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# Sustainability in every fibre

As one of the world's largest paper-based packaging businesses, Smurfit Kappa maintains a relentless commitment to sustainable business that underlies everything we do.

We use sustainability as a lens through which to focus our innovation, our strategy and our processes. The transparency and detail we offer our stakeholders is industry-leading.

For many years, our distinctive focus has been on designing for a circular economy – a truly closed-loop system in which the productivity of the resources we use is maximised and the CO<sub>2</sub> emissions generated through our products are minimised. Simultaneously, we endeavour to promote sustainable use of renewable raw materials, to reduce the use of and replace nonrenewable raw materials with renewable ones where we can and ultimately to reuse resources we take out.

Our innovative, right-weighted, recyclable packaging delivers real savings in cost and carbon for our customers and for consumers. It is an approach that has delivered consistent business growth and long-term partnerships with some of the world's most respected brands. But current technology means paper cannot be recycled indefinitely; new wood fibre must be introduced into the system creating an impact for which we must take responsibility. True closed-loop thinking starts in the forest, which is why we are unique among our peers in committing to 100% sustainably sourced new fibre from forests where biodiversity and human rights are assured to the highest globally recognised standards.

Our customers have unrivalled visibility of the impact of the products they buy from us, helping them in turn to realise their own sustainability strategies and better manage their impact.

This is how we do business. It is what drives our success, our competitive energy, our hunger for fresh challenges. Every day, we prove how our way of working contributes to a better world and a brighter future.

That is why we are proud to say that running through our people, our processes and our products, we have **sustainability in every fibre**.

From the production line through to the consumer, packaging can make a difference: through new ideas, it has the potential to shape the way you do business.

For more information visit:

openthefuture.info 📐

# Smurfit Kappa at a glance

As a global company, our operations create value for our customers, employees, investors, suppliers and the communities in which we operate.





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# Our approach to a sustainable business

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### Our approach to business A letter from our Group Chief Executive Officer



**GARY McGANN** Group Chief Executive Officer

### Summary

- recognised by FTSE4Good
- new relative CO<sub>2</sub> emissions target
- weachieved our sustainable fibre sourcing target
- first company-wide employee engagement survey

# Sustainability for long-term corporate success

# I am pleased to introduce Smurfit Kappa's eighth annual Sustainable Development Report.

Throughout 2014, Smurfit Kappa continued to meet, and at times exceed, the sustainable development goals we as a company set ourselves. This report will highlight a number of these examples, and outline where we have progress to make on our ambitious sustainability journey.

### **Our vision**

Sustainability and social responsibility are at the heart of our business. They are core to ensuring our long-term success as a company; not just our view, but one supported by the UN Global Compact. We believe that it is also part of our responsibility, as a global corporate citizen, to help meet the challenges of climate change, increasing resource scarcity, poverty, inequality and conflict. Sustainability and social responsibility also help us to meet customer and consumer demand for sustainable products and services. And, in turn, this helps our customers and consumers become more sustainable as well. That makes our business a more attractive investment, strengthening our licence to operate and increasing our market share as a result. In short, it makes business sense to be sustainable.

### Our journey in 2014

I am proud to say that in 2014 our contribution to meeting some of these societal challenges was recognised externally. In September we were listed on the FTSE4Good index in recognition of our continuing efforts to minimise our impact on the environment and to increase the social benefit we create. We continue to achieve this in three ways: making our processes more sustainable; delivering products and services which increase the efficiency of our customers' value chains; and investing in the development of our employees and the communities in which we have the privilege to operate. After achieving our previous target of reducing relative  $CO_2$  emissions by 20% compared to 2005, we have since increased our level of ambition, committing to reduce Smurfit Kappa's relative  $CO_2$  emissions by 25% by 2020.

We achieved the target of using only fibre from sustainable sources in our production processes, and by completing the certification of our operational system we will, going forward, be able to label all packaging solutions delivered to customers accordingly.

For the first time in our company's history, and as part of our continuing commitment to invest in the development of our 42,000 employees across 32 countries, we launched a global engagement survey, MyVoice, giving our employees a greater voice in shaping the future direction of our company.

In addition, we remain absolutely committed to the health and safety of our employees and premises. Increased focus was given to report and record every accident, irrespective of seriousness and to timely reporting and accurate classification of all classes of accidents and their injuries. Although the lost-time through injury rate did not improve compared to 2013, we remain firmly committed to achieving a reduction of 5% annually by 2017.

### Looking forward

While we are proud of our achievements in 2014, we recognise that Smurfit Kappa is on a journey to embedding sustainability throughout all its operations. We are making progress on performing waste assessments throughout the company, and water impact assessments on relevant sites. This coming year we will define measurable targets against waste reduction. For water usage we expect to define credible and relevant targets before 2017. We fundamentally believe in a new model of doing business: the circular economy. In short, the circular economy is by nature restorative: replacing natural resources needed for our production processes and reusing, in the best way we can, those resources which we take out.

The circular economy provides Smurfit Kappa with new business opportunities and innovative solutions to reduce material costs, ensuring our business is resilient in the face of growing resource constraints. In our view, increasing resource productivity through a more circular model of production and consumption can be an important contributor to job growth and economic competitiveness.

Re-engineering our business in this way requires a holistic approach, working at system level, which promotes innovation and connections across sectors and value chains. While a number of our operations are already advanced in their application of this systemic approach, others are on a journey to doing so. »

# Certified by nature

97% of our packaging for our customers can be labelled Chain of Custody Certified. The challenge for our business is not only to reduce the amount of natural resources we use, but to use them in the most effective way. The necessary data to analyse how to make our activities more circular has already been collected and in this report you will find a wealth of environmental and social data. We aim to be fully transparent on our journey to sustainable development. By being transparent we can share sustainability learning and challenges more easily between value chain partners.

In this report you will find a detailed account of our progress and targets against five key priority areas: Forest, Climate Change, Water, Waste and People.

To play our part in the environmental and social challenges the world is facing, it is a precondition that companies like ours can operate under fair, predictable and competitive conditions. We believe there is a need for an environment for industry that is enabling, allowing business to be more efficient, more effective and ultimately more competitive. It is only by being competitive we can make the necessary investments for sustainability. 2015 is a big year for our planet with the agendas of climate change, sustainable development and energy uniting on a global scale. We have therefore joined the World Business Council for Sustainable Development as we believe that business contributions will be central to success in ensuring sustainable economic growth and prosperity for all.

I hope you will find the content of our Sustainable Development Report 2014 both interesting and informative and look forward to any feedback that you may have (sustainability@smurfitkappa.com).

GARY McGANN Group Chief Executive Officer 12 June 2015

#### 🔍 Community Testimonial

### Compassion is a universal language



On 6 March 2015 Smurfit Kappa Orange County launched a partnership with the Manitas que Hablan' Foundation to provide education for children with language mpairment and hearing disorders.

Teresa Hernandez (see picture), a Foundation Board Member tells us: "Our mission is to facilitate the integration of these children into society by providing them with the tools to make this possible. Recently we planned to build two newly equipped classrooms and to guarantee the salary of four teachers in one building. Students learn faster and better if classrooms are both situated in one building. This way we would have more opportunities to support the education of our children."

"Our kids, volunteers and staff were excited by the news that the Smurfit Kappa Foundation donated US\$75,000 to support the project. It is heart-warming to see that commercial enterprises like Smurfit Kappa act as good corporate citizens. One of Smurfit Kappa's own employees with language and hearing difficulties, Karla Cruz, offered some motivational advice at the launch, telling our kids to "never give up, no matter what obstacles you experience, and always move forward".

Smurfit Kappa Orange County will continue to support 'Manitas que Hablan' for the next two years. Benjamin Olmos, Human Resources Manager at Smurfit Kappa Orange County, said: "Part of our mission is to continue to support our community and what better way to do this than with a project like this. An initiative that offers children the support to fully integrate into society."

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# Our five strategic priorities

In this report you will find a detailed account of our progress and targets. Our approach to business creates opportunity to promote positive change.

### Forest

All of the raw material used in our paper production is now sourced under certified Chain of Custody systems



Find out more how we are committed to increasing certified wood fibre in packaging on page 32

### **Climate change**

We set ourselves a new target to reduce CO<sub>2</sub> emissions of produced paper tonne by 25% by 2020

Find out how we are reducing our carbon footprint on page 38

### Water

We have reduced our relative COD discharge by 28% in comparison to our base year 2005



Find out how we are working towards water discharge reduction on page 44

### Waste

Twelve of our 38 paper mills effectively sent no waste to landfill in 2014



Find out how we are reducing the amount of waste we create on page 48

### People

Our first company-wide employee survey, MyVoice had a high response rate of 80%

Find out how committed we are to safety on page 52

## Our approach to business **Our year in highlights**

# Vision into action: what we are doing

### **Business**

#### FTSE4Good

An investor rating system that recognises sustainability achievements.

**Achievement:** We were listed in the FTSE4Good index for the first time.



### FTSE4Good

### Sustainable sourcing

Our auditing of suppliers continues to ensure the materials, resources and services we source are sustainable and meet our high standards.

Achievement: 100% of our strategic suppliers in Europe have been audited since we started to audit suppliers in 2010.

### Four acquisitions finalised in 2014

In 2014, we continued to grow our market positions through a number of small but important acquisitions in the Americas.

