN8	Total water withdrawal by source	Full	SDR	41, 76-83
EN10	Percentage and total volume of water recycled and reused	Full	SDR	40, 76-83



GRI-G3.1	DESCRIPTION	LEVEL OF REPORTING	SOURCE/COMMENT	PAGE(S)
EN11	Location and size of land by protected areas and areas of high biodiversity value	Full	SDR Website	29-30
EN12	Description of significant impacts of activities, products and services on biodiversity	Full	SDR	30-33
EN16	Total direct and indirect greenhouse gas emissions by weight	Full	SDR	35, 76-83
EN17	Other relevant indirect greenhouse gas emissions by weight	Full	SDR	40, 76-83
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved	Full	SDR	36
EN19	Emissions of ozone-depleting substances by weight	Full	We do not add any ozone-depleting substances (ODS), that have been regulated following the Montreal Protocol, to our products during our manufacturing processes. Consequently, our products do not emit any ODS during their life cycle.	
EN20	NO <sub>x</sub> , SO <sub>x</sub> and other significant air emissions by type and weight	Full	SDR	76-83
EN21	Total water discharge by quality and destination	Full	SDR	40-42, 76-83
EN22	Total weight of waste by type and disposal method	Full	SDR	76-83
EN23	Total number and volume of significant spills	Full	SDR One significant spill occurred at Cellulose du Pin	41
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation	Full	SDR	15-16, 26-43
EN27	Percentage of products sold and their packaging materials that are reclaimed by category	Full	SDR	26
EN28	Significant fines and non-monetary sanctions for non-compliance with environmental law	Full	SDR	9
EN29	Significant environmental impact from transport	Full	SDR	40
<b>Labour Practice Indicators</b>				
	Disclosure on management approach	Full	SDR	12, 44-58
LA1	Total workforce by employment type and region	Full	SDR	52-54
LA2	Total number and rate of employee turnover by age group, gender, and region	Full	SDR	54
LA3	Benefits provided to full-time employees	Full	SDR	52
LA4	Percentage of employees covered by collective bargaining agreements	Full	SDR	52
LA5	Minimum notice period(s) regarding significant operational changes	Full	SDR	57
LA7	Rates of injury, occupational diseases, lost days and absenteeism, and number of work-related fatalities by region	Full	SDR	47-48
LA8	Education, training, counselling, prevention and risk-control programmes in place to assist workforce members, their families or community members regarding serious diseases	Full	SDR	46
LA10	Average hours of training per year per employee by employee category	Full	SDR	54
LA11	Programmes for skills management and lifelong learning	Full	SDR	54-57
LA12	Employees receiving performance and career development reviews	Full	SDR	55
LA13	Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity	Full	AR SDR	38-39 52-54
LA14	Ratio of basic salary of men to women by employee category	Full	SDR Same job, same pay	52
LA15	Return to work and retention rates after parental leave, by gender (partial reporting)	Partial	SDR Detailed information not currently available	53
<b>Human Rights Indicators</b>				
	Disclosure on management approach	Full	SDR	12, 52
HR1	Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening	Full	SDR	57-58

