## Smurfit Kappa

## Smurfit Kappa



## the future

Sustainable Development Report 2013

Sustainable Development Report 2013



We're helping to open a sustainable future for everyone

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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 with application level A+.

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 have always done.

Sustainability is about satisfying customers with creative and innovative products and services that carry their products, optimise their supply chains and extend the longevity of their products.

We achieve this by 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 safeguarding our reputation.

We take our responsibilities in sustainability seriously and are conscious of our responsibilities to the environment, our people and the communities in which we are located.

## Smurfit Kappa at a Glance







11

The Americas

revenue €8bn EBITDA €1.1bn









**CUSTOMERS** 





**INVESTORS** 

€70m dividends paid







SUPPLIERS strategic and important suppliers in Europe and the Americas



LOCAL & NATIONAL GOVERNMENTS income and other taxes



103,000 Hectares forest plantations

## Our Vision on Sustainability

#### ACHIEVEMENTS



#### O, EMISSIONS

-21% reduction of relative fossil CO<sub>2</sub> emissions in our mill system reached in 2013 compared to 2005.



#### **CHAIN OF CUSTODY**

91% of all Group converting

operations certified Chain of Custody by the end of 2013.



TARGETS

## 5%

HEALTH AND SAFETY Annual reduction in the lost-time and injury rate for the next 5 years (2013-2017).

1/3

WATER Decrease COD in our mill system by ½ by 2020.

## 100,000

#### COMMUNITY

people reached in local communities by 2020 by spending at least  $\in 1m$  yearly on education of children.



SUSTAINABLE SOURCING Implement our key sustainable

sourcing principles with our suppliers.



#### WASTE

Conduct an assessment before end of 2015 to minimise (non-) hazardous waste.

## Highlights

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

The long-term target to reduce the relative fossil  $CO_2$  emissions by 20%, compared to the base year 2005, has been met, with a relative reduction in emissions of 21% achieved by the end of 2013.

#### Certifications

**Chain of Custody.** Currently, 91% of all Group converting operations are certified Chain of Custody, which exceeds the Group's long-term commitment to reach at least 90% by 2015.

**Certified Packaging.** Close to 90% of our packaging produced in Europe can be declared as certified Chain of Custody. Once the expected certification of our Venezuelan operations is completed by the end of 2014 the same will be true for our products from the Americas.

#### **ISO** Certifications

- Our paper mills in Argentina, Bernal and Coronel Suarez and our paper mill in Valencia in Venezuela obtained their ISO 14001 certifications in environmental management in 2013.
- Five of our paper and board mills in Germany and the Netherlands (Baden Karton, Herzberger, Zülpich, CD Haupt and Roermond) and our corrugated packaging factory Atlacomulco in Mexico were certified under ISO 50001 for their energy management system.
- By the end of 2013, 92% and 22% of our mills are certified under ISO 14001 and ISO 50001 respectively.

#### **COD Discharge Reduction**

Globally, in 2013 our mills discharging to surface waters reduced COD discharges by 0.4% per tonne of paper and board produced compared to 2012.

#### Investments in fossil CO, Reduction

- Completion of a new lime kiln in our Cali paper mill in Colombia in March 2013 reducing fossil CO<sub>2</sub> emissions by 13,000 tonnes on an annual basis.
- The new CHP in our Barranquilla paper mill in Colombia is fully operational since August 2013, reducing fossil CO<sub>2</sub> emissions by 13,000 tonnes on an annual basis.
- A new CHP that has become operational in the second quarter of 2014 in our Hoya paper mill in Germany completed a multiyear investment project which reduced fossil CO<sub>2</sub> emissions by 15% on a per tonne basis.

#### **Code of Business Conduct**

A Group-wide awareness campaign to inform all our employees about the core principles of the Code was initiated in the course of 2013 and will be completed in the course of 2014.

#### Sustainable Packaging

At Smurfit Kappa's Group Innovation Event, awards for the most innovative sustainability ideas in process, product, supply chain and social engagements were given as part of our biennial Sustainability Awards. In the Americas, Sustainability Awards were also handed out at the Innovation and Sustainability Event for categories including environment, product/process improvement, social engagement and safety.

#### Acquisitions

CRP Print and Packaging was acquired in October 2013. This UK-based company specialises in litho-laminated packaging, 3D point of sale products, high definition preprint, food contact and heavy duty packaging. The company employs approximately 220 people and will be operating under the name of Smurfit Kappa CRP.

## Letter from our CEO

GARY McGANN GROUP CHIEF EXECUTIVE OFFICER

#### Introduction by Gary McGann

I am pleased to introduce Smurfit Kappa's seventh annual Sustainable Development Report. Sustainability and social responsibility are core values at Smurfit Kappa. They are at the heart of how we operate and interact with customers, employees, suppliers and the communities in which we do business. We see sustainability as a key business driver providing challenges and business opportunities. It is therefore one of our key platforms for differentiation in a competitive market.

In 2013 we have again broadened our commitment to, and delivered proof of, our dedication to sustainability by a) continuing to invest in the environment, b) adding measurable long-term commitments to our existing commitments and c) by achieving two of our existing long-term commitments several years ahead of schedule.

The best way to demonstrate that our sustainability objectives are achievable, beneficial to our business and economically viable is by creating economic, social and environmental win-win situations for all stakeholders. In 2014, we will focus our efforts on creating value for our shareholders by growing our business in existing and new markets, proactively building strategic relationships with our customers, and providing them with sustainable and differentiated packaging solutions. This will continue to be the basis from which we will also be able to create value for our people while enhancing the social and natural environments in which we are embedded

As a further introduction to the Sustainable Development Report 2013 I would like to highlight a number of developments.

#### Our Vision on Sustainability

In last year's report, we set out our long-term vision on sustainability. As a company we are uniquely positioned to make a real difference for our various stakeholders through our efforts in the area of sustainability.

For our customers we want to be their proactive supplier and partner of choice. This is an objective to which we are committing ourselves. Not only when it concerns an answer for their direct packaging needs, but also when it comes to providing the best and most sustainable packaging solution for the part of their supply chain where we can make a difference. For our people we want to be the employer of choice in terms of their personal development, working conditions and health and safety standards. For the communities, we aim to be the corporate citizen of choice by investing in the social and economic development of the communities of which we are an integral part. We sustainably operate our manufacturing facilities and limit any negative impact on the environment as much as possible while concentrating on delivering positive impacts. We want to be recognised as a valued and trusted corporate citizen when it comes to the social environment in which we are embedded locally.



We aim to give preference to suppliers who share our rigorous environmental, social and technical standards and are willing to partner with us in our drive to reach our business and sustainability objectives. By taking a long-term, inclusive and comprehensive approach to understanding and addressing our sustainability impacts, we aim to be a partner of choice for non-governmental organisations. For local governments we aim to be a trusted partner when it comes to compliance and we will also be supportive in the social development of local societies. We have reflected our aims in our vision on sustainability and translated them into intermediate and long-term measurable targets both of which are steps on a long lasting journey.

#### **Engagement with Stakeholders**

We consider open and transparent communication with our stakeholders to be central to our efforts in becoming a partner of choice. We proactively seek their input and feedback, recognising that it deepens our understanding of their priorities and sustainability agenda. We bring to the table our knowledge of designing supply-chain-optimising packaging solutions and our knowledge of producing these sustainably. Our stakeholders provide input in a variety of ways ensuring a continuous exchange of information. This creates strong. mutually beneficial relationships which support our efforts to take our sustainability approach to the next level.

To further understand the demands of our stakeholders. we continuously analyse their sustainability reporting and have discussions with their key executives. Short interviews with representatives from our stakeholder base complement the materiality analysis, highlighting the sustainability aspects that are important to them. This year we extended our analysis to a total of 81 stakeholders, both customers and suppliers. The analysis shows that issues such as health and safety, sustainable packaging, climate change, energy usage, water intake and discharge, sustainable forestry and human rights are among the most important issues for our stakeholders. All of these issues are core to our sustainability agenda, and we continue to review their developing impact. More details of this analysis can be found on page 14 of this report.

#### Long-term Sustainable Development Commitments

#### Additional commitments in 2013

In 2013, we added four long-term commitments to cover new areas in which we had not previously set targets. These commitments have been made in the areas of Health and Safety, Community Involvement, Waste and Sustainable Sourcing. The total set of commitments (new and existing) covers all our main sustainability areas, ranging from lower CO<sub>2</sub> emissions to Waste reduction and from Health and Safety to Sustainable Sourcing. We will continue to report on each of these commitments on an annual basis. More details on what the new commitments entail can be found in this report and first time

reporting on progress made will be covered in our Sustainable Development Report 2014.

### Progress on existing commitments in 2013

Good progress has been made during 2013 in the realisation of our long-term sustainable development priorities. 91% of our converting operations worldwide are now certified Chain of Custody under FSC and/or PEFC, realising one of our commitments on the sustainable use of fibres. We expect to reach the certified Chain of Custody status for the remaining relevant converting operations in 2014, allowing us to deliver close to 90% of our packaging solutions to customers under the label certified Chain of Custody.

We also reached our long-term commitment for the relative reduction of fossil CO<sub>2</sub> emissions resulting from our mill system. By the end of 2013, relative fossil CO<sub>2</sub> emissions were reduced year-on-year by over 6% and by close to 21% compared to 2005, meeting our 20% reduction target. To show our commitment to further decrease relative CO<sub>2</sub> emissions we will announce a new target in the course of 2014.

Our production related COD discharges are now more than 25% lower than in 2005 and 0.4% lower than in 2012. After the approval by our Board of Directors of the revised and updated Code of Business Conduct, a comprehensive awareness campaign in 17 languages was initiated across all of our operating sites with the ultimate objective of ensuring that all our employees are familiar with the new Code and behave accordingly. This campaign will be completed in the course of 2014.

#### Competitiveness of Industry Prerequisite for Investments in Sustainability

To play our part in the environmental and social challenges the world is facing, it is a precondition that companies, such as Smurfit Kappa, can operate under fair, predictable and competitive conditions. The economic and financial crisis has highlighted the need to reignite industrial growth in Europe. In that respect we welcome the various policy intentions that were published by the EU Commission in January 2014 and the explicit objective of raising the share of industry as a component of GDP from the current 16% up to 20% by 2020. To reach that objective, industry needs a completed single market while policy areas such as energy policy, balanced environmental regulation and labour mobility need to be addressed. We believe there is a need for greater certainty and a reduction in the excess of regulation in order to create an environment for industry, which is enabling, makes business more efficient, more effective and ultimately more competitive.

The Climate and Energy package 2030, published by the EU Commission in January 2014, sets a stricter fossil  $CO_2$ emission reduction target that demands an increase from 20% by 2020 to 40% by 2030. Although this target will be a formidable challenge for the industry, we welcome the clarity it provides on how Europe will move forward on becoming less carbon intensive and what role renewable energy and the use of biomass will play in order to realise this objective. For energy intensive industries, such as ours, to remain competitive we believe the EU has the responsibility to ensure that our industry has secure and longer term access, at affordable and competitive prices, to energy, wood, recovered paper and water without distortive taxes and/or subsidies. In the context of energy availability, certainty and cost, we urgently need the completion of the internal single market. We will continue to advocate that sustainable growth is only possible over time when the right trading conditions exist. As an industry firmly embedded in and committed to the European market, in those conditions we will be able to deliver our commitments to sustainable growth.

I hope you will find the content of our Sustainable Development Report 2013 both interesting and informative, and look forward to any feedback that you may have (sustainability@smurfitkappa.com).

Kany Wilson

**Gary McGann** Group Chief Executive Officer 23 June 2014

# ingenuity

Terry McGivern and Aiden Costello from Smurfit Kappa Yate in the UK

Smurfit Kappa's success is built on constantly delivering original and inventive solutions that unlock opportunities for our forward-thinking customers. Applying our ingenuity requires that we constantly approach every challenge and opportunity from multiple perspectives and apply our best thinking. In a world that is constantly changing our customers will continue to look for us to be original and inventive.

## 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, Remuneration Report and Remuneration Policy, is set out in the SKG Annual Report 2013.

#### 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 Working 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 in areas such as the progress being made on our long-term sustainable development commitments. A Board report on our sustainability activities, including progress on indicators and targets, is reviewed at Board level twice a year.

### Code of Business Conduct and Group Policies

The Smurfit Kappa Code of Business Conduct (the "Code") was revised during 2012. The Code applies to the Group's Board of Directors, officers and employees worldwide. We also require individuals, entities, agents or anyone acting on the Group's behalf to comply with its Code. The Code has been translated into 17 languages and introduced to all employees in each of our areas of operation.

The Code takes account of the following international conventions and codes:

- 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.

Our Code provides the underlying standards of behaviour required from each and every employee in every jurisdiction. It sets out our position in relation to compliance with the law, adherence to ethical standards, and commitment to quality and service.

Each Group company and its employees, regardless of geographic location, is 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 Code makes it clear that personal and professional integrity is the responsibility of each employee.

In addition to the Code, the Group also has a series of policies covering a number of areas relating to our operational and managerial practices.

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.

#### 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 2013, 82 detailed internal financial and IT audits were completed.

In addition to these internal audits, all operating entities 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 2013, no such misreporting was identified.

During 2013, there was one incident related to discrimination reported which the Group considered to be noncompliant 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 2013. In line with the Group's Code of Business Conduct no financial contributions were made to political parties in 2013. 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. In respect of a breach of such laws and regulations, one significant fine related to an accident of a worker was imposed on the Group in 2013. In 2013, there were situations where some of our operations operated outside the limits of their environmental permits. In these situations we worked with the authorities to address the relevant issues in as timely and efficient a manner as possible.

## Engagement with Stakeholders

#### **Our Stakeholders**

In the continuous interactions we have with our various stakeholder groups we consider transparency, ethical behaviour and orientation on future cooperation of key importance. Frequent interaction with our stakeholder communities, in all countries and areas where we operate, offers us great opportunities to further develop ourselves in all aspects of sustainability thereby meeting and, where possible, exceeding their expectations. Our stakeholders are crucial to the realisation of our sustainability objectives whether their concerns are environmental social or economic.

Stakeholders are a) entities or individuals that reasonably can be expected to be significantly affected by our activities or products or b) whose actions can reasonably be expected to affect our ability to successfully achieve our objectives. In principle we consider any person or entity with whom we engage to be part of our stakeholder community. This ranges from customers to suppliers, from employees to investors and from local residents and local authorities to NGO's and supranational institutions. Many stakeholder interactions take place at a local level where our teams engage on a daily basis with customers, employees, suppliers and local authorities. We also receive stakeholder feedback through customer satisfaction surveys, dialogue with trade unions, employee questionnaires and communication with investors.

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 29. Our main stakeholder groups are listed overleaf including a summary of how we engage with them. Out of these interactions we concluded that the following topics are the most important for stakeholders: Chain of Custody of raw materials and sustainable forestry, Climate Change and Energy, Health and Safety, Sustainable Packaging and Water intake and discharge. In the various sections of this report we state our view, approach and activities with regard to these topics.

#### Memberships in Organisations

We believe it is important to be an active participant, a member, a signatory or to be otherwise supportive of relevant 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. We focus our efforts in that regard particularly 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,
- the International Corrugated Cases Association (ICCA),
- the European sack kraft manufacturers' association (Eurokraft) and
- 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. Our Group CEO is currently Chairman of CEPI, our divisional CEO of European Corrugated is currently President of FEFCO and one of our Colombian managers is President of ACCCA. 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:

#### CDP,

- the Supplier Ethical Data Exchange (Sedex),
- ▶ the Water Footprint Network (WFN),
- the Programme for the Endorsement of Forest Certification (PEFC<sup>®</sup>),
- the Forest Stewardship Council<sup>®</sup> (FSC<sup>®</sup>),
- the UN Global Compact (see also page 94).

We are active members in such organisations, customarily providing them with information on our operations as input for statistical (industry) data and information, engaging with them on developing policies, strategies, appropriate targets, and execution.

Our Group CEO is a member of the European Round Table, a forum of approximately fifty 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 national industry and business associations in both Europe and America.

#### Examples of how we engage with our stakeholders

We are continuously looking to intensify our engagement with 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 can be in the form of conferences and round-table discussions with sustainability officers from customers, jointly working on specific projects in sustainability, attending customer conferences or supporting customers with their specific sustainability initiatives.
Our employees are the key to our success. Their health and safety is a core value and we place significant emphasis on their well-being. There are numerous training and development programmes for our people 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. Our Code of Business Conduct reflects how we conduct our business and the important role our employees play in that.
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.
Besides the usual interactions with suppliers, there are specific programmes and initiatives in place to assure we can realise our sustainable sourcing objectives such as audits and questionnaires and the requirement that our suppliers 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 the best appropriate quality at the right price and appropriate support for sustainability.
Memberships of, or participations in, organisations such as FSC, PEFC, the Supplier Ethical Data Exchange (Sedex), CDP and Water Footprint Network. Dialogue, both direct and indirect, (through membership organisations) and cooperation on specific topics such as water and $CO_2$ sequestration.
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 together with the devotion of our employees' time and expertise. The aim is to assist communities in self-help. The Smurfit Kappa Group Foundation targets social responsibility, particularly in the area of youth health and education in those countries in which Smurfit Kappa operates.
We foster membership of industry associations at national and international level, and participation in forums

## Materiality



Our objective when determining materiality is to identify issues reflecting Smurfit Kappa's significant economic, environmental and social impacts on the markets in which we operate or participate. These then form the basis of our work in sustainability.

Smurfit Kappa is faced with a wide range of topics on which we could report. We aim to limit reporting to those topics and indicators that are sufficiently important to warrant inclusion in our report. Given that not all material topics and indicators are of equal importance we aim to give relative priority to the most important topics and indicators.

A combination of internal and external factors have been used to determine materiality. Internal factors include our own overall mission, vision on sustainability, long-term strategy and the various Group policies, covering a wide range of policy areas, including our own Code of Business Conduct. External factors include the Global Reporting Initiative (GRI) guidance on materiality and completeness, topics highlighted by organisations such as CDP, Sedex and Dow Jones Sustainability Index ('DJSI'), regulatory and compliance drivers and general trends in the marketplace. As in previous reports we also interviewed representatives from 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 and important stakeholders. Prioritisation of the various topics was determined by using both a qualitative and a quantitative approach. For the internal and external factors mostly a qualitative approach was used, for the analysis of the material topics for relevant and important stakeholders a quantitative approach was used.

We studied the materiality analysis of a group of 81 companies that we consider important or relevant to us. This group includes mostly customers (70%) and is complemented by suppliers and peers (30%). In our view, the issues that are material for our customers, suppliers and/or peers are, in many instances, 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 the frequency with which a topic/issue was mentioned to be an indicator of the importance of that topic/ issue for the investigated group of companies. The graph above reflects this interpretation while also indicating the significance of these issues to Smurfit Kappa.

This approach resulted in an extensive list of topics that can be classified under four main headings:

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

Individual topics which we have included under each of these headings are highlighted in the graph above.

Issues shown are plotted according to the GRI guidelines.

## Strategy

The Group's objective is to develop long-term relationships by providing customers with differentiated packaging solutions that enhance the customers prospects of success in their end markets. In that context, by generating strong sustainable revenue and profitability, together with judicious capital allocation decisions, we expect to deliver an increasingly strong return on capital through the cycle. This objective is underpinned by the Group's clearly stated ambition to maintain its premier position in the industry by delivering superior customer satisfaction; pursuing cost and operating efficiencies; maintaining proactive environmental awareness; reinforcing its commitment to continuous improvement in the areas of health and safety and corporate social responsibility, and thereby maximising its returns to its shareholders.

### The Group's Objectives and Strategies are:

- to expand its market positions initially in Western Europe, Eastern Europe and the Americas through selective focused growth, including:
  - organic growth from increased market share.
  - the pursuit of accretive acquisitions in higher growth markets.

- to become the supplier/partner of choice of its customers by:
  - developing proactive initiatives to improve customers' offering;
  - constantly innovating its products, service, quality and delivery and
  - pursuing superior performance measured against clearly defined metrics.
- to focus on enhancing its operational excellence, from the forests or recycling depots to the customers' end markets by relentlessly pursuing the continuous upgrade of its customers' offering. This will be facilitated by:
  - improving the output from the Group's high quality asset base;
  - increasing the proportion of differentiated ideas, products and services on offer; and
  - ensuring that the driving force behind all its operations is one of customer satisfaction and excellence in the marketplace.
- to recruit, retain, develop, and motivate the best people who, working optimally in teams, will excel in a dynamic progressive company, thereby achieving their full potential.

We will do this through:

- high quality graduate and other recruitment initiatives, progressive goal setting, and performance appraisal programme;
- focused job training and coaching;
- constant team-building initiatives;
- cross divisional in-house development programmes; and
- selective executive development programmes.
- to maintain a disciplined approach to capital allocation and maintain the focus on cash generation as a fundamental basis for delivery optimal shareholders returns.

## Our Vision on Sustainability

By 2050, nine billion people will live on our planet compared to seven billion today. This development provides an opportunity and imperative for companies to offer products that meet the increasing needs of a growing population within natural resource constraints. The key to future success will be to find growth opportunities that are economically, socially and environmentally balanced.

As a leading company in the design and manufacture of paper-based packaging, we view sustainability as a key business driver, a fundamental part of our supply chain management and also as an important responsibility which we take very seriously.

Sustainability for us is about improving the guality of life today and in the future, for people and for our planet. For 80 years we have been producing innovative packaging solutions from renewable and recyclable raw materials. We aim to make a unique difference through sustainability in our key area of expertise: providing creative and innovative paper-based packaging solutions that support our customers' growth and development. As part of this, we will optimise their supply chains and extend the longevity of their products; by using resources and materials responsibly through our forestry and recycling businesses. We also aim to provide a safe working environment; for our people; work to benefit the local communities; and safeguard our reputation. In addition, we wish to deliver optimal shareholder returns to sustain investment, progress and employment.

We aim to play a leading role in the area of sustainability:

- (a) in providing our customers with innovative and sustainable packaging solutions and optimising their supply chain;
- (b) in sustainably using natural resources;
- (c) in creating value for our shareholders;
- (d) in how we care for the health, safety and development of our people;
- (e) in helping to develop strong local communities, socially and economically.

This helps us secure the practical and moral authority to operate in all our chosen locations.

Sustainability is part of a journey of striving for excellence in all aspects of our business. For us, it is an important factor to be successful and profitable allowing us in turn to re-invest in our business, the environment, our people and communities while rewarding our shareholders. To measure the progress we make on that journey, we have defined key building blocks that allow us to formulate objectives and measurable targets to be achieved within agreed timeframes.



## Our Commitment and Approach to Sustainable Development

Our objective is to be a customeroriented, 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. For us sustainability is a platform that will help us to reach our objectives. It is an integral part of our operations and part of our daily business life. Sustainability to us makes perfect business sense as it helps us grow our business. For our full commitment and approach to sustainable development see our website www.smurfitkappa.com

#### Our Commitment and Approach

Our Vision on Sustainability sets out 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 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

We take a special interest in safeguarding the environment as our products are composed of materials that are natural resource-based, renewable, recyclable and predominantly made from recycled material. We commit to doing 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 promoting their purchase and consumption. Our packaging products typically have an important function in logistical processes and because of this function, paperbased 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.

#### 2. 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 the provision of a safe work environment, by providing them with challenging and satisfying jobs and by offering career opportunities. Our other key focus is on the local communities where we 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 to assist in all forms of 'self help'.

#### 3. Business

We need profitable growth to reward our shareholders 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. Sustainability is an integral part of our business commitment and product offering. Sustainability is natural to our business, a key business driver and a differentiating factor in the market.

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.

# experience

Willard Pereboom from Smurfit Kappa Zedek in the Netherlands

Our experiences have helped us refine our skills and build a strong and respected reputation. Our experience lets us approach each new challenge with confidence and offers our customers the reassurance they need to move forward.

## Key Risks, Challenges and Opportunities

Sustainability is the collective term under which many issues and topics can be placed. Some of these issues comprise risks to us such as the issue of climate change or the availability of raw materials; others provide us with business opportunities such as optimising the supply chain of our customers. We consider all issues under the collective term sustainability to be challenges. Not surprisingly therefore, sustainability is one of our key business drivers. In a world where the supply of natural resources is finite, optimal use of these resources in our business is key in helping to mitigate climate change and limit, as much as possible, other environmental impacts on air and water systems. The main resources we need as raw materials are wood, recovered paper, and energy and water to make the manufacturing process of paper and board possible.

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

We significantly add value to our customers if our packaging products and services help them to better market and secure the durability of their products, improve their logistical processes and lessen the impact on the environment of their supply chain. Our main objective is not only to provide marketing and retail ready packaging to our customers, but also to proactively help them to optimise their supply chains and to minimise their product waste by securing the durability of products.

In this dynamic business environment, risks and opportunities regarding the issues of fibre availability, energy, regulation concerning CO<sub>2</sub> emissions, water, food safety and sustainable packaging are therefore key challenges 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, ranging 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. More general factors such as population growth, changing consumer patterns and food scarcity can also have an impact.

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 offering business opportunities to us.

The 2020 EU Renewable Energy Policy targets are supported by subsidy schemes that both increase prices as well as impact the availability of our raw materials. This can be seen in Austria, for example, which has turned from a wood-exporting country into a woodimporting country due to the building of subsidised biomass power plants. In its framework document for climate and energy for the period 2020 - 2030, the EU Commission proposes to increase the target for renewable energy to 27% by 2030. We welcome that the EU also states that in the future, benefits of renewable energy must be exploited in a way which is principally market-driven. We also welcome that the EU calls for an improved biomass policy to allow for fair competition between the various uses of biomass resources in, for example, paper and pulp industries. The EU is in effect supporting our favoured 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 thermaluse

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

The recyclability of paper fibres is an important contributor to the sustainable nature of our products. Recovery of used paper is a global necessity and policies should stimulate setting up well-functioning paper recovery systems.

We expect global collection rates to continue to increase. In Europe, collection rates have reached on average over 70%, with additional potential in Eastern European countries. Increasing demand for recovered paper in countries such as China and India has put upward pressure on global recovered paper pricing as local recovery systems in these countries are lagging behind. As Europe is a major exporter of recovered paper to China, this development is a concern to us regarding future availability of recovered fibre for our European operations.

The quality of recovered fibres is deteriorating as the number of times paper is recycled is growing. Fresh fibre inflow into the paper production and recycling system is therefore a necessity, which is another reason why the above mentioned resource hierarchy 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, also for recovered paper, the resource hierarchy is of utmost importance assuring that recovered paper is first used for producing paper and board, and only at the end of its life cycle should it be used as fuel for energy generation which generates the same level of calorific content.