- Colombia, (66%, May 2014), certain assets and business of Corrumed S.A.
- Dominican Republic, (100%, September 2014), certain assets and business of Cartonera Rierba S.A.
- Bates Container LLC ('Bates'), (100%, October 2014), four packaging plants located in Texas, in the United States
- Brian Thomas, (100%, October 2014), a sheet plant located in Texas, in the United States

### Forest

### Certified packaging by default

In 2014 we continued to implement Chain of Custody certification that now enables us to deliver FSC® certified packaging to any of our customers. We are solving last challenges and giving the guarantee to our customers that their packaging originates from sustainable sources.

Achievement: More than 97% of our packaging can be labelled as Chain of Custody certified.

### New Chain of Custody certifications

100% of our paper mills and 92% of our converting operations are now Chain of Custody certified according to FSC and/ or  $PEFC^{TM}$ .

Achievement: In 2014 we reached FSC Chain of Custody certifications at all Venezuelan converting operations and in Chile as well as the San Felipe, Caracas and Valencia paper mills in Venezuela.

### New Forest certifications

The forest certification process in Venezuela was started in 2014, achieving the certification for a number of our plantations during the year.

Achievement: The forest certification process was finished for 31% of our plantations in December 2014 and the certificates were obtained in March 2015. The process continues.

### Climate Change



### Increased CO<sub>2</sub> emission reduction target

A new target for relative fossil  $CO_2$ emissions was introduced in May 2014 after achieving the original target of a reduction of 20% by 2020 compared to 2005. The new target is to reduce relative  $CO_2$  emissions for our mill system by 25% by 2020 compared to 2005.

 $\begin{array}{l} \textbf{Achievement:} \mbox{ Our relative reduction} \\ \mbox{offossil CO}_2 \mbox{ emissions in 2014 was } 1.2\% \\ \mbox{ compared to 2013 and stands at -21.6\% } \\ \mbox{ compared to the level in 2005.} \end{array}$ 

### Piteå powered by bioenergy

Europe's largest kraftliner mill Piteå in Sweden is now effectively completely powered by bioenergy.

Achievement: The Piteå mill has increased the share of biofuels in its energy mix gradually. In 2014 the Piteå mill moved to fuelling the lime kiln and recovery boiler with biofuels, becoming  $CO_2$  emissions neutral. The energy mix now stands at 99% biofuels, with 1% being fossil fuels needed as start fuel for boilers.

### New tool that links our carbon footprint method and our production data

Smurfit Kappa's 'Innotools' have been equipped for over two years with the ability to compute the carbon footprint of individual packaging products.

Achievement: A new option in our Innotools suite of design software allows customers not only to know the carbon footprint for each packaging unit, but to also track progress over the years.



### Water



### Investment in Waste Water Treatment Plants

Investment in water treatment plants enables Smurfit Kappa to be more efficient in cleaning the water we use, resulting in more efficient water use and reuse throughout production.

Achievement: We invested in a new water treatment plant in Forney (U.S.A.) and expanded the capacities of those in Monterrey (Mexico) and Zülpich (Germany). We have reduced our relative COD discharge by 28% in comparison to our base year 2005.

### Water risk assessments started

We performed an overall water risk assessment of all our paper and board mills and developed a mill specific assessment tool piloted in our Mexican Cerro Gordo mill.

Achievement: As a result, we are able to set more specific targets on water and make individual improvement plans for each mill. The mill specific assessments continue at most relevant mills in 2015.

### Waste

**Waste to landfill assessments started** We launched a waste to landfill assessment project to map our opportunities to reduce waste throughout our operations.

Achievement: As a result of the assessment we will be able to set our waste reduction targets.



# People

### **My Voice**

A Group employee survey that measures engagement of our employees and their view in putting the Smurfit Kappa Vision into practice.

Achievement: Our first companywide employee survey, My Voice, had aresponse rate of 80%.



Health and safety Introduced Total Recordable Injury Rate (TRIR).

**Achievement**: TRIR was added to our existing health and safety performance metrics.

### Smurfit Kappa Foundation Mexico

We launched this year a third foundation in the Americas. Besides this Mexican foundation we also have foundations in Colombia and Venezuela, as well as a Corporate Foundation.

Achievement: The network of Smurfit Kappa foundations is expanding with an initiative for a charitable foundation in Mexico.



### Our approach to business Our distinctive sustainable business model

## Sustainability innovation: driving our competitive advantage

At Smurfit Kappa we believe sustainability creates business value.

#### **Embedding sustainability**

Sustainability is at the heart of our business. It drives what we do and how we do it, creating value for our business and the communities in which we operate. We deliver sustainability through two avenues:



We enable our customers to develop and grow their businesses sustainably. Being a sustainability leader within our industry creates business value. By reducing our impact on the environment, the raw materials that we use and by optimising design resulting in more sustainable packaging our customers are able to make a positive business choice when choosing Smurfit Kappa as their partner. Sustainability drives our competitive advantage.

We are looking for packaging solutions that enable our customers to reduce their carbon footprint by making efficient use of renewable raw materials.

Our approach to sustainability is driven by innovative thinking. It drives the way we do business – from analysing customer challenges, to understanding a specific customer market and finding the right solutions. We help our customers see through the new solution, delivering shared value from an innovative idea to implementation. In the communities where we play a part, we are proud to contribute to sustainable economic and social development, as an employer, as a partner and through the work of our foundations in addressing the principles of the UN Global Compact.

This is how we do business. It is what drives our success and our competitive energy. Every day our customers' needs drive us to be innovative and to contribute to a better, more sustainable world through new solutions.

### A research-based approach

A package's purpose is to shelter, support, communicate on and transport a product to its customer. The most important sustainability criteria are that the package is fit for purpose and does not under or over deliver. This serves both our own customers and our business best. Our business, therefore, is about finding the most suitable solution for our customers – a process that is based on and borne out of continuous research, putting facts and data into practice through innovative packaging solutions.

Our approach is supported by data from the Industry Council for Packaging and the Environment (INCPEN), which compared the direct and indirect impact of packaging on our customers' value chain. INCPEN found that the energy and therefore  $CO_2$ impact of packaging products on the supply chain was less than 5% whereas the indirect  $CO_2$  abating impact is much more significant for the sustainability of a customer's supply chain.

We enable our customers to develop and grow their businesses sustainably. We do this through a web-based suite of design software, our Innotools – Innobook, Paper to Box, Pack Expert and Shelf Viewer – which we make available to our customers, supporting robust evaluation of their supply chains. Innotools enables customers to optimise the direct and indirect environmental impact of our packaging on their supply chain. Outputs can range from simple changes in pallet patterns or case counts which can increase the quantity of products loaded, in turn reducing the mileage and carbon footprint of transport.

We eco-design our packaging, meaning we tailor packaging solutions to our customers' needs, whether that be for promotion or convenience, while optimising resources used. In our eco-design approach we look into the entire packaging concept of our customers' product, aiming at optimised primary and secondary packaging.

Driving innovation at the heart of design means we can respond flexibly and sustainably to a number of challenges: from changing consumer preferences and demographics to legislative and regulatory developments and changes across our competitive landscape. These include:

- More promotional package and brand extensions to maintain customer loyalty
- More visually engaging and colourful packaging designs to enhance brand awareness
- Responsible packaging via known resource origins
- Convenience features
- Smaller pack size for single serving and 'on the go' use
- Changing supply chain channels to the consumer (e.g. E-commerce)

From an operational perspective this requires us to innovate to deliver new shapes, sizes, materials and print colours in higher definition in an economically feasible way.

As well as providing an innovation challenge, it also poses a sustainability one.

By working in partnership with our customers, we tailor our packaging solutions to their needs, increasing packaging efficiency, minimising transport runs and continuing the life cycle of packaging by enabling in-store, on-package marketing. Through our collaborative partnerships we are able to constantly update our understanding of the needs of our customers and ultimately of consumers.

An example of an innovation in practice is the introduction of Shelf Smart service. Research indicates that 76% of consumer purchasing decisions are made in-store, meaning that shelf-ready packaging which is able to carry branding and consumer messaging reduces the need for duplicate materials to hold products in-store that reduces the environmental footprint of our customers.

#### 🔍 Customer testimonial

Lamb Weston/Meijer's strategy



#### The multiplier effect

Lamb Weston/Meijer, currently one of the top three producers of processed potato products in the European, Middle East and African (EMEA) region, selling high quality products in 100 countries worldwide, has ambitions of becoming the industry leader in sustainable development by 2020. That is a goal that can only be realised if its suppliers are equally committed to sustainable development.

Jolanda Soons-Dings (pictured), senior manager Sustainability & Regulatory Affairs, elaborates:

"Smurfit Kappa has been supplying our company since 1985 and today supplies the majority of the 60 million cartons we use annually. 'Sustainability is one of the three operating principles in our business strategy. We have ambitious objectives for 2020 which we encourage and need our suppliers to contribute toward, by reducing the water and carbon footprint of our supply chain.

"Smurfit Kappa contributes to this process by sharing practical examples on reducing water, energy and emissions in their product life cycle. It boils down to new packaging innovations which increase resource efficiency, waste reduction and the recycling of packaging. With our combined expertise we can improve our sustainability performance along the way!"

### Our approach to business **Creating shared value**

The adoption of a partnership approach means we strive to support and enable sustainability across our customers' value chain.

## Delivering value for allour stakeholders

We deliver value to our customers, employees, investors, suppliers and the communities in which we operate.