GRI-G3.1	DESCRIPTION	LEVEL OF REPORTING	SOURCE/COMMENT	PAGE(S)
<b>HR2</b>	Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken	Full	SDR No formal assessments in place. Our Code of Business Conduct provides the principles to operate for all our operations globally. Our Code of Business Conduct is based on international conventions and codes such as The UN Declaration of Fundamental Human Rights and the ILO Declaration on Fundamental Principles and Rights at work (core conventions). Approximately 15% of our production volume originates from countries considered high or extreme risk (according to the Maplecroft Human Rights Risk Index 2013). Also for countries with high or extreme risk, our Code of Business Conduct is basis for doing business. Therefore, we consider the risk that our operations in those and other countries violate human rights as low.	58
<b>HR3</b>	Total hours training on policies and procedures concerning human rights	Not reported	We have no such training programmes. Employees are made aware of relevant policies through awareness programmes regarding Code of Business Conduct.	
<b>HR4</b>	Total number of incidents of discrimination and actions taken	Full	SDR Website	52
<b>HR5</b>	Operations and significant suppliers identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and actions taken to support these rights	Full	SDR	52
<b>HR6</b>	Operations with significant risk for incidents of child labour, and measures taken to eliminate	Full	SDR	52
<b>HR7</b>	Operations with significant risk of forced or compulsory labour, and measures to eliminate	Full	SDR	52
<b>HR8</b>	Percentage of security personnel trained in the organisation's policies or procedures concerning aspects of human rights that are relevant to operations	Not reported	Not applicable	
<b>HR9</b>	Incidents of violations involving rights of indigenous people and actions taken	Full	see comment under HR2	
<b>HR10</b>	Percentage and number of operations subject to human rights reviews	Full	see comment under HR2	
<b>HR11</b>	Number of grievances related to human rights addressed and resolved	Full	No such grievances were reported to Group and there were no such reports to local operations either.	
<b>Social</b>				
	Disclosure on management approach	Full	SDR	12, 59
<b>S01</b>	Percentage of operations with implemented local community engagement, impact assessments, and development programmes.	Partial	SDR	59-65
<b>S02</b>	Percentage and total number of business units analysed for risks related to corruption	Partial	SDR	8-9
<b>S03</b>	Percentage of employees trained in organisation's anti-corruption policies and procedures	Full	SDR	8-9
<b>S04</b>	Actions taken in response to incidents of corruption	Full	SDR	8-9
<b>S05</b>	Public policy positions and participation in public policy development and lobbying	Full	SDR	8-9
<b>S06</b>	Total value of financial and in-kind contributions to political parties, politicians and related institutions by country	Full	SDR	8-9
<b>S07</b>	Total number of legal actions for anti-competitive behaviour, anti-trust and monopoly practices and their outcomes	Full	SDR	8-9
<b>S08</b>	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	Full	SDR	8-9

GRI-G3.1	DESCRIPTION	LEVEL OF REPORTING	SOURCE/COMMENT	PAGE(S)
<b>SO9</b>	Operations with significant potential or actual negative impact on local communities	Full	In general, we recognise that our operations are of economic significance for the local communities in which they are located. It is our policy to be actively involved socially in our host communities. Environmentally, our paper and board mills may pose a risk of effluent leakages which, if they occur, may temporarily affect local water streams with increased COD/BOD or TSS levels. Our operations do not pose a significant risk of emissions to air of substances that may affect human health. Our operations do not pose a risk to their host communities regarding the use of natural resources with the possible exception of those areas where water is scarce.	
<b>SO10</b>	Prevention and mitigation measures in operations with significant potential or actual negative impact on local communities	Full	In general, by complying with local and international laws, there is no need for further prevention and/or mitigation measures with regard to potential environmental risks that could possibly impact host communities.  For the handling of the negative environmental impact of the black liquor spillage in Factice see page 41.  In those cases where a local operation discontinues its operations, any negative economic effects on its host community are mitigated by actions described on pages 80 and 81.	
<b>Product Responsibility Indicators</b>				
	Disclosure on management approach	Full	SDR	12, 71
<b>PR1</b>	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures	Full	SDR	72
<b>PR2</b>	Incidents of non-compliance with regulations and voluntary codes on Health and Safety impacts of products and services during their life cycle, by type of outcomes	Full	SDR	72
<b>PR3</b>	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements	Full	SDR	72
<b>PR4</b>	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labelling, by type of outcomes	Full	SDR	72
<b>PR5</b>	Practices related to customer satisfaction, including results of surveys that measure customer satisfaction	Full	SDR	69
<b>PR6</b>	Programmes for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship	Full	SDR	69
<b>PR7</b>	Total number of incidents of non-compliance with regulations and voluntary codes on marketing communications, including advertising, promotion and sponsorship by type of outcomes	Full	SDR	69
<b>PR8</b>	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	Full	No substantiated complaints identified	
<b>PR9</b>	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	Full	No fines and/or substantiated claims for non-compliance with laws or regulations concerning the provision and use of products and services were identified	



# BUSINESS IN THE COMMUNITY IRELAND

## EXTERNAL COMMENTARY – SMURFIT KAPPA SUSTAINABILITY DEVELOPMENT REPORT 2012

This, the sixth sustainability report published by Smurfit Kappa, is a very impressive, clear and comprehensive report.