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. As our sector is energy-intensive, high energy costs also put us in a vulnerable competitive position vis-à-vis alternative, less energy intensive packaging materials. European and national policies that add significant costs to the price of energy have, in a number of countries, outgrown the production costs of energy itself. We welcome the understanding by the EU Council that European energy prices are clearly uncompetitive and that the difference with other trading regions in the world is unsustainable. A critical first step to address this is to complete the internal European single market in energy.

Another concern is that the global energy 'landscape' has changed significantly in a relatively short period of time. Shale gas and shale oil have already led to a decrease in energy costs (notably natural gas) for United States industry and led to the export of more economically-priced coal from North America to Europe. 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 such as wind and solar energy and the use of (imported) cheap coal. This development is of considerable concern to us as we already have made significant investments in gas-fired CHP installations on the basis of their high energy efficiency and their relative environmental friendliness. We welcome that the EU recognises that the rapid (subsidised) deployment of renewable energy sources affects the competitiveness of other, e.g. CHP, sources that will continue to be fundamental for the EU's energy system.

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

In January 2014, the EU published its policy framework for climate and energy in the period from 2020 - 2030. In short, the EU proposes to leave the current ETS III intact and to increase the fossil  $CO_2$  emission reduction target to 40% in 2030 relative to emissions in 1990. The EU also proposes renewable energy to comprise 27% of the European energy mix by 2030.

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 EU itself forecasts that greenhouse gas emissions, relative to emissions in 1990, are expected to reduce by 24% and 32% in 2020 and 2030 respectively. We therefore recommend that the EU gives greater priority to improving the overall competitive situation of industry in Europe towards which lowering energy prices forms an important step.

We have made significant steps in reducing our  $\rm CO_2$  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.

#### Key Risks, Challenges and Opportunities (continued)

To mitigate the risks as a result of the impact of climate change policies, we focus our efforts on reducing specific types of energy usage. 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.

#### 4. Water

Water availability and the impact of our water consumption and discharge 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 available in sufficient quantities, as a Group we will reduce our water usage where feasible. We have therefore committed to perform water impact assessments of all of our sites on their environment in relevant areas and develop water usage measures as appropriate before 2017.

We believe water policymakers 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 recovered before the water is released to the public water body in compliance with legislation. We already retrieve valuable biogas from waste water sludge (see page 41) and we are researching how to recover other valuable resources from waste water flows.

Although the process of paper and board production requires substantial volumes of water, we return over 90% of that water to the water, systems from which it was extracted. We are strongly committed to further improve water usage efficiency and also to improve the quality of the water returned. Since 2008 the water intake of our paper and board mill system has decreased by 13% per tonne of product. Since 2005 we have achieved a reduction of over 25% in the organic load (COD) discharged with the effluents. 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. We are also closely monitoring the upcoming ISO standard on water footprinting through the different national standardisations as well as 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:

- 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.
- British Retail Consortium/Institute of Packaging Global Standard for Packaging and Packaging Materials.
- 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.

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 the Americas. Smurfit Kappa has an experienced internal team which is dedicated to food contact and food safety issues.

#### 6. Sustainable Packaging

Packaging is about collecting, storing, transporting, distributing, marketing, advertising and preserving goods. Through packaging, the global population is able to have safe access to essential products such as food, clothes and medicines. Paper packaging is the most sustainable solution to maintain local and global flows of goods. It is based on a natural renewable resource (wood) that can be recycled many times. As a paper-based company, we see a suite of opportunities to provide our customers with sustainable packaging solutions and to make their supply chains more sustainable. The clear environmental advantages of paper-based packaging results in overall desirability of these materials by consumers, retailers and customers. Many of our customers have targets for packaging from renewable materials such as paper. We see opportunities by supporting our customers with creative and innovative products and services that market their products, protect their products, optimise their supply chains and extend the longevity of their products.

Our manufacturing process also provides opportunities that contribute to packaging becoming more sustainable. In our paper and board mills, the process needs both steam and power that provides us with the opportunity to generate power and heat at a very high efficiency rate using Combined Heat and Power installations. In our kraftliner mills we have the opportunity to minimise the use of fossil fuels by using biomass boilers for the generation of electricity and steam. In 2013, 44% of all fuel used to generate energy was biomass-based and we are further investigating opportunities for using even less fossil-based fuels in the future.

## Long-term Sustainable Development Commitments

To measure the progress we are making on our activities in sustainability we have defined specific tangible and measurable targets within certain time frames.

In 2010, we adopted four long-term commitments with measurable targets to state our ambition to be a leading sustainable company. In mid-2013, we made our long-term vision on sustainability public in a paper entitled 'The Smurfit Kappa Vision on Sustainability'. In that publication we widened the scope of our long-term objectives and commitments to include a number of other sustainable development issues that we consider important. These issues are waste management, water usage, safety at work, sustainable sourcing and our involvement in the local communities where we operate.

In this section we describe the achievements to date, activities in 2013, and current and future activities related to the objectives and targets defined in the following seven building blocks that impact the four key pillars (our supply chain, production operations, customers and our role as responsible employer) of our business:

#### Chain of Custody

- CO<sub>2</sub> emissions
- Waste
- Water
- Health and Safety
- Sustainable Sourcing
- Community involvement.

In addition, the progress made in the implementation of our Code of Business Conduct is described.

#### **1. CHAIN OF CUSTODY**

The sustainable origin of raw material is of the utmost importance for us. It ensures the protection of biodiversity, indigenous peoples' rights, workers' rights, and areas of significant environmental or cultural importance. According to our materiality analysis, it is also one of the key issues for our stakeholders. Sustainable fibre means fibres that are certified or are of a non-controversial origin. We are fully committed to that principle, both for our virgin fibres as well as the recovered fibres that we use as raw material. Our sustainably-managed planted forests are not only productive, they also secure biodiversity (page 36).

#### COMMITMENT

By 2015, all fibres produced and purchased will be labelled as Chain of Custody certified under FSC, PEFC or SFI. As a minimum requirement fibre should be from a sustainable origin.

By 2015 over 90% of our paper-based packaging will be labelled as Chain of Custody certified under FSC, PEFC or SFI.

The packaging solutions that we deliver to our customers should contain only certified fibres and/or fibres of noncontroversial origin. Our products should also 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 form of the fibres.



#### Fossil CO<sub>2</sub> Emission Reduction (basis 2005)



Wood and virgin pulp produced or purchased are preferably Chain of Custody certified with the remainder of non-controversial origin. A total of 56% 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 the remaining 44% is controlled wood (from a noncontroversial origin). This status is verified by a third party under the chain of custody scheme FSC and/or PEFC.

#### Achievements to date

- In Europe:
  - Our complete paper and board mill system is Chain of Custody certified under 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.
  - 94% of our European system of converting business operates under a FSC and/or PEFC Chain of Custody certification system.
- In the Americas:
  - Our Colombian forests have been FSC certified since 2003. Our forest activities in Venezuela passed the FSC Controlled Wood certification audit in January 2014.
  - All of our US, Colombian and Mexican mills and converting operations are Chain of Custody certified under FSC. These include the operations from Orange County that were acquired in December 2012.

- All but one converting operations in Argentina are Chain of Custody certified under FSC since 2012. Our two recycled paper mills in Argentina and the remaining converting operation not previously certified in Argentina (in Mendoza) passed the FSC certification audit in January 2014.
- By the end of 2013, 87% of paper and board produced in our Group was certified for further labelling Chain of Custody according to either PEFC or FSC.
- An overview of activities that are certified can be found on page 86 with full details on our website.

#### Activities and results in 2013

- In 2013, we completed the three year certification programme of our European converting operations.
  Considerable progress was also made in the certification process of our converting operations in the Americas.
- 99% of customer packaging solutions produced in Europe originates from certified FSC and/or PEFC operations.
- In December 2013, our converting operation in the Dominican Republic passed the FSC audit.
- We continued auditing our suppliers to ensure that no wood fibres originate from controversial sources. At the end of 2013, 98% of paper purchased from third parties and (partly) containing wood fibres is certified Chain of Custody under PEFC, SFI and/or FSC Mix or Controlled wood.

#### Current and future activities

- In March 2014, we reached a global level of 91% Chain of Custody certified for all of our converting plants, enabling us and our customers to trace the origin of the fibres we use.
- In Europe 94% of our converting plants operate under a Chain of Custody certification scheme. Consequently we can service our customers fully with packaging solutions that are Chain of Custody certified. Our objective by the end of 2015 is that at least 90% of our packaging solutions delivered from Europe are sold as Chain of Custody certified.
- Completion of FSC certification of our paper mills in Venezuela is envisaged for 2014.

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

Climate change and 'global warming' are widely seen as high priority sustainability issues. Our materiality analysis confirms that Climate Change is also a key issue for our stakeholders. Customers regularly ask for our input into the calculations of their products' carbon footprint. For us these issues are among the most important sustainability issues as they are closely related to our business. Energy generation involves significant CO, emissions from burning fossil fuels. Therefore our fossil CO, reduction programme is to a large extent directed at increasing efficient energy usage and increasing the use of biomass where it is economically viable.

We have taken initiatives both in Europe and the Americas to address this subject. We continuously invest in projects that should lead to higher energy efficiency and reduction of fossil CO, emissions.

#### COMMITMENT

A 20% reduction in relative fossil  $CO_2$  emissions in our mill system by 2020 compared to 2005.

Collaborate with customers to determine the carbon footprint of the packaging lifecycle.

#### Achievements to date

- We have been switching from fossil fuels to renewable energy where possible and economically feasible (biomass boilers commissioned in Sweden (2007) and France (2010), new black liquor boiler installed in Colombia (2008), switch to biomass fuel in the lime kiln in Piteå in Sweden (2008) 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 output. 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 2013, fossil CO<sub>2</sub> emissions per tonne of paper and board produced have decreased by 20.7% thereby achieving our commitment to decrease by 20% six years ahead of schedule. This is illustrated in the graph on page 24 which shows the annual improvement compared to the base year 2005.

#### Activities and results in 2013

- In 2013, the total fossil CO<sub>2</sub> emissions of our global paper and board mill system decreased by 1.4% compared to 2012 despite the addition of the Forney paper mill in the US to our system in December 2012. Excluding Forney, fossil CO<sub>2</sub> emissions have decreased by 5.1%.
- By the end of 2013, volume adjusted fossil CO<sub>2</sub> emissions per tonne of paper and board produced were 6.5%

lower than those at the end of 2012. During 2012 and also in 2013, a number of energy-related investments was completed, resulting in the achievement of our long-term development objective to decrease relative fossil CO<sub>2</sub> emissions of our global paper and board mill system by 20% relative to 2005.

- 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, which produced only electricity, has been fully operational since August 2013. The reductions of fossil CO<sub>2</sub> emission are estimated to be 13,000 tonnes on an annual basis.
- In our recycled paper mill in Hoya in Germany a multi-year investment project has been completed in Q1 2014. The first phase reduced fossil CO<sub>2</sub> emissions on a per tonne basis by 6-7%. The second phase involved the installation of a CHP. Once the CHP is fully operational, relative fossil CO<sub>2</sub> emissions are expected to decrease by approximately 15% relative to the start of the project.
- In our kraft paper mill in Navarra in Spain, the rebuilt biomass boiler that has been in operation since October 2012 showed its full effect in 2013. Direct fossil CO<sub>2</sub> emissions decreased by approximately 22,000 tonnes on an annual basis.
- In our kraft paper mill in Cali in Colombia, a new more energyefficient lime kiln was commissioned in March 2013. Direct fossil CO<sub>2</sub> emissions are expected to decrease on an annual basis by 13,000 tonnes.
- In our recycled paper mill in Mengibar in Spain, a boiler was installed using biogas produced in the water treatment process as fuel for the production of steam. Previously the biogas was flared. Using the biogas decreases the need for natural gas resulting in a decrease of 2,500 tonnes of fossil CO<sub>2</sub> emissions.

#### **Current and future activities**

 In the rebuilding of our recycled paper mill in Townsend Hook in the UK we will replace the two existing paper machines with one new machine which has a slightly higher production capacity. This machine will have an improved energy efficiency compared to the two existing paper machines and therefore save 25,000 tonnes of direct fossil  $CO_2$  emissions. The start-up of this machine is planned for the first quarter of 2015.

- 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.
- In our recycled paper mill in Zülpich in Germany, the replacement of the size press by a spray sizer is planned to be completed in the second quarter of 2014. Due to this investment, water usage can be reduced leading to less energy needs to produce steam. Total fossil CO<sub>2</sub> emissions are expected to be reduced by 14,000 tonnes.
- In our recycled paper mill in Ania in Italy, a new CHP will be installed which will generate all electricity needed on-site resulting in a decrease of fossil CO<sub>2</sub> emissions by 2,400 tonnes.

#### 3. WASTE

Given that the global population is expected to increase by 2 billion by 2050 and that average incomes, particularly in emerging countries, will grow strongly, the existing issue of waste generation will become even more important over the next years. Although not at the top of their agenda, for our stakeholders waste is increasingly important. However for us, waste is already today an important issue as we generate sizable volumes of non-hazardous waste in our manufacturing process with approximately 57% being sent to landfill. Our objective is to contribute to a circular economy. Eventually we will take all avoidable waste out of our production system and we will minimise our waste to landfill to those materials that are not further recyclable, renewable or recoverable

#### Long-term sustainable development commitments (continued)

#### COD Discharge Reduction (basis 2005)



#### COMMITMENT

Conduct before the end of 2015 a company-wide assessment with the aim to minimise:

- Non-hazardous waste generation
- Waste to landfill
- Hazardous waste generation.

### Achievements to date and activities in 2013

- Since 2008, we have gathered detailed information on our waste streams from all our operations on a regular basis.
- In 2013, eight of our 24 paper mills in Europe did not send any waste to landfill.
- In 2013, 40% of non-hazardous waste generated by our operations was recovered. This comprised the recycling of certain waste components into new products or different products and by composting or by incinerating waste as fuel for energy production, thereby recovering the caloric value of the waste.
- During 2013 we performed an in-depth assessment of the different types of waste generated by our operations (mills and converters). This assessment is a first step to identify which types of waste are generated at which stage of the manufacturing process and which operations are the main contributors to our total waste generation and waste disposal.

#### Current and future activities

In 2014, we will further detail our company-wide waste assessment, including analysing which waste streams are generated during the different stages of our production process. We will determine best practice on how to prevent waste and how to recover waste.

- In 2014, we will make a companywide analysis of the generation of hazardous waste by our operations.
- A number of mills are already performing initial waste assessments at mill level.
- Before the end of 2015, we will assess whether there are economically feasible ways to reduce our waste streams that are currently going to landfill.

#### 4. WATER

Water is seen as a sustainability issue of increasing importance. Water is abundantly present on Earth: yet the availability and quality of fresh water is limited and, according to the Food and Agriculture Organisation of the UN, is decreasing and unequally distributed. For the paper and packaging industry, after fibre water is the most important natural resource for our business. As we return approximately 90% of the water we take into the public water body, our primary commitment for water and our 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.

With regard to water scarcity in the areas where our operations are located, we use various tools that have been developed by organisations such as WBCSD, World Resources Institute and WWF that provide insights into regional and national water risks. These tools will be used to analyse which of our mills are located in water-stressed areas.

Our objective is to minimise the impact our water usage and discharge have on

the environment, the water ecosystems and the water balance of the areas where our operations are located. In areas with fresh water scarcity, we are committed to helping safeguard the availability of fresh water for the local communities where we operate.

While the original commitment of reduction of COD discharge by one third by 2020 compared to 2005 has remained the same (COD discharge per tonne of paper produced), we modified this target in 2013 to take into account those mills that directly discharge to the water bodies. This better reflects the impacts our mills have on the environment.

#### COMMITMENT

Perform water impact assessments of our sites on their environment in relevant areas and develop water usage measurements as appropriate before 2017.

Reduce the organic content discharged in the process water (COD) of our mill system by one third by 2020 compared to 2005 and assess specific mills for phosphorous and nitrogen effluents before the end of 2015. The reduction is relative to the organic discharge measured by COD, expressed per tonne of paper discharged directly on water bodies.

#### Achievements to date

- Investments in water treatment plants has taken place in a number of paper mills since 2005 including: 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 mills in the Americas have taken initiatives resulting in a 20% decrease in water intake per

tonne of product produced. However since the addition of Forney at the end of 2012, the actual decrease is now 40%.

Between 2005 and 2013, 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 on the previous page which shows the annual improvement compared to the base year 2005. We calculate this indicator with the mills that discharge their treated, process water after use to a surface water body. Those mills that have their process water treated at a local water treatment plant are not included in this commitment.

#### Activities and results in 2013

- Due to under performance in some of our water treatment plants during part of 2013, we were not able to achieve further decreases in the organic load discharges of our mill system compared to 2012. This was also partly due to the fact that no additional water treatment plants were commissioned in 2013.
- Over 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.
- We have performed an initial analysis of suitable tools to determine in which regions where we have operations, there exists water scarcity and/or water risks regarding availability of sufficient fresh water.

#### Current and future activities

- There are several investments in water treatment facilities in both Europe and America that 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 in the Americas.
- In the regions where we have operations we will determine, according to generally accepted tools, which areas represent the highest risks in terms of water scarcity and in terms of the impact

our operations have on the water availability in those regions.

#### 5. HEALTH AND SAFETY

Providing healthy and safe working conditions for our people is a core commitment. Our stakeholders consistently emphasise that this issue is also of utmost importance to them. At Smurfit Kappa, health and safety in the workplace has been receiving increasing focus for many years. This focus has resulted in the continually strengthening global approach to the prevention of injuries and ill health defined, coordinated and reviewed from our Group Head Office. Annual targets are set relating to the reduction of injuries. Our objective is to adopt a structured and systematic approach to the management of safety and well-being aspects in the workplace. We are absolutely committed to implementing targeted risk mitigation measures to achieve zero fatalities in our operations. Through our continual investment in awareness and progressive competency development programmes, we expect to achieve further reductions in the number of work related accidents.

#### COMMITMENT

Zero fatalities is an objective in all our operations.

Safe behaviour and well-being

- Develop a holistic approach to increase safety and well-being at work
- Increase awareness of safety in the working environment by promoting practices such as near miss reporting
- Stimulate pre-emptive actions on reporting of near misses to avoid serious accidents.

Injuries: Reduce the lost-time and injury rate by 5% annually for the next 5 years (2013-2017).

#### Achievements to date

During 2013, we successfully achieved a 16% reduction in our lost time accident frequency rate while achieving an 11% reduction in injury severity rate compared to 2012.

#### Activities and results in 2013

During 2013, Smurfit Kappa appointed a Group Director of Health and Safety whose priority has been the development of processes that ensure the consistent and global adoption of proven health and safety practices and their verification through a comprehensive audit process.

- During 2013, we held a series of regional health and safety workshops in which all business divisions were represented resulting in the establishment of a collaborative professional health and safety network and agreement on both common priorities and the engagement approach necessary to facilitate continual improvement.
- Collaboration across our divisions has also led to the development of a common health and safety audit tool that will enable all plants to undergo audits using common criteria chosen to verify the presence of the appropriate protective measures relating to our operations.
- We recently established a new safety incident bulletin process designed to share the key lessons from incidents. Known as Safety Incident Bulletins, lessons are now being shared across our operations each month; the bulletins are posted on information boards within our plants allowing employees to learn from safety events at other plants. This tool helps ensure safety incidents receive appropriate senior management focus within reviews and communications.

#### Current and future activities

- A new one page Group Health and Safety Policy statement that will replace the existing policy statements is being developed. This policy statement will be adopted by all plants and promotes greater consistency in our health and safety commitment.
- Together with all divisions, a set of Good Health and Safety Practice requirements is being developed. These good practice requirements will be adopted as minimum mandatory requirements across all divisions. A corresponding good health and safety practice assessment questionnaire that will enable self-assessment, reporting and future verification is also being developed.

During 2014, we plan to train a panel of health and safety coordinators in the use of the new health and safety audit tool mentioned above. This will assure our employees of the presence of the necessary programmes and protective measures at all our operations.

#### 6. SUSTAINABLE SOURCING

Sustainability in our supply chain is a core issue for us. Working with thousands of suppliers, ranging from multinational companies to local family-owned businesses, means that we have to critically assess their potential impact on our own sustainability profile. Transparency throughout the value chain together with sustainable packaging are important for our stakeholders. We are therefore fully committed to managing our suppliers in line with our sustainability objectives. Our primary focus is the suppliers of materials that are used to produce our products. Our approach is to engage with our suppliers, requesting them to employ sustainable practices. Recurring audits and follow up programmes are being used to assure continuous progress.

#### COMMITMENT

Perform risk assessments of suppliers regarding food safety, technical data sheets, material safety and substances of high concern.

Implement system of auditing based on the key sustainable sourcing principles.

Implement our key sustainable sourcing principles with our suppliers.

#### Achievements to date

- A formal sustainable sourcing policy has been effective since 2010 and was updated in 2013.
- By the end of 2013 we finished our first three-year programme to audit our strategic European supplier base. All of the audited suppliers deliver key materials to us such as paper, starch, chemicals, printing inks and glues that are all part of our final products.
- By the end of 2013, 54 additional European suppliers delivering both key and non-key goods and materials have been audited (see page 73).

#### Activities and results in 2013

- In 2013, a total of 50 supplier audits took place.
- We started to audit our supplier base in the Americas. Six strategic suppliers of key materials were audited.
- The auditing of suppliers of non-key materials in Europe was accelerated in 2013. This group comprises goods such as cutting dies, printing plates, strapping tapes and pallets.
- We looked at the feasibility of performing online audits of suppliers.
- Ten training sessions of Smurfit Kappa auditors were held in both Europe and the Americas. An internal reference guide to ensure consistency by different auditors has been developed.

#### Current and future activities

- We will continue to ask our suppliers to apply our key sourcing principles, while focusing on working towards more sustainable practices and also taking our commitments on sustainability into account.
- We will start the next cycle of audits of our European strategic supplier base.
- We will continue the first cycle of auditing of strategic suppliers in the Americas.
- There will be special focus on the continuous improvement programmes agreed with suppliers that have been audited.
- Additional training sessions of Smurfit Kappa auditors will be held in both Europe and the Americas.

#### 7. COMMUNITY INVOLVEMENT

We strive to be an integral part of the communities where we operate by making positive contributions to their economic and social development. Our focus is on supporting activities and community support programmes in areas such as education and health programmes as well as areas that align with our specific expertise. We do this in two fundamental ways: through making financial contributions (generally "matching funds") and by volunteering.

#### COMMITMENT

Smurfit Kappa foundations to reach 100,000 people in local communities by 2020 by spending at least €1 million per annum on the education of children and €1 million per annum on scientific research on e.g. biodiversity.

Local management teams (mill/plant level) to comprise at least 90% residents in every country where we operate.

#### Achievements to date

- The Fundación Smurfit Carton de Colombia celebrated its 50th anniversary in 2012 and focuses on issues such as education of children and the eradication of youth poverty in Colombia.
- The Health Brigades programme in Venezuela, was established in 2009 and is designed to offer preventive health service in the rural communities neighbouring our Venezuelan operations. The programme has provided medical service to almost 360,000 people since its inception.
- The Smurfit Kappa Foundation was established by the Group Head Office in February 2011 and focuses on projects involving young disadvantaged children.
- Our management teams in plants throughout the Group have taken local community initiatives over the past years ranging from charity fundraising to volunteering activities at local projects and activities.

#### Activities and results in 2013

- In Colombia and Venezuela, specific programmes provide education to teenagers at Smurfit Kappasponsored high schools. These focus on areas such as agriculture, forestry, livestock and pulp and paper. In both countries, Smurfit Kappa also sponsors development projects for disadvantaged children or children living in the area surrounding Smurfit Kappa operations. In 2013, approximately €1 million was spent on the various educational programmes in these two countries.
- The Smurfit Kappa Foundation supports a number of projects in countries where we operate.

These focus on young disadvantaged children. In 2013, the Foundation committed to (co-)sponsor two such projects in addition to existing projects. By the end of 2013, the Smurfit Kappa Foundation had either sponsored or committed to sponsor projects in Colombia, Germany, Ireland and the Netherlands. Expenditure in 2013 amounted to over €200k, thus bringing expenditure in its first two years of operation to over €0.5 million.

- In Europe, Smurfit Kappa cosponsors and actively participates in an initiative led by the European Round Table of Industrialists, Junior Achievement-Young Enterprise Europe and European Schoolnet called Global Entreprise Project which aims to promote greater understanding and awareness among young people about globalisation, entrepreneurship and the skills they need to succeed in the global economy.
- Our Colombian operations spend approximately €1 million on forestry research focussing on areas such as species improvement, how to maintain conservation banks in both pines and Eucalyptus and tree breeding, plantation management and phytosanitary protection.

#### Current and future activities

- In Colombia and Venezuela our intention is to broaden the scope of existing programmes such as the El Caracoli project and day care and early childhood educational programmes.
- In Europe, the Smurfit Kappa Foundation intends to sponsor additional projects and has already committed to support a project in Birmingham in the UK, supporting children in one of the most disadvantaged areas of this city.

#### CODE OF BUSINESS CONDUCT

Over the years, the employee base of our multinational Group has grown considerably, both in size and 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 officially underpinned by our Code of Business Conduct, to which all of our companies and employees alike must adhere. The fundamental driver of this policy is that the tone is set from the top.

The Code of Business Conduct is supported by a number of policies 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 an overarching Code of Business Conduct, that 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 confidentially raise 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 2013

The updated Code of Business Conduct was formally announced to the Group in April 2013 and was subsequently communicated through the divisional and country structures through to plant level employees.

- The Code of Business Conduct was subsequently reviewed and cleared with the respective Works Councils.
- The Code has been translated into 17 languages and has been published on the Group's website in the various languages
- The Code of Business Conduct "Group-wide Awareness Campaign" was formally launched on 10 September, 2013 and will be completed in the course of 2014 in each of our areas of operation. The purpose of the campaign is to inform all our employees about the core principles of the Code via a training course.
- In 2013, 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 general plant managers and financial controllers gave written confirmation of their understanding and adherence to the Code of Business Conduct; 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.
- 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.

#### Current and future activities

The Group will continue to actively communicate and promote the core principles of the Code of Business Conduct through the Group structure to all employees.

## expert

Juan Moreno Sánchez at work at Smurfit Kappa Bogotá Corrugated in Colombia

Our expertise in forestry, recovery, paper, packaging and related systems is recognised as industry leading and sets the standard for efficiency, sustainability, quality and innovation. Our focus on training and innovation ensures that our expertise continues to evolve and expand to meet the needs of our customers and the environment.

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## Environment

Respecting the natural environment in which we operate is part of our overall mission. The environmental challenges the world is facing today are, to a significant degree, challenges we face in our operations on a daily basis. Issues such as efficient use of energy to mitigate climate change, sustainable forestry, reducing the use of water and prevention of waste are important to us and to our stakeholders. We are committed to progress on these issues and we aim to minimise the impact our activities have on the environment as much as we can. Our principle focus will be 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, the avoidance of waste and the usage and discharge of water. As forest owners and users 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 to make our processes more energy and water efficient. In 2013 we committed ourselves to also include the issue of waste in our primary focus.