Our relentless commitment to sustainability means we set high standards throughout our value chain and are able to deliver sustainable packaging solutions for our 69,000 customers worldwide. The adoption of a partnership approach means we strive to support and enable sustainability across our value chain.

### Customers

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We are committed to being a trusted partner and expert on packaging solutions for our customers, helping them meet their own targets and commitments. We do this in a number of ways:

- Ensuring the fibre in our packaging products is sourced sustainably, making us a preferred supplier for many businesses
- Our packaging solutions help reduce the carbon footprint throughout our customers' value chain

We share knowledge, experience and expertise on sustainable packaging with our customers and suppliers, to help them meet their own commitments

> To maintain strong relationships we

have embarked on a series of round table customer discussions to ensure Smurfit Kappa is always able to help them meet their increasingly complex sustainable packaging needs.

### Consumers

According to the Regeneration Consumer Study by BBMG, GlobeScan and SustainAbility, consumers are increasingly aware of the sustainability of the products they purchase. Safety and information about the product ranks high in their individual choices where they increasingly hold companies responsible for the impact companies' products have on the environment and society.

- Our products meet all food safety standards, including OECD guidelines for Multinational Enterprises
- The quality of our packaging solutions enables high-definition printing, enabling in-store packaging that communicates product information, reducing the need for duplicate shelf packaging

### **Employees**

Our people are our most important asset. Their commitment to Smurfit Kappa drives our success and innovative approach to delivering sustainable packaging to our customers.

- We have committed to develop the skills of our employees through a wide range of development and training programmes
- We have committed to listen to our employees through a company-wide survey, MyVoice
- We recognise their work through our Innovation and Sustainability Awards

### **Shareholders**

Sustainability is increasingly being recognised by the investment community as a building block to long-term value creation for shareholders. In recent years a growing number of investment funds have implemented explicit mandates for Socially Responsibility Investing (SRI). Our key achievements in this space are outlined throughout this report.



### **Suppliers**

Maintaining transparent and long-term relationships with suppliers is essential to ensuring high quality and financial stability. Sourcing represents the single largest cost item for Smurfit Kappa. In 2014, we purchased products and services, including raw materials, energy, transportation, maintenance and repairs, and investment goods to the value of €4.7 billion.

To ensure we meet our sustainability commitments a robust sustainable sourcing policy is required.

Smurfit Kappa's Sustainable Sourcing programme includes a risk assessment of suppliers across the following areas:

- Quality
- Hygiene and safety
- Order processing
- Manufacturing

- **Continuous** improvement
- Service and technical support
- Environment and sustainable development

Our risk mapping shows that nearly all of the strategic or important suppliers of key materials, goods and services are in a moderate to low-risk category.

### **Our communities**

Across all our operations we strive to share value from our business growth with the communities in which we operate.

- The Smurfit Kappa Foundation and our other national level foundations' goal is to end the cycle of poverty and dependence that exists in some of the communities and countries in which Smurfit Kappa operates. This is guided by the United Nations (UN) Millennium Development Goals, with a particular focus on youth health and youth education

### Consumption

Our operations support the employment of local people in areas where there are few other employment opportunities

Our operations are often located in rural areas where we are a significant employer, providing employment and development opportunities to local people. Through our investments in those operations we also provide significant indirect employment opportunities to local suppliers of the equipment and services we invest in. Operations at these plants require a lot of raw material and a significant part of these supplies are sourced from the regions in which we operate.

## Our approach to business **Customers**

To be able to find an impactful, large-scale, sustainable way for packaging means a holistic approach to packaging solutions.

# Partnering with customers

### At Smurfit Kappa we believe that the right choice of packaging makes supply and value chains more sustainable.

This is why our customers are vital partners in all our packaging development processes.

By adopting a holistic approach, which examines the entire product value chain including all packaging, transport, storage and product presentation, we are better able to find significant sustainable improvements than when each step is considered in isolation. To be able to find an impactful, large-scale, sustainable way for packaging means a holistic approach to packaging solutions and quantifiable and transparent data.

In order to create such breakthroughs it is vital that we are able to quantify the impact a packaging solution has on the total carbon footprint of a customer's product. We also aim to maintain or improve its functionality. However, ultimately, many trade-off decisions have to be made between material efficiency, logistical efficiency and marketing efficiency.

Smurfit Kappa follows a strict approach to make all functionalities measurable in order to help our customers make the best choice for their business. We call this 'packaging innovation for business success'. To develop packaging that delivers tangible sustainable value to our customers' value chain we work with three pillars:

- 1. Eco-design: develop fit for purpose packaging with lower environmental footprint
- 2. Supply chain: develop packaging that reduces the total environmental impact of the final product delivered to the consumer
- 3. Co-operation: redesign our sustainability vision together with our customers resulting in long-term strategy that further improves our sustainability profile

### **Eco-design**

Our approach to eco-design is underpinned by three actions:

- Paper To Box a unique software tool which allows us to compute measurable environmental impact at a material and packaging level
- Sustainable scorecard our method of presenting reliable sustainability data to our customers, tangibly contributing to customer sustainability targets
- Performance packaging Smurfit Kappa's unique way to ensure fit-for-purpose packaging with the lowest environmental footprint. Developed over a number of years, new insights are added at each stage. In 2014, using unique insights from the aeronautical industry, Smurfit Kappa started to redesign all its materials

### Supply chain

We develop supply chain value in the following ways:

- Make the environmental footprint of our customer's supply chain tangible with our unique Pack Expert tool
- Leveraging our partnership with supply chain engineers we have made significant progress in developing new groundbreaking insights to reduce product waste in the supply chain, with significant effects on environmental footprint
- Together with our high-tech partner
  Eye See we make consumer behaviour
  measurable, enabling us to truly reduce
  the environmental footprint while
  maintaining consumer functionality.

### **Co-operation**

Sharing knowledge and expertise with our customers we are able to help them redesign their sustainability strategy, using the following:

- Training courses and workshops to develop shared insights and inspire new initiatives
- Round tables to re-engineer the industry vision on sustainability and how paperbased packaging can truly make a sustainable difference in the customer supply/value chain
- Awards to bring sustainability alive by letting supply/value chain partners judge and identify sustainability best practice
- An event where over 200 supply/value chain partners debate and discuss how to further develop the supply chain

# Circular Operations

The New York Times praised Smurfit Kappa Roermond Papier for its exemplary initiatives to become a 100% circular operation.

## Our approach to business **Suppliers**

For Smurfit Kappa, sustainable sourcing means requiring our suppliers to adhere to basic sustainable development principles.

## Sustainable sourcing

### The breadth of our product portfolio means we source a wide range of products, materials and services.

These include our principal fibre sources – wood, recovered paper, pulp and paper – other direct and indirect inputs such as starch, chemicals, fuels, spare parts, and services from IT and logistics to energy and maintenance services. Our supply network includes suppliers ranging from small-scale local companies to large multinationals. We aim to build long-term relationships with our suppliers in order to develop our work together.

The sustainability requirements for our suppliers and our policy on the environment, forestry and sustainable sourcing are available at www.smurfitkappa.com/ vhome/com/Sustainability/OurApproach/ Governance/Policies/Pages/Default.aspx

For Smurfit Kappa, sustainable sourcing means requiring our suppliers to adhere to basic sustainable development principles, addressing the concerns of key stakeholders, complying with regulatory frameworks, adhering to best practice and managing supply risks and safeguarding our reputation.

Sourcing represents the single largest cost item for Smurfit Kappa. In 2014, we purchased products and services such as raw materials, energy, transportation, maintenance and repairs, and investment goods to the value of  $\leq 4.7$  billion.

Where possible we endeavour to procure our products and services from local suppliers. The procurement of a number of major items of expenditure is coordinated centrally to achieve economies of scale. Nevertheless, a significant part of the actual supplier deliveries for these categories could be considered as local as many of the goods and services are provided by suppliers whose production locations are in the same geographical area as our operations. In total, approximately 74% of our suppliers' deliveries can be classified as local. These interactions between our operations and the local operations of suppliers provide support for local economies.

Our sustainable sourcing programme includes a risk assessment of suppliers and consists of the following seven areas: quality, hygiene and safety, order processing, manufacturing, continuous improvement, service and technical support and environment and sustainable development. Our risk mapping shows that nearly all our strategic or important suppliers of key materials, goods and services are in the moderate to low-risk area of the risk map.

# Product specific carbon footprints

Our **carbon footprint calculations** help customers track their product and packaging CO<sub>2</sub> reduction targets.



Smurfit Kappa has over 300 strategic and important suppliers of key raw materials and important goods and services in Europe and the Americas. Our supplier auditing programme started in 2010 and in 2014 we completed the audit of 100% of our strategic suppliers and of 45% of our important suppliers in Europe. In the Americas we began auditing suppliers in 2013. Following an initial audit, we work with each supplier on continuous improvement opportunities identified. During 2014, 42 suppliers delivering both key materials and important goods and services have been audited. Approximately 90% of these suppliers scored satisfactorily, the remaining 10% will be compliant once they successfully complete their defined continuous improvement plans in specific areas of attention.

Improvement opportunities for these suppliers cover areas including hygiene and environmental management systems. The supplier audits also include questions on social governance covering GRI, Sedex, UNGC and CDP. We aim to increase the number of suppliers of key raw materials, goods and services who commit to the ten principles of the UNGC and who report on social data to Sedex. Fifty-eight of our suppliers, mostly strategic, are currently listed as members of Sedex.