As a company dedicated to “the sustainable supply of paper-based packaging solutions”, sustainability is not only a key business driver for Smurfit Kappa, but a platform for differentiation in the market. Through innovative packaging design and customer supply chain optimisation, Smurfit Kappa has become a key enabler in ensuring the delivery of customers’ product to consumers is optimally sustainable.

Smurfit Kappa produces both the raw material for packaging and the packing itself. A strong commitment to continuous improvement has resulted in significant strides being made on the company’s own sustainability journey.

Particularly impressive is the fact that 90% of converting operations worldwide are Chain of Custody certified under FSC or PEFC – achieved 2 years ahead of schedule. The approach to ensure complete traceability in the supply chain and continuous investment in sustainable forestry management is evidence of leadership in their sector. In addition, we wholly endorse the company’s engagement with suppliers to align their policies and objectives on sustainability with those of Smurfit Kappa.

Indeed, the value placed on stakeholder engagement as a whole stands out in this report. Practical examples are provided on how Smurfit Kappa engages on an ongoing basis with customers, employees, local communities and NGOs (regarding environmental impact). Input from all groups is drawn upon to aid the company refine the issues most material to the company.

Through the narrative and detailed data supplied, it is evident that tremendous effort is being made in all operating locations to achieve a balance of economic, social and environmental aspects. We commend the level of data disclosed on energy, water and waste management.

The example of innovation being delivered by Smurfit Kappa in Colombia, in partnership with local organisations, on biofuel, is worthy of specific mention.

The section detailing the risks and challenges regarding the issues of fibre availability, the rising cost of energy, regulation concerning CO<sub>2</sub> emissions, water and food safety, faced by both Smurfit Kappa and the paper packing industry as a whole is articulated well. Each challenge is dealt with comprehensively and following on from the disclosure of the achievements made to date, we look forward to reading in the coming months, how Smurfit Kappa is continuing in its risk management strategy.

The new Code of Business Conduct 2012 and ongoing awareness programme is likely to pay dividends too. Safety at work continues to be a priority alongside strong practices in place on employee management and development.

As in previous years, independent assurance is provided by KPMG on how Smurfit Kappa has applied the Global Reporting Initiative’s G3.1 Guidelines. Our recommendations made last year were fully taken on board with the use of graphs and ‘at a glance’ illustrations.

### Recommendations

The 2012 report is very comprehensive and perhaps somewhat repetitive in places. We suggest that Smurfit Kappa consider making greater use of the corporate website to feature the main elements of the report, divided into sections e.g. impact of Smurfit Kappa at a glance; innovative packaging design for customers; approach to risk management; engagement with stakeholders; objectives and targets for the coming year.

Further, while excellent examples of packaging design and customer supply chain optimisation are included in this report, we recommend that additional emphasis is given to these in the next iteration.

On a final note, the extent to which sustainability is integrated into the Smurfit Kappa business strategy, operations and activities suggests to us that the company is ready for the challenge of an integrated report - where financial, social & environmental data, approach and impact - is disclosed in one document. According to the GRI, “*the future of corporate reporting is the integration of financial and sustainability strategy and results.*”

In placing sustainability at the heart of Smurfit Kappa’s business strategy and in driving ongoing, continuous improvement, both in global operations and communications, a leadership opportunity is available to the Group in integrated reporting, that we warmly recommend is seized and acted upon.