#### **1. SUSTAINABLE USE OF FIBRES**

Almost all of our products are made from paper and support our customers in making their supply chain more sustainable. Our products are made from both virgin and recycled fibres that have a sustainable origin and are recyclable.

Smart and efficient packaging solutions help to make the total supply chain of goods more sustainable. 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.

The paper-based packaging solutions that we supply to our customers are an environmentally friendly form of packaging as the raw material comes from renewable sources and the end product is fully recyclable. We use a mix of virgin or recycled papers depending on product requirements and the supply chain specifics.

A fresh virgin fibre inflow into the recycling system is required as wood fibres degrade every time they are recycled. The length of a wood fibre is shortened during every cycle and totally degraded after a certain number of cycles. Therefore, virgin fibre is constantly added to the system to compensate for the loss of degraded fibre 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 2011, which is the latest year for which official Eurostat statistics are available, was 83%. Five out of every six paper-based packaging units are recycled, far higher than for example the number of glass and metal units being recycled. Plastic packaging is far behind, with only two out of every six plastic packaging units being recycled. (see graph page 33).

#### Fibre origin 2013

#### Fibre origin 20

#### Packaging Recycling Rate in EU (%)

Source Eurostat





For the last few years we have been engaged in extensive Chain of Custody certification programmes to ensure that the natural resources, which we need and depend upon, are responsibly managed. We expect to complete our global certification programme by the end of 2014 but are already in a position today to service our customers with the sustainably produced products that they require.

By making tangible and measurable commitments for the sustainable use of fibres we are showing our drive to apply the principles described in this important sustainability area.

#### Use of virgin fibres

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

More than 84% of the wood we use for the production of virgin fibres and virgin papers is purchased from external suppliers. In order to supply us and to make sure our supply of wood is from a sustainable origin, external suppliers have to maintain 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 well-established 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 the Americas where we have virgin containerboard production facilities. 70% of the virgin containerboard used for the manufacture 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.

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

#### Use of recycled fibres

In 2013, 74% of our fibrous raw materials came from recycled fibres.

We consume approximately 5.5 million tonnes of recovered paper each year. Of this figure, 4.3 million tonnes are processed in Europe and most of this is supplied through our own recovery and recovered paper supply system. This makes us the clear industry leader in consumption of recovered paper in Europe. With the acquisition of Orange County at the end of 2012, 88% of our recovered paper needs in the Americas in 2013 were secured either through collection in our own system or through term contracts with third party suppliers (70% in 2012).

#### 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) schemes. These are 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. It proves that our commitment to a sustainably managed supply chain, ranging from sustainable forest management practices to delivering Chain of Custody certified products to our customers, leads to measurable and tangible results.

#### Environment (continued)





#### Chain of Custody-status for every reel along the total supply chain

An innovative combination of Smurfit Kappa's logistical expertise and IT skills has resulted in a Chain of Custody (CoC) breakthrough.

The CoC-certification guarantees customers that Smurfit Kappa makes use of only sustainable fibres in CoC certified products, enabling them to realise their own sustainability targets. Since there was no ready IT solution available on the market, Smurfit Kappa created its own system by adapting SAP, local Smurfit Kappa IT technology and the paper industry standard PapiNet, and introduced new working procedures which can be seen as a new industry segment standard.

The new system guarantees traceability from tree and bale to certified box for both FSC and PEFC certification schemes on a scale that is unique within our industry. It is able to accommodate significant complexity, which is crucial given that paper products are supplied by almost 270 internal and external paper mills to over 200 CoC-certified corrugated plants, and the Smurfit Kappa supply chain system as a whole must keep track of 5 million tonnes of paper, 2 million reels and approximately 250,000 trucks on an annual basis.

#### Paving forest roads by recycling asphalt and tyres

In Colombia, Smurfit Kappa recycles asphalt and car tyres to create new pavements and retention walls, thereby reducing the use of nonrenewable natural resources like rock, cement, metals and fossil fuels.

In 2013, the programme for construction and maintenance of forestry roads in Smurfit Kappa's areas of influence in Colombia, collected 10,000 square meters of tarmac from the government's public roads that were heading to landfills. The material is now used successfully in the maintenance of forest roads and public roads of neighbouring rural communities. In 2013, Smurfit Kappa paved five kilometres of roads with recycled asphalt and the depot contains enough for several kilometres more.

Another successful recycling programme concentrates on used tyres from industrial equipment. Tyres are not biodegradable and accumulating them is illegal since tyres can negatively impact health as ideal hiding places for rodents and mosquitos. Instead, Smurfit Kappa uses the tyres as a self-supporting structural element in the construction of retention walls both for public roads and for Smurfit Kappa's own lumber transportation roads.

#### 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.

In Colombia, where we have our largest forest plantations we have approximately 69,000 hectares, including 5,900 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% is 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 pine trees. The balance is used for research and development such as silviculture, plantation management, forest protection and forestry research. Since early 2014, the forest plantations in Venezuela are FSC Controlled Wood certified.

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

During the plantation life cycle, we conform to a comprehensive set of governmental approved legal, technical and environmental regulations. In most cases annual permit renewals are required under these regulations.
## Paper and Board production

In Europe 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. Our European mills are certified under FSC and PEFC schemes.

In the Americas in 2013, we achieved certification under Chain of Custody for our two paper mills in Argentina. We had achieved this status already for our paper and board mills in Colombia, Mexico and the USA. Our three paper mills in Venezuela are expected to be certified by the end of 2014.

## **Packaging operations**

The Chain of Custody certification programme we initiated for our packaging operations in 2009 has been completed in Europe and is due to be completed towards the end of 2014 in the Americas. As described above, Chain of Custody certified packaging provides our customers with a guarantee 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.

Although our three year programme described above was completed early 2013, we continued in 2013 with the process of certifying additional operations both in Europe and in the Americas. By the end of 2013, 94% of our paper-based packaging operations in Europe were operating under a Chain of Custody certification scheme, reaching a level of 74% for our packaging operations in the Americas. For the Group as a whole, we reached a level of 91% thereby achieving our initial long-term commitment to reach a level of 90%. A new target is now to assure that over 90% of our total paper-based packaging volume delivered to customers is certified under either FSC, PEFC or SFI by 2015.

## Overview of certification in place at the end of 2013

The table below gives a detailed overview of our paper capacity operating under Chain of Custody certification by type of paper together with the number of converting operations also Chain of Custody certified.

The first two sections of the table give the percentage of our paper or board production capacity operating under 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, taking into account also the certified raw material we can obtain. This information is provided by type of paper and board produced in both Europe and the Americas.

These percentages reflect the situation at the end of 2013. 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.

VIRGIN PAPER				
EUROPE		Production ktonnes	Production capacity with CoC certification	% certified paper
	Kraftliner products	1.605	100%	80%
	Other virgin papers (sack paper, MG paper)	251	100%	46%
THE AMERICAS				
	Kraftliner, printing & writing paper, SC fluting	300	79%	79%
RECYCLED PAPER	S & BOARD			
EUROPE		Production ktonnes	Production capacity with CoC certification	% certified paper
	Containerboard recycled papers	2.858	100%	100%
	Solidboard & carton board	858	100%	100%
THE AMERICAS				
	Containerboard recycled papers	954	80%	66%
	Cartonboard	134	66%	26%
PACKAGING				
EUROPE		Number of sites certified	Percentage of sites owning CoC Certification	
	Corrugated packaging	169	93%	
	Solid & carton packaging	9	100%	
THE AMERICAS				
	Corrugated packaging	26	74%	
	Folding packaging	2	67%	
	Sacks	4	80%	

\*Certification at the end of 2013

## Environment (continued)

## **Suppliers**

To make further progress in the certification of our products, in 2013 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 FSC and/or PEFC. This verification process includes all our external paper suppliers and is based on physical independent audits. At the end of 2013, 98% of all our external virgin supplies for our global converting system were FSC, PEFC and/or SFI certified or have PEFC and/or FSC controlled wood status. The remaining 2% is purchased through agents who are not certified. However, the majority of that 2% (70%) has a certified origin while the balance is from non-controversial origin.

## Biodiversity

Both in Colombia (32%) and in Venezuela (37%) significant parts of our total forest area are protected natural forest. These protected parts of our forests are not replaced by plantations and thus help maintain the rich biodiversity of the areas, preserve watersheds and conserve natural habitats.

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

- Continuously and systematically develop 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 line with our commitment to invest in the local communities where we operate, we are continuously investing in Colombia in forestry related research projects, frequently in cooperation with other research institutes as the following examples show. Together with the National Centre for Coffee Research (CENICAFÉ) we have 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.

Also since 2007, research has been undertaken to improve growth, lumber density, straightness and resistance to diseases in various Eucalyptus species. The research indicated potential volume gains between 17 - 50% compared to local types of the Eucalyptus species in Colombia. This project allows our nurseries to supply the plantlet market of Colombia with the best genetic material available.

In 2013, 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 302,000 tonnes of carbon within it. The wood harvested in the same period contained approximately 278,000 tonnes of carbon, giving a positive carbon balance of over 24,000 tonnes of carbon or its equivalent of 87,000 tonnes of CO<sub>2</sub>. As forestry planning is essential to guarantee a sustainable supply of wood fibres, our forestry operations have developed several tools with which planting, fertilising, growth status and harvest planning can be optimally managed. In 2013, a total of 2,500 hectares were planted of which 77% with Eucalyptus species and the remainder with pine species.

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

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 which species are

present in our forest areas, we focused on determining which of these species were categorised as endangered by international organisations such as the International Union for Conservation of Nature (IUCN).

Since 2010, Smurfit Kappa has been carrying out a study in the natural forests of Colombia within the company's forestry estate. In 2013 a new project phase began in partnership with the Biology Programme of the Natural Science School of Universidad del Valle. The focus is on the "Diversity of birds, mammals and plants in the natural forests of the forestry nucleus in Sevilla".

At the end of 2013, four new bird species were identified, which are endangered to a certain extent:

- Bolborhynchus ferrugineifrons (Rufous-fronted Parakeet)
- Chondrohierax uncinatus (Hooked-billed Kite)
- Patagioenas subvinacea (Ruddy Pigeon)
- Sericossypha albocristata (White-capped Tanager).

During the past three years, in the studies developed by Smurfit Kappa, 990 species were recorded and identified in our forests. This includes 458 trees, 473 birds, and 59 mammals of which 30 species are to some extent endangered.

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.

Additionally, in 2013 we continued having meetings with employees, customers, environmental NGOs and environmental authorities to share information about the wide range and significant impact of our sustainability actions on forestry and biodiversity. Apart from these meetings we engage in frequent dialogues with other stakeholder groups interested in our actions related to forestry and biodiversity. Forestry studies have been actively promoted over the past number of decades and we have been involved in numerous publications on forestry research about topics related to



## Protecting the habitat of Red Howler monkeys

In 2013, Smurfit Kappa received a formal request from members of the local community of Santa Rosa de Cabal in Colombia to help protect a group of howler monkeys in the region where Smurfit Kappa operates forestry plantations for pine tree harvesting.

The red howler monkey (*Alouatta seniculus*) measures 56 to 92 cm. These monkeys are famous for their loud howls, which can travel three miles through dense forest, and are recognised by their short snouts and wide-set, round nostrils. Most howler species live in groups of up to nine animals and eat mainly top canopy leaves, fruits and nuts.

Smurfit Kappa formed a partnership with the local energy company (CHEC), the local environmental authorities (CARDER) and other stakeholders, to eliminate and minimise hazardous conditions. Conventional power cables were replaced by ecofriendly coated cables so the primates are protected from electric shocks. Smurfit Kappa built hanging bridges to help the monkeys pass unharmed over the forestry truck roads, thereby reducing danger and potential stress caused by the forestry activities.

silviculture, tree breeding and forest health for Eucalyptus as well as tropical and subtropical pines over the past decades.

In Europe we have identified those of our operations that 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 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.

All of the affected operations take the necessary steps to protect the sensitive environment in which they are located.

## 2. EFFICIENT USE OF ENERGY AND CARBON MANAGEMENT

## Towards a low carbon economy

In January 2014, the EU released its policy framework for climate and energy in the period from 2020 to 2030. Together with other policy documents, this will lead to a

new European climate change and energy package. The policy framework proposes to increase the fossil CO<sub>2</sub> emission reduction target to 40% compared to 1990, up from the 20% reduction to be reached by 2020 compared to 1990. The final outcome of this proposal will be crucial for Smurfit Kappa and our industry as a whole as our daily operations are affected by the policy package. The EU can meet its objectives in this area only if there is sufficient biomass availability. To this end, an improved biomass policy will be necessary, as the EU has indicated. Currently our industry is the largest user and most efficient generator of biomass in Europe. This is realised through the extensive use of biomass boilers that are mainly fuelled by biomass residuals such as bark, sawdust, thinnings and stumps.

In 2013, in Smurfit Kappa, 44% of all fuel used by Smurfit Kappa to generate energy was biomass-based. The remainder consisted of the relatively low  $CO_2$ -emitting fossil fuel, natural gas (47%), with the balance split between coal (6%) and other fossil fuels (3%). A total of 80% of all fuels used to generate electricity and steam are produced through a Combined Heat and Power (CHP) system.

## Combatting climate change

Our approach to tackling climate change comprises a three-pronged approach:

 Generating energy efficiently through investment in Combined Heat and Power systems



- 2. Reducing our absolute use of energy through investment in research and new replacement technologies
- Reducing carbon emissions through a shift to biomass and investment in efficient energy generation.

## 1) 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 well suited to install these co-generation units given our need for both electricity and steam. In 2013, the proportion of our electricity coming from CHP installations was 49% compared to 52% in 2012. This is the result of positive effects from the efficiency savings from the installation of a new CHP installation in our paper mill in Barranquilla in Colombia as well as some negative effects arising from under performance and operational disruption at certain existing CHP installations. In some cases, closure of CHP formed part of necessary upgrade work to our mills, such as in Townsend Hook in the UK, where a new CHP installation will be operational in due course.

A new boiler has also been installed in our recycled paper mill in Mengibar, Spain, at which biogas from the water treatment plant is now being used to produce steam for the production process, instead of being simply flared off.

## Direct fossil (scope 1) CO, emission

EUROPEAN MILLS



**Biofuels and fossil fuels** 



Our recycled paper mill CD Haupt in Germany installed an engine that is fuelled by biogas generated in the on-site waste water treatment facility. In addition, a waste heat recovery unit has been installed, which circumvents the need to produce fresh steam. Previously, the biogas was burned in a CHP boiler. The new application of the biogas results in more electricity generated by the CHP installation than previously while delivering reductions of fresh steam usage and direct fuel consumption.

Our Cali mill in Colombia invested in 2013 in a new lime kiln for the virgin paper process. Whereas the old kiln was fired by heavy fuel oil and typically ran above its capacity limits, the new kiln uses natural gas to burn lime more efficiently, resulting in a lower fuel usage per ton of lime produced.

## 2) Investing in energy reduction programmes

In 2013, we completed the strategic overview of all potential larger energy reduction projects for our European paper and board mills. This built on an internal study from 2011 which identified all theoretically possible savings on energy needs and fossil CO<sub>2</sub> emissions per paper and board mill. A number of projects identified for reductions in energy use and fossil CO<sub>2</sub> emissions form part of larger projects already in progress; however, in 2013, several initiatives to reduce the use of energy were approved, with a number also delivered as the following examples illustrate.

At our recycled paper mill in Hoya in Germany. a multi-year investment was nearing completion by the end of 2013 with the installation of a new CHP. This builds on a series of investments in the paper machine which have been carried out since 2011, both to expand the capacity and also to reduce energy usage.

We have also been able to make energy reductions at our paper mill in Zülpich in Germany with the replacement of a size press with a more efficient spray sizer, which will lower the need for steam required to evaporate the water from the produced paper.

Further energy reductions resulting from investment in higher energy efficiency will be achieved at our recycled paper mill in Roermond in the Netherlands by rebuilding one of the paper machines.

Direct fossil (scope 1) CO, emission

THE AMERICAS MILLS



## **Biofuels and fossil fuels**





In 2013, the energy intensity on a per tonne basis of our paper and board production decreased by 1.5% compared to 2012.

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 the Americas) in the tables on pages 80-85. Those tables report energy consumption for the production of the paper or board manufactured while the two input/output tables on page 78 (European operations) and on page 79 (the Americas 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 96 to 98.

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

In 2013, we achieved our commitment to reach a 20% reduction of fossil  $CO_2$  emissions relative to production by 2020 compared to 2005 in our global mill system. The mill systems in Europe and the Americas both achieved relative

#### Direct fuel consumption 2013

ALL OPERATIONS







emission reductions. These relative reductions were the result of energy related investments as well as the effect of the temporary closure of the Townsend Hook paper mill in the UK. In 2013 our total fossil mill CO<sub>2</sub> emissions (direct and indirect) increased by 4,300 tonnes compared to 2012, mainly due to the acquisition of the Forney mill in Texas (USA). Without the addition of the Forney mill and taking into account the effect of the temporary closure of the Townsend Hook mill in the UK, overall absolute fossil CO<sub>2</sub> emissions would have been reduced by 50,000 tonnes. Temporary changes in CHP operations both had a positive as well as a negative impact on the absolute emissions.

Examples of mills in Europe that contributed to this reduction are Navarra in Spain (rebuild of biomass boiler), Saillat in France (import of green steam from the neighbouring paper mill) and Piteå in Sweden (fossil fuel replaced by biogenic fuel in the lime kiln) For the Americas, CO<sub>2</sub> emission reductions were achieved by Cali in Colombia (installation of a new lime kiln), Valencia in Venezuela (electricity production by gas turbines instead of diesel motors), and Barranquilla in Colombia (installation of a CHP).

Historic trends in the fossil  $\rm CO_2$ emissions for both Europe and the Americas are shown in the graphs on the previous page.

A further reduction in fossil  $CO_2$ emissions can be expected in two main areas. Firstly, projects that will reduce the need for steam and electricity in the mills, and secondly those that will bring more efficient use of fossil fuels, mainly by additional investments in CHP capacity. These potential investments in CHP installations can decrease  $CO_2$  emissions as well as contribute to a further shift to biomass usage as fuel.

## Germany Zülpich – Next generation sizer lowers water use and saves on fossil CO<sub>2</sub> emissions

In 2012, a new technology of spraying water and starch to fluting paper was successfully tested in our recycled paper mill in Viersen in Germany. Through this technology the concentration of starch in the water can be increased from 10-15% to 15-25%, a decrease of approximately 50% water used per kg starch. This new technology, which is replacing the traditional pond- or filmsizer, has multiple environmental benefits. The higher concentration of starch means less water is needed to bring the starch onto the paper. Less water used means also less water needs to be evaporated in the drying section of the paper machine. Less evaporation means less need for energy and hence lower CO<sub>2</sub> emissions. A third benefit is that less paper breaks are expected. The paper sheet has a higher dryness after the sizing treatment and is therefore stronger compared to using the traditional technology. This should lead to less paper breaks in the paper machine and therefore to less energy usage per tonne of paper produced.

The technology is being tested for the production of testliner in our recycled mill in Zülpich in Germany. If successful, the technology opens up the opportunity to save on water and energy and to decrease fossil CO<sub>2</sub> emissions further.

## Replacement of diesel engines by gas turbines saves fossil CO<sub>2</sub> emissions

Our mills in Venezuela need to be able to operate independently from the national electricity grid during certain periods. Until 2012, the Valencia paper mill's electricity was partly generated through diesel motors and party by a CHP installation fuelled by natural gas. Some gas turbines did become available from the San Felipe mill and are now operational in the Valencia mill. All electricity is now generated by the use of natural gas which is a 'cleaner' fuel than diesel oil and therefore reducing the CO<sub>2</sub> emissions from the Valencia mill. Any surplus electricity generated by the turbines is used by the offices and Smurfit Kappa's corrugated and folding carton plants neighbouring the mill. A further positive of this project is that one of the existing (smaller) gas turbines at the Valencia mill can now be moved to the Caracas mill to replace motors that generate electricity in that mill using heavy fuel oil.

## Environment (continued)



Thomas Berger from Smurfit Kappa Piteå in Sweden near the lime kiln.

# Piteå reduces use of fossil fuels to only 2%

The Smurfit Kappa kraftliner mill in Piteå is always investigating ways to switch to green energy. A good example of that is the lime kiln, which has been partly fuelled by solid biomass for several years.

The main challenges for fuelling the lime kiln with 100% solid biomass were the particle size, the dosing and the availability of the biofuel. The team in Piteå, together with the supplier of the lime kiln burner, developed a solution for these issues: saw dust that is dried with flue gas and then ground. Since 2013, the lime kiln is fuelled with 100% biomass and biofuel.

The Piteå mill is now running for more than 98% on biogenic energy and Piteå has the lowest carbon footprint of all Swedish mills producing kraftliner. Operating the lime kiln with solid biomass instead of fuel oil reduced fossil  $CO_2$ emissions by 27,000 tonnes.

# Germany Hoya – Extension of the CHP installation

Our paper mill in Hoya, in Northern Germany, operates a carton board machine and a testliner/fluting machine. The production capacity of the latter has been increased from 290,000 tonnes to 420,000 tonnes through a multi-year investment programme which was recently completed by the installation of a refurbished CHP.

As part of the investment programme, several heat reduction measures were taken resulting in a decreased heat consumption on a per tonne basis and only a small increase in the steam usage per hour. Electricity usage per hour has increased as faster running machines need more electricity.

Electricity and steam is provided by a Combined Cycle Gas Turbine installation (a combination of a gas turbine, waste heat recovery boiler and steam turbine) and three separate steam boilers. As the gas turbine installation has been running at maximum capacity, the additional electricity requirements of the enlarged paper machine had to be imported from the national grid.

To decrease the electricity intake from the grid a refurbished CHP has been installed. With this installation, which has been operational since Q2 2014, fossil  $CO_2$  emissions will be decreased by approximately 8,000 tonnes, while the cogeneration ratio will be increased.

# Germans take the heat off the environment

Smurfit Kappa Rheinwelle in Kreuzau, Germany utilises compressed air in its production facilities. The heat that is generated when air is compressed was not used in the past. Rheinwelle's team developed applications for this heat leading to lower CO<sub>2</sub> emissions.

Most of the heat generated in the factory stems from cooling the compressor. This heat was lost in the past, while at the same time energy was needed for heating the offices during the winter. The objective was to recover at least 75% of the discarded heat by installing a heat exchanger. In winter Rheinwelle now recycles heat for approximately 1,000 m<sup>2</sup> office space. That means 100% of heating capacity for the offices is now covered by using the previously unused heat.

For using the heat in the summer Rheinwelle also developed a solution. With the generated heat the temperature of fresh water for the boiler was increased from  $15^{\circ}$ C to  $75^{\circ}$ C. The annual effect of the recycling of the otherwise lost heat is a reduced usage of natural gas resulting in a decrease in fossil CO<sub>2</sub> emissions of 158 tonnes representing 5% of Rheinwelle's fossil CO<sub>2</sub> emissions. And finally, the project generated further awareness for sustainability aspects of Smurfit Kappa's business among the team members.

# Biogas produced in our water treatment plants supports fossil $CO_2$ emission reductions

Water is a vital element in the manufacturing process of paper and board. It is needed to dissolve wood or recovered paper into fibres from which we can produce paper. During the paper-making process, the water is taken out in a number of steps resulting in a final reel of paper with a humidity of only 9%. Resulting process water is then cleaned in our water treatment facilities using an anaerobic process in which bacteria 'eat' certain components present in the water and as a result, produce biogas.

The energy content of a cubic meter of biogas is on average 75% of that of natural gas and therefore this biogas, instead of flaring it, can be used in an installation on-site that has been fitted for this source of fuel.

The main applications for the use of biogas are:

- Burning the biogas in a stand-alone boiler or co-firing it in an existing boiler to produce steam. This replaces directly fossil fuel (mostly natural gas) and decreases direct fossil CO<sub>2</sub> emissions. The steam produced in this way, if flowing through a steam turbine, also produces electricity, resulting in a decrease of indirect CO<sub>2</sub> emissions.
- Burning the biogas in a biogas motor to produce green electricity. This reduces indirect CO<sub>2</sub> emissions. These motors on average have an electrical efficiency of 40% and the remainder of the energy of the biogas converts to heat either in the flue gas of the motor or in heat in the motor itself. Both sources of heat can be used to replace fresh steam, which also reduces direct fossil CO<sub>2</sub> emissions of the mill.
- Replacement of fuels in other installations, such as in the lime kiln of a kraftliner mill, decreasing direct CO<sub>2</sub> emission of this mill.

Over the past few years we have invested in a number of our paper and board mills around the Group in one of the above applications decreasing emissions of fossil CO<sub>2</sub>.

The following examples are illustrative of this development:

 SSK in Birmingham in the UK installed an engine in 2012 that is fuelled by biogas generated in the on-site water treatment facility. The motor is used to heat up water, needed for spraying the felts in the drying section of the paper machine.

- Mengibar in Spain installed a new boiler in 2013, where biogas from the water treatment plant, which was flared previously, is burned to produce steam.
- CD Haupt in Germany installed an engine that is fuelled by biogas generated in the on-site water treatment facility. The motor is used to heat up process water, which makes injection of fresh steam for heating this process water unnecessary.
- Ania in Italy modified the burner of an existing natural gas boiler to enable co-firing of biogas produced by the the newly installed water treatment plant, replacing part of the natural gas used in the past.
- Until 2013, Saillat in France could only use 40% of the biogas, due to boiler restrictions, to produce steam. Early in 2014, we replaced two small boilers with a large one, in which all biogas can be co-fired. This boiler is operational since Q2 2014 and has increased the steam production capacity of the mill.
- In 2013, Bernal in Argentina installed new multi-fuel burners in its steam boiler that are also capable of burning biogas. In 2014 the connection from the water treatment plant to the boiler will be made so that all the biogas can be burned instead of flaring it as is done today.
- Also in 2013, Roermond in the Netherlands replaced an existing biogas boiler by a larger one so that additional amounts of biogas that will be produced in the next few years as a result of the capacity expansion of the mill can be used.
- Townsend Hook in the UK will install two biogas motors in the new paper machine (which will be operational in 2015), to produce green electricity. The heat of these motors will be used partly for heating process water and partly for heating spray water of the drying felts in the paper machine.

Collectively, all Smurfit Kappa initiatives to efficiently use biogas produced on our sites have led to a reduction of the equivalent of 613 TJ of fossil fuel resulting in a decrease of 34,000 tonnes of fossil CO, emissions.