## Our approach to business **Our Group operations**





Operations	
Virgin mills	5
Recycled containerboard mills	13
Other recycled paper and board mills	8
Corrugated	157
Cartons and solidboard packaging	9
Recovered fibre	15
Other	49

	5	
Sales	0	
Volumes	~	ે (Million tonnes)
Kraftliner		1.6
Recycled containerboard		2.9
Other paper and board		1.1
Corrugated		4.2
Solidboard packaging		0.3

### Our approach to business Stakeholder engagement

Through our continuous engagement we are able to determine which issues are of most importance.

# A constant conversation

As a responsible business we provide opportunities to our stakeholders to give feedback on our business practices.

Stakeholder engagement is guided by the materiality of the issues of these groups to our business; whether that is employees whose safety we are responsible for, customers and suppliers in our value chain, investors in our business or authorities responsible for our regulation.

Smurfit Kappa takes a multifaceted approach, providing opportunities to discuss and give feedback on our business, including:

- Direct meetings with individual customers
- Audits of suppliers

Right-weighted paper packaging

performance and product

ES without componising

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- Meetings with investors at our investor days and one-to-one meetings
- Round table discussions organised by Smurfit Kappa or stakeholders
- Our first company-wide employee survey (2014) which received a response rate of 80%

Through continuous engagement with these stakeholders we are able to determine which issues are of most importance to them:

### **Customers**

- Chain of Custody of raw materials/ sustainable packaging
  - Climate change
- Transparency/traceability — Water
- Circular economy (waste)
- Community involvement
- Social responsibility

### Investors

- Chain of Custody of raw materials
- Human rights
- Climate change

#### **Employees**

- Health and safety
- Personal development

Our analysis has found broad alignment between the issues raised by stakeholders and those material to our business operations and, indeed, to our five sustainable development pillars.

#### Q Case study

#### Innovative raw materials



There is broad alignment between the issues raised by stakeholders and those material to our business operations.

### Flower power packaging in Barbosa

Flores Funza is a leader in Colombia's flower industry, utilising methods and products that are socially and environmentally responsible. They work with Smurfit Kappa to supply their packaging.

Traditionally, virgin fibres from wood and recycled fibres from recovered paper have been the main sources of raw material for the production of paper. Flores Funza, however, had the idea to investigate the possibility of using the stems of carnation flowers as an alternative source of fibres for paper making.

Smurfit Kappa was involved in the project right from the start. Experiments were carried out on our paper machine to adjust to the new raw material and changes were made to improve the processing qualities of the carnation stems. The stems were

### Membership organisations

It is our strong belief that sustainability cannot exist in a vacuum. Our goal is to be the most sustainable packaging solutions company globally; but that cannot happen without leadership in industry and among our corporate peers. Along with sharing our sustainability learning with customers and suppliers, we believe it is important to share these and potential challenges within our industry and even our competitors. To this end we are involved with a number of trade bodies to influence understanding and share knowledge on embedding sustainability throughout operations.

- Confederation of European Paper Industries (CEPI) – Group and national level membership. Smurfit Kappa's Group CEO is currently the Chairman
- European Corrugated Packaging Association (FEFCO) – Group and national level membership. Smurfit Kappa's CEO of European Corrugated Division is currently the Chairman

chopped into smaller pieces, cleanliness was improved and the moisture content was optimised. After these trials, in 2013, Flores Funza decided it was time to build its first carnation stem pulp production plant.

In early 2014, Smurfit Kappa's Barbosa mill began to receive shipments of stem pulp and 70 tonnes of the fibre have been processed on the paper machine that annually produces 77,000 tonnes of liner and medium paper. The average ratio of 0.7% of stems to total pulp can probably be further increased to 3.7% when a monthly supply of 250 tonnes of stem pulp is realised. The strategic partnership between the two organisations has gone from strength to strength, with worthwhile reductions in solid waste and a new, renewable source of raw material.

- International Corrugated Cases
  Association (ICCA). Smurfit Kappa's
  Group COO is currently a Board
  member
- Asociación de Corrugadores del Caribe Centro y Sur América (ACCCSA).
   Smurfit Kappa Dominican Republic General Manager is currently a member of Board of Directors

In addition, we are active participants in and signatories to a number of mainly environmental reporting and sustainability organisations:

- CDP (formerly Carbon Disclosure Project)
- The Forest Stewardship Council (FSC)
- The Programme for the Endorsement of Forest Certification (PEFC)
- The Supplier Ethical Data Exchange (Sedex)
- The UN Global Compact
- The Water Footprint Network (WFN)
- The European Round Table of Industrialists (Smurfit Kappa's Group CEO is a member) »

## Our approach to business **Stakeholder engagement** continued

We work closely with our customers around sustainable fibre sourcing: the carbon footprint of their value chain and social compliance.

### How we engage our stakeholders Customers

We work closely with our customers around sustainable fibre sourcing: the carbon footprint of their value chain and social compliance. We engage with them through round table discussions, joint sustainability projects, representation at customer conferences and support for customer sustainability initiatives.

### **Employees**

We offer a range of training and development programmes and are proud to maintain a number of works councils that have managerial level representation.

### Investors

We run a programme of roadshows and investor days giving analysts and investors the opportunity to engage with management, in addition to one-to-one meetings and industry-related investor conferences.

#### **Suppliers**

We regularly offer suppliers the opportunity to give feedback through audits and questionnaires. Additionally, we require suppliers to conform to our Sustainability Sourcing Policy. For our part, where feasible, we source locally while ensuring quality at the right price.

### NGOs

We are members of the FSC, PEFC, Sedex, CDP and the Water Footprint Network and engage with other NGOs where appropriate.

### Local communities

We are proud to support a number of social projects around health, employment and environment in the communities in which we operate, in particular across our Latin American operations where employees are encouraged to contribute to their local communities. This is supported and supplemented through the Smurfit Kappa Foundation and other foundations at national level, with a particular focus on youth health and youth education.

### Government and society

We maintain membership of industry associations at a national and international level, and participate in forums related to broader business and society.

#### 🔍 Employee testimonia

#### **Chris Blockhus,** Smurfit Kappa Forney Coated Products (USA)



The General and Mill Manager Programme (GMMP) course is a fantastic opportunity to see all that Smurfit Kappa has to offer. Having only been with the company for a few years through acquisition, this was a great opportunity to understand the ethos of the company through exposure to all aspects of the company. From briefings by the senior leadership to functional area presentations on compliance, sustainability and safety we have a full portfolio to lead our operations successfully. The personal development sessions by Thrive provide insight to how we function and thereby how we can be selfaware of these attributes when dealing with others. It has also provided insight for areas to improve to be a more effective leader. Smurfit Kappa possesses a vast array of tools and practices that are world class. Seeing the Development Centre and how these tools are employed demonstrate the commitment the company has to bringing the utmost value to our customers' applications.

The companionship and connections with our classmates from around the world has been a special opportunity to understand now similar and yet different business is conducted throughout the group. These connections continue well beyond the course as we have opportunities to leverage the talents of classmates across the company.

#### Construction Co

#### Catherine Carey, Smurfit Kappa Paper Solutions Belfast (Northern Ireland)



The GMMP programme is a highly valuable experience that certainly exceeded my expectations. It was a great opportunity to meet with other General and Mill Managers and create a network with them and their experiences. The balance of the course was excellent; spending time learning about my style as a manager, as well as furthering my knowledge about the company and the

Industry. The course is well organised and actively encourages participants to be oper about their experiences and opinions. Including knowledgeable speakers from each of the key areas of the business, provided me with practical knowledge that I could use as soon as I returned to my plant. The time spent on this programme has certainly strengthened me in my role.

**Responsible use of water** 

# 90% of the water we use returns back to nature in good condition. The remaining 10% to the packaging.

Responsible use of water

se of water

### Our approach to business Corporate governance and business ethics

## Commitment from the boardroom to the factory floor

### Summary

- The Smurfit Kappa Code of Business Conduct guides employee behaviour throughout our business
- The Smurfit Kappa Board has overall responsibility for ensuring that we demonstrate leadership within the paper-based packaging sector, promoting an actionable sustainable development agenda
- Each significant business unit is externally audited for its sustainability

The Board and Management of Smurfit Kappa support and strive for the highest standards of corporate governance and ethical business conduct.

We believe this should be promoted from the most senior levels of the business, 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 2014 SKG Annual Report on pages 38 to 42,

### Sustainability governance

Sustainable development is at the heart of Smurfit Kappa's operations and activities. The Board has overall responsibility for ensuring Smurfit Kappa demonstrates leadership within the paper-based packaging sector, promoting an actionable sustainable development agenda. To this end, our Group CEO sponsors the development and implementation of Smurfit Kappa's sustainability policies.

At executive management level, the Group Steering Committee sets out the strategy and objectives for our sustainable development and reviews 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 Group headquarters.

The Group Steering Committee is supported by a Sustainability Working Group, comprised of key representatives from the operating divisions in Europe and the Americas, and Group headquarters. This working group's task is to monitor how targets are being met across a wide range of sustainability indicators and to promote the principles of sustainable development with Smurfit Kappa's customers, suppliers and corporate peers. This working group is also responsible for the preparation and production of the Annual Sustainable Development Report.