**Tina Roche**  
Chief Executive  
Business in the Community Ireland



# UN GLOBAL COMPACT

Smurfit Kappa became a participant in the United Nations Global Compact, a worldwide corporate citizenship initiative, in 2010. This is now a network of more than 10,000 corporate participants and other stakeholders from over 130 countries who promote ten core principles in the areas of human rights, labour, environment and anti-corruption. These principles are listed in the table below.

As a part of this commitment, Smurfit Kappa will report on the Company's corporate responsibility activities and performance in an annual Communication on Progress (COP), using the annual Sustainable Development Report as the platform for this communication.

The Sustainable Development Report provides a number of examples of ongoing activities, as well as relevant key performance indicators, which illustrate Smurfit Kappa's

support for the ten Global Compact principles in its everyday business. Measurements of performance related to the Global Compact principles are given using indicators provided by the Global Reporting Initiative (GRI), wherever feasible. In particular, GRI performance indicators relating to human rights, labour and anti-corruption principles are presented in the Social Development section while environmental performance indicators reported in the Environment section.

A complete GRI index can be found on pages 86 to 90 of the Report.

The following table shows how our performance in relation to each UN Global Compact principle can be reported using a number of GRI performance indicators. This is based on guidance documents published by the UN Global Compact.

## UNGC principles

## GRI indicators

### Human Rights

- |   |  |                                |
|---|--|--------------------------------|
| 1 | Businesses should support and respect the protection of internationally proclaimed human rights; and | HR1-11, LA5, LA7-8, 13-15, PR8 |
| 2 | Businesses should make sure that they are not complicit in human rights abuses.                      | HR1-11                         |

### Labour

- |   |  |                      |
|---|--|----------------------|
| 3 | Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining; | LA4-5                |
| 4 | Businesses should uphold the elimination of all forms of forced and compulsory labour;                                   | HR7                  |
| 5 | Businesses should uphold the effective abolition of child labour; and  | HR6                  |
| 6 | Businesses should uphold the elimination of discrimination in respect of employment and occupation.                      | EC7, LA2, 13-15, HR4 |

### Environment

- |   |   |                           |
|---|---|---------------------------|
| 7 | Businesses are asked to support a precautionary approach to environmental challenges;               | EC2, EN18, 26             |
| 8 | Businesses should undertake initiatives to promote greater environmental responsibility; and        | EN1-29, PR3-4             |
| 9 | Businesses should encourage the development and diffusion of environmentally friendly technologies. | EN2, 5-6, 10, EN18, 26-27 |

### Anti-corruption

- |    |  |       |
|----|--|-------|
| 10 | Businesses should work against corruption in all its forms, including extortion and bribery. | SO2-4 |
|----|--|-------|



# INDEPENDENT ASSURANCE REPORT

To the readers of the Sustainable Development Report 2012 of Smurfit Kappa Group plc.

## INTRODUCTION

We were engaged by the Board of Directors of Smurfit Kappa Group plc (further: 'Smurfit Kappa') to provide assurance on the Sustainable Development Report 2012 (further: 'the Report'). The Executive Directors of Smurfit Kappa are responsible for the preparation of the Report, including the identification of material issues. Our responsibility is to issue an assurance report based on the engagement outlined below.

## SCOPE

Our assurance engagement was designed to provide limited assurance on whether the Report is presented fairly, in all material respects, in accordance with the G3.1 Guidelines of the Global Reporting Initiative.

We do not provide any assurance on the achievability of the objectives, targets and expectations of Smurfit Kappa.

Procedures performed to obtain a limited level of assurance are aimed at determining the plausibility of information and are less extensive than those for a reasonable level of assurance.

## REPORTING CRITERIA AND ASSURANCE STANDARD

Smurfit Kappa applies the Sustainability Reporting Guidelines of the Global Reporting Initiative (G3.1) as described in the section Relationship to GRI Guidelines. It is important to view the performance data in the context of these criteria.

We conducted our engagement in accordance with the International Standard on Assurance Engagements (ISAE 3000): Assurance Engagements other than Audits or Reviews of Historical Financial Information, issued by the International Auditing and Assurance Standards Board. This standard requires, amongst others, that the assurance team possesses the specific knowledge, skills and professional competencies needed to provide assurance on sustainability information and that they comply with the requirements of the Code of Ethics for Professional Accountants of the International Federation of Accountants to ensure their independence.