MURFIT

STAINABLE DEVELOPMENT REPORT 2013

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Fresman Zapata and German Arley Ramírez from our Medellín Corrugated plant in Colombia.



# Sustainability and profitability go hand in hand in Colombia

The environmental programme of Smurfit Kappa in Colombia shows that implementing the good practice policy concerning the use of water, gas, and electricity, has significantly decreased the consumption of these resources. Simultaneously, these changes have improved operational conditions with regard to machines, productivity, quality and waste.

Using different continuous improvement tools the packaging operations in Colombia have realised many technical improvements; changes driven by both an environmental concern and an economic challenge. The cost of energy in Colombia has been rapidly increasing and therefore much focus is aimed at controlling energy use to create a competitive advantage.

The new measures include a decrease in machine section temperatures, new temperature control systems, extra insulation, new machine start-up order. more continuous corrugator runs. replacing lamps and installing a translucent roof, new buffer tanks, switch to electric pumps, using rain water and condensate recovery, and the optimisation of the machine printing wash system. All these measures have resulted in a 29% reduction in gas usage and a 10% reduction in electricity usage saving energy and reducing CO, emissions. Also the usage of water was reduced by 29%.

llama Felipe Ramos near the Myrggo Boiler located at Smurfit Kappa Atlacomulco Corrugated in Mexico.

## Knowledge sharing in Mexico supports environmental performance

At the end of 2012, the Converting Division of Smurfit Kappa Mexico took a holistic approach to sustainability. A network was created with all operations and the Mexico head office participated in knowledge sharing on value-added projects in areas such as environment, social and economic.

The network stimulated an exchange of training materials, knowledge sharing and involvement and commitment at all levels of the organisation. Plant managers were appointed as sustainability champions with the task to stimulate their own organisation to participate in and to share with the other network participants. The Mexican head office functioned as a sponsor and facilitator compiling training and reference materials, publishing a monthly sustainability bulletin and by creating a virtual sustainability library.

In this environment, the operations identified many improvement opportunities for environmentally efficient projects in the area of raw material usage, energy, water and waste. Not surprisingly, environmental performance for the division increased and several key indicators showed in the first 6 months of 2013 an encouraging improvement already. Both fuel and electricity consumed per unit output decreased by 5%, Water consumption and waste generation per unit output decreased by 4% and 3% respectively. These were just the result for the environmental projects, in the area of energy management systems, social responsibility and health and safety likewise initiatives were taken and successes achieved

## **Emission from transport**

The vast majority of our CO<sub>2</sub> emissions stem from our manufacturing activities at our production locations. Of the remaining CO<sub>2</sub> emissions, those caused by the transport of raw materials, intermediate and final products to and from our production locations are also significant. For our European operations we calculate, on an annual basis, the CO emissions related to the transport of the main raw materials to our mills and converting plants. For 2013, we have, for the first time, estimated the CO emissions related to the transport of customer products from our European corrugated operations to customer points of delivery. Transportation of our products is mostly outsourced to external parties.

In the  $CO_2$  emissions reported we include the transport of wood, recovered papers and market pulp used in our mills. We also take into account  $CO_2$  emissions from the transport of intermediate products to paper mills and/or converting plants (reels of paper, corrugated board sheets, solid board sheets, plastic films and other items to the converting plants) as well as  $CO_2$  emissions of the transport of finished products to our customers (mainly packaging solutions).

While the calculation of  $CO_2$  emissions for the transport of paper reels between our own mills and the converting plants is accurate (representing 70% of the total volume), 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 third parties. C0<sub>2</sub> emissions for transport of raw materials 2013 - European operations





For 2013,  $CO_2$  equivalents for transport of raw materials amounted to 216,000 tonnes. The breakdown by mode of transport is shown in the graphs above. The  $CO_2$  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 so-called tonnekilometres and the pie-chart displays the split by type of transport. 54% of our transport needs are carried out by road, 35% by sea with the balance carried out by train.

For the calculation of the  $CO_2$  emissions for the transport of finished products from our converting plants to customer points of delivery, we have accurate data for 29% of the total volume. We consider this figure to be representative for all finished goods transport. By way of simple extrapolation, we have estimated the total relevant  $CO_2$  emissions to be 101,000 tonnes (100% by road).



**Edwin van Woudenberg** Commercieel Manager at Koopman Cargo

## ENGAGEMENT WITH STAKEHOLDERS

## On the road to even more sustainable logistics

Koopman Logistics Group is Smurfit Kappa's preferred supplier in The Netherlands for the transportation of its paper and board products. Since 1998 the family-owned company has been working closely together with Smurfit Kappa to improve the quality, efficiency and sustainability of Smurfit Kappa's transport, cargo and warehousing needs. Every day Koopman transports more than 300 Smurfit Kappa truck loads across the roads in The Netherlands and neighbouring countries.

"Both Smurfit Kappa and Koopman are early innovators", says director of cargo operations Harm Koopman. "Nowadays you can earn special certificates for planning logistical efficiency by combining cargo loads of multiple companies. We already made that kind of efficiency planning part of our relationship 16 years ago. We have invested in special software that enables us to combine all of our truck loads in the smartest possible way with the least empty transport kilometres. Our efforts earned us a 'Lean and Mean'-certificate and we have been rewarded because we managed to reduce our CO<sub>2</sub>-emissions by 20% in a time span of five years."

Commercial manager Edwin van Woudenberg continues: "Koopman was one of the first transport operators with a whole fleet of Euro-V proof trucks. We now even have a novelty with several Euro-VI classifications. Many of our trucks make use of bio-gas and to save fuel we also employ Longer Heavier Vehicles which measure up to 25 metres. The driving habits of our truck drivers are monitored through a special programme. This effort has resulted in another 4% fuel reduction. All our drivers and other personnel are employed according to the Dutch Collective Labour Agreement, which means they are fairly rewarded for their work and that we adhere to all safety standards."

Harm Koopman concludes: "Together with Smurfit Kappa we are working to continuously improve the way we forecast logistical movements and we expect that with the efforts of both companies we can even further improve our efficiency and sustainability in the future!"



Harm Koopman Director of Cargo Operations

## Environment (continued)





Plastics, metals, and various other materials are non-fibrous contaminants present in the recovered paper bales that are supplied to Smurfit Kappa's paper mills to produce recycled paper. These materials cannot be used in the production of recycled paper and routinely are sent to landfill. A team from the German paper mills in Hoya and Zülpich together with a third party developed an entrepreneurial solution to recover most of these materials to further reduce the amount of materials sent to landfill.

The recycling process starts when recovered paper is put into the pulper. In the pulper fibres dissolve in water and at the same time most of the non-fibrous components are filtered out by making use of a large rotating rope. When the rope is fully loaded it is sent to landfill as waste. Nowadays the ropes are transported to one of our German recovered paper depots next to the Hoya paper mill. This depot receives waste ropes from several Smurfit Kappa paper mills and through a specialised installation, the pulper ropes are recycled into three components: metal (23%), fuel substitute (70%), and water (7%). As a result Smurfit Kappa now annually sends 10,500 tonnes of waste less to landfill and re-uses even more recyclable materials.

## Using 100% of the paper in Spain

A team of Smurfit Kappa Huelva in Spain got to the core of the issue, literally, when they developed a new way to reduce paper core waste.

The initial idea was to take advantage of every meter of paper by making better use of the last meters of paper left at the core when using reels of paper to produce corrugated board. The core paper waste reduction was achieved by making use of an innovative automatic splice at the final stage of unwinding reels of paper. Then the idea was extended to any break during the unwinding of reels of paper. This led to a significant reduction of paper waste, contributing to a reduction in the carbon footprint.

A paper break in the corrugator can occur as a result of damages in the reel or because the end of the reel is reached. The inventors of the concept call the process 'best reel improvement'. Smurfit Kappa Huelva is specialised in industrial and agricultural performance packaging, but the new approach can be used in other corrugator settings as well.

## **3. WASTE**

Using data from 30 OECD countries it has been estimated that a 1% increase in national income leads to an increase of municipal waste of 0.7%. The growing global population and the expected growth in average incomes of emerging countries in particular, will make the issue of waste generation even more important in the next few years. The EU has adopted legislation that over time will only allow final waste to be sent to landfill. For us, waste is an important issue as we generate sizable volumes of nonhazardous waste in our manufacturing process. Our objective is to contribute to a circular economy. Eventually we will take all avoidable waste out of our production system and we will minimise our waste to landfill to those materials that are no longer recyclable and/or recoverable.

The vast majority of waste generated in our operations is non-hazardous, consisting mainly of waste from the recovered paper pulping and screening process, sludge from the process water treated in our water cleaning facilities, calcium carbonate residues from lime kilns, and ashes from biomass boilers. Over 90% of all waste is generated in our paper and board mills with the balance generated by the packaging operations.

Currently, approximately 57% of the non-hazardous waste generated is sent to landfill. We operate landfill sites at three of our paper and board mills. Legislation on waste to landfill differs by country/region. Also the opportunity to economically re-use certain elements of the waste within the vicinity of our operations differs. These two factors greatly determine whether waste eventually is sent to landfill or re-used. Examples of re-use of waste streams can be found in the Netherlands, where our Roermond paper mill converts 99.5% of its recovered papers and other raw materials into valuable and useful products and applications (see page 75 under 'Recognitions') and in Germany, where our Hoya paper mill, together with the recovered paper operations, developed a solution for waste resulting from the primary pulping process of recovered paper (see insert on the previous page).

What is registered as waste is actually waste with a water content of

approximately 50% due to the following reason. The different waste fractions are stem mostly from various steps in our paper and board manufacturing process in which large quantities of water are added to the primary raw materials and subsequently taken out in the manufacturing process. The waste generated in the pulping and screening process and in the water treatment process contains mostly water which is then partly removed by pressing the material. Still approximately 50% of the remaining waste consists of water.

During 2013, we performed an in-depth assessment of the different types of waste generated by our operations (mills and packaging operations). This assessment is a first step in identifying which types of waste are generated at which stage of the manufacturing process and which operations are the main contributors to our total waste generation and waste disposal. In 2014 we will add further detail to this assessment, including analysing which waste streams are generated during the different stages of our production process and determining best practices on how to prevent waste and how to recover waste.

Once we have appraised our waste streams and possibilities to reduce the amount of waste we will set a challenging and measurable target for waste reduction.

## 4. WATER MANAGEMENT

Apart from energy, water is the next most important element in the production process of paper and board. UN data indicate that global water use has been growing at more than twice the rate of population growth in the last century and the UN estimates that by 2025, two thirds of the global population will be affected by water stress. For our stakeholders, intake, usage and discharge of water is also a key topic. Therefore, although we have always tried to limit water intake where we can, we have committed to perform water impact assessments of our sites on their environment in relevant areas and develop water usage measures as appropriate before 2017. This commitment is in addition to our existing commitment to minimise the impact our water usage and discharge have on the

#### Water sources

ALL OPERATIONS



environment, and specifically the water ecosystems.

Over ninety percent of the water used is actually returned to the water bodies in good condition. 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 many times in the production process 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 are investing in the best available techniques to treat water before returning it to the water source. Since 2005, we have made considerable efforts and sizeable investments in upgrading water treatment facilities. One of our largest paper mills, Zülpich in Germany, is operating a 100% closed loop process water system.

## Water performance

Over 98% of our total water intake is in our paper and board mills. In 2013, our mills collectively used 123 million m<sup>3</sup> of water. Our global converting system which requires limited amounts of water relative to production volumes used 2.3 million m<sup>3</sup>. Despite the addition of SK Orange County to our operations at the end of 2012, in 2013 our total water intake is similar to 2012. For 2013, the average water intake by our paper and board mills equalled 17,7 m<sup>3</sup> per tonne of product produced, down from 18,7 m<sup>3</sup> in 2012.

## Environment (continued)



#### Water intake

THE AMERICAS PAPER MILLS



#### Water released

Water intake

EUROPEAN PAPER MILLS



#### Water released

THE AMERICAS PAPER MILLS



#### Process water discharges

EUROPEAN PAPER MILLS: COD, BOD, TSS



#### Process water discharges

THE AMERICAS PAPER MILLS: COD, BOD, TSS



This decrease is the result of the addition of the Forney paper mill (SK Orange County) in the US to our system at the end of 2012. Due to an almost closedloop water system, the water intake of Forney is approximately 2 m<sup>3</sup> per tonne of product produced.

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%. Compared to 2012, the performance in 2013 further improved by 0.4%. We use the COD (Chemical Oxygen Demand) content as a measure for water quality.

For 28 of our paper and board mills, the water that is discharged to the surface water systems such as rivers, lakes and/ or sea has been treated in water treatment facilities on-site. For the other eight mills, water is being discharged to community water treatment plants where it is treated before being discharged to public water bodies.

The indicators related to the quality of water discharges (BOD, COD, TSS) displayed in charts and commentary on trends are related to these mills that discharge treated process water directly to the surface water systems. Other indicators (water intake, water released) are related to all 36 mills.

Although on an overall basis, performance in 2013 was only slightly better compared to 2012, our Bernal mill in Argentina showed a significant improvement due to the full benefit in 2013 of the new process water treatment plant commissioned in mid-2012. Also the Cerro Gordo mill in Mexico improved its performance in 2013, successfully conducting a programme in 2013 to increase the rate of recycling of the process water and also to adjust the chemical treatment at the process water treatment plant, thereby achieving a 34% decrease in its COD discharge compared to 2012. Our mill in Facture in France returned to normal discharge levels compared to 2012 when an incident with a black liquor boiler led to exceptionally high discharge levels. Our mill in Piteå in Sweden experienced technical issues at the aerobic reactor during the first guarter of 2013 and in August 2013 a total mill power shutdown subsequently led to water treatment

plant not functioning correctly. This resulted in a temporary overall increase of organic discharge per tonne of product for Piteå by approximately 50% compared to 2012. At the Navarra mill in Spain the impact of including the cooling water, which contains suspended solids, into the calculation of the global organic discharge of the mill led to an increase of approximately one third of the organic discharge in 2013 compared to 2012. 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 typically show a performance trend highly correlated to the COD indicator and are therefore not discussed in further detail. The so-called eutrophication indicators (nitrogen and phosphorus) remained stable in 2013 compared to 2012.

There were no significant spills reported in 2013.

## Water data

Water related data for all our operations (including details for individual mills in Europe and the Americas) are shown in the tables on pages 78-85. For the mills where the water treatment is subcontracted to an external third party, we measure and report COD, BOD and TSS levels in the water discharged by these mills before it is discharged to these external treatment parties.

To provide a correct overview of the Group performance for all water indicators, BOD discharged is estimated in some mills (Nervión and Navarra in Spain and SSK in the UK) by using COD discharge in combination with the ratio COD/BOD obtained from surveys performed during 2013 in those mills.

## Cellulose du Pin

In 2012, our Cellulose du Pin kraftliner mill located in Biganos in France, faced the collapse of one of its black liquor storage tanks resulting in the release of effluent onto the grounds of the facility. Although immediate action was undertaken to contain the spillage a limited quantity of 100m<sup>3</sup> of black liquor effluent spilled into the nearby Lacanau river harbouring some very rare species of fish, part of a regional natural park and connected to the Arcachon Bay.

Following the spillage the authorities requested an assessment of the impact of the spillage on the Lacanau and connected rivers, groundwater and on living organisms. The impact assessment was conducted by Cellulose du Pin in cooperation with the office of the Regional Natural Park and various scientific associations for the protection of nature. Results were shared with local interest groups such as the oyster farmers in the Arcachon Bay, local authorities and associations focussed on protecting the environment. Initial conclusions point to very limited levels of pollution as a consequence of the black liquor spillage in the Lacanau river thanks to our mill staff's fast and effective response. Indicators have shown that the fish population has been restored and that sensitive species are still present in the river. The aquatic vegetation has also returned to its normal appearance including the re-emergence of rare and sensitive plant types.

On the back of this, the participating parties signed a three year agreement that will commit Cellulose du Pin to supporting studies designed to improve the knowledge of flora and fauna present in the natural zone surrounding the paper mill. These scientific studies will be performed by local wildlife associations.

The initial results of the studies on the flora and fauna in an area of approximately 700 hectares surrounding the mill has already highlighted important information. This includes the identification of species across many different categories such as mammals, reptiles, amphibians, birds and fish. The study so far shows a diversity that is of scientific interest, with some rare animals (European otter, European hedgehog, common genette, red squirrel, aquatic vole) and also species unknown to be living in the area before (European water shrew). These initial results will be completed by the results of the continuing studies during the next two years. A positive effect of these studies is that Cellulose du Pin now is viewed as a contributor to scientific research on wildlife in the area, and a local partner supporting sustainability, research to wildlife and environmental protection.



Johny van Buren and Gregory Dick (r.) at Smurfit Kappa Zülpich in Germany.

## Smart dosing system saves water and chemicals in Zülpich

Together with an equipment manufacturing company, Smurfit Kappa has developed in its paper mill in Zülpich in Germany a smart dosing system – FlowJec – with which paper can be produced in a highly environmentally compatible manner.

The key feature of FlowJec is that it ensures a homogeneous dosing of chemicals in the process flow. This is realised by introducing retention agents to both paper plies. The result is twofold:. fewer chemicals are needed and less fresh water is needed to dissolve the chemicals. Depending on the paper grade produced, main raw materials like energy, fibres and water account for more than 70% of the manufacturing effort.

The way in which chemicals are added in the approach flow system or wire section not only influences their effectiveness, but also has a crucial impact on the efficiency of the raw material utilisation. The improved stock consistency in the headbox results in better ash distribution and formation, which in turn enhances runnability. This shows that FlowJec saves resources, enhances quality and implements a more sustainable work flow.

## Cow manure improves performance of wastewater treatment plant in Mexico

The Mexican city of Monterrey has limited water availability and as a result water costs are high. Two years ago the management of Smurfit Kappa's paper mill in Monterrey initiated a programme to optimise its water management.

The programme improved the performance of the wastewater treatment plant, but the water discharge parameters were difficult to comply with. The microbiological population of the activated sludge was mostly composed of filamentous bacteria that hindered good flocculation and caused solids to overflow.

To successfully solve the overflow problem, an extract of cow manure was used to override the filamentous bacteria. This eased environmental pressures and facilitated better reuse of water throughout the plant. The BOD discharge was reduced by 93% between 2011 and 2013, while TSS discharge was reduced by 86%. The mill also reduced its fresh water intake from the municipal grid from 30% to 5% of its water needs by making better use of treated water and well water.

# Efficient (re-)use of water in Colombia

Two of the Smurfit Kappa converting sites in Colombia, one in Bogotá and one in Medellin, achieved a significant reduction in their water intake.

In Bogotá, treated water was formerly used for the preparation of gum. However, due to changes in the production process the treated water can now be used for other purposes. A new set up of the treated water circulation system now allows the water to be used for washing the printing plates from the printing machines and the washing sections on the corrugator, which are the most water intensive units of the plant. Waste water is treated with various chemicals in the treatment plant and is then returned as clean water to the system. Efficiently re-using the treated water in this way saves 60 m<sup>3</sup> of water monthly.

In Medellin, which due to its tropical rainforest climate has high precipitation levels, the local Smurfit Kappa plant uses rainwater in an efficient way by investing in a rain water recovery system. The new collection tank and piping network distribute the rain water to the glue preparation unit and washing sections of the machines. The intake from the city's water system has been reduced by as much as 16% facilitating a sizeable environmental improvement. Medellin is a densely populated area, with more than 3.5 million people, which puts a burden on the water resources of the district. Smart water management by industrial users like Smurfit Kappa contributes to the improvement of local living conditions and the environment.

# Social

Under the second sustainability heading - People - our initial 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 safe working, top performance and personal growth of our employees go hand-in-hand.

To reach these objectives we aim to be socially conscious and proactive on social issues by making a commitment to continuous improvement in the areas of health and safety and a 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 approach to social responsibility.

Our relationships with the local communities in which we operate is another key priority for us as we are often seen as an important partner in the local society and economy. Our objective in this regard e is to contribute positively to local economic and social development by providing jobs and responding to the communities' particular social needs.

## 1. HEALTH AND SAFETY

Smurfit Kappa has made the health and safety of its workforce an overriding consideration. We have adopted a structured and systematic approach to the management of health and safety considerations in the workplace. We are confident that further improvements in our safety performance are attainable. The commitments within our revised Group Health and Safety policies are consistent with those of the internationally recognised OHSAS18001 occupational health and safety system specification.

Elements of the approach we adopt to ensure sustained commitment and achieve injury reduction targets include:

- Making health and safety a consideration in our management recognition and reward programme.
- Having health and safety as a primary agenda topic in all relevant management and employee meetings.
- Promoting continual improvement through our annual excellence in health and safety awards programme.
- Sharing incident information across our operations.
- Performing internal benchmarking of health and safety performance on a monthly basis using a suite of performance metrics.
- Promoting the development and implementation of technical and engineering improvements through our innovation in safety awards programmes.
- Providing regular health and safety training and briefings to employees.
- Conducting cross audits in health and safety involving our panel of trained internal health and safety coordinators.

We made progress on our journey to a safer and healthier work environment during 2013, when a 16% reduction in the lost time accident frequency rate and a 11% reduction in the injury severity rate of our own employees was achieved, compared to 2012 (see page 50). Our operational teams, together with our health and safety experts, continue to identify opportunities for further improvement. We recognise the importance of strong leadership, continual employee involvement, and representation in the development and maintenance of a positive safety culture.

To that extent, we are building an interconnected and collaborative health and safety "expert community "that supports our operations management teams as they take steps, both locally and regionally, to address common and unique challenges. This expert network leverages the rich knowledge of our employees in areas such as human resources, production, industrial design, and process control. This network positions us to deliver innovative solutions based on proven principles.

Below we provide some examples of important health and safety programme developments that received special focus during 2013 and early 2014:

In 2013, to support our drive for continual improvement, we appointed a Group Director of Health and Safety whose priority has been the development of processes that ensure the consistent and global adoption of proven health and safety practices and their verification through a comprehensive audit process.

## Social (continued)

## Lost Time Accident Frequency Rate\*

FULL YEAR 2012 vs 2013



\* for definition see page 97

- In early 2014, we established a Safety Incident Bulletin process to share key lessons learned from incidents across our operations. Bulletins are posted both electronically and on information boards within our plants allowing employees to learn from safety events at other plants. This tool also helps to ensure safety incidents receive appropriate management attention and allows plants to discuss the applicability of lessons from other plants.
- A common, one page Group Health and Safety Policy statement is being adopted across all our operations. The statement clearly articulates and reinforces our commitment to health and safety. To support the policy statement, a set of Good Health and Safety Practice requirements have been developed which will be adopted across all divisions. Compliance with these requirements will be verified through our audit tools.
- We currently measure and will continue to monitor lagging indicator metrics such as accident frequency and severity rates. To drive performance improvements, we are increasing our focus on monitoring a suite of leading indicators.
- During 2013, we established a project team to build a comprehensive health and safety verification and audit process tailored specifically to our operations and to be applied across our global operations. This project is leading to the development of a common health and safety audit tool allowing us to audit our operations using common criteria to verify the

presence of the appropriate protective measures relating to our operations.

- Segregation of pedestrian and lift truck traffic is a core risk mitigation measure in warehouse and logistics areas. For this reason, we continued in 2013 to implement restrictions on pedestrians in material stores and warehouses, when lift trucks are operating. Progressive technical and engineering risk control solutions were implemented to ensure the safety of those who enter such areas. In addition, new forklifts are being fitted with speed limiters and other risk reduction devices, some involving the use of radio frequency identification devices (RFID) technology. Throughout our operations advancements in effective physical separation measures between lift trucks and pedestrians continue to receive special consideration.
- Since 2010, we have been performing Safety Opinion Surveys biennially. This survey process is designed to obtain opinions and perceptions from our employees on a range of health and safety aspects within their work environment. The outputs of the 2012 survey highlighted improvement opportunities which we responded to during 2013. Examples of such opportunities included promoting near miss reporting and the sharing of lessons from incidents that have occurred at other operations. In 2013, we introduced our Safety Incident Bulletin process. Near miss reporting is now an established practice at every plant. We will perform our next safety

Lost Time Accident Severity Rate\*

FULL YEAR 2012 vs 2013



opinion survey exercise across our entire Group operations during 2014.

- We have revised our health and safety incident and injury reporting standard this year. The standard defines the monthly mandatory health and safety monthly reporting requirements that apply across all Smurfit Kappa operations. The key changes within the revised standard focus on:
  - Providing a list of clear definition of additional reporting categories to facilitate more consistent recording of injuries and incidents involving contracted staff agency workers and subcontracted labour workers.
  - Providing improved guidance on injury classification based on externally recognised injury reporting guidelines; this focuses on distinguishing between First Aid Case (FAC) and Medical Treatment Case (MTC), thereby increasing consistency of injury classification across all Smurfit Kappa operations.
  - Providing improved clarity when reporting accidents sustained by a Smurfit Kappa employee while working at one plant yet reporting to another organisation (e.g. employee on secondment).
  - Emphasising more clearly the precise method of calculating the number of days relating to a lost time accident thereby ensuring precise recording of severity rates.

#### Days Lost Due to Accidents\*

FULL YEAR 2012 vs 2013



Number of Accidents\*

FULL YEAR 2012 vs 2013



The safety of every member of the Group's workforce is an overriding consideration. We devote considerable time and effort to promoting an awareness of health and safety so that the Group's employees and subcontracted workers are aware of, and adhere to, the appropriate protective procedures. It is with great regret, therefore, that we report two fatalities during 2013. A contractor sustained fatal injuries while performing a tree felling task on behalf of our Colombian forestry operations and an employee sustained fatal injuries while performing roof maintenance at the Group's Chilean operations.

The Group responded promptly to these fatal incidents and steps were taken to further strengthen both our forestry and "work at height "programmes. In October 2013, all plants underwent a specially designed plant safety evaluation focused on establishing the presence of critical roof level safety risk mitigation features. This recognised that many of our plants have equipment for which maintenance or checking tasks need to be performed on the roofs of their buildings. A programme has been initiated to equip our roofs with safety and access control devices to further enhance the protection of those performing maintenance and checking tasks. Plants requiring regular access are being fitted with specific protective measures. Access to roofs is restricted where protective measures are not fitted.

The Colombia forestry team have introduced a number of safety programme improvements. These include the introduction of a video based interactive tool to explain safety procedures, the communication of forestry related safety alerts to targeted contractors and the deployment of a suite of ten life-saving rules. The life-saving rules relate to critical practices for each forestry process where non-compliance could lead to severe injury. The rules are communicated to the workforce through recorded briefings and the posting of highly visible posters at the forestry work front. Clear and fair consequences apply if the rules are broken.