### **Organisation and reporting**

Sustainability is hardwired into our operations and reporting structures in a number of ways. Our sales and marketing teams are responsible, at both a central and local level, for ensuring the sustainability of our packaging solutions and communicating the benefits they can bring to our customers. Local operations and divisional management have responsibility for managing our use of energy and water, the health and safety of our workforce and the well-being of the local communities in which we operate. Reporting across all these measures takes place through regular monthly and/or quarterly reports to the responsible management levels. This is supplemented through specific reporting, including reporting on the progress made on our long-term sustainable development commitments.

A Board report on our sustainability activities including progress against particular indicators and targets is prepared and presented to the full Board twice a year.

### Code of Business Conduct and corporate policies

The Smurfit Kappa Code of Business Conduct (the 'Code') applies to the Group's Board of Directors, officers and employees worldwide. We require all individuals, entities, agents or anyone acting on the Group's behalf to comply with the Code, which has been translated into 17 languages to ensure full accessibility. »

# Embracing local cultures

We embrace local cultures and prefer to employ from the local community at all levels, where feasible.

### Our approach to business **Corporate governance and business ethics** continued

# Giving back to communities

Our foundations target projects for youth education and health with funding of **€1m annually.**  We have created specific policy statements in key areas of sustainability that we believe are integral to improving Smurfit Kappa's performance.

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.

The Code provides accessible and understandable guidance for each and every employee in every jurisdiction. It sets out our position and expectations from employees in relation to compliance with local, regional and national 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 core to conduct business in an ethical manner, which is the duty and the responsibility of each employee.

A major 'Group-wide Awareness Campaign' to educate all employees on the core principles of the Code, begun in 2013, was completed in 2014.

During 2014, of the incidents considered to be non-compliant with the Code of Business Conduct, only one was deemed to be significant. The Code is supplemented by 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 we believe are integral to improving 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 on an annual basis by the Group's external auditors.

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

Our Internal Audit Department has its own extensive work programme using the Group's Financial Risk Management System. During the course of 2014, 81 detailed internal financial and IT audits were completed. In addition to these internal audits, all national operating companies 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 accredited professionals within each country.

Using this system we have identified the following audit risk: significant material mis-statement of financial results, deliberate or otherwise, arising from a poor control framework. During 2014, no such misreporting was identified.

### **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 material to our business, representing our positions 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). We also work 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 2014. In line with the Group's Code of Business Conduct no financial contributions were made to political parties in 2014. No national government is a direct shareholder in Smurfit Kappa.

### Compliance

It is Group policy to comply, as a minimum, with the applicable laws and regulations in each of the countries in which we operate and to ensure that our employees are aware of this and conduct themselves appropriately. No material fines were imposed on the Group in 2014 in respect of any breaches of such laws and regulations.

#### Global Enterprise Project testimonial

### Inspiring youth to be the social innovators of tomorrow



In 2011 the European Round Table of Industrialists (ERT) started the Global Enterprise Project (GEP) together with JA-YE Europe, Europe's largest provider of entrepreneurship education programmes. Smurfit Kappa CEO Gary McGann personally took a keen interest in the initiative and inspired his colleagues to also volunteer to help educate teenagers on the importance of globalisation, entrepreneurship and modern day skills.

"It is quite unique that the CEO of a major European company volunteers himself to share his experience and expertise with our 15 to 18-year-old students", says Caroline Jenner, CEO of JA-YE Europe. "His enthusiasm has motivated over 50 high level executives at Smurfit Kappa to invest more than 400 hours of volunteering for the GEP in seven European countries." Livia di Nardo (see picture), director of development at JA-YE Europe, states: "Smurfit Kappa also financially supports the educational efforts with its GEP partnership. We work closely together with the Smurfit Kappa's HR-department to get in contact with professionals within Smurfit Kappa who are willing to help boost employability and foster an entrepreneurial spirit among the youth."

Annually GEP reaches more than 4,000 students who complete the course, start up 170 mini-companies and participate in an international competition. Caroline Jenner: "Gary McGann and his colleagues demonstrate that Smurfit Kappa really cares about bridging the gap between education and the world of work to help young people create a bright future."



# Our priorities and performance

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People	

### Our vision and priorities **Materiality**

Through consultation we are able to identify and prioritise a range of issues that are important to our stakeholders.

## Governing Group behaviours and activities

We take a robust approach to identifying the environmental, social and economic factors on which our business operations have an impact.

Our process has four stages:

- 1. Assessing internal and external factors material to our business
- 2. Assessing factors material to stakeholders of our business
- 3. Benchmarking our approach against customers, investors, suppliers and corporate peers
- 4. Stress testing issues identified with stakeholders

We limit the issues considered in this report to only those which have a direct impact on our activities, the environment or our stakeholders.

### Internal and external factors

The assessment of internal and external factors start with examining the principles that define the way we operate. They include, but are not limited to: our overall mission, vision on sustainability, long-term strategy and the Code of Business Conduct which governs Group behaviours and activities.

We reflect the internal factors with the business environment that we operate in. These factors we receive through different channels, and we use the most measurable and credible means to understand the relevance. In this we benchmark with data collected from us and used in different ratings, comparisons and regulatory and compliance drivers such as: the Global Reporting Initiative (GRI), issues highlighted by the Carbon Disclosure Project (CDP), Sedex, FTSE4Good and the Dow Jones Sustainability Index (DJSI).



### Material aspects facing Smurfit Kappa

#### Key

- > Environmenttopics
- > Social topics
- > Economic topics ) General topics

- Topics
- 01 Health and Safety
- 02 Energyuse 03 Governance and
- Business ethics and value
- 04 Waterintake & discharge 20 Labour relations
- 05 Waste
- **06** Sustainable packaging
- 07 Diversity 08 Community involvement
- 09 Human Rights
- 10 Sustainable product
- development

- 11 Biodiversity 12 Climate change
- 13 Environmental
- awareness
- 14 Responsible Sourcing
- 15 Sustainable agriculture 16 Career development and
- Employeetraining 17 Well-beingemployees
- 18 Compliance and transparency
- 19 Employee benefits and remuneration
- 21 Natural raw material sourcing and certification
- 22 Transport and distribution
- 23 Quality Management
  - 24 Foodsafety
  - 25 Sustainable forestry

### Stakeholders

The assessment of internal and external factors is then compared with results of consultations with our stakeholders. Through this, we are able to identify, clarify and prioritise a range of aspects that are important to our stakeholders.

Prioritisation is determined using both a qualitative and quantitative approach. Assessing aspects that are material to our stakeholders, a qualitative approach is used to determine factors. This is based on the views of our management, sustainability, purchasing and sales teams. We also conduct interviews with representatives from different stakeholder groups (that are featured throughout the report), which help to identify important internal and external factors.

We group the aspects under four main categories:

- Environmental
- Social
- Economic
- General

We then determine the significance and prioritisation of material aspects through quantitative analysis of the feedback received.

These aspects are then assessed against two axes:

- 1. whether their impact is significant enough to warrant attention and action
- 2. their priority to our business and to our stakeholders

The higher in each axis the aspect is, the more relevance it has for Smurfit Kappa.

### Benchmarking

The material aspects identified as a result of our analysis are then benchmarked against the views of customers, investors, suppliers and corporate peers. Here we concentrate on benchmarking the annual sustainability reporting of our stakeholders. Based on our stakeholder assessment we have been able to identify 91 relevant customers, investors, suppliers and corporate peers whose reports we use to quantify the importance of each material aspect. This is done by assessing companies performing a materiality analysis and the frequency with which material aspects were referenced, as an indicator of importance to the business.

The materiality matrix represents the three step assessment. Although not all aspects highlighted in the graph have the same relative importance for Smurfit Kappa, for transparency reasons they have been considered in determining issues material to our business, and indeed our sector, and are plotted in accordance with GRI guidelines.

The most relevant sustainability aspects to Smurfit Kappa land on the high level of interest by our stakeholders as well as high level significance for Smurfit Kappa itself. Some of the sustainability aspects may overlap with each other but have a focus that clearly differentiates the issue from other similar topics.

### Stress testing

Material aspects vary across countries and regions. For example, in Europe we have found environmental aspects to have a higher priority whereas in the Americas social aspects are considered more important. Acknowledging these regional differences, the final phase is to stress test their relevance and priority with our national and international stakeholders. We do this in a number of ways:

- Organising meetings and round table discussions with sustainability representatives from our customers
- Participating in sustainability discussions within our industry, especially through our membership at CEPI
- Participation in CDP, DJSI and FTSE4Good surveys
- Engagement with investors
- Community engagement through the Smurfit Kappa Foundations in various countries
- Benchmarking against UN Global Compact guidelines

As the final result of the materiality analysis, we have come to five key strategic sustainability priorities that we concentrate on in our daily operations and reporting.

These five key strategic priorities are:

- Forestry, under which we look into sustainable forestry, biodiversity and natural material sourcing
- Climate change, under which we look into energy use, climate change and transport and distribution
- Water, under which we look into water intake and discharge
- Waste, under which we discuss about avoiding waste to landfill and hazardous waste
- People, under which we look into health and safety, diversity, human rights, career development and employee training, well-being of employees, labour relations and community involvement

The material relevance of each priority is explained in the following chapters. Other topics we consider to be part of responsible business as such and have therefore commented on these topics throughout the report.