## WORK UNDERTAKEN

Our procedures included the following:

- A risk analysis, including a media search, to identify relevant sustainability issues for Smurfit Kappa in the reporting period;
- Evaluating the design and implementation of the systems and processes for the collection, processing and control of the information in the Report, including the consolidation of the data for the Report;
- Interviews with relevant staff at corporate level responsible for the sustainability strategy, policies, communication and management, as well as other relevant staff at corporate level responsible for providing the information for the Report;
- Visits to production sites in Wrexen and Düsseldorf (Germany), Nervión and Mengibar (Spain), Valencia (Venezuela) and Cali (Colombia) to review the source data and the design and implementation of controls procedures at local level;
- Evaluating internal and external documentation, based on sampling, to determine whether the information in the Report is supported by sufficient evidence;
- An analytical review of the data and trend explanations submitted by all production sites for consolidation at corporate level.

## CONCLUSION

Based on the procedures performed, as described above, nothing has come to our attention to indicate that the Report is not fairly presented, in all material respects, in accordance with the G3.1 Guidelines of the Global Reporting Initiative.

Amstelveen, 21 June, 2013

KPMG Sustainability,  
part of KPMG Advisory N.V.

Wim Bartels, Partner



# GLOSSARY

<b>BOD</b>	Biochemical Oxygen Demand (one element of the COD, unit: mg O <sub>2</sub> /litre) refers to the level of oxygen uptake by micro-organisms in a sample of water measured over a period of five days.
<b>Biodiversity</b>	General term to describe the variety of life forms (flora and fauna) in an ecosystem.
<b>Biofuels</b>	Fuels coming from biomass (wood rejects, bark, black liquor produced during the production of virgin pulps, pitch oil, biomass part of mixed wastes and biogas produced during the anaerobic treatment of water).
<b>Black liquor</b>	Residue from pulping that contains organic compounds (like lignin). This residue is burnt in paper mills to produce energy.
<b>CDP</b>	The Carbon Disclosure Project is an independent not-for-profit organisation holding the largest database of primary corporate climate change information in the world.
<b>CEN</b>	Comité Européen de Normalisation. The European Committee for Standardisation is major provider of European standards and technical specifications.
<b>CEPI</b>	CEPI, the Confederation of European Paper Industries. It is a non-profit organisation representing the European pulp and paper industry.
<b>Certified wood product</b>	Certification is given to companies and landowners to verify that their forestry practices are consistent with requirements laid down in these standards. Only certified wood product might carry a label. The label on wood products guarantees that consumers can trust the sources. Actual certification is carried out by independent certification organisations that are accredited by FSC or PEFC or SFI to carry out.
<b>CHP</b>	Combined Heat and Power: a combination of a boiler and a gas and/or steam turbine that simultaneously produces electricity and thermal energy (steam) by burning fuels. This system is considered to be the most efficient technology in industries using both steam and electricity. When mills sell part of their produced steam to an external party or have net electricity export (selling more to an external party than purchasing), the consumption of fuel and emissions reported for this mill is adjusted to report only that part used to produce paper. This adjustment is based on a reference heat boiler with an efficiency of 90%, which is also used by CEPI and the European Commission for EU ETS benchmark calculations.