Smurfit Kappa experienced two significant fires in 2013. The first occurred in Cerro Gordo in Mexico in March and the second occurred in Birmingham in the UK in April. In both cases the fires occurred accidentally in the recovered paper area of the local Smurfit Kappa paper mills, resulting in the total loss of 16,000 tonnes of recovered paper. Fortunately, both fires were brought swiftly under control with minimal environmental impact, there were no injuries to any of our employees or anyone else dealing with the fires and no fines were incurred.

#### Annual Health and Safety Day

In April 2013, we continued to promote awareness and foster cooperation within the workforce through the highly successful Safety Day. Events were held in all our plants in Europe and the Americas. An address by the Group's Chief Operating Officer, highlighting the importance of protecting the health and safety of employees was screened in all operations and all senior executives were in attendance at one of our operations on the Safety Day. During the campaign, many events were organised with employees. The positive feedback from our employees following Safety Day 2013 has indicated that it continues to be a resounding success drawing on the active participation of our management and the interaction with our employees, and in many cases with their families. Health and Safety Day will be organised annually in all our plants in Europe and the Americas. Plans are already in place to promote more health and safety events during 2014.

In addition to the various Group-wide and Regional initiatives outlined above, individual plants continued to operate their own health and safety initiatives during 2013 including 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, we continue to encourage employees 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 the Americas focussing on increasing awareness and fostering appropriate behaviour with regard to safety.

## Social (continued)



Families and employees at the First Aid Day at Smurfit Kappa Bernal in Argentina.



Manuel López from Smurfit Kappa Cerro Gordo Mill, Victoria Franco from Smurfit Kappa Monterrey Guadalupe Corrugated and Roberto Albert from Smurfit Kappa Mexico in Mexico.



Ostermann and Jos van Cruchten from the Recycled Paper Europe cluster.

Krebs, Egon Speckmann, Torsten

## RPE Health and Safety Standard Handbook pays off

The Smurfit Kappa paper mills cluster operating as Recycled Paper Europe (RPE) has, after extensive research, successfully introduced new health and safety standards in close co-operation with an external engineering office.

The RPE H&S competence team began to develop the H&S standards in 2010 to reduce potential risks at the workplace. These standardised procedures have now been published in the RPE H&S handbook for all employees. From the beginning the H&S team strove to develop practical guidelines, not an abstract and lengthy publication, for the six paper mills located throughout Germany, the Netherlands and the Czech Republic.

The results have proven that the team has succeeded in their mission to make the paper mills a safer place to work. The number of accidents within this cluster of Smurfit Kappa paper mills has fallen 37% between 2009 and 2013. In the same period Days Lost due to accidents are down by 61%, the frequency of accidents has decreased by 40% and the severity of accidents has reduced by 63%. These improvements clearly demonstrate that H&S is an integral aspect of the corporate culture at Smurfit Kappa.

## Argentinean families receive resuscitation and First Responder training

To raise awareness of home accidents and to teach families how to respond to personal injuries and fire hazards, the Smurfit Kappa Argentina team organised a First Aid Day with the help of local fire brigades and the Red Cross organisation.

Smurfit Kappa's First Aid Day took place in the Bernal and Coronel Suarez plants. Families of employees were invited to participate in workshops and to tour the plants. Special individual attention was given to the specific department where the family member of the participants works.

The participation of the experienced Red Cross and the local fire brigade members ensured good levels of participation from families who got engaged in a resuscitation workshop or a Home First Aid course focused on responding to a fire scenario in the home. The workshops received positive feedback from the families, who enjoyed the day and even earned formal certificates. The children especially liked the games with funny clowns and the crafts with paper and corrugated boxes, but what the kids liked most of all is no surprise: the fire-fighters' truck demo!

# Safety is not simply a programme, it's a culture!

Smurfit Kappa Mexico developed its own, by now, very successful safety culture seminars, founded by combining their internal expertise and external best practice sources.

A team was established to coordinate the efforts, set goals and develop materials. The next phase consisted of running tests, training the course instructors and implementing the interactive two day course at all the Mexican sites. By the end of 2013, a total of 80 courses had been delivered to over 1,700 employees, led by some 70 trained facilitators.

The course features seven modules which address historical performance, personal experiences, safety concepts, risk assessment, mistakes, safety culture, commitment, protective measures and incident investigation. These seminars are contributing to improved accident prevention through greater hazard awareness within the workforce and higher commitment to maintaining a safe workplace. The bottom line is that safety is not simply a programme, it's a culture. These Smurfit Kappa safety culture seminars are promoting an interdependent safety culture by actively encouraging employees to "take care of each other"



Paul Fockaert beside one of the safety zones of the folder-gluer at Smurfit Kappa Interbox in Belgium.

# Belgium: Health and safety improvements that really stick

After 38 years of service, the folder-gluer machine at the Smurfit Kappa solid board plant in the Belgian town of Hoogstraten, needed an overhaul to upgrade its safety standards. With smart high-technology improvements the folder-gluer is ready for the future again both production and safety-wise.

Health and safety is a key value at Smurfit Kappa. A folder-gluer machine has many moving parts that need to be adjusted by the operator regularly. That requires the operators to take strict precautionary measures to maintain safe working conditions while operating the equipment.

In a team effort, Belgian engineers evaluated the best way not only to revise the machine, but also to check working conditions ensuring the highest possible safety standards, while the equipment is operated at the highest efficiency rate.

The changes included installing large safety screens, an in-feed robot, special safety zones, automatic strapping, safety cameras, alarm condition sounders and protective fencing. The quality of folding is now checked using laser technology and out of specification packaging is rejected by an automatic kicker. In combination with the automatic quality control system the machine produces perfect gluing and folding and, most importantly, complies with proven machine safety standards.

## 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. Apart from one incident in which immediate and appropriate measures were taken, no issues of discrimination in any of these categories were reported in 2013.
- 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 the Americas.

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 2013.

- 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 2013.
- 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 2013.

- We compensate fairly and review wage and salary levels at regular intervals. Where appropriate we use expert methodologies and input from the current jobholder, 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 strive to operate as a meritocracy, and 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 therefore no formal system at Group level to measure the precise ratio for remuneration by gender.

The Group's compensation philosophy is to reward employees based on current best practices in the relevant market. The Group compares its compensation practices to compensation survey data that is compiled and published by major consulting firms. 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 responsibility, size of the job, experience, performance, country of residence, etc. and not as a result of nationality or any other such reason.

## Social (continued)

#### Total employees by age







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 specific countries.

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 2013, the Group had some 41,000 employees. This figure includes both our own employees as well as contracted labour.

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, more than 50% 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 administrative or clerical activities such as sales and marketing, finance, human resources and procurement, all of those categorised as indirect labour activities.

Approximately 5% of our employees are engaged under a temporary contract.

Of our total workforce, almost 82% were employed in ten countries (Mexico, Germany, France, Venezuela, Netherlands, United Kingdom, Colombia, Spain, Italy and Sweden), with the remaining 18% distributed between the other 22 countries were we have a production and/or a sales and marketing presence. This distribution generally is in line with Smurfit Kappa's distribution of activities. Since the acquisition of Orange County in December 2012, Mexico has become our number one country in terms of headcount.

Total employees by length of service

During 2013, 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 2013, 17% of all Smurfit Kappa employees were female (1% more than in 2012) and 83% were male – see graph on page 55. 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 strive for an increasing level of participation of women in management roles in the company. In that context we have been reviewing the areas and roles where the retention level and further advancement of women has the greatest potential for success. Concrete results are to actively promote female participation in management training programmes such as the Advanced Management Development programme and to pay extra attention to female managers and high potentials when reviewing our succession plans.

In relation to return to work and retention rates after parental leave we do not keep central records. In 2013, we analysed the situation in three countries and the statistics for the year are shown for illustrative purposes in the table below.

At the end of 2013, employee turnover in the organisation had decreased from 4.6% in the previous year to 4.3% . Retirements and the pursuit of other careers or interests were the main reasons for the departure of more than half of the employees in 2013, while rationalisation and redundancies accounted for 15% of the departures in 2013. There were 1,955 new entrants to the Group during 2013, of which 85% were in Europe and 15% in the Americas.

Country	Italy	Poland	Sweden
No. on parental leave	16 (of which 5 men)	6 (of which 1 man)	11 (of which 7 men)
Return to work after parental leave	10	4	11
Retention rate	63%	67%	100%

Total employees by Gender

Top 10 Countries Headcount 2013





## Talent Attraction and Employee Training and Development

Success within the Group can only be delivered through our people. We are fully committed to ensuring that employees at all levels and in all locations are fully aligned, empowered, inspired and trained to deliver outstanding results and to achieve personal growth and advancement where possible.

To fulfil these commitments a wide range of training and development activities take place at local and central level.

For example, at local levels over the past twelve months we have delivered over 150 training interventions in the area of safety and over 50 programmes covering sales.

Overall in 2013 each employee spent twenty hours on average in training.

Within the Paper Division the Recovered Paper Operation ran a programme for all company car and truck drivers in Germany, Benelux and Slovakia to learn more about driver safety and the various new technologies found within the vehicles. Training took part on a test track in groups of twelve over a full day and the plan is to refresh these skills every three years.

In the UK the Corrugated Division ran a series of programmes in the area of Supervisory Training. The core topics included report writing, team working, team development and communication skills.

In Mexico, we ran a design competition with a number of local universities. Final year students were eligible to enter and this enabled them to develop a practical application from their Graphic Design and Structural Design studies as well as promoting our name as a potential employer of choice in a discipline where we needed to boost our resources. We received 140 entries and seven finalists were invited to present their designs. The three winners were then invited to spend an internship with Smurfit Kappa.

In Argentina an annual event is run for all newcomers to our company. The attendees spend a full day learning about the full operational scope of Smurfit Kappa and hear presentations from the Argentina senior executives. It also provides them with the opportunity to meet colleagues and share their initial experiences of the Group.

Graduate recruitment and development programmes continue to grow as a means of attracting new talent into Smurfit Kappa. For example, we have been running a graduate recruitment scheme in Germany since 2002 and of the 40 employees to join us through the programme, 35 are still employed by Smurfit Kappa and have since gone on to grow their careers in the areas of sales, finance and operations.

At central level the Group continues to place a significant emphasis on the Advanced Management Development (AMD) Programme. The programme is aimed at high potential, mobile employees from across the Group who have typically been with Smurfit Kappa for between three and eight years. This has been running for over twelve years, with over 300 participants having passed through the programme. In 2013 we carried out a detailed analysis of the success of the programme by surveying all past participants. Well over half of the participants are still with the Group and have gone onto achieving significant promotion and advancement.

In 2013, we saw the second running of the General and Mill Manager Programme (GMMP) for newly appointed Operational Managers. For the first time participants from the Americas also took part. The 19 participants that took part in the two week programme represented 13 different nationalities. 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.

The Group's centrally run English Language Training continues to go from strength to strength with around 100 people participating in 2013 in the six programmes offered. This training is run in conjunction with an internationally recognised Language School. Plans are in place to supplement this in the coming year with an enhanced e-platform to allow more remote learning opportunities and to actually assess all senior managers with regard to their proficiency levels of English.

The Group continued to develop its relationship with two of Europe's leading Executive Education Business Schools by enrolling participants in various open programmes offered by the London Business School and by INSEAD. In the Americas, we continue sending professionals to obtain Masters degrees at Purdue University in the USA, a programme that has been in place since 1992.

## Social (continued)

## Management Gender 2013 - Top 10 countries





## ENGAGEMENT WITH STAKEHOLDERS

## Bill Fox, Group Head of Leadership and Talent Development

The AMD programme began back in 2000 and in more than 300 participants have passed through since its start. The idea is to take high potential employees from around the Group and expose them to the full activities of the Group, provide them with some leadership training and have them take part in a real and very 'live' project during the programme. It has given many of our past participants an excellent springboard within the Group and we see many now in senior roles. To ensure the progamme remains effective for us we continue to develop it year after year seeking feedback from the participants. Our Talent and Development strategy is to help our people to fulfill their own potential and AMD is a key element in that strategy.



#### ENGAGEMENT WITH STAKEHOLDERS

## Jennie Kaarle, European Technical Account Manager, Sweden

The AMD programme is a great opportunity to meet senior management and colleagues from different countries - creating networks. I have also learned a lot about my strengths and weaknesses. I feel that I have broadened in my professional role, helping me to connect all the dots in the company together. In my role, which involves meeting customers, having this overview and insight in our business will definitely make me a better representative of the company. Although I think additional focus on individual management skills would make future programmes even better, it is great that people from the Americas region are also participating; it makes the programme definitely more complete having a mix of participants from all countries where the Group is active.



#### ENGAGEMENT WITH STAKEHOLDERS

## Amy Byrne, Financial Internal Auditor, Ireland

The AMD programme was a very valuable experience exceeding my expectations. It provided exposure to parts of the business outside of my normal role and the opportunity to develop contacts across countries and cultures. The programme was challenging in a good way giving me the opportunity to move outside my comfort zone and learn about other aspects of the business. The programme was very beneficial to my professional life. I was exposed to different information and gained a greater knowledge of the overall Group. How would I describe the programme: It is cross-divisional, countries and functions, allowing all participants exposure to new aspects of the business. Would it not be great to have a platform/ forum where all employees can interact and share knowledge across countries and divisions?

#### Top 10 Employee Gender - Top 10 Countries





#### ENGAGEMENT WITH STAKEHOLDERS

## Mauricio Astudillo, Operations Engineer PM4, Cali, Colombia

The AMD programme is a very interesting, complete, innovative and challenging training personal development tool that has fully met my expectations. The programme triggers participants to be active, dedicated, focused and to express their own opinion to fellow participants in discussions. I was happy to contribute the best of my personal experience and knowledge gained over the years working with Smurfit Kappa. Although I personally also would have liked to go in depth in some areas of personal interest, AMD has provided me with new strengths and tools that for sure will help me to perform my job even better. It gave me a wider and clearer perspective and understanding of the Group. Clear positives of AMD are its focus, high level and challenging environment that is created.





# Young paper makers move up the ranks in Austria

The paper mill in Haid bei Ansfelden, Austria, has a rich history. Smurfit Kappa Nettingsdorfer has been in operation since 1851. The people that produce the annual 440,000 tonnes of paper are well trained and make sure that a new generation of paper makers moves up the ranks on a regular basis.

To give young people a chance to get acquainted with the paper mill, it has introduced apprenticeship training for teenagers starting at the age of 15. The programme takes three to four years and prepares for a career as a paper technician, electrical engineer or machine technology employee. Every year four to six young people start in this programme.

The so-called dual system offers social security and gives teenagers a chance to gain experience in a real work environment. Keeping in mind that the participants are young, the programme also incorporates leisure activities.

The students learn, earn a living and receive a certificate. Talented participants can continue their education with a Master Craftsman Exam, which grants access to courses on a college or university level.

## **Retired employees**

Our retirees have a special relationship with Smurfit Kappa. We are grateful for their contribution to our 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. Such events 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 issue 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.

## **Works Councils**

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 in 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 January 2012, governs the functioning, rights and duties of the EWC, and will remain in place for four years i.e. until the end of 2015.

During 2013 and as per our Agreement, we had two regular EWC forums and three Select Committee meetings.

The EWC consists of a maximum 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.

In those cases where a local operation discontinues its operations, any negative economic effects on its host community are mitigated by actions that are agreed with local and, if applicable, country Works Councils. 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 and early retirement where appropriate (see an example of this in the UK on page 59).

Where the change has transnational implications, and / or decisions that will significantly impact on the interests of its employees on two or more EU member States – for example, the relocation of production capacity, changes in operations, the acquisition, disposal or closure of businesses, collective dismissals - a consultation process with the European Works Council must take place prior to any decision being made. This is addition to local and country actions and consultations.

This set of actions, at the appropriate level (European, country, local), ensures that the needs and requirements of our employees are taken into account in each case where an operation is discontinued, without compromising the Group's ability to take the appropriate action(s) to protect its commercial interests.

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 six weeks to 24 weeks.

## Acquisition 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 was one acquisition during the course of 2013 and no such issues arose.

## **Group Awards**

Through our Smurfit Kappa Awards events in both Europe and the Americas, we 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.



#### ENGAGEMENT WITH STAKEHOLDERS

# Courses that change the lives of employees and enrich the community

When Smurfit Kappa's Townsend Hook mill, located in the British town of Snodland, had to close two old paper machines to construct a new bigger machine on site, Smurfit Kappa took it upon itself to initiate a special training and development programme for the forty papermakers involved. A programme with a lasting impression on the participants and the local community.

External trainer Sue Ricketts feels privileged that she was asked by Bob Huelin, Director of Training and Development at Townsend Hook College of Papermaking, to be part of this special programme:

"This staff development programme is unique in many ways and testifies to Smurfit Kappa's commitment to its personnel and the surrounding community. The mill will be offline for 18 months and during this time the crew remains employed, receives training and works on community projects. I have shared the journey of this group. For some, being back in the classroom was very hard, but the self-discovery of experiential learning resulted in self-confident, resilient individuals who are ready to take on the challenges of the new plant and perform a new role in their community. Smurfit Kappa has made it possible to enrich their personal lives."

"The group learns how to operate the new machine, but also receives extensive training aimed at personal development in general. The multiple courses even include maths, English, and foreign languages such as German. Furthermore, the college of papermaking stimulated many community activities such as re-decorating a special needs school, resurfacing a play area in a local primary school, erecting storage sheds for sport equipment in a local infant school, carrying out maintenance work at a local community cricket club and organising a fund raising day for the elderly with dementia. The programme really makes a difference for many people both inside and outside Smurfit Kappa", external trainer Sue Ricketts concludes.



Sue Ricketts External Trainer



## ENGAGEMENT WITH STAKEHOLDERS

## Immediate help after flooding disaster in La Plata

In April 2013, a major flood took place in the city of La Plata, close to the Smurfit Kappa plant of Bernal in Argentina. The devastating flood affected more than 190,000 people and left 70,000 people temporarily homeless.

Smurfit Kappa responded immediately. Employees donated money to buy food, water, hygiene items and clothes. More than 1,000 local families received donations from the funds which were raised at short notice. In kind donations included pasta, rice, milk, water, clothes, cardboard boxes and work T-shirts.

The humanitarian efforts were coordinated by the Banco Provincia Foundation. Director Soledad Peralta stated: "The link with companies who want to work together with the community is of major importance to us. Smurfit Kappa helped immediately when the flood occurred and thanks to their collaboration we were able to aid many people who had lost everything. We are very grateful."

The tragic result of the powerful flood was that 78 people lost their lives and 2,200 people needed to be evacuated. The buildings and infrastructure in the city suffered enormous damages. "Families lost everything, the water devastated their houses, it was very emotional. The HR department immediately asked us to help the city", says Smurfit Kappa treasury analyst Emiliano Bregant. Luis Guinder, customer service manager, comments: "Smurfit Kappa gave us the opportunity to help our neighbours when they needed help the most. The actions and fundraising showed the unconditional support of our company and employees to our community."



**Soledad Peralta** Director of Banco Provincia Foundation

## Social (continued)

For 2013, our kraftliner mill in Nettingsdorfer in Austria was awarded Plant of the Year for the Paper and Board activities for record production and operational performance and our corrugated packaging operation in Gdansk in Poland received an award for its and consistent operational and safety performance.

Our kraftliner mill in Piteå in Sweden was awarded Overall Plant of the Year for its best operational performance since the inception of Smurfit Kappa and its new ways of working.

In Health and Safety, the Awards for Excellence in Safety were awarded to our SSK paper mill in the UK and to our corrugated packaging operation in Schneverdingen in Germany for their exemplary safety leadership in the application of risk mitigation solutions and continual reinforcement of their workplace safety culture. The Awards for Excellence in Safety Improvement were awarded to our solid board mill in Hoogkerk in the Netherlands and our corrugated packaging operation in Alicante in Spain for their commitment to leverage experience from past incidents for further improvements in protective measures. Our corrugated packaging operation in Barnstaple in the UK received the Award for Excellence in Sustained Safety for operating more than 5,000 days without a single lost time accident.

In the Americas the same internal competitions exist. Our paper mill in Valencia in Venezuela was named Overall Plant of the Year in the Americas for its huge positive operational transformation in 2013, including recording zero accidents in 2013, resolving outstanding environmental issues and employees participating in local community activities. In Argentina, the paper mill in Coronel Suarez, in Colombia, the Barbosa paper mill, in Mexico, the Cerro Gordo paper mill, in Venezuela, the Caracas packaging plant and in the USA, the Forney paper mill were all named Plant of the Year in their respective countries.

In Health and Safety, the Awards for Excellence in Safety were awarded to the Atlas packaging plant in Mexico and to the Cagua packaging plant in Venezuela recognising their exemplary injury-free performance and the introduction of programmes involving the family members of the workforce. The Awards for Excellence in Safety Improvement were awarded to the Barbosa packaging plant in Colombia and the Naucalpan Folding Carton plant in Mexico recognising improvements in injury prevention achieved by increased employee engagement following the introduction of behavioural-based safety programmes.

More information on the Innovation and Sustainability Awards can be found on pages 66-67.

## 3. OUR INVOLVEMENT IN THE COMMUNITY

Smurfit Kappa invests significantly in the communities near our facilities, recognising it is a responsibility and an opportunity to contribute positively to the economic and social development of the communities of our host regions. Community involvement not only builds trust in Smurfit Kappa's way of doing business, it also serves as link between Smurfit Kappa and issues close to us such as the value of forests and training and education of (young) people. As a major employer in many countries, we therefore aim to play an active role in the communities in which we have the privilege to operate.

While our biggest contribution to our communities is in the jobs we create through our local investments, we are also committed to responding to the communities' social needs. We strive to be an integral part of the communities in which we are located, by supporting activities and community support programmes focusing on areas such as self-help initiatives, education and health programme. We do this in two fundamental ways, through making financial contributions and/or by volunteering with local employee engagement and participation being an important consideration in our decision to assist

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 General 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 General 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.



Maximilian Fischer from Smurfit Kappa Zülpich in Germany welcomes visitors at the training fair.

## Training fair delivers more qualified applicants

Education has become even more important during recent years due to demographic changes and a looming shortage of skilled workers. The management of Smurfit Kappa in Zülpich in Germany, identified the problem several years ago and initiated a regional training fair.

The idea was supported by the municipality and secondary schools in the area. They offered to make their school facilities available for the event. As the plan became more elaborate other participants such as a training centre, employment agencies and other relevant organisations joined the initiative.

Nowadays more than 600 pupils learn the ins and outs of more than 50 different professions and can meet representatives of the companies. Less well-known jobs with interesting career perspectives are brought into the limelight like that of paper technologist. The companies find new, well qualified trainees and the students learn interesting facts about professions that they had not previously known. As a result of the fair Smurfit Kappa received more than 60 applications for five apprenticeship vacancies.





With the help of Smurfit Kappa, through its local foundation, the strawberry growers have united themselves in an organisation called FRESOTA. Smurfit Kappa in Venezuela and its large volunteer team have joined efforts to educate future generations.

## A helping hand for Colombian strawberry growers

Colombian strawberry growers from the Sotará-Cauca region experienced high production costs, post-harvest losses and low family income. With the help of Smurfit Kappa, through its local foundation, the growers have united themselves, by creating the association called FRESOTA and thereby improving their business and living conditions.

The Sotará-Cauca region is ideal for agricultural purposes. But besides good weather and fertile soil, local farmers also need skills and knowledge to be successful. By supporting farmers to run FRESOTA more effectively, Smurfit Kappa helps to battle poverty and stimulate the local economy.

Now that the strawberry growers are united, they were able to replace the intermediaries that used to control the industry with their own commercial committee. Both payment policies and cost structure of the co-op changed. As a result the growers now realise a profit and have even opened a community grocery store. The profit is largely invested in sustainable initiatives such as sanitation improvements in the area and donations to the local library. FRESOTA has improved the quality of life for the whole community.

This initiative was recognised by the Fundación Interamericana and RedEAméricana. FRESOTA was awarded with the Transformadores prize in 2013. This Fundación honors community development initiatives.

## Smurfit Kappa trains Venezuelan Youth in values

Smurfit Kappa in Venezuela and its large volunteer team have joined efforts to educate future generations to help them face 'the Challenge of Growth'. Together with the Don Bosco Educational Unit and with the support of the NGO Jóvenes Emprendedores, ethical values were successfully promoted to families.

Good morals and sound ethics form the basis of any society or nation. This effort is just one of the Social Responsibility projects initiated by Smurfit Kappa in Venezuela to help local communities. In 2013 the aim of most of these activities was focused on providing tools for training and education, highlighting the 'Growing Challenge'.

The educational programme was taught during five weeks of workshops to approximately 300 people, specifically students in their fourth year of high school, and their parents or guardians. Students attended an initial activity, followed by meetings and workshops covering various topics like motivation, entrepreneurial attitude and values in daily life. During the closing activity, with students and their families, participants officially confirmed their commitment to follow the example of the given values. The largest corrugated packaging companies in the Czech Republic jointly cooperate with the Secondary School of Applied Arts by initiating a new curriculum.

## New converting machine operator curriculum in the Czech Republic

The largest corrugated packaging companies in the Czech Republic jointly cooperate with the Secondary School of Applied Arts by initiating a new curriculum to train converting machine operators. Smurfit Kappa and its colleagues are in need of well-educated employees and they have stepped up to the plate to stimulate a new generation to earn a degree in the paper packaging industry.

The packaging companies all recognise that qualified employees are the most important asset for any company. In the years to come the industry needs more well-trained people than the number currently available on the Czech job market. The companies also assist the school in promoting the new course.

Job security is an important driver for many young people who are just starting their career. Our people from Smurfit Kappa Žimrovice to be actively involved in the new curriculum by educating teachers, assisting in the course programme and student handbooks, and also facilitating practical activities for students at the production plants.



## Social (continued)



Every year, Smurfit Kappa organises soccer The environmental education at Smurfit Kappa Poland is part of the school programme.



Smurfit Kappa's Group office in Dublin organised a four-day charity walk in September 2013 along the Wicklow Way.



## Smurfit Kappa scores with School Cup

tournaments in the summer and during

Christmas holidays in Denmark.

Summer or winter, outdoor or indoor, five or sixteen years of age, the Smurfit Kappa School Cup has proven to be a successful event uniting the local Danish community of Kolding for more than 20 years.

Every year Smurfit Kappa organises soccer tournaments in the summer and during Christmas holidays. Last year a total of 265 teams participated representing more than 2,000 school children from grade 0 to grade 10. The outdoor event is organised together with Kolding Boldklub and the winter time indoor tournament is a joint effort with Kolding KFUM (YMCA) soccer club.

The tournament has grown into a prestigious local sports event and eager winners in each age group are very proud of their Smurfit Kappa School Cup and the specially designed Smurfit Kappa T-shirts. The kids love the attention of the 6,000 spectators and the coverage they get in the local newspapers. Not only do the kids enjoy the exposure, Smurfit Kappa in Denmark does so too. Because of the tournaments young people appreciate the company and seek to pursue a career at Smurfit Kappa.