## Our vision and priorities **Forest**

# Managing our forests sustainably

### Summary

- Smurfit Kappa is committed to promoting sustainable forest management with strong ecosystem services and welfare of the local communities. We put our commitment into action through supporting Forest Certification
- We have set ourselves a relentless target to purchase and produce all of our fibres either FSC, PEFC or SFI Chain of Custody certified by the end of 2015 and require this from our suppliers
- In 2014 we sold 41% of our European packaging as FSC labelled and have now a potential to sell 97% of our global production labelled as certified.

At Smurfit Kappa we produce paper from virgin and recycled fibres. In this chapter we discuss our approach to sustainably sourcing our fibres, covering both fibre sourcing and forest management at our own plantations.

Smurfit Kappa is committed to producing the highest quality paper-based packaging in the most sustainable way. At the heart of this is minimising our resource impact by using raw materials as efficiently as possible. This means a responsible approach: we use recycled fibre where we can, and virgin fibre where necessary, given the limited life cycle of wood fibre.

Throughout the paper production process there will always be a need for virgin wood fibres. Fibre can only be recycled approximately eight times before the quality becomes too poor. As a result we have to source virgin raw material from forests. We use both wood fibres and recovered paper to produce virgin and recycled paper globally at a ratio of 26% to 74% respectively.

The combination of actual impact and being a highly visible user of forests places an important duty on the sector, and also on Smurfit Kappa, to play a leading role in ensuring the resource is used in a responsible, sustainable way.

We believe forests can create sustainable, renewable sources offibre when managed well. Smurfit Kappa manages its own eucalyptus and pine plantations in Colombia and Venezuela and manages a small number of hectares of forest in Spain and France. We also procure pulp wood from suppliers throughout Europe, including from Sweden, France, Spain, the Baltic States, Austria and Germany.

Everything we do is subject to strict principles of sustainability and the highest standards of practice to ensure sustainable forest management. We hold our suppliers to the same standards.

### Chain of Custody certification

Transparency throughout our supply chain is key to the delivery of our sustainability responsibilities. We are committed to maintaining, in as great a way as we can, robust monitoring and third-party auditing of our supply chain to ensure sourced fibre is compliant with our sustainability principles. Key to our commitment is forest certification and Chain of Custody certification. A significant part of that commitment includes maintaining high levels of biodiversity-particularly for our own forestry operations. It is this aim that guides our sourcing and management approach. While Smurfit Kappa does not source wood fibre from areas where the risk of deforestation is high, it is nevertheless an important issue that affects the reputation of the whole industry.

The availability of certified fibres at our paper mills currently reaches a level that enables us to produce some 88% of our paper as Chain of Custody certified according to FSC or PEFC. The remaining 12% are non-controversial fibres managed through mills' Chain of Custody certified risk assessment systems.



\*All operations include: P&B mills, Sack plants, Corrugated, Board converters

### Fibre origin 2014 – all operations\*

#### 🔍 Case study

### Smurfit Kappa Central Forestal: portable bridge



### Bridging the gap in Spain

The mountains and valleys in Spain's Basque country are characterised by their forests. The abundance of small streams that flow through the western Pyrenees make it difficult to harvest wood in the region without disturbing nature, but Smurfit Kappa has managed to bridge the gap.

The common way to deal with water obstructions was to either build permanent bridges or to channel the streams through buried pipes. Building a permanent structure has a major impact on the surroundings. The use of buried cement pipes disturbs the bottom of the river and requires constant maintenance.

Smurfit Kappa Central Forestal's innovation was triggered by a harvesting project surrounding the village of Orozko. The nearby

The complete Smurfit Kappa paper and board mill system in Europe is Chain of Custody certified under either one or both schemes we support in Europe (FSC and PEFC) since 2010. This means that we have reached a 100% production capacity with Chain of Custody certification for our paper and board production in Europe.

In the Americas, we reached a Chain of Custody certification status for all of our mills in January 2015 when our Venezuelan paper mills were also certified. This includes mills producing virgin and recycled containerboard, carton and solid board, sack paper and machine glazed papers. We are currently working towards increasing the percentage of production capacity with Chain of Custody certification in the Americas. Currently, depending on the product line, the level of produced certified products varies between 61% and 100% per production line. Except for one small converting operation, the Chain of Custody certification of our converting operations in the Americas was completed by March 2015. In Europe, 95% of our converting operations are Chain of Custody certified. We are in the process of certifying the remaining operations both in the Americas and Europe. With this high percentage of both certified paper and board produced and converting operations under Chain of Custody certification we have now a potential to label 97% of the paper based packaging we produce in the Group beyond our commitment to achieve 90% by 2015.

### Our commitment to sustainable fibre

Our target is to source fibres that originate from certified, well-managed forests or are of a non-controversial origin. We also use recovered paper as a raw material. All of the material should be delivered through a third-party verified, Chain of Custody certified supply chain. We accept FSC, PEFC and SFI certified wood and the Chain of Custody systems at our mills and plants also cover recycled fibre sourcing. » Arbaitza stream, the best preserved river in Biscay, is home to an endangered crayfish. Stirring up the sandy bottom of the river would cloud the water with sediment and as a result the oxygen intake of the crayfish would be jeopardised. The solution is an innovative portable bridge that can be reused and does not have any impact on nature.

The light portable bridges, weighing only 1.4 tonnes, can easily be dismantled and moved to other locations. The lorry used in harvesting also carries the bridge to the harvesting site, thereby ensuring a reduction in  $CO_2$  emissions as well. The stakeholders involved in the harvesting projects in Basque country support the new method of crossing streams and endorse its sustainable characteristics, making the harvesting activities more acceptable to the public.

We deliver transparency in our supply chains through a comprehensive certified Chain of Custody system.

### Our vision and priorities **Forest** continued

In Europe we offer forest management services through our wood supply companies in Spain and France. The packaging products we deliver to our customers should therefore not only meet the above requirement but also meet the commitments we make in our various policy statements (Forestry policy, Code of Business Conduct, Social Citizenship, etc.). Most of these have been covered in Chain of Custody certification. This concerns all fibres and fibre-based products we use or manufacture, whatever the origin or form of the fibres.

A total of 57% 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 43% is wood from non-controversial origin. This status has been risk assessed through our FSC and/or PEFC Chain of Custody system and verified by a third party.

Smurfit Kappa recycling operations handle some 5.4 million tonnes of recovered paper annually in Europe and 1.2 million tonnes in the Americas. We have a network of 14 recycled paper depots in Europe and 33 in the Americas that supply recovered paper from municipalities, retailers, industrials and our own corrugating and converting operations.

### Risks, challenges and opportunities Deteriorating quality of recovered fibre

Across the globe more and more paper is being recycled. This has a positive impact on the fibre supply when more paper and paper-based packaging is needed, especially in developing and emerging economies. But using more fibre that is recycled also reduces the quality of recovered paper and hence that of newly-made recycled paper. As forest areas are still converted mainly into agricultural land, future availability of wood for various purposes including the production of paper is at risk. The solution is to strike a balance between the use of recovered fibres and the use of virgin fibres made directly from wood. Sustainable forest practices and only using material from sustainable origin/Chain of Custody certified material is key to striking that balance and to maintaining an equilibrium.

### Wood-based subsidies and their effects on wood markets

The 2020 EU Renewable Energy Policy targets are supported by subsidy schemes that both increase the price 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 wood-importing country due to the building of subsidised biomass power plants. For the 2020-2030 period the target for renewable energy has been increased, and participants are expected to reach 27% energy from renewable sources by 2030. 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. This in effect supports 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 energy generation.

### **Regulation and certification**

As a company operating across a number of European countries, we are aware of the differing level of implementation of the EU Timber Regulation effective since March 2013. While countries like Germany implemented very strict controls, others like Latvia, Lithuania, Estonia, Poland and Slovakia did not. Current levels of illegal material are estimated to be between 3% to 8% (EU DG Environment).

While the EU is beginning to address this, we believe more can be done. As a result, Smurfit Kappa must rely on the forest certification schemes FSC and PEFC to ensure the materials we source meet our standards.

However, both have also faced issues with the integrity of their Chain of Custody systems. To tackle this, both schemes have made efforts to improve their systems including updating Chain of Custody standards and creating platforms that enable increased transparency for certificate holders' data.


Across the globe more and more paper is being recycled. This reduces the need for virgin fibres which is good for maintaining forest cover internationally. As a member of the FSC Chain of Custody technical working group, Smurfit Kappa has been assisting in the revision of the standard. The proposed revisions take a positive approach to the pre- and post-consumer waste balance, making post-industrial waste equate more closely with post-consumer waste. The result is that higher quality paper waste from converting operations would qualify as Chain of Custody certified raw material, improving both the quality and availability of certified packaging raw material.

### **Forest and plantation management**

### **The Americas**

Smurfit Kappa owns and manages 103,000 hectares (ha) of forests and plantations in Colombia and Venezuela that provide almost all the virgin wood fibre we require in those countries. They are all subject to protection programmes managed by Smurfit Kappa based on the best sustainable development principles promoting responsible use of natural resources alongside economic development and social inclusiveness.

We also conform to comprehensive legal, technical and environmental regulations set by local governments and international bodies, and subject to annual review.

### Colombia

Our largest forest plantation area is in Colombia. In total we own or manage approximately 69,000 ha, including:

- 44,000 ha of commercial plantations, of which 5,900 ha are partnerships with private land owners
- 22,000 ha of protected natural forest
- Just over 3,000 ha of land given over to infrastructure

In our commercial plantations 60% of the land is occupied by pine trees and 39% by eucalyptus trees, while 1% is dedicated for research.