<b>CHP (outsourced)</b>	A CHP installation, belonging to an external party, located at or near a Smurfit Kappa site for delivering electricity and steam to the Smurfit Kappa production facility. All fuels and electricity used for the production of paper as well as emissions related to that are included in the figures for the Smurfit Kappa production facility.
<b>COD</b>	Chemical Oxygen Demand is the most commonly used test to measure the amount of organic compounds in water (unit: mg O <sub>2</sub> /litre). The result indicates the level of all organic compounds that can be oxidised by a strong oxidising agent.
<b>CoC</b>	Chain of Custody Certification applying to wood/fibre material and products. Chain of Custody is an information trail about the path taken by products from the forest or, in the case of recycled materials, from the reclamation site to the consumer including each stage of processing, transformation, manufacturing, and distribution where progress to the next stage of the supply chain involves a change of ownership.
<b>Co-generation</b>	Electricity generated by a CHP system belonging to our organisation or from a CHP outsourced.
<b>Containerboard</b>	Papers and boards mainly used in the manufacture of corrugated board. They are made from virgin or recovered fibres. Included are kraftliner, testliner, semi-chemical fluting and recycled fluting.
<b>Corrugated board</b>	Structured board made by a corrugator usually formed by gluing one wave formed liner (called fluting) in the middle to two flat-facing sheets of containerboard (kraftliner or testliner) outside.
<b>CO<sub>2</sub> biogenic</b>	Carbon dioxide emitted when burning biofuels. This CO <sub>2</sub> is considered to be carbon neutral as it is removed from the atmosphere and stored in biomass within a short period of time.
<b>CO<sub>2</sub> fossil</b>	Carbon dioxide emitted when burning fossil fuels for the production of paper. The calculation is made according to international guidelines from the carbon content of each fuel (WR/WBSCD GHG protocol).
<b>CO<sub>2</sub> indirect</b>	Fossil carbon dioxide generated, externally to the site, to produce the electricity purchased from the grid by the company. Source: International Energy Agency Data Services. 2009: "CO <sub>2</sub> emissions from fuel combustion (2009 Edition)".
<b>Carbon dioxide equivalent CO<sub>2</sub>-eq</b>	A metric measure used to compare the emissions from various greenhouse gases based upon their climate change potential (CCP). The CO <sub>2</sub> -eq carbon dioxide equivalent for other emissions is derived by multiplying the amount of the emission by the associated CCP factor.
<b>CSR</b>	Corporate Social Responsibility: a concept whereby organisations consider the interests of society by taking responsibility for the impact of their activities on customers, suppliers, employees, shareholders, communities and the environment in all aspects of their operations.
<b>Dust</b>	Particles coming from the combustion of fuels. Dust emissions are measured mainly by the mills. Where dust is not measured (converting plants), emissions are calculated from fuel consumption using the emission factors listed in the Ecoinvent database version 2.1.
<b>EBITDA</b>	Earnings before interest, taxes, depreciation and amortisation.
<b>ELCD</b>	European Reference Life Cycle Database. The ELCD has been developed within the "European Platform on Life Cycle Assessment" that is a project of the European Commission, carried out by the Commission's Joint Research Centre, Institute for Environment and Sustainability (JRC-IES).