## Factory trip teaches youngsters eco-awareness

Environmental education is a serious topic, but when it comes to teaching eco-awareness to children, the people from Smurfit Kappa Poland found out that a fun approach is much more effective.

In Poland many children go on a school trip to the Smurfit Kappa Konin factory, to be inspired and play ecological games with each other. At the factory the children follow a "box" through its various stages of production and participate in cardboard "testing". The education at Smurfit Kappa is part of the school programme and gives youngsters an insight into the world of recycling, forest protection and smart usage of valuable resources such as water.

Smurfit Kappa Poland started the activities to assist teachers at neighbouring nurseries and schools within the framework of their environmental protection programmes. The aim is to teach children respect for nature, to encourage them to participate in environmental matters, to develop their own sense of responsibility, to raise awareness for the need to react quickly to ecological problems, and to teach them how to live an ecological lifestyle themselves

## Ireland - Smurfit Kappa charity walk in aid of Irish **Cancer Society**

Smurfit Kappa's Group office in Dublin organised a four-day charity walk in September 2013 with all proceeds raised going towards the Irish Cancer Society.

A group of 16 walkers completed the entire 132 km of the Wicklow Way which is a scenic way-marked trail that traverses the Wicklow Mountains, starting in Clonegal, Carlow in the south and finishing in Marlay Park, Dublin in the north. On the third day, another couple of colleagues joined them and on the final day, a large group of some 30 colleagues and family members accompanied them to the finish line where they were welcomed by their immediate families and remaining colleagues from the Group head office to celebrate the completion of a successful event.

The joint effort raised over €108,000 for the Irish Cancer Society which is the leading voluntary funder of cancer research in Ireland. The Society also offers free, confidential advice, support and information on any question about any cancer.



## International - Smurfit Kappa Foundation

The Foundation was established in 2011, when the Board of Smurfit Kappa agreed to establish an initial €3 million fund. 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 have now been invested and the interest will continue to be available to fund worthwhile projects. Further funding of the Foundation is under consideration.

The Foundation supports projects in the countries where we operate, with the initial focus on projects involving young disadvantaged children in the areas of health and nutrition, basic care, and early education. Currently, the Foundation supports a number of such projects in Germany, the Netherlands, UK, Colombia and Ireland.

The new initiatives assisted by the Foundation in 2013 were as follows:

The Joris Kring children's centre in the Netherlands is one of the latest projects to be co-funded by the Foundation. The centre offers specialised day care to children and youngsters with intellectual or multiple disabilities. In a homely environment, the centre focuses in small groups on the qualities and talents of each child. Each group consists of six to eight children, and there is a daily programme of joint and individual activities, while a daily meeting between the child and their mentor is at the core of their care.

Having been based in a number of different locations throughout Amsterdam, in March 2013 the Joris Kring centre moved to new accommodation in the city, where all classes and facilities of the day-care centre have been brought together under one roof. However, because of limited resources, there was no money available for developing the existing neglected garden. Thanks to the support of the Foundation and local businesses in the area, the centre has been able to transform the old area into a modern much needed recreational garden for the children.

Another recent project that has received funding from the Foundation was the creation of a modern multimedia interactive art programme in a childcare centre in Germany.

The Lebenshilfe is a care centre in Bürvenich, near the town of Zülpich in Germany. The centre has a wide range of facilities, including a small children's home which caters for young people with behavioural disorders. Recently, a special Media Empowerment Programme was implemented that provides the children with a platform to participate artistically and creatively in a cultural environment with the help of new digital media in the area of photography, video and social networks. The main aim of the project is to identify the intrinsic talent and skills of the autistic children in order to develop a tailor-made therapy which can be financed by health insurance later. This enables them to forget their "disability" tag and benefits their intellectual development.

The Foundation has its own website: www.smurfitkappafoundation.com, providing information on the type of projects the Foundation is focusing on and how to apply for funding.

# forward -thinking

Collaboration is about sharing a vision and working to achieve it, both with forwardthinking customers and each other. This belief reflects the way we work with our customers and each other across disciplines, divisions and countries. We recognise the real value of the different experiences, expertise, cultures and ideas that are found in Smurfit Kappa. We recognise that when we work together to open up opportunities for our customers we make anything possible.

# Innovation in Design and Sustainability Awards

Innovation and sustainability are key to Smurfit Kappa's business success and also one of our strategic priorities. Our Innovation Events in Europe and the Americas held in 2013 provide platforms to showcase our expertise and ingenuity in the area of innovation and sustainability to customers and investors; creating opportunities to meet Smurfit Kappa representatives and witness how future trends in packaging are interacting with innovation and sustainability agendas.

In 2013, we hosted 250 customers and investors at two events in the Netherlands and Mexico where attendees were able to see the latest innovations in packaging design and sustainability as well as new concepts in the area of augmented reality and e-commerce. Over one hundred innovative packaging designs were showcased at the events, which featured the display of more than a hundred smart sustainability solutions in the wider context of the progress Smurfit Kappa has made in its journey towards a sustainable future. The European event was used to launch Smurfit Kappa's new 3D Store Visualiser that allows customers to assess the impact of hundreds of their products in a store within seconds. This tool offers great flexibility throughout categories and retail formats. Ultimately, the 3D Store Visualiser will support customers in reducing the time-tomarket of their products. The tool was also shown at the event in Mexico City.

The highlight of both events was the announcement of the winners of the European and the Americas internal Innovation and Sustainability Awards. The designers of the most innovative packaging solutions and the inventors of the most creative sustainability solutions from both Europe and the Americas were judged at the respective events by an external jury made up of customers and sustainability experts.



# Sustainability in Our Business

For Smurfit Kappa, sustainability is central to our efforts to create economic value while preserving the environment for future generations. The direct and indirect economic impact our business has on all our stakeholders is how we measure our contribution to economic development. Our principal strategy to create economic value is by developing long-term customer relationships through differentiated packaging solutions that enhance their prospects of success in their end markets. These relationships provide us with the opportunity to generate sustainable revenue, sufficient profitability and the return on capital through the business cycle we believe is necessary to allow us to advance our drive for sustainability and which will allow us to provide our various stakeholders with the contributions they reasonably expect.

Our packaging solutions support customers in advancing their own business. Progressive dividends and share price growth reward investors for their financial support. Fair pay, other benefits, and personal development recognise our employees for their contributions. Payments for delivered goods and services contribute to suppliers' product and business development.

Smurfit Kappa contributes to the economic development of the many communities and regions where we operate as a significant employer, through direct financial support and volunteering activities in community activities. Our tax payments, both locally and to country governments, further contribute to economic, social and environmental development in the countries in which we operate. Providing progressive, innovative and sustainable 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. We do this in a sustainable way by providing them with packaging solutions that use renewable raw materials and are fully recyclable. Our innovation activities contribute to resource efficiency, which in turn leads to a smaller environmental footprint. Consumers' demand for environmentally friendly products drive the search for sustainable innovations.

## **1. OUR BUSINESS**

Smurfit Kappa is one of the world's largest integrated manufacturers of paper-based packaging products, with operations 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, graphic board, bag-in box, sack paper, and machine glazed paper.

In 2013, the Group's total revenue was almost  $\in 8$  billion, generating an operating profit of  $\in 643$  million and earnings per share of  $\in 1.145$  (pre-exceptional). Total employee wages and other benefits amounted to  $\in 1,940$  billion and  $\in 4.6$ billion was paid to suppliers. For the year 2013, an interim dividend of 10.25 euro cents and a final dividend of 30.75 euro cents per share was declared and our tax to local and national governments amounted to  $\in 122$  million.



## ENGAGEMENT WITH STAKEHOLDERS

## Important sustainable sourcing partner for Unilever

Sustainable sourcing and waste reduction are important targets in Unilever's Sustainable Living Plan. "The programme sets the roadmap for doubling the size of our business, while reducing our overall impact on the environment", says Todd Williams, Procurement Director, Customer Packaging, of Unilever in an interview centred around the role of sustainability in the relationship between Unilever and Smurfit Kappa.

#### The importance of sustainability

Todd Williams continues: "Procurement has a crucial role to play in sustainable sourcing, as we aim to manage the volatility of supply and improve the quality of raw materials for our products in the long-term. Sustainable sourcing not only helps us manage a key business risk, it also presents an opportunity for growth, allowing our brands to stand out in the marketplace. Packaging plays an important role throughout value chain. Smurfit Kappa is an important partner to us for the sustainable sourcing of wood fibre, recycled or certified, and for product innovation that leads to less waste and emissions."

## Key aspects in sustainability

"The elimination of deforestation is essential, so initially we are focusing on the sustainable sourcing of the fibre. In addition, we are looking to improving the efficiency of fibre use to reduce product weights and improve our  $CO_2$  emissions. As an industry leader, Smurfit Kappa has the knowledge and expertise to eliminate of deforestation, develop next generation innovative solutions to optimise fibre usage/ $CO_2$  emissions, and develop credible measurement and KPIs to drive a sustainable future."



**Todd Williams** Procurement Director, Customer Packaging, Unilever.

#### 2013 Financial Performance Overview

	2013 €m	2012 €m
Revenue	7,957	7,335
Earnings before exceptional items and share-based payment expense ('EBITDA')	1,107	1.016
EBITDA margin	13.9%	13.8%
Operating profit	643	630
Profit before income tax	294	319
Free cash flow	365	282
Net debt	2,621	2,792
Net debt to EBITDA	2.4x	2.7x
Basic earnings per share (cent)	82.2	106.9
Pre-exceptional earnings per share (cent)	114.5	104.1
Return on Capital Employed	13.1%	12.0%

## 2. CREATING VALUE WITH CUSTOMERS

Smurfit Kappa's packaging solutions enable customers to optimise their business models' outcome. We are honoured to be the partner of choice in our field of expertise for many responsible and reputable customers who are committed to sustainability. We seek to differentiate ourselves by offering superior insights, service, quality, delivery, and customer relationships. We are clearly established as a committed partner to many of our key customers working in their industries and within their operations to define and meet (and where possible exceed) their increasingly complex packaging needs. Our commitment to sustainability will strengthen existing partnerships and help to form more collaborations. enabling customers to meet their own targets and commitments in sustainability. Our company culture

supports consistent product innovation and the provision of tangible added value for our 64,000 customers worldwide.

With approximately 60% of our customers in the FMCG segment comprising food, beverage and household consumables, packaging solutions range from high quality retail ready packaging and merchandising displays to transport and protective packaging. For retail ready packaging, approximately 75% of buying decisions by end consumers are made at the point of purchase and, therefore, high quality impactful packaging has an important role to play in this regard. With 750 designers worldwide, an array of design, logistical tools and experience provides us with the opportunity to make a difference for our customers

## Sustainability in Our Business (continued)

Increasingly, customers require packaging to be sustainable, fit for purpose, as well as cost effective. We work with our customers to make their supply chains more sustainable. For example, to completely protect packaged products throughout the supply chain, we deliver "right-weighted" packaging. 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, while our approach and tools help us to design packaging that is both "right-weighted" and which also help market our customers' products. As part of this, these tools also give our customers' the ability to appraise certain sustainability aspects of our products in relation to their own products, such as the carbon footprint of our packaging, weight and pre/ post-consumer waste content. This allows them to determine which designs contribute most to meeting their own sustainability goals.

Our packaging can make the delivery of our customers' product to consumers more sustainable by addressing two main aspects of innovative packaging design and customers' supply chain optimisation.

Firstly, we guarantee our customers that our packaging solutions are sustainably produced, from materials from sustainable origin, utilising the collective design skills of our global team of designers.

Secondly, we focus on how our packaging can minimise the total environmental impact per unit of product delivered to the consumer. According to a study done by INCPEN, the energy component and hence the  $CO_2$  impact of packaging products is less than 5% in a typical customer's supply chain. The packaging-related positive indirect impact (less damage/ loss of the packed product, optimised logistics, less waste, disposal, etc.) is much more significant for the sustainability of a customer's supply chain. For many customers we carry out evaluations with the help of our web-based suite of design software, collectively called Innotools (Pack Expert, Paper-to-Box, Innobook, etc), 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, the quantity of products loaded on a pallet can be decreased, reducing the number of road trips hence reducing the CO<sub>2</sub> emissions from transportation.

## Customer engagement

Our customers form an important stakeholder group and they are instrumental in shaping our sustainability agenda. Through the many interactions we have with our customers, we ensure that we are aware of specific developments regarding our customers as well as of developments in the industries of our customers. In 2013 we initiated, as an additional form of engagement, round table discussions with customers specifically around the topic of sustainability. In 2013 we held one such event where we discussed global trends in sustainability as well as specific sustainability challenges and opportunities in the industry of each of the participating customers. Input from the participating customers confirmed the sustainability areas we are currently working on as the most important. Input from these type of interactions with customers will help us to keep our sustainability agenda up-to-date and in line with the important stakeholder group formed by our customers.



## Innovation saves material, time and the environment in the USA

At Smurfit Kappa Forney Coated Products, in Texas, USA, things can always be improved, even when it comes to cookies.

Cookie suppliers used to make use of a poly-laminated freezer sheet to produce cookies and ship them to the stores where the actual baking takes place. The cookies would then be transferred to a baking sheet manually. This process took time and additional material, as the freezer sheet is not recyclable and cannot be used for baking.

Forney Coated Products developed a sheet that goes through the entire process. The Freeze & Bake sheet is specifically designed to allow the cookie pucks to be produced, frozen, packed in layers for shipment. Once they arrive at the store the sheets are taken directly from the box and placed on a baking plate. The sheet also has excellent grease resistance and the cookies release flawlessly after baking. This process reduced labour, material and improved efficiency at the bakery by 50%. An estimated 250 tonnes of sheets have been produced in 2013. The Freeze & Bake product is a good example of how innovation leads not only to better customer solutions but also to more sustainable products.








THIRIET Ice Cream asked Smurfit Kappa in France to come up with a versatile and sustainable high temperature-resistant packaging solution for its Baked Alaska meringue pie. This was a complex challenge to replace the existing aluminium tray with a sustainable alternative.

The new THIRIET Ice Cream packaging would have food contact, could not use polystyrene for health and safety reasons, and aluminium was out of the question because of metal detection during the production process. To top things off, the pie is treated with a blowtorch to colour it just before freezing, heated in the oven by the consumer and briefly set on fire with alcohol just before eating.

Smurfit Kappa France came up with a smart combination of three white Krafts making the use of polystyrene and aluminium obsolete. The combination of Greaseproof White Kraft on the outside, 100% Virgin White Kraft fluting and Complex PET White Kraft on the inside, resulted in a sustainable corrugated board packaging that outperformed the existing aluminium tray and made sustainability the big winner.

### Mono-material packaging leads to multiple solutions

In Italy the Fabbri company is famous for its candy black cherry syrup which is shipped all over the world in its very famous blue and white vases. To protect these fragile items during their global journey Fabbri used four different paper-based packaging solutions with four different polystyrene inserts (seven parts each) to pack four different vases.

These packs were complicated to assemble and involved different kinds of material to dispose off. Fabbri's Sustainability Policy demanded a mono-material solution that would reduce packaging costs and also reduce the carbon footprint. Working together, the teams from the Smurfit Kappa locations in Massa Lombarda and Fustelpack developed a corrugated mono-material packaging solution that suited the Fabbri company well. The teams created one single packaging solution suitable for the four different vases complemented by four different inserts to protect the vases. This way 120,000 pieces of polystyrene were replaced by corrugated packaging material. A drastic volume reduction and improvement in logistics, which blend in perfectly with the customer's Sustainability Policy "Programma Goccia Verde".

### Thinking out of the box to lubricate the supply chain

For many years Haubenberger, a well-known Austrian bakery, made use of plastic trays for its products as a solution during times of peak demand. However, during these periods the plastic trays are hard to come by, costly and they require additional cleaning. The people from Haubenberger and Smurfit Kappa Interwell worked closely together and came up with a unique 'green' packaging solution. Haubenberger now enjoys the benefits of more flexibility in peak seasons with short lead times, no cleaning, less storage space, and a reduction in transport movements with the non-erected corrugated trays. The result? A significant cost reduction using the greener corrugated packaging solution.



#### ENGAGEMENT WITH STAKEHOLDERS

### Focus on Sustainability and CSR not just a "box ticking" exercise

Strong management teams, earnings growth, dividends and therefore, value creation have traditionally been the key areas of focus for potential investors when analysing a company. However, sustainability and Socially Responsible Investing (SRI) is increasingly become an important facet of the investment process. For years consumer appetite for corporate social responsibility has been growing strongly and more recently it appears that the investment community is catching up. Indeed, the EUROSIF European SRI study from 2012 indicates that since 2005 Sustainability themed investments in Europe have grown from €6.9bn to over €48bn.

Given its renewable and recyclable nature, corrugated packaging is one of the most sustainable packaging solutions available to consumers. Smurfit Kappa is an industry leader on the sustainability front, with 100% certified ethical chain of custody in its European operations. In addition, it has made significant steps to reducing its carbon footprint.

Consumers are the key driver of the sustainability agenda. As a result, Smurfit Kappa's customers are coming under increased scrutiny with regard to delivering a truly sustainable product offering which includes raw material sourcing, manufacturing processes and ethical employment standards. In fulfilling customers' demand for sustainable packaging solutions, Smurfit Kappa is not only meeting its own CSR targets but helping its customers achieve their sustainability targets. We believe this is a key point as the market begins to recognise that Sustainability is not just a "box ticking" exercise but a competitive advantage which can provide a real avenue of growth and ultimately this will help drive shareholder returns over the long-term.



**David O'Brien** Equity Analyst in Goodbody Capital Markets specialising in the Paper & Packaging sector.

#### **Customer satisfaction**

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 complete satisfaction.

In our converting operations, major customers routinely perform 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.

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

Innovation is of strategic importance in securing and retaining our customers' business. Innovative design 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. 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 "rightweighted" packaging based on experience and empirical modelling.
- Reduce complexity in the packaging portfolio thereby achieving higher productivity, less material usage and less waste.
- Deliver tangible sustainability parameters for customers, enabling benchmarking and contributing to customers' sustainability agenda.

### 3. ENHANCING SHAREHOLDER VALUE

Sustainability is increasingly being recognised by the investment community as complementary to long-term value creation for its shareholders, and to this end Smurfit Kappa is well positioned to continue to deliver value through its established sustainability programme. Sustainability is a key element within our business model and remains an important part of our strategy.

In recent years a growing number of investment funds with explicit mandates for Socially Responsible Investing ("SRI") have taken sustainability indicators into account. Additionally, a growing number of mainstream investors are also now considering these performance indicators. The EUROSIF European study 2012 reported that all responsible investment strategies surveyed have outgrown the market since 2009. The Carbon Disclosure Project ("CDP") claims that leading companies in CDP's sustainability rankings show a better share performance than other companies. Organisations such as the Global Reporting Initiative ("GRI") are introducing new reporting systems to reflect the increasing need not just for environmental data, but for the less tangible social and governance indicators as well. Institutional investors add environmental and social parameters to their risk analyses, while a number of sustainability funds have a strategy to only invest in companies that are seen as leaders from an environmental, social and economic perspective.

Smurfit Kappa has an extensive investor relations programme involving roadshows, investor days, one-on-one meetings, teleconferences, and participation in industry-related investor conferences. The Group has a clear objective to enhance shareholder value through a detailed strategic capital allocation plan focusing on a progressive dividend policy, debt reduction and sustainable earnings growth through judicious capital investments and accretive acquisitions. Significant progress has been made on each of these bases in recent years with a 105% increase in the final dividend since reinstatement to 30.75 euro cent and over  $\notin$ 800 million debt reduction since 2007. The 2013 closing price on the Irish Stock Exchange for Smurfit Kappa's share was  $\notin$ 17.89 resulting in a Group market capitalisation of approximately  $\notin$ 4.1 billion, up 98% year-on-year.

### 4. WORKING WITH GLOBAL AND LOCAL SUPPLIERS

Maintaining transparent and long-term relationships with suppliers is essential to ensuring high quality and financial stability for both parties. Sourcing represents the single largest cost item for Smurfit Kappa. In 2013, we purchased products and services such as raw materials, energy, transportation, maintenance and repairs, and investment goods to the value of €4.6 billion.

As part of our customers and their customers' supply chain, guaranteeing that supplied goods meet environmental, social, and technical standards requires a robust sustainable sourcing policy.

Our Sustainable Sourcing programme includes a risk assessment of suppliers and consists of the following seven areas: quality, hygiene & safety, order processing, manufacturing, continuous improvement, service & technical support, environment & business sustainability. Our risk mapping shows that practically all our strategic or important suppliers of key materials and goods are in the low-risk area of the risk map. Smurfit Kappa has over 200 strategic and important suppliers of key raw materials and goods in Europe and the Americas. Since we started in 2010 to audit our suppliers, 98% of our strategic suppliers, and a significant number of our important suppliers, have been audited. Following an audit we work with each supplier on continuous improvement opportunities identified in their audit. By the end of 2013, 54 additional European suppliers delivering both key and non-key goods and materials have also been audited. Approximately 90% of these suppliers scored satisfactorily, the remaining 10% will be compliant once they complete successfully their defined continuous improvement opportunities in specific areas of attention.

Improvement opportunities for these suppliers are in areas such as hygiene and environmental management systems. The supplier audits also include questions on social governance covering GRI, Sedex, UNGC, CDP etc. We aim to increase the number of suppliers of key raw materials and goods who commit to the ten principles of the UNGC and who are registered to Sedex. 40 of our European suppliers, mostly strategic, are currently members of Sedex.

#### Contribution to local economies

We favour procuring our products and services from local suppliers where possible. The procurement of a number of major items of expenditure, such as recovered paper, paper, energy, chemicals, starch, and inks is coordinated centrally to achieve economies of scale. Notwithstanding, 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.

#### 5. PRODUCT RESPONSIBILITY AND PRODUCT SAFETY

Smurfit Kappa has always demonstrated a strong commitment to product safety. We will comply with all legislation on health and safety aspects of our products. We also have agreed to voluntary codes of conduct that, among others, are based on the OECD Guidelines for Multinational Enterprises.

In 2013, 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, 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.



Michel Simonini from AkzoNobel beside the Eka Netic installation at Smurfit Kappa Ania in Italy.



#### Supplier initiatives

#### AkzoNobel's injection technology improves chemical efficiency

AkzoNobel is one of Smurfit Kappa's major suppliers of chemicals for paper and board manufacturing. Sustainability is embedded in the company culture, values and goals as is demonstrated by AkzoNobel's listing as a leader in the DJSI.

A recent innovation is Eka Netic. This is a high performance dosing technique for chemicals used in the production of paper and board. It was developed and tested at our Mengibar paper mill in Spain. The injection technology improves chemical efficiency, reduces fresh water consumption and cuts the cost of energy. This is done by making use of kinetic energy to improve the mixing of additives at the stock flow of the paper and board machines.

In 2013, Eka Netic was installed at our paper mill in Ania, Italy, which led to a reduction in fresh water intake of 40,000 m<sup>3</sup> per year and energy savings of 1.1 million Kwh. Due to better mixing, it was possible to reduce the use of the retention chemicals also by 5%. Eka Netic will be implemented at more Smurfit Kappa locations in the future. A significant part of our packaging is intended for the agri-food industry. For this sector, 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. Our laboratory 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. The department tests our products to ensure compliance with European recommendations such as those related to toy safety and packaging and packaging waste. 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 the Americas. We follow the evolution of regulations in all countries and are active at European and the Americas region, 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, which 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 according to the European standard on the management of hygiene in the production of packaging for foodstuffs (EN 15593). Ania in Italy is different and is certified according to the International Good Manufacturing Practice for Corrugated and Solid Board Packaging standard (FEFCO/ ESBO GMP Standard). More information on management systems certification of our mills can be found on page 86.

In response to customer needs, some 55% of our converting plants now have processes in place and are certified by one of the following recognised hygiene codes or standards: ISO 22000, EN 15593, British Retail Consortium (BRC), American Institute of Baking (AIB) or International Good Manufacturing Practice for Corrugated and Solid Board Packaging (FEFCO/ ESBO GMP Standard). In 2013 one additional converting operation in Italy achieved certification against the FEFCO/ESBO standard. It is our aim to certify all our converting plants for which this is relevant.



Nicolas Pombo from Smurfit Kappa Colombia Forestry received the first prize.



Mark Rushton (r.) presented the Global PPI Award in the categories 'Bio Strategy of the Year' and 'Mill Manager of the Year' to Jo Cox from Smurfit Kappa Roermond in the Netherlands.

As a result of our overview structure, 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 keeps a close watch for any food safety alert issued by the European Commission or national authorities. The specific purity analyses that we conduct on the various paper grades that we produce, allied to our in-depth knowledge of food contact issues, enable us to respond to these alerts and, if necessary, to adjust our processes in the shortest possible timeframe.

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, the Confederation of European Paper Industries (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.

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.

In this context, Smurfit Kappa has developed an innovative new solution which stops migration of mineral oils from packaging into food products. The recently announced Catcher Board MB12 uses Powder Activated Carbon in the paper or board to prevent the diffusion of oils into food products. This innovative method creates a blocking mechanism across the whole surface area of the packaging, including at the "cut edges" of the board unlike other so called "barrier solutions". Smurfit Kappa's new offering responds fully to prospective legislation that a country like Germany expects to introduce, that would prohibit measurable migration of mineral oil aromatic hydrocarbons into food. The Catcher Board MB12 is the most innovative offering on the market. It is made using natural ingredients, introduced as White Lined Chipboard and Solid board, and adheres to Smurfit Kappa's industry-leading sustainability standards. This new product will be available to customers in the second guarter of 2014.

#### 6. RECOGNITIONS

#### The Netherlands - Two Global PPI Awards for Roermond paper mill

The PPI (Pulp & Paper International) awards are the only global awards

dedicated to recognising achievements in the pulp and paper sector. Smurfit Kappa Roermond won the award in the 'Bio strategy of the Year' category for its sustainable use of waste streams. The mill's Managing Director won the 'Mill Manager of the Year' Award (see picture above). Through an effective sustainability strategy, Roermond has found valuable solutions for almost all of its reject streams. 99.5% of its raw materials are converted into useful and valuable applications. This high percentage is reached by converting its main residual stream into a 50% bio-based pellet that is called Rofire® and that is supplied as fuel to the limestone industry. By using Rofire®, the limestone industry is able to replace 13,000 tonnnes of coal and is avoiding the emission of 20,000 tonnes of CO<sub>2</sub> annually.

### Colombia - Award for Smurfit Kappa forestry

Smurfit Kappa's forestry programme in Colombia was awarded the first prize in a major contest organised by the World Wide Fund for Nature and El Espectador newspaper for intiatives to improve the conservation of forest ecosystems. Smurfit Kappa Cartón de Colombia was recognised for the best environmental practices related to water, reforestation, and resource management.