### Venezuela

Our forests in Venezuela are situated in the three western states. Totalling some 35,000 ha offorest and plantations, they include:

- 21,000 ha of commercial plantations
- 13,000 ha of natural forest
- Approximately 1,000 ha of land given over to infrastructure »

# Our vision and priorities **Forest** continued

In 2014 the inventory of carbon captured by 25,000 ha of pine and 16,207 ha of eucalyptus reached 2,521,855 tonnes.  In our commercial plantations 60% of the land is dedicated to short fibre species (eucalyptus and gmelina) and 31% by long fibre pine. The remaining 9% is used for research and development, including silviculture, plantation management and forest protection activities.

### Certification

Our Colombian forest management programmes have been certified by the FSC since 2003.

Our Venezuelan forests and plantations are managed to the highest standards. By the end of 2014, 45% of the area was certified to FSC Controlled Wood standards.

We finalised a FSC Forest Management standard certification process for 31% of the plantations in December 2014 and received the certificate in March 2015.

### Conservation

Of the forest land owned by Smurfit Kappa in Colombia and Venezuela, 32% and 37% respectively is dedicated to protect the sustainability of forests. Not converted to plantations, this land helps to maintain the rich biodiversity of the area, preserving watersheds and conserving habitats and ecosystems.

To maintain the biodiversity and sustainability offorests in these areas, our guiding principles are to:

- Conserve natural forests under our stewardship, protecting and promoting species diversity, thereby sustaining ecosystems and contributing to the protection of water sources and habitats for flora and fauna
- Identify appropriate species and practices that increase plantation yields while protecting the environment
- Continuously and systematically develop research programmes to preserve and enhance soil productivity

Plantation forestry offers a means to produce sustainable fibres for paper production in an efficient manner. In our Colombian and Venezuelan holdings this is done in carefully selected areas, avoiding valuable ecosystems and protected forest areas.

#### 🔍 Employee Testimonial

Continuous education changed my life



### José Ramiro Ríos Diaz

One of the areas in which Smurfit Kappa Colombia's Forestry Division is most active is Pereira, the nation's sixth largest city. Located in Colombia's Western region, forestry thrives in the foothills of the Andes as a result of fertile soil and good weather. And as a result of the focus on personnel training and development by Reforestadora Andina S.A., a Smurfit Kappa subsidiary. "I joined the forestry project as a 23 year old field worker in 2001. At that time I only had completed the 5th grade of elementary school. Smurfit Kappa offered me the chance to go to high school and join the programme for Adult Education that Smurfit Kappa hosts in co-operation with Caja de Compensacion Familiar. The programme is especially designed to benefit forestry workers, their families and the neighbouring community.

" This year I hope to graduate from Universidad Abierta y a Distancia (UNAD). Successful completion of the Open University and Distance Learning Program grants me the title Agro-Forestry Technologist. Smurfit Kappa's continued support for my personal development has allowed me to progress within Reforestadora Andina and to move up the ranks from field worker to the position of Manager of Farms II. I am thankful and proud that nowadays I am in charge of a significant forestry nucleus in the Colombian Andean Zone belonging to the Departamentos of Quindío and Risaralda."

### Biodiversity and habitats

Protecting and promoting biodiversity and natural habitats is at the heart of our approach. To achieve this, we work with third-party institutions and through our own research centre in Colombia.

In Colombia we have worked with three local universities – Cauca, Valle and Quindío since 2009, studying the flora and fauna populations in and around our protected and planted forests. Examples of our work include:

- A partnership with the Biology Programme of the Natural Science School of Universidad del Valle, begun in 2013 to study the 'diversity of birds, mammals and plants in the natural forests of the forestry nucleus in Sevilla'
- A literature review, carried out in 2014, which aimed to inform conservation planning by identifying areas of special biodiversity in close proximity to the company's plantations and natural forests in the Santa Rosa-Pereira core areas

During the past three years, studies developed by Smurfit Kappa identified 990 species in our forests. This includes 458 trees, 473 birds, and 59 mammals of which 30 species are to some extent endangered. It is clear to us that our plantations and the neighbouring protected natural forests form important wildlife corridors that contribute to species conservation in the Andean ecosystem, and therefore need careful management.

### Carbon sequestration

To explore the carbon sequestration potential of the pine and eucalyptus species planted by Smurfit Kappa, we launched a partnership with the National Centre for Coffee Research (CENICAFÉ). Together we developed the 'Carton of Colombia Carbon Fixation Program' or 3CFix, for the calculation of carbon fixed by our plantations. As a result, we established in 2014 that the inventory of carbon captured by 25,500 ha of pine and 16,200 ha of eucalyptus reached 2,521,855 tonnes.

Since the start of our Colombian forestry activity, the amount of carbon dioxide removed from the atmosphere by 44,000 ha of plantations is 9,255,206 tonnes.

### Engagement with communities and stakeholders

In addition to our work in biodiversity and nature protection, we work in close cooperation with the communities neighbouring our plantations. In the communities in which we operate we endeavour to engage local people around decision-making processes. This is especially important in Latin America, where indigenous people may have rights to the land and local communities' livelihoods are dependent on the forests.

### Europe

In Europe we offer forest management services through our wood supply companies in Spain and France. In both countries we follow local best practices for forest management, as certified by PEFC.

Our wood handling operations are Chain of Custody certified according to FSC and PEFC standards, while our complete paper and board mill system has been certified since early 2011.

### Forest

Boundary: This strategic priority discusses relevant issues around sustainable forest management, biodiversity and natural material sourcing. We limit our reporting to our own forest management, raw material sourcing, production and labelling our products.

We implement sustainable forest management principles for our own plantations and forests and aim to achieve FSC and PEFC certification for all of our plantations and forest.

We certify our own Chains of Custody according to FSC and PEFC standards, covering both virgin and recycled fibres. We expect our suppliers to be able to deliver fibrous raw materials through complete FSC, PEFC or SFI certified Chains of Custody.

**Commitment #1:** All fibre produced and purchased is Chain of Custody certified under FSC, PEFC or SFI.

Timeframe: Target to be reached by 2015.

**Progress made:** We achieved 99.9% certification in 2014, the highest number that can reasonably be achieved.

Commitment #2: Over 90% of our packaging is labelled as Chain of Custody certified under FSC, PEFC or SFI.

Timeframe: Target to be reached by 2015. Progress made: In Europe we reached 41% in 2014.

Our perspective: Independent third-party verified certification is the most reliable means to promote sustainable forest management and combat deforestation. We manage our forest holdings based on our sustainable development principles, promoting economic growth, responsible use of natural resources and fostering social equity in the regions where our plantations and forests are located.

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. For Smurfit Kappa communicating the sustainable nature of our products is important. Therefore we have included the sourcing of recovered paper to the scope of our Chain of Custody certifications.

FSC, PEFC and SFI currently offer the most reliable standards that deliver credible sustainable fibrous raw materials.

## Our vision and priorities **Climate Change**

# Tackling the challenge of climate change

### Summary

- Smurfit Kappa is committed to reducing the amount of energy it uses and the emissions associated with its business practices and products
- We have committed to a 25% reduction in relative fossil CO<sub>2</sub> emissions (compared to 2005) in our paper and board mill system by 2020
- We have already achieved a 21.6% reduction against this target

The production and use of fossil energy is one of the major contributors to greenhouse gas emissions and climate change globally. The effects of climate change is one of the biggest challenges we as a society face.

Use of energy, carbon footprint and GHG emissions are all material to Smurfit Kappa's business. We also recognise that these issues are material to wider society, and indeed to the environment itself.

Paper production is energy intensive and the cost and supply of energy are key decision factors for our sector. To meet this challenge, our industry must reduce the energy intensity of production and move, where economically feasible, from fossil fuels to renewable sources, including biomass.

As a company we strike a balance between using wood (and recovered) fibres for the production of paper and using wood fibres such as sawdust, bark, black liquor and fibre containing sludge for bioenergy production. By the nature of its processes, the paperproducing industry is one of the most efficient users of wood and energy alike. We only use wood biomass that cannot be used in any higher value production for energy generation. In addition, we reuse as much as we can of the by-products of bioenergy production, including black liquor, as a fuel in our own production processes.

### **Risks, challenges and opportunities**

We know that climate change represents a global risk. More intense and extreme weather poses a risk not only to our business, but to society as well. In the global drive to decrease fossil  $CO_2$  emissions a shift

towards the use of renewable energy is needed. This shift could be achieved by embracing biomass energy. However, this may limit the availability of wood fibres for paper production. Cost is also a risk and a challenge. Increased cost of the raw material, possibly as a result of government incentives that encourage the use of biomass, could create a competitive disadvantage compared to less energy-intensive packaging materials.

Smurfit Kappa supports efforts to curb climate change and establish a global level playing field. The upcoming COP 21 meeting in Paris in December 2015 provides another opportunity for governments to make economic growth and measures to restrict global climate change to 2°C mutually compatible, through stable policy frameworks that offer certainty to support innovation and investment decisions.

Specifically the EU, now that its policy framework for the period 2020-2030 has been approved, needs to think carefully about how to avoid so-called 'carbon leakage' – the transfer of business operations to countries with less robust environmental targets.