<b>Environmental Management System</b>	A set of processes and practices that enable an organisation to reduce its environmental impact and increase its operating efficiency.
<b>Emissions Trading Scheme</b>	A scheme calculated to allocate greenhouse gas allowances for a list of specific activities.
<b>Fluting</b>	The wavy formed middle layer in corrugated board.
<b>Fossil fuels</b>	Fuels originating from natural resources (gas, oil, coal, peat and lignite).
<b>FSC</b>	The Forestry Stewardship Council is an independent, non-governmental, organisation established to promote the responsible management of the world's forests through independent third party certification.
<b>Gigajoule</b>	Unit of energy that generally applies to fuel. 1 gigajoule (GJ) = one billion joules = $10^9$ joules.
<b>GRI</b>	The GRI (Global Reporting Initiative) reporting framework is the generally accepted framework for reporting on an organisation's economic, environmental and social performance. The sustainability reporting guidelines give the reporting principles, and the list of performance indicators, for each of the three key areas that should be disclosed in a sustainability report.
<b>Grid supply</b>	Electricity purchased from a national distribution network.
<b>GWh</b>	Unit of energy, generally applies to electricity – 1 GWh (GigaWatt hour) = 1 Million KWh (KiloWatt hour).
<b>Hectare</b>	A unit of area. One hectare (Ha) = 10,000 m <sup>2</sup> . One hectare = 2.471 acres.
<b>ILO</b>	International Labour Organisation.
<b>Inorganic raw materials</b>	Raw material used for manufacturing our products that are not organic such as: fillers, sodium hydroxide, sodium sulphate and calcium oxide.
<b>Innotools</b>	Innotools is a unique software suite for developing fit-for-purpose packing. It comprises: Innobook, an internal library with almost 5,000 proven design solutions used extensively by designers in Smurfit Kappa; Pack Expert, an advanced statistical model used to determine the packaging performance in the customer's supply chain; and Paper-to-Box, a sophisticated software tool used to predict box performance based on board design and composition.
<b>ISO 9001</b>	Scheme certified by independent third party that ensures that the operation certified applies internationally recognised standards and procedures of quality management.
<b>ISO 14001</b>	Scheme certified by independent third party that ensures that the operation certified applies internationally recognised standards and procedures of environmental management.
<b>ISO 17025</b>	This international standard lists the requirements to allow the accreditation by authorised third party of a testing laboratory and to verify its proficiency.
<b>ISO 22000</b>	This standard specifies requirements for a food safety management system where an organisation in the food chain needs to demonstrate its ability to control food safety hazards in order to ensure that food is safe at the time of human consumption.
<b>kTonne</b>	One kTonne = 1,000 tonnes, where one tonne (metric tonne) = 1,000 kilograms.
<b>Kraftliner</b>	Paper made mainly from virgin wood fibres.
<b>Mm<sup>3</sup></b>	1 million cubic metres.
<b>MJ</b>	Megajoule, a unit of energy. 1 megajoule (MJ) = 1 million joules = $10^6$ joules.
<b>MWh</b>	Unit of energy, generally applies to electricity – 1 MWh (MegaWatt hour) = 1,000 KWh (KiloWatt hour).
<b>Natura 2000</b>	Natura 2000 is an ecological network of protected areas in the territory of the European Union. In May 1992, governments of the European Union adopted legislation designed to protect the most seriously threatened habitats and species across Europe (the Habitats Directive).
<b>NGO</b>	A Non-Governmental Organisation (NGO) is a legally constituted organisation created by private persons or organisations with no participation or representation of any government.
<b>N (Nitrogen)</b>	Total Nitrogen is the sum of organic nitrogen, ammonia, NH <sub>3</sub> and ammonium, NH <sub>4</sub> <sup>+</sup> discharged with the process water.
<b>NO<sub>x</sub></b>	Mix of nitrogen oxides (NO and NO <sub>2</sub> ) calculated as NO <sub>2</sub> (nitrogen dioxide) coming from combustion of fuels. They can contribute to the acidification of soil and water. NO <sub>x</sub> emissions are measured mainly by the mills. Where NO <sub>x</sub> is not measured (converting plants), emissions are calculated from fuel consumption using the emission factors listed in the Ecoinvent database version 2.1.
<b>Non-Controversial origin</b>	Virgin wood or wood fibre which has been verified as having a low probability of including wood from any of the following categories, in line with FSC and PEFC schemes: <ul style="list-style-type: none"> <li>a) Illegally harvested wood;</li> <li>b) Wood harvested in violation of traditional and civil rights;</li> <li>c) Wood harvested in forests in which high conservation values are threatened by management activities;</li> <li>d) Wood harvested in forests being converted from natural and semi natural forest to plantations or non-forest use;</li> <li>e) Wood from forests in which genetically modified trees are planted</li> </ul>