# relentless

We never stop until we have delivered on our promise and achieved the best possible solution for our customers, our community and our business. This relentless desire for excellence is driven by a passion for paper and packaging and by a pride in our company's heritage and vision.

# Input/Output for 2013 All European Operations

#### **INPUT**

Wood and fibre		
Wood <sup>(1)</sup>	5,072	ktonnes ar
Market virgin pulp	106	ktonnes ar
Other pulp	35	ktonnes ar
Recovered Paper	4,251	ktonnes ar
Paper or Board purchased	1,643	ktonnes ar
Plastic films, other plastic item (BIB)	19	ktonnes
Starch (all types)	256	ktonnes ar
Inorganic raw materials	246	ktonnes ar
Other organic raw materials	212	ktonnes ar

#### OUTPUT

001101		
Production		
Papers (all grades)	4,714	ktonnes
Corrugated Packaging *	4,558	ktonnes
Board and laminated Boards *	858	ktonnes
Converted Board *	292	ktonnes
Sacks	-	ktonne
Other packaging	19	ktonnes
Direct emissions to air		
CO <sub>2</sub> fossil	1,728	ktonnes
CO <sub>2</sub> biogenic	3,191	ktonnes
Dust from fuels	0.4	ktonne
SO <sub>x</sub> from processes	0.6	ktonne
NO <sub>x</sub> from processes	3.6	ktonnes
Energy output		
Electricity to third party	318	GWh
Thermal energy to third party	248	τJ
Biomass sold	2,073	τJ
Wastes		
Hazardous wastes	6.7	ktonnes
Non-hazardous wastes sent to landfill	252	ktonnes
Non-hazardous wastes recovered	313	ktonnes
Other non-hazardous wastes	28	ktonnes
Discharges to water		
Water released	84	Mm³
COD	24	ktonnes
BOD	8.6	ktonnes
Total Suspended Solids	5.0	ktonnes
Ν	0.5	ktonne
Ρ	0.07	ktonne

Energy Energy from fossil fuels 29,025 ТJ Energy from purchased biofuels 5,206 ΤJ Electricity from grid 1,800 GWh

91	Mm³
	91

ktonnes ar: kilotonnes as received

 $^{(1):}$  wood & sawmill chips as delivered to the mill

 $\ensuremath{^{(2):}}$  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 80 to 85. The latter pages show the energy consumption for the production of the paper or board manufactured.

# Input/Output for 2013 All American Operations

#### INPUT

Wood and fibre		
Wood <sup>(1)</sup>	957	ktonnes ar
Market virgin pulp	0.3	ktonnes ar
Other pulp	3.4	ktonnes ar
Recovered Paper	1,200	ktonnes ar
Paper or Board purchased	348	ktonnes ar
Plastic films, other plastic item (BIB)	1.9	ktonne
Starch (all types)	35	ktonnes ar
Inorganic raw materials	92	ktonnes ar
Other organic raw materials	56	ktonnes ar

#### OUTPUT

001101		
Production		
Papers (all grades)	1,220	ktonnes
Corrugated Packaging *	1,112	ktonnes
Board and laminated Boards *	168	ktonnes
Converted Board *	55	ktonnes
Sacks *	52	ktonnes
Other packaging	1.9	ktonne
Direct emissions to air		
CO <sub>2</sub> fossil	995	ktonnes
CO <sub>2</sub> biogenic	555	ktonnes
Dust from fuels	0.1	ktonne
SO <sub>x</sub> from processes	1.8	ktonne
NO <sub>x</sub> from processes	0.8	ktonne
Energy output		
Electricity to third party	1.5	GWh
Thermal energy to third party	-	TJ
Biomass sold	-	TJ
Wastes		
Hazardous wastes	2.8	ktonnes
Non-hazardous wastes sent to landfill	260	ktonnes
Non-hazardous wastes recovered	51	ktonnes
Other non-hazardous wastes	2.3	ktonnes
Discharges to water		
Water released	32	Mm³
COD	14	ktonnes
BOD	3.7	ktonnes
Total Suspended Solids	4.5	ktonnes
Ν	0.4	ktonne
Р	0.01	ktonne

Energy		
Energy from fossil fuels	15,589	τJ
Energy from purchased biofuels	747	TJ
Electricity from grid	726	GWh

34

Mm<sup>3</sup>

ktonnes	ar <sup>.</sup>	kilotonnes	as	received
100111100	un.	10000111100	uu	received

 ${}^{\scriptscriptstyle(1):}$  wood as delivered to the mill

Water intake<sup>(2)</sup>

<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 80 to 85. The latter pages show the energy consumption for the production of the paper or board manufactured.

### European Mills 2013 Environmental Data

		Nettingsdorfer, Austria	Navarra, Spain	Cellulose du Pin, France	Piteå, Sweden	Morava, Czech Republic	CD Haupt, Germany	Hoya, Germany	Viersen, Germany	Zülpich, Germany	Mengibar, Spain	
		bkl, tl	tl, mg paper	bkl, wtkl, wttl	wtkl, bkl, wttl	tl, fl	fl, tl, sb, wttl	fl, tl, cart	fl	fl, tl	fl, tl, wttl	
PRODUCTION	ktonnes	439	107	484	682	60	311	406	73	478	205	
ENERGY												
Electricity												
Co-generated	GWh	158	64	358(1)	333	-	68	86	-	174	108	
Self-generated	GWh	-	-	-	-	-	-	-	-	-	-	
Hydro power	GWh	0.2	-	-	-	2.4	0.2	-	-	-	-	
Grid supply	GWh	136	74	33	267	18	29	81	23	21	- (2)	
Total Electricity	GWh	295	138	391	600	21	97	167	23	195	108	
Fuel usage												
Biofuels	τJ	3,541	2,262	9,236	9,951	11	48	69	-	274	47	
Fossil fuels	LT	1,186	232	571	193	311	1,566	2,177	338	3,182	1,485	
Total fuels	ΤJ	4,727	2,494	9,807	10,144 <sup>(3)</sup>	322	1,614	2,246	338	3,455	1,533	
WATER WITHDRAWAL	1											
Surface	Mm³	12	5.2	8.4	36	0.4	0.4	-	-	1.9	1.6	
Ground	Mm³	-	-	1.0	-	-	0.8	2.2	0.3	0.4	-	
Grid	Mm³	0.1	0.01	0.02	0.1	-	-	0.2	0.01	-	0.1	
Total water <sup>(4)</sup>	Mm³	13	5.3	9.6	36	0.4	1.2	2.3	0.3	2.3	1.7	
DISCHARGES												
To air												
CO <sub>2</sub> fossil direct	ktonnes	68	16	33	17	17	88	122	19	255	84	
CO <sub>2</sub> fossil indirect	ktonnes	26	18	2.6	7.9	11	13	37	10	10	-	
CO <sub>2</sub> biogenic	ktonnes	367	242	1,000	1,117	0.9	3.7	6.1	_	23	6.3	
Dust	tonnes	72	16	39	265	0.1		_	-	0.4	0.2	
NO <sub>x</sub> as NO <sub>2</sub>	tonnes	242	143	652	819	8.6	50	74	6.1	274	97	
SO <sub>x</sub> as NO <sub>2</sub>	tonnes	41	93	44	60	3.3	0.2	4.0	0.3	106	4.6	
To water												
Process water	Mm³	5.2	4.9	9.2	13.8	0.3	0.4	1.7	0.2	-	1.2	
Cooling water	Mm <sup>3</sup>	7.1	-	-	22.1	-	0.4	0.04	-	1.2		
COD	tonnes	7,183	436	4,433	3,318	40	92	283	N/A	-	283	
BOD	tonnes	4,375	71	1,205	678	2.3	3.8	16	N/A	-	15	
Total Suspended Solids	tonnes	678	189	657	840	7.2	2.7	45	N/A	_	139	
Total N	tonnes	41	105	90	86	5.3	0.3	19	N/A	-	32	
Total P	tonnes	3.4	0.8	14	18	0.3	0.2	1.4	N/A	-	1.8	
Solid wastes	tormes	5.4	0.0	14	10	0.5	0.2	1.4	14//1		1.0	
Total non-hazardous wastes	tonnes	24,634	25,370	48,580	41,363	8,239	13,924	32,826	7,212	25,428	33,966	
Landfill	tonnes	3,624	186	22,483	1,844	3,533	- 15,924	4.2	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	11,801	33,841	
Recovery	tonnes	19,406	25,184	26,097	39,519	4,707	13,924	32,705	7,212	1,859	125	
Other	tonnes	19,400	23,104	20,097		4,707		118	1,212	1,859	123	
Hazardous wastes	tonnes	532	- 144	658	- 144	9.4	- 24	43	- 5.2	52	- 36	
	tornes	552	144	030	144	5.4	24	40	5.2	52	50	

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

mg: machine glazed sb: solid board tl: testliner

wtkl: white top kraftliner wttl: white top testliner

Water discharges : In grey and italic mills that do not discharge their process water to surface

Alfa D'Avignon, France	Rethel, France	Saillat, France	Ania, Italy	Roermond, The Netherlands	SSK, United Kingdom	Townsend Hook, United Kingdom	Baden Karton, Germany	Herzberger, Germany	Oude Pekela, The Netherlands	Hoogkerk, The Netherlands	Coevorden, The Netherlands	Nieuweschans, The Netherlands	Nervíon, Spain	Total Mills
tl	tl	fl, tl	fl, tl	tl, fl	tl, fl	fl, tl	cart	sb	sb	sb	sb	sb	sack paper	
73	57	249	208	591	208	103	131	252	56	71	90	95	144	5,573
						(1)								
 -	-	39 <sup>(1)</sup>	33	116	63	37 (1)	61	78	6.5	-	0.2	27	115	1,926
 -	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	1.8	-	-	-	-	1.5 _ <sup>(2)</sup>	0.9	-	-	-	_ (2)	-	7.0
 30	23 23	79	40	37	- 63	9.0 46	62	9.3 89	10	13 13	24 24	27	73 189	1,028
30	23	120	73	153	05	40	02	09	16	13	24	21	109	2,961
-	28	201	31	180	46	-	-	-	-	-	-	-	2,770	28,695
 368	288	1,293	1,134	2,892	1,313	1,019	1,108	1,587	307	309	288	575	97	23,818
 368	316	1,494	1,165	3,073	1,359	1,019	1,108	1,587	307	309	288	575	2,867	52,513
		, -	,	.,	,	,	,	,					,	,
0.7	-	1.9	1.4	2.1	-	0.6	1.4	3.6	0.03	0.3	0.3	0.3	2.6	81
-	0.5	-	-	-	0.9	0.2	-	-	0.2	-	0.2	-	-	6.7
-	0.01	-	-	0.2	0.1	0.01	0.02	-	0.01	0.01	0.05	0.1	0.01	0.8
0.7	0.5	1.9	1.4	2.2	1.1	0.9	1.4	3.6	0.3	0.3	0.6	0.4	2.9	90
 21	16	73	64	164	74	57	62	89	17	17	16	32	6.3	1,428
 2.3	1.8	6.3	16	15	0.9	4.1	-	4.3	4.3	5.4	10	-	17	223
1.7	2.1	25	2.3	13	4.8	2.6	-	-	-	-	-	0.6	329	3,147
 0.3	0.3	3.2	-	-	-	-	-	1.0	-	-	-	-	38	436
 20	21	67	86	142	128	178	24	73	16	5.8	8.2	41	278	3,455
19	6.9	1.8	1.4	24	2.8	40	0.5	10	0.04	0.04	0.1	12	68	542
0.6	0.4	16	1 2	1.6	0.7	0.6	1 0	17	0.2	0.3	0.2	0.7	2.0	40.2
0.6	0.4	1.6 -	1.2	1.6 -	0.7	0.6 -	1.2 0.04	1.3 2.1	0.2	0.2	0.2 0.3	0.3	2.0	49.2 33.4
65	28	782	120	289	2,531	65	133	170	27	27	1,037	45	1,055	22,440
 11	3.3	182	10	11	694	5.7	8.2	170	1.0	0.9	560	1.3	251	8,117
8.4	5.6	403	22	26	1,407	19	8.6	21	4.0	3.0	28	6.0	118	4,637
2.8	2.8	93	16	23	56	3.8	0.6	1.4	1.2	1.7	4.9	1.4	4.4	498
2.0	0.3	12	1.6	2.6	14	0.3	0.1	0.5	0.1	0.2	0.2	0.2	0.5	74
4,130	4,967	30,063	21,869	38,227	31,575	19,275	9,680	18,591	4,101	2,006	5,682	5,473	84,386	541,569
4,129	1,127	25,890	4,297	-	30,542	13,534	-	89	-	-	-	-	83,181	240,106
 0.5	3,840	4,173	17,572	38,102	1,033	5,702	791	18,502	4,101	2,006	5,682	5,473	1,204	278,920
0.2	-	-	-	124	-	40	8,889	-	-	-	-	-	-	22,543
1.4	2.8	24	42	13	36	176	99	10	12	9.1	15	23	15	2,127

<sup>(1)</sup> CHP partly or totally oustourced N/A: not available
 <sup>(2)</sup>: electricity exported by CHP
 <sup>(3)</sup>: part of heat exported outside the Group
 <sup>(4)</sup>: Total water includes rainwater and waste water from another organisation

# European Operations 2013

PRODUCTION	ktonnes	PAPER & BOARD MILLS 5,573	INTEGRATED CORRUGATED OPERATIONS 4,299	OTHER PACKAGING OPERATIONS 570	OTHER OPERATIONS 2,211	TOTAL OPERATIONS
ENERGY						
Electricity						
Co-generated	GWh	1,926	15	-	_	1,941
Self-generated	GWh	,;	-	_	_	-,
Hydro power	GWh	7.0	-	_	_	7.0
Grid supply	GWh	1,028	492	82	3.3	1,606
Total electricity	GWh	2,961	507	82	3.3	3,554
Fuel usage		/				-,
Biofuels	LT	28,695	126	_	_	28,821
Fossil fuels	,u TJ	23,818	4,188	204	89	28,299
Total fuels	TJ	52,513	4,314	204	89	57,119
WATER WITHDRAWAL		,	.,			
Surface	Mm³	81	0.03	-	_	81
Ground	Mm <sup>3</sup>	6.7	0.4	0.01	_	7.1
Grid	Mm <sup>3</sup>	0.8	1.3	0.1	_	2.2
Total water (1)	Mm³	90	1.7	0.1	-	91
DISCHARGES						
To air						
CO <sub>2</sub> fossil direct	ktonnes	1,428	240	12	6.6	1,687
CO, fossil indirect	ktonnes	223	160	30	1.4	415
CO, biogenic	ktonnes	3,147	14	_	-	3,161
Dust	tonnes	436	4.5	0.03	0.01	441
NO <sub>x</sub> as NO <sub>2</sub>	tonnes	3,455	92	3.7	4.4	3,554
SO <sub>x</sub> as SO <sub>2</sub>	tonnes	542	48	1.2	4.1	596
To water						
Process water	Mm³	49	0.6	0.1	-	50
Cooling water	Mm³	33	0.1	-	-	34
COD (2)	tonnes	22,440	1,572	N/A	N/A	24,012
BOD <sup>(2)</sup>	tonnes	8,117	470	N/A	N/A	8,587
Total Suspended Solids (2)	tonnes	4,637	369	N/A	N/A	5,006
Total N <sup>(2)</sup>	tonnes	498	18	N/A	N/A	515
Total P <sup>(2)</sup>	tonnes	74	0.7	N/A	N/A	74
Solid wastes						
Total non-hazardous wastes	tonnes	541,569	32,944	7,142	11,525	593,179
Landfill	tonnes	240,106	9,139	1,130	1,288	251,662
Recovery	tonnes	278,920	18,277	5,676	10,238	313,111
Other	tonnes	22,543	5,528	336	-	28,406
Hazardous wastes	tonnes	2,127	3,530	1,014	2.4	6,674

 ${}^{\scriptscriptstyle (1):}$  Total water includes rainwater and waste water from another organisation

N/A: not available

 $\ensuremath{^{(2):}}$  sum of available data (for mills details are reported in the individual tables)

### The Americas Mills 2013 **Environmental Data**

		Bernal, Argentina	Coronel Suarez, Argentina	Cali, Colombia	Barranquilla, Colombia	Barbosa, Colombia	Los Reyes, Mexico	Cerro Gordo, Mexico	Monterrey, Mexico	Caracas, Venezuela	Valencia, Venezuela	San Felipe, Venezuela	Forney, USA	Total Mills
		fl, tl	fl, tl	P&W, Sack paper, cart, virgin pulp, tl, bkl, sc fl, wttl, wtkl	tl, fl	fl,tl	fl, cart, tl	tl, cart, fl	fl, tl	tl, cart, wttl	cart	tl, sc fl, fl, bkl	fl, tl	
PRODUCTION	ktonnes	72	48	256	62	75	74	298	39	15	45	100	304	1,388
ENERGY														
Electricity	C)1//			100	07							445	10	100
Co-generated	GWh	-	-	199	27	-	-	-	-	-	22	115	46	409
Self-generated	GWh	-	-	-	-	-	-	-	-	3.6	29	-	-	33
Hydro power	GWh	- 7 /	-	-	-	-	-	-	-	-	-	-	-	-
Grid supply	GWh	34	19	130	12	39	49	169	21	5.1	2.4	2.2	93 170	574
Total electricity	GWh	34	19	329	38	39	49	169	21	8.8	54	117	139	1,016
Fuel usage	<b>T</b> 1			4 200							-	606	746	
Biofuels	LT	-	-	4,206	-	-	-	-	-	-		686	746	5,637
Fossil fuels	LT	457	227	5,109	611	394	524	1,248	203	194	1,244	3,101	979	14,289
Total fuels	LΤ	457	227	9,315	611	394	524	1,248	203	194	1,244	3,787	1,724	19,926
WATER WITHDRAWAL														
Surface	Mm <sup>3</sup>	0.7	-	21	1.1	0.6	-	-		0.5	-	-	-	24.2
Ground	Mm <sup>3</sup>	0.2	0.3	0.1	-	-	0.3	1.6	0.1		1.1	4.2	-	8.1
Grid	Mm <sup>3</sup>	-	-	-	0.01	-	-	-	0.02	0.2	0.1	-	0.6	0.9
Total water (1)	Mm³	0.9	0.3	21	1.1	0.6	0.4	1.6	0.1	0.8	1.2	4.2	0.6	33
DISCHARGES														
To air														
CO <sub>2</sub> fossil direct	ktonnes	26	13	388	34	30	29	70	11	12	70	177	55	916
CO <sub>2</sub> fossil indirect	ktonnes	12	6.8	23	2.0	6.9	22	77	9.4	1.4	0.9	0.6	49	211
CO <sub>2</sub> biogenic	ktonnes	1.0	-	401	-	-	-	-	-	-	-	75	79	555
Dust	tonnes	-	0.3	88	1.2	0.8	1.0	2.1	-	-	-	22	4.6	120
NO <sub>x</sub> as NO <sub>2</sub>	tonnes	21	14	267	13	18	30	58	5.8	20	69	210	58	783
SO <sub>x</sub> as SO <sub>2</sub>	tonnes	5.7	0.3	1,666	0.4	86	0.1	0.7	0.05	1.3	14	5.7	22	1,803
To water														
Process water	Mm <sup>3</sup>	0.5	0.3	23	0.9	0.3	0.2	0.5	0.1	0.8	0.8	3.4	0.02	31
Cooling water	Mm <sup>3</sup>	0.2	-	-	-	-	-	-	-	-	-	-	-	0.2
COD	tonnes	53	60	6,527	1,851	1,732	36	114	33	1,186	225	1,644	369	13,831
BOD	tonnes	6.9	9.4	1,033	976	697	2.4	8.1	4.4	462	34	197	196	3,627
Total Suspended Solids	tonnes	13	17	2,384	851	206	3.5	14	5.9	697	57	230	13	4,492
Total N	tonnes	4.0	3.7	291	13	4.6	1.1	2.5	1.0	14	4.7	30	1.7	371.0
Total P	tonnes	0.3	0.2	4.2	0.02	0.3	0.4	1.8	0.1	0.8	0.3	2.4	0.3	11
Solid wastes		6.647		407.000	0.404	c c	4.6.15	44.895		6	10.005	44.575	70.4.45	
Total non-hazardous wastes	tonnes	6,825		127,290	2,191	6,718	1,649	44,388	6,061	832	10,977	41,075	30,145	281,282
Landfill	tonnes	6,759	3,124	125,100	2,157	5,121	1,556	19,258	5,743	784	10,669	39,711	30,034	250,016
Recovery	tonnes	66	8.1	1,475	33	1,588	93	25,130	318	48	279	127	91	29,257
Other	tonnes	-	-	716	-	8.1	-	-	-	-	29	1,237	19	2,008
Hazardous wastes	tonnes	44	10	163	16	6.9	5.2	25	6.4	8.8	14	883	-	1,183

bkl: brown kraftliner wttl: white top testliner

tl: testliner P&W: printing and writing grade wtkl: white top kraftliner

fl: recycled fluting cart: carton board sc fl: semi-chemical fluting virgin pulp: virgin pulp sold externally

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

Water discharges : In grey and italic mills that do not discharge their process water to surface

# The Americas Operations 2013

		PAPER & BOARD MILLS	OTHER OPERATIONS	TOTAL MILLS
PRODUCTION	ktonnes	1,388	2,928	
ENERGY				
Electricity				
Co-generated	GWh	409	-	409
Self-generated	GWh	33	0.3	33
Hydro power	GWh	-	-	-
Grid supply	GWh	574	150	724
Total electricity	GWh	1,016	150	1,167
Fuel usage				
Biofuels	TJ	5,637	1.1	5,638
Fossil fuels	TJ	14,289	1,281	15,570
Total fuels	TJ	19,926	1,282	21,208
WATER WITHDRAWAL				
Surface	Mm³	24	0.05	24
Ground	Mm³	8.1	0.2	8.3
Grid	Mm³	0.9	0.4	1.3
Total water <sup>(1)</sup>	Mm³	33.2	0.7	34
DISCHARGES				
To air				
CO <sub>2</sub> fossil direct	ktonnes	916	79	994
CO <sub>2</sub> fossil indirect	ktonnes	211	58	269
CO <sub>2</sub> biogenic	ktonnes	555	0.1	555
Dust	tonnes	120	0.2	120
NO <sub>x</sub> as NO <sub>2</sub>	tonnes	783	29	812
SO <sub>x</sub> as SO <sub>2</sub>	tonnes	1,803	12	1,815
To water				
Process water	Mm³	31	0.1	31
Cooling water	Mm³	0.2	0.01	0.2
COD	tonnes	13,831	322	14,153
BOD	tonnes	3,627	34	3,661
Total Suspended Solids	tonnes	4,492	22	4,514
Total N	tonnes	371	1.7	373
Total P	tonnes	11	0.3	11
Solid wastes				
Total non-hazardous wastes	tonnes	281,282	32,249	313,531
Landfill	tonnes	250,016	10,369	260,385
Recovery	tonnes	29,258	21,608	50,866
Other	tonnes	2,008	272	2,280
Hazardous wastes	tonnes	1,183	1,667	2,850

 $\ensuremath{^{(1):}}$  Total water includes rainwater and waste water from another organisation

# Total Group Operations

	Γ	All operations				
		2013	2012	2011	2010	2009
ENERGY						
Electricity						
Co-generated <sup>(1)</sup>	GWh	2,350	2,405	2,401	2,250	2,169
Self-generated	GWh	33	-	-		-
Hydro power	GWh	7.0	5.5	5.5	8.3	11
Grid supply	GWh	2,330	2,081	2,049	2,321	2,446
Total electricity	GWh	4,720	4,491	4,456	4,580	4,626
Fuel usage						
Biofuels	τJ	34,459	31,936	33,102	32,769	29,391
Fossil fuels	τJ	43,869	44,723	46,202	46,631	47,134
Total fuels	TJ	78,328	76,659	79,304	79,400	76,525
WATER WITHDRAWAL						
Surface	Mm³	106	104	103	109	121
Ground	Mm³	15	16	15	15	16
Grid	Mm³	3.5	3.1	3.0	3.2	3.8
Total water <sup>(2)</sup>	Mm³	125	126	122	127	141
DISCHARGES						
To air						
CO <sub>2</sub> fossil direct	ktonnes	2,681	2,775	2,860	2,861	2,917
CO, fossil indirect	ktonnes	683	584	572	661	661
CO <sub>2</sub> biogenic	ktonnes	3,716	3,622	3,606	3,517	3,100
Dust	tonnes	561	665	699	772	1,004
NO <sub>x</sub> as NO <sub>2</sub>	tonnes	4,367	4,688	4,767	5,595	6,566
SO <sub>x</sub> as SO <sub>2</sub>	tonnes	2,411	3,334	3,893	3,691	3,832
To water						
Process water	Mm³	81	79	78	82	96
Cooling water	Mm³	34	34	32	33	32
COD (3)	tonnes	38,165	35,665	36,278	35,024	38,961
BOD (3)	tonnes	12,248	11,473	11,638	11,404	13,052
Total Suspended Solids (3)	tonnes	9,520	7,752	8,504	8,033	8,384
Total N <sup>(3)</sup>	tonnes	888	711	643	653	420
Total P (3)	tonnes	86	91	97	109	86
Solid wastes						
Total non-hazardous wastes	tonnes	906,710	919,084	906,389	888,775	918,692
Landfill	tonnes	512,047	565,345	525,854	453,240	453,498
Recovery	tonnes	363,976	322,712	329,880	377,493	337,529
Other	tonnes	30,686	31,026	50,655	58,043	127,666
Hazardous wastes	tonnes	9,523	12,813	10,717	12,448	10,289

 $^{(1):}$  For years 2009, 2010, 2011 & 2012 electricity co-generated and self-generated

(2): Total water includes rainwater and waste water from another organisation

 $\ensuremath{^{(3):}}$  Sum of available data (for mills details are reported in the individual tables)

# Management Systems Certification

Fore	-	Forest Management		ourcing		Chain of Custody
		-	Europe			
CO		FSC				PEFC & FSC
VE	Venezuela Forest	FSC CW* Mar 2014	FR Co	omptoir Du Pin A	quitaine	PEFC & FSC
Exte Euro	ernal Paper Sourcing pe	Chain of Custody				
Euro	pean Paper Sourcing (EPS)	PEFC & FSC				
	ppean Mills	Quality Management System	Environmental Management System	Health and Safety System	Hygiene Management Foodstuffs packaging	;
virg	n mills	ISO 9001	ISO 14001	OHSAS 18001	EN 15593	
AT	Nettingsdorfer	•	•		•	PEFC & FSC
ES	Navarra	•	•		•	PEFC & FSC
	Nervíon	•	•		•	PEFC & FSC
FR	Cellulose du Pin	•	•	•	•	PEFC & FSC
SE	Piteå	•	•		•	PEFC & FSC
Recy	rcled mills					
CZ	Morava	•	•	•	•	PEFC & FSC
DE	Baden Karton	•	•	•	•	PEFC & FSC
	CD Haupt	•	•	•	•	PEFC & FSC
	Herzberger	•	•	•	•	PEFC & FSC
	Ноуа	•	•	•	•	PEFC & FSC
	Viersen	•	•	•	•	PEFC & FSC
	Zülpich	•	•	•	•	PEFC & FSC
ES	Mengibar	•	•		•	PEFC & FSC
FR	Alfa d'Avignon	•	•		•	PEFC & FSC
ΓN	Rethel	•	•		•	PEFC & FSC
	Saillat	•	•	•	•	PEFC & FSC
IT	Ania	•	-	-	other standa	
			•	-		
NL	SBM Coevorden	•	•	•	•	PEFC & FSC
	SBM Hoogkerk	•	•	•	•	PEFC & FSC
	SBM Nieuweschans	•	•	•	•	PEFC & FSC
	SBM Oude Pekela	•	•	•	•	PEFC & FSC
	Roermond	•	•	•	•	PEFC & FSC
UK	SSK	•	•	•	•	PEFC & FSC
	Townsend Hook	•	•	•	•	PEFC & FSC
	Americas Mills	Quality Management System	Environmental Management System	Health and Safety System	Chain of Custody	
Virgi	n mills	ISO 9001	ISO 14001	OHSAS 18001		
СО	Cali		•		FSC	
VE	San Felipe					
	vcled mills				<u>.</u>	
AR	Bernal		•		FSC Feb 2014	4
-	Coronel Suarez		•		FSC Feb 2014	
со	Barbosa		•		FSC	
	Barranquilla		•		FSC	-
МΧ	Cerro Gordo	•	•	1	FSC	-
1 1/1	Los Reyes	•	•		FSC	
	Monterrey	•	•		FSC	
VE	Caracas	•			FJC	-
۷Ľ						
110	Valencia		•			•
US	Forney				PEFC & FSC & SFI	×

\*Certified Wood

## About the Report

The information in this report covers all the international activities of the Smurfit Kappa Group for the calendar year 2013 and also includes some information for early 2014 when mentioned specifically.

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

At the end of 2013, our operations included 352 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 CRP (see below). For this company data are only included when specifically mentioned in the relevant section of the report.

### Acquisitions and Divestitures 2013

In October 2013, Smurfit Kappa acquired CRP. This UK-based company specialises in litho-laminated packaging, 3D point of sale, HD preprint, food contact, and heavy duty packaging. CRP employs approximately 220 people and is now operating under the name of Smurfit Kappa CRP. For 2013, data of this company are not included in this report. There was one divestiture. Mittpac in Sweden in December 2013 environmental data on Mittpac are included in the report. 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 2013 with the exception of the CRP 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 operations where significant deviation occurs.

In 2013, we initiated a programme to support the mills in developing their own internal tools to ensure a robust and fully traceable reporting of their environmental data in strict compliance with the Group reporting protocol. Our intention is to extend this activity to all paper and board mills in the next two years. Our intention is to develop protocols not only for energy data, but also 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.  $CO_2$  emission calculations have been based on established fuel consumption and specific  $CO_2$  emission factors. Definitions and calculations for the performance indicators can be found in the glossary on pages 96 to 98.

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 95.

# **GRI** Table

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 2013. All core Indicators have been addressed and are included in the table. The index refers to information in our 2013 Sustainable Development Report (SDR), our 2013 Annual Report (AR), our website: www.smurfitkappa.com and the Carbon Disclosure Project website.

We declare that our 2013 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 G3.1 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)
Profile				
1.1	CEO Statement on relevance of sustainability to the organisation and its strategy	Full	SDR	5-7
1.2	Description of key impacts, risks and opportunities	Full	SDR	20-22
Organisati	ional Profile			
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	128-130
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	125-126
2.10	Awards received in the reporting period	Full	Website	
Report Par	ameters			
3.1	Reporting period (e.g. fiscal/calendar year) for information provided	Full	SDR	87
3.2	Date of most recent previous report (if any)	Full	SDR	5
3.3	Reporting cycle (annual, biennial, etc.)	Full	SDR	5
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	87
3.6	Boundary of the report	Full	SDR AR	87 3-5
3.7	Any specific limitations on the scope or boundary of the report	Full	SDR	87
3.8	Basis for reporting on joint ventures, subsidiaries, etc.	Full	SDR	87
3.9	Data measurement techniques and the bases of calculations	Full	SDR	38,87
3.10	Explanation of effect of re-statements of information provided previously	Full	SDR	87
3.11	Significant changes in scope, boundary, or measurement methods	Full	SDR	87
3.12	Table identifying the location of the Standard Disclosures in the report	Full	SDR	88-92
3.13	Policy and current practice on seeking external assurance for the report	Full	SDR	87
Governand	ce, Commitments, and Engagement			
4.1	Governance structure of the organisation	Full	AR	38-42

GRI-G3.1	DESCRIPTION	LEVEL OF REPORTING	SOURCE/COMMENT	PAGE(S)
4.2	Indicate if Chair of the Board is also an executive officer	Full	AR	39
4.3	The Board members that are independent and/or non- executive members	Full	AR	38-39
4.4	Ways for shareholders and employees to provide recommendations or direction to the Board	Full	SDR AR	58 41
4.5	Link between compensation of Board and management with SDR performance	Full	AR	49-50
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	10-11 13, 38-42
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	10 40
4.11	Explanation of whether and how the precautionary approach or principle is addressed by the organisation	Full	AR	42
4.12	Externally developed economic, environmental and social charters & principles	Full	SDR	10-11
4.13	Memberships in associations	Full	SDR	12-13
4.14	List of stakeholder groups engaged by the organisation	Full	SDR	13
4.15	Basis for identification and selection of stakeholders with whom to engage	Full	SDR	5-6, 12, 14
4.16	Approaches to stakeholder engagement	Full	SDR	12-14, 70
4.17	Key topics and concerns raised through stakeholder engagement	Full	SDR	12-14
Economic	Indicators			
	Disclosure on management approach	Full	SDR AR	5, 12-14 13, 32-33, 74-82
EC1	Direct economic value generated and distributed	Full	AR	84-86
EC2	Financial implications and other risks and opportunities for the organisation's activities due to climate change	Full	CDP 2013 Investor	Section 5
EC3	Coverage of the organisation's defined benefit plan obligations	Full	AR	79-81, 104- 107
EC4	Significant financial assistance received from government	Full	AR	68, 79
EC6	Policy, practices and proportion of spending on locally- based suppliers at significant locations of operation	Full	SDR	13,73
EC7	Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation.	Full	SDR	53-54
EC8	Development and infrastructure provided primarily for public benefit	Full	SDR Other than local community involvement, no engagement by Smurfit Kappa	60-63
Environme	ental Indicators			
	Disclosure on management approach	Full	SDR	5, 17-18, 87
EN1	Materials used by weight or volume	Full	SDR	78-79
EN2	Percentage of materials used that are recycled input materials	Full	SDR	33
EN3	Direct energy consumption by primary energy source	Full	SDR	38-39, 78-85
	Indirect energy consumption by primary source	Full	SDR	38-39, 78-85
EN4				
EN4 EN5	Energy saved due to conservation and efficiency improvements	Full	SDR	37-42

### GRI Table

GRI-G3.1	DESCRIPTION	LEVEL OF REPORTING	SOURCE/COMMENT	PAGE(S)
EN8	Total water withdrawal by source	Full	SDR	45, 78-85
EN10	Percentage and total volume of water recycled and reused	Full	SDR	45-47, 78-85
EN11	Location and size of land by protected areas and areas of high biodiversity value	Full	SDR Website	36-37
EN12	Description of significant impacts of activities, products and services on biodiversity	Full	SDR	36-37
EN16	Total direct and indirect greenhouse gas emissions by weight	Full	SDR	38, 78-85
EN17	Other relevant indirect greenhouse gas emissions by weight	Full	SDR	43, 78-85
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved	Full	SDR	37-42
EN19	Emissions of ozone-depleting substances by weight	Full	We do not add any ozone-depleting subst that have been regulated following the Mo to our products during our manufacturing Consequently, our products do not emit at their life cycle.	ntreal Protocol, processes.
EN20	$\mathrm{NO}_{\mathrm{x}^{\prime}}\mathrm{SO}_{\mathrm{x}}$ and other significant air emissions by type and weight	Full	SDR	78-85
EN21	Total water discharge by quality and destination	Full	SDR	45-47, 78-85
EN22	Total weight of waste by type and disposal method	Full	SDR	78-85
EN23	Total number and volume of significant spills	Full	SDR	47
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation	Full	SDR	17, 32-48
EN27	Percentage of products sold and their packaging materials that are reclaimed by category	Full	SDR	33-35
EN28	Significant fines and non-monetary sanctions for non-compliance with environmental law	Full	SDR	11
EN29	Significant environmental impact from transport	Full	SDR	42-43
Labour Pra	ctice Indicators			
	Disclosure on management approach	Full	SDR	14, 49-60
LA1	Total workforce by employment type and region	Full	SDR	54-56
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 AR	53-54 86
LA4	Percentage of employees covered by collective bargaining agreements	Full	SDR AR	53 86
LA5	Minimum notice period(s) regarding significant operational changes	Full	SDR	58
LA7	Rates of injury, occupational diseases, lost days and absenteeism, and number of work-related fatalities by region	Full	SDR	50-51
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	55
LA10	Average hours of training per year per employee by employee category	Full	SDR	55
LA11	Programmes for skills management and lifelong learning	Full	SDR	55-57
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 54-57
LA14	Ratio of basic salary of men to women by employee category	Full	SDR Same job, same pay	53

GRI-G3.1	DESCRIPTION	LEVEL OF REPORTING	SOURCE/COMMENT	PAGE(S)
Human Rig	hts Indicators	<b>-</b> "	000	
	Disclosure on management approach	Full	SDR	14, 53
HR1	Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening	Full	SDR	58
HR2	Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken	Full	No formal assessments in place. Our Co Conduct provides the principles to opera- operations globally. Our Code of Business on international conventions and codes s Declaration of Fundamental Human Righ Declaration on Fundamental Principles a (core conventions). Approximately 15% of volume originates from countries consid extreme risk (according to the Maplecrof Risk Index 2014). Also for countries with our Code of Business Conduct is basis for Therefore, we consider the risk that our and other countries violate human rights	Ite for all our s Conduct is based such as The UN its and the ILO nd Rights at work of our production ered high or t Human Rights high or extreme risk, or doing business. operations in those
HR3	Total hours training on policies and procedures	Not reported	We have no such training programmes.	
	concerning human rights		Employees are made aware of relevant p awareness programmes regarding Code Conduct.	
HR4	Total number of incidents of discrimination and actions taken	Full	SDR Website	53
HR5	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	Partial	SDR	73
HR6	Operations with significant risk for incidents of child labour, and measures taken to eliminate	Full	SDR	53
HR7	Operations with significant risk of forced or compulsory labour, and measures to eliminate	Full	SDR	53
HR8	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	
HR9	Incidents of violations involving rights of indigenous people and actions taken	Full	see comment under HR2	
HR10	Percentage and number of operations subject to human rights reviews	Full	see comment under HR2	
HR11	Number of grievances related to human rights addressed and resolved	Full	No such grievances were reported to Gro no such reports to local operations eithe	
Social				4.4.60
	Disclosure on management approach	Full	SDR	14,60
\$O1	Percentage of operations with implemented local community engagement, impact assessments, and development programmes.	Partial	SDR	60-63
SO2	Percentage and total number of business units analysed for risks related to corruption	Partial	SDR	10-11
SO3	Percentage of employees trained in organisation's anti- corruption policies and procedures	Full	SDR	6, 10-11
SO4	Actions taken in response to incidents of corruption	Full	SDR	10-11
SO5	Public policy positions and participation in public policy development and lobbying	Full	SDR	10-11
SO6	Total value of financial and in-kind contributions to political parties, politicians and related institutions by country	Full	SDR	11
SO7	Total number of legal actions for anti-competitive behaviour, anti-trust and monopoly practices and their outcomes	Full	SDR	11
SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	Full	SDR	10-11

GRI-G3.1	DESCRIPTION	LEVEL OF REPORTING	SOURCE/COMMENT	PAGE(S)
SO9	Operations with significant potential or actual negative impact on local communities	Partial	SDR 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.	26
SO10	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 Facture see page 47.	
			SDR	58
Product Re	esponsibility Indicators			
	Disclosure on management approach	Full	SDR	14, 73
PR1	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	73-75
PR2	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	73
PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements	Full	SDR	73-75
PR4	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	73
PR5	Practices related to customer satisfaction, including results of surveys that measure customer satisfaction	Full	SDR	72
PR6	Programmes for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship	Full	SDR	72
PR7	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	72
PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	Full	No substantiated complaints identified	
PR9	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-cc with laws or regulations concerning the provision products and services were identified	

### Business in the Community Ireland

#### External Commentary – Smurfit Kappa Group

This is the seventh annual sustainable development report published by Smurfit Kappa Group (SKG).

We know from previous reports that sustainability and social responsibility are core values of the company, and are embedded both in operations and reporting structures.

The examples of how SKG reacted when operations ceased while a new machine in Townsend Hook was being constructed, and the response in Bernal Argentina following a major flood in La Plata, illustrate well a company with a big picture view, one deeply committed to its values and principles and prepared to do what is necessary to bring about as positive an impact as possible, for its key stakeholders.

Smurfit Kappa Group's differentiating factor is being able to provide its customer base not only with completely traceable, sustainable packaging solutions, but in being able to optimise customer's own supply chains in doing so. Their 2013 report goes to some length to explain why sustainability is a key business driver for SKG, presenting challenges and business opportunities, in a competitive market.

We were interested to read that:

- At the end of 2013, 91% of all Group converting operations are Chain of Custody certified under FSC or PEFC and almost 90% of packaging produced in Europe are Chain of Custody certified (operations in the Americas are expected to follow in 2014). 92% of Smurfit Kappa paper mills are certified to ISO 14001.
- 2. The target to reduce relative fossil  $CO_2$ emissions by 20% by 2020 (on a 2005 baseline) was achieved six years ahead of schedule in 2013. Smurfit Kappa is now estimating  $CO_2$  emissions for the transport of customer products from the European corrugated operations to customer points of delivery.
- 3. Smurfit Kappa returns over 90% of water used to the systems from which it was extracted. Since 2008, the water intake of the paper and board mill system has decreased by 13% per tonne of product. Valuable biogas is now retrieved from waste water sludge and one of the largest Smurfit Kappa paper mills, Zulpich in Germany, is operating a 100% closed loop process water system.
- 4. In 2013, eight of the 24 paper mills in Europe sent no waste to landfill. 40% of non-hazardous waste generated by

operations was recovered. In an ambitious move, in-depth assessment has been conducted of the different types of waste generated by the mills and packaging operations, at all stages of the manufacturing and production processes, to determine the best way to both prevent and recover that waste.

- 44% of all fuel used to generate energy in 2013 was biomass based. 80% of all fuel used to generate electricity and steam is produced through a CHP system.
- 6. Health & Safety continuous to receive priority attention. We noted that a Group Director of Health & Safety has been appointed to ensure consistent and global adoption of health & safety practices and their verification. In 2013, improvements included the segregation of pedestrian and lift truck traffic in warehouse and logistics areas and the revision of the group health & safety incident and injury reporting standard.
- 98% of strategic suppliers have now been audited and SKG is now working with suppliers on a sustainability continuous improvement plan, on areas identified during the audit. A goal has been set to increase the number of suppliers of raw materials to commit to the UN Global Compact and register with Sedex.

The context and detail provided in the 2013 Report convey the complexity of operations, the variety of challenges being faced and how Smurfit Kappa Group is utilising its 80 years' experience, expertise and scale to address energy & water efficiency, biodiversity and climate change in tandem with improving operational conditions of machines, productivity, quality and waste.

Furthermore, we very much commend the leadership role taken by Smurfit Kappa Group in 2013 in particular areas such as:

- Collecting 10,000 square meters of tarmac from the Colombian Government's public roads that was being sent to landfill, for use in the maintenance of forest and public roads in rural communities.
- 2. Investing in research to conserve natural forests located on company lands to ensure the sustainability of forest diversity and contribute to the protection of water sources, flora and fauna.

We welcome the focus on innovation in the 2013 Report including the European and Americas internal Innovation & Sustainability Awards (for the most innovative packaging and most creative sustainability solutions, judged by customers and sustainability experts). Very exciting is the Smurfit Kappa innovation (Catcher Board MB 12) to stop the migration of mineral oils from packaging into food products.

We are delighted to see that our recommendation last year to include more case studies has been taken on board. Examples illustrating how the specific requirements of diverse customer needs have been met are excellent, and include how Smurfit Kappa has been able to remove plastics, polystyrene and aluminium from waste streams, replacing them with sustainably sourced, renewable and recyclable paper based alternatives.

Impressive too is the addition of an endorsement from Unilever, as a case study of a satisfied key customer being supported by their supplier, Smurfit Kappa, to attain their own challenging sustainability goals.

As in previous years, independent assurance is provided by KPMG on how Smurfit Kappa has applied the Global Reporting Initiative's G3.1 Guidelines.

#### Recommendations

This is a very comprehensive sustainability report, where commitment to continuous improvement, via challenging targets, is evident throughout. Quality, efficiency and sustainability are centre stage to all operations.

However, the report is long and somewhat repetitive in places. We very much recommend that the company considers utilising the corporate website and other channels to convey the main elements of the report, e.g. the impact of Smurfit Kappa at a glance; innovative packaging design for customers; objectives and targets for the coming year etc.

We also suggest utilising the format of short videos to convey to stakeholders the company's commitment to sustainability, its key impacts and its leadership role in the packaging industry.

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



# UN Global Compact

Smurfit Kappa became a supporter of the United Nations Global Compact ("UNGC"), a worldwide corporate citizenship initiative, in 2010.

As a network of more than 12,000 corporate participants and other stakeholders from over 145 countries, it is the largest voluntary corporate responsibility initiative in the world. Supporters of the UNGC 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 reports 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 on-going activities, as well as relevant key performance indicators that 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 are reported in the Environment section. A complete GRI index can be found on pages 88 to 92 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.

	IGC principles	<b>GRI indicators</b>
Hu	iman 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
La	bour	
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
En	vironment	
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
An	ti-corruption	
10	Businesses should work against corruption in all its forms, including extortion and bribery.	SO2-4
	OBALCO	



# Independent Assurance Report

To the readers of the Sustainable Development Report 2013 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 2013 (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 About the Report. 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 Hoya (Germany), Navarra (Spain), Saillat (France), Žebrák (Czech Republic), Bernal and Coronel Suárez (Argentina) to review the source data and the design and implementation of controls 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.

During the assurance process we discussed the necessary changes in the Report and reviewed the final version of the Report to ensure that it reflects our findings.

#### 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, 23 June 2014

KPMG Sustainability, part of KPMG Advisory N.V.

W. J. Bartels, Partner

# Glossary

BOD	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.
Biofuels	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).
Black liquor	Residue from pulping that contains organic compounds (like lignin). This residue is burnt in paper mills to produce energy and to recover the chemicals.
CEN	Comité Européen de Normalisation. The European Committee for Standardisation is major provider of European standards and technical specifications.
CEPI	CEPI, the Confederation of European Paper Industries. It is a not-for-profit organisation representing the European pulp and paper industry.
Certified wood product	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 audits.
СНР	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.
CHP (outsourced)	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.
COD	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.
CoC	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.
Co-generated Electricity	Electricity generated by a CHP system belonging to our organisation or from an outsourced CHP system.
Self-generated Electricity	Electricity generated by a an electricity generator without production of steam.
Containerboard	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.
Corrugated board	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.
CO <sub>2</sub> biogenic	Carbon dioxide emitted when burning biofuels. This $\rm CO_2$ is considered to be carbon neutral as it is removed from the atmosphere and stored in biomass within a short period of time.
CO <sub>2</sub> fossil	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).
CO <sub>2</sub> indirect	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 for year 2010. "CO <sub>2</sub> emissions from fuel combustion - 2013 Edition".
Carbon dioxide equivalent CO <sub>2</sub> -eq	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.

Dust	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.
ELCD	European Reference Life Cycle Database. The ELCD has been developed within the "European Platform o Life Cycle Assessment" by the Commission's Joint Research Centre, Institute for Environment and Sustainability (JRC-IES).
Environmental Management System	A set of processes and practices that enable an organisation to reduce its environmental impact and increase its operating efficiency.
Emissions Trading Scheme	A scheme calculated to allocate greenhouse gas allowances for a list of specific activities.
Fluting	The wavy formed middle layer in corrugated board.
Fossil fuels	Fuels originating from natural resources (gas, oil, coal, peat and lignite).
FSC	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
GJ	Gigajoule, a unit of energy that generally applies to fuel. 1 gigajoule (GJ) = one billion joules = $10^9$ joules.
Grid supply	Electricity purchased from a national distribution network.
GWh	Unit of energy, generally applies to electricity – 1 GWh (GigaWatt hour) = 1 Million KWh (KiloWatt hour).
Inorganic raw materials	Raw material used for manufacturing our products that are not organic such as: fillers, sodium hydroxide, sodium sulphate and calcium oxide.
ISO 9001	Scheme certified by independent third party that ensures that the operation certified applies internationally recognised standards and procedures of quality management.
ISO 14001	Scheme certified by independent third party that ensures that the operation certified applies internationally recognised standards and procedures of environmental management.
ISO 17025	This international standard lists the requirements to allow the accreditation by authorised third party of a testing laboratory and to verify its proficiency.
ISO 22000	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.
Kraftliner	Paper made mainly from virgin wood fibres.
ktonne	One ktonne = 1,000 tonnes, where one tonne (metric tonne) = 1,000 kilograms.
Lost Time Accident	Refers to a work-related injury incident sustained by a Smurfit Kappa employee while performing their wor duties that results in their absence from their scheduled work after the day of the incident.
Lost Time Accident Frequency Rate	Refers to the number of Lost Time Accidents per 100,000 hours worked. [LTA Frequency Rate = Number of LTA x 100,000 /Total Number of Hours Worked]
Lost Time Accident Severity Rate	Refers to the total number of Days Lost per 100,000 hours worked. [LTA Severity Rate = Number of Days Lost x 100,000 / Total Number of Hours Worked]
N (Nitrogen)	Total Nitrogen is the sum of organic nitrogen, ammonia, $\rm NH_3$ and ammonium, $\rm NH_4$ + discharged with the process water.
NO <sub>x</sub>	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>2</sub> emissions are measured mainly by the mills. Where NO <sub>2</sub> is not measured (converting plants), emissions are calculated from fuel consumption using the emission factors listed in the Ecoinvent database version 2.1.
Non-Controversial origin	<ul> <li>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> <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 tress are planted</li> </ul> </li> </ul>

### Glossary (continued)

Number of Days Lost	Refers to the number of Days Lost arising from any Lost Time Accident. When counting the number of Days Lost due to an accident, the day of the accident is not counted as a lost day.
Other organic raw materials	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.
PEFC	Programme for the Endorsement of Forest Certification. PEFC is an independent, non-governmental organisation which promotes sustainably managed forests through independent third party certification.
P (Phosphorous)	Total phosphorous is the sum of phosphorous compounds discharged with the process water.
PJ	Petajoule, a unit of energy. 1 petajoule = 1,000 terajoules = 10 <sup>15</sup> joules
Process water	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.
Purchased pulp	Pulp produced by third party companies and purchased by our mills to produce paper or board (the pulps are mainly bleached).
Recovered paper	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.
Sludge	A solid waste that is produced during water treatment from biological activity (mainly aerobic stage).
SFI	SFI Inc (Sustainable Forest Initiative) is an independent, non-profit organization dedicated to promoting sustainable forest management. Companies are certified chain of custody according to the SFI standard through independent third party certification.
Solid Wastes	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.
Total non-hazardous wastes	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.
Non-hazardous wastes Landfill	Part of the non-hazardous wastes that are disposed of in either internal or external landfill in accordance with national legislation.
Non-hazardous wastes Recovery	Part of non-hazardous wastes that are reused or recycled or composted or used in agriculture or incinerated with energy recovery. The incineration facility is classified as a recovery operation is the efficiency of the plant complies with the definition laid down In Annex II of the Directive 2008/98/EC on waste.
Non-hazardous wastes Other	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.
Hazardous wastes	Residues of oils and other hazardous wastes (building wastes containing asbestos, ink residues, etc.).
SO <sub>x</sub>	Mix of sulphur oxides calculated as $SO_2$ coming from combustion of fuels. Sulphur dioxide contributes to the acidification of soil and water. $SO_2$ emissions are measured mainly by the mills. Where $SO_x$ is not measured (converting plants), emissions are calculated from fuel consumption using the emission factors listed in the Ecoinvent database version 2.1.
Testliner	Paper manufactured from recycled fibres.
IJ	Terajoule, a unit of energy that generally applies to fuel. 1 terajoule = 1,000 gigajoules = 10 <sup>12</sup> joules.
Total Suspended Solids	Total Suspended Solids refers to the level of small solid particles released with process water.
Virgin fibre	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.

### Notes

# Group Operations

### The Americas

#### OPERATIONS

2
10
33
2
5
33
2

#### SALES

Volumes	(million tonnes)
Containerboard	1.1
Other Paper & Board	0.3
Corrugated	1.0

VIRGIN MILLS

- RECYCLED MILLS
- CORRUGATED
- CARTONS
- A PAPER SACKS
- BAG-IN-BOX
- RECOVERED FIBRE
- ♣ FORESTRY



### Europe

#### OPERATIONS

Virgin Mills	5
Recycled Containerboard Mills	
Other Recycled Paper and Board Mills	
Corrugated	158
Cartons and Solidboard Packaging	
Recovered Fibre	16
Other	49

#### SALES

Sales Volumes	(million tonnes)
Kraftliner	1.6
Recycled Containerboard	2.9
Other Paper & Board	1.1
Corrugated	4.2
Solidboard Packaging	0.3

VIRGIN MILLS

RECYCLED MILLS

CORRUGATED

- CARTONS AND SOLIDBOARD PACKAGING
- BAG-IN-BOX
- RECOVERED FIBRE



#### Smurfit Kappa Group plc

 Beech Hill

 Clonskea

 Dublin 4

 Ireland

 Tel:
 +353 (0)1 202 7000

 Fax:
 +353 (0)1 269 4481

 Email:
 sustainability@smurfitkappa.com

 Web:
 www.smurfitkappa.com