<b>OECD</b>	Organisation for Economic Co-operation and Development.
<b>Other organic raw materials</b>	Raw materials used for manufacturing our products that are organic excluding fibres, starch or plastic raw materials which are reported individually. This category includes oil, lubricant and organic additives such as colorant or dyes.
<b>PEFC</b>	Programme for the Endorsement of Forest Certification. PEFC is an independent, non-governmental organisation which promotes sustainably managed forests through independent third party certification.
<b>P (Phosphorous)</b>	Total phosphorous is the sum of phosphorous compounds discharged with the process water.
<b>PJ</b>	Petajoule, a unit of energy. 1 petajoule = 1,000 terajoules = $10^{15}$ joules
<b>Process water</b>	Quantity of water containing organic compounds released to the environment (river, sea) after internal water treatment or released to an external treatment plant (municipal water treatment). In all cases, levels of pollutants released are reported as outputs of the company even in the case of operations that send process water to external treatment.
<b>Purchased pulp</b>	Pulp produced by third party companies and purchased by our mills to produce paper or board (the pulps are mainly bleached).
<b>REACH</b>	REACH is the Regulation for Registration, Evaluation, Authorisation and Restriction of Chemicals. REACH applies to all chemicals: not only chemicals used in industrial processes but also chemicals in articles such as paper and packaging.
<b>Recovered paper</b>	Recovered paper refers to used paper and board separately collected and classified for the purpose of recycling for use as raw material in the manufacture of new paper and paperboard.
<b>Renewable energy</b>	Energy coming from sources that are naturally renewable (e.g. biomass, hydro power).
<b>Sludge</b>	A solid waste that is produced during water treatment from biological activity (mainly aerobic stage).
<b>Sedex</b>	Sedex, the Supplier Ethical Data Exchange, is a membership not-for-profit organisation for businesses committed to continuous improvement of the ethical performance of their supply chains. Sedex focuses on four pillars: Labour Standards, Health and Safety, Environment and Business Integrity.
<b>Solid Wastes</b>	Wastes are classified as non-hazardous wastes or hazardous wastes and are reported separately. Wood wastes and corrugated board shavings are excluded. All amounts of wastes are reported in mass as disposed.
<i>Total non-hazardous wastes</i>	Sum of all solid non-hazardous wastes that are going to landfill or are recovered or comprise other wastes. Each category of non-hazardous wastes is defined and reported.
<i>Non-hazardous wastes Landfill</i>	Part of the non-hazardous wastes that are disposed of in either internal or external landfill in accordance with national legislation.
<i>Non-hazardous wastes Recovery</i>	Part of non-hazardous wastes that are reused or recycled or composted or used in agriculture or incinerated with energy recovery.
<i>Non-hazardous wastes Other</i>	Part of non-hazardous wastes that does not belong to the two previous categories. This includes wastes incinerated without energy recovery or wastes for which the final disposal is uncertain.
<i>Hazardous wastes</i>	Residues of oils and other hazardous wastes (building wastes containing asbestos, ink residues, etc.).
<b>SO<sub>x</sub></b>	Mix of sulphur oxides calculated as SO <sub>2</sub> coming from combustion of fuels. Sulphur dioxide contributes to the acidification of soil and water. SO <sub>x</sub> emissions are measured mainly by the mills. Where SO <sub>x</sub> is not measured (converting plants), emissions are calculated from fuel consumption using the emission factors listed in the Ecoinvent database version 2.1.
<b>SVHC</b>	Substances of Very High Concern are defined in Article 57 of REACH Regulation (EC) No 1907/2006 and include substances which are Carcinogenic, Mutagenic or toxic to Reproduction (CMR) or Persistent, Bioaccumulative and Toxic (PBT) or very Persistent and very Bioaccumulative (vPvB).
<b>Testliner</b>	Paper manufactured from recycled fibres.
<b>TJ</b>	Terajoule, a unit of energy that generally applies to fuel. 1 terajoule = 1,000 gigajoules = $10^{12}$ joules.
<b>Total Suspended Solids</b>	Total Suspended Solids refers to the level of small solid particles released with process water.
<b>Virgin fibre</b>	Pulp obtained through a chemical process used to remove lignin from wood. As a result, the fibre can be used to produce paper. The lignin residue and other organic compounds are subsequently collected and used in the formation of black liquor.
<b>WFN</b>	Water Footprint Network (WFN) is a non-profit international network. The mission of the WFN is to promote the sustainable, fair and efficient use of fresh water resources worldwide.



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