Smurfit Kappa supports the EU initiative for an Energy Union. We believe it will enable European companies to deliver innovative, efficient products and technologies to tackle climate change, provided it is established in the correct way. With 70-75% of our business based in Europe we are affected by the enduring high energy costs in the region. The Energy Union aims, among other things, to address this issue. Looking further ahead, the Forest Fibre Industry 2050 Roadmap to a low-carbon bio-economy paper showed that a  $CO_2$ reduction for our sector of 50-60% compared to 1990 levels is possible based on available and emerging technologies. To reach a reduction of 80% by 2050, the development and availability of breakthrough technologies is necessary but must be available by 2030.

We are participating in a consortium that is investigating the viability of one such breakthrough technology called Deep Eutectic Solvents. To transform the energy consumption of production processes, cooperation within and between businesses across different sectors, particularly around research and development, is essential. Governments and the EU have a central role to play in incentivising projects to meet this challenge. »

### Direct fossil (scope 1) CO<sub>2</sub> emission European mills



### Direct fossil (scope 1) CO<sub>2</sub> emission The Americas mills



### Q Case study

### Supply chain CO<sub>2</sub> reduction



### Fanfold<sup>®</sup> by train

Progress is not always the result of new developments. It can just as well be inspired by ideas from the past. Smurfit Kappa Germany looked back to take a step forward and exchanged the European highways for railways.

Fanfold<sup>®</sup> is a continuous sheet of corrugated board that has been scored and folded like a fan. It is an ideal solution for customers who have many different sized products and packaging specifications. Every year 150 truck loads of Fanfold<sup>®</sup> each travelled a distance of 1,250 kilometres to Sweden.

The challenge was to find an alternative, less expensive, lower environmental impact transportation solution, that still guaranteed in time customer service.

The team turned to the railways, investigating and subsequently reviving an existing in-house railway connection. Deutsche Bahn now loads a couple of wagons a week, each the equivalent of 2.5 truckloads. In 2014 60 train wagons travelled to Sweden instead of 150 trucks. Expenses have dropped and almost 150 tonnes of CO2 emission from trucks was replaced by the much smaller CO<sub>2</sub> output of the modern freight train. Production also benefits with a longer lead time for the corrugator planning. Both the client and Smurfit Kappa are satisfied with the major CO2 reduction that benefits the whole supply chain.

### Our vision and priorities Climate Change continued

To tackle climate change we are moving to a lower fossil-fuel, less CO<sub>2</sub> intensive energy mix.





### Progress in 2014

To tackle climate change we are moving to a lower fossil-fuel, less  $CO_2$  intensive energy mix, promoting renewable sources where economically feasible and closing loops to create circularity in our production process. We do this through a three-pronged approach:

- Investing in efficient energy generation
  - Efficient energy generation by investing in highly efficient Combined Heat and Power (CHP) systems. Our industrial need for both electricity and heat means we are well suited to scaling up our use of CHP generated power
  - Improving the efficiency of our current boiler houses, minimising heat losses
- Investing in energy reduction programmes
  - Reducing our absolute use of energy through investment in research and new replacement technologies
- Investing in fossil CO<sub>2</sub> reductions
  - Reducing carbon emissions through a shift to CO<sub>2</sub> friendlier fuels such as biomass and natural gas

We achieved a decrease of 21.6% of our fossil  $CO_2$  emissions in 2014, in comparison to our baseline year 2005. Our target is measured against produced tonnes of paper rather than absolute values as the company is in dynamic growth and also subject to opening and closing facilities.

### Combined heat and power

During 2014, one major CHP project was finalised and one was initiated.

- In Saillat, France, the internal CHP runs year round and, during Q2 2014, a new more efficient boiler was installed leading to a 16% decrease of fossil CO<sub>2</sub> emissions
- In Hoya, Germany, an additional CHP was started in April 2014, resulting in a decrease of 5,000 tonnes of CO<sub>2</sub> emissions from start-up until the end of 2014

In Ania, Italy, we are investing in a new CHP that will be operational in 2016 and lead to electricity self-sufficiency and an emission reduction of 2,400 tonnes of  $CO_2$  per year.

Direct fuel consumption All operations\*



\*All operations include P&B mills, Sack plants, Corrugated, Board converters

### Biofuels and fossil fuels



### **Efficient infrastructure**

At our Townsend Hook mill we are rebuilding the mill by replacing two paper machines with one new machine. This new technology will improve absolute energy use and CO<sub>2</sub> emissions. When production restarts in  $2015 we expect to create lower CO_2 \\ emissions than when operating the two \\ older machines. When a new CHP is \\ installed by 2018 we expect to reduce \\ emissions by 35-50\% in comparison to \\ the previous situation.$ 

At our Calimill in Colombia, a new lime kiln has been operating for a year, using natural gas instead of heavy oil as fuel. Energy efficiency has been improved by 20% per used tonne of lime,  $CO_2$  emissions have decreased by 13.000 tonnes representing 3%, and waste has decreased by 5,000 tonnes annually.

Our Piteå mill achieved full bioenergy-based production in 2014, moving to biofuel in its lime kiln and recovery boiler. The main energy sources are now by-products from the pulping process, resulting in specific fossil  $CO_2$ emissions of 22kg per produced tonne of paper, 5% of typical fossil  $CO_2$  footprint.

### **Closing loops**

We close loops and create circularity in our energy production through fully utilising, where possible, any by-products that have a high energy value. In addition to traditional bioenergy usage at pulp and paper mills – burning black liquor at integrated pulp and paper mills and utilise the biogas produced during the anaerobic water treatment at our recycled paper mills as fuel – we are currently exploring further options for creating energy and heat from our side streams that have otherwise no other valuable use. »

#### Q Case study

### Vacuum systems



### Energy efficiency through vacuum systems

Vacuum systems that are being used to support the dewatering process in paper and board machines is no news in the paper industry. The Smurfit Kappa corrugated division however, found that using vacuum exhaust in a new innovative way at its operations can also bring many benefits and efficiencies.

At paper and board machines, a vacuum system is used to remove water from the paper sheet and also to dewater and clean press felts. Improving the control of vacuum levels and removing inefficiencies can significantly help to save energy.

At Smurfit Kappa SSK we improved the PM4 vacuum system by improving its control. We now use only two pumps for four vacuum devices instead of four. This change led to best in class energy use and reduced wear of wires and felts at the machine.

At the corrugating and converting operations, vacuum is typically used to move corrugated sheets through production lines. At Smurfit Kappa Düsseldorf (see picture) a thought of using the vacuum exhaust air in a smart way led to an innovative approach to removing conversion waste and rejects with otherwise wasted vacuum exhaust air.

The new system means that instead of blowing the vacuum exhaust air to the production hall, we now use it to suck waste and rejects and direct them to a collection point in a controlled manner. The innovation is recycling air and at the same time increasing efficiency to the plant's waste management.

### Our vision and priorities Climate Change continued

Using a suite of tools, including our Paper to Box and Pack Expert, we continue to work with customers to determine the carbon footprint of their packaging.

Examples of these include:

- Experimenting with producing biodiesel from black liquor at our Piteå mill that then can be used as fuel for the trucks transporting goods to and from the mill
- Burning tall oil, a high-energy value by-product from the pulping process, at the lime kiln and at the recovery boiler at Piteå.

### Working with our customers

Using a suite of tools, including our Paper to Box and Pack Expert, we continue to work with customers to determine the carbon footprint of their packaging. These tools give access to  $CO_2$  emissions data and other information to optimise packaging solutions.

In 2014, Paper to Box was used 2,172 times a day and Pack Expert 1,052 times a day on average. As we work towards our 2020 target of 25% reduction of our specific CO<sub>2</sub> emissions, these tools can capture this data for customers' own calculations and benefit.

A new option in our Innotools suite of design software allows customers not only to know

the carbon footprint for each packaging unit, but also to track its development over the years.

### **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<sub>2</sub> 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<sub>2</sub> 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

#### Q Supplier testimonial

### Innovative adhesive aeration system in cooperation with Henkel



Henkel is the world's largest adhesives manufacturer. It provides innovative solutions and leading product technologies through a network of industry experts. Also this year, Henkel is included in the Dow Jones Sustainability Indices since their launch in 1999, ranked eight times as industry leader. Sustainability is truly embedded in the company culture, values and goals. "Henkel searches for solutions that are environmentally compatible and deliver added value through a reduced ecological footprint", says Johanna Friess (pictured), marketing manager for Industrial Adhesives Europe.

Henkel and Smurfit Kappa Joined forces to introduce the innovative next generation Adhesive Aeration. The system incorporates a laminating adhesive and a third generation glue-mix unit that adds controlled quantities of air to the gluing process. The application increases the volume of the adhesive. Significantly less adhesives are needed for the same laminating area resulting in greater efficiency and value.

Productivity and performance are further improved by faster handling and less containers, storage, transport, and cleaning time of returnable containers. The life cycle assessment shows that the aeration technology reduces the carbon footprint up to 20% compared to traditional solutions. In conclusion, it leads to reduced emissions and saves resources. The system has been implemented at the corrugated plant of Smurfit Kappa Massa Lombarda in Italy. Bruno Pelloni from the plant says: "This is a good example of cooperation between stakeholders which can be implemented at more plants to achieve better environmental efficiency." Further implementation of the system is under consideration in Germany and Sweden 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<sub>2</sub> 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.

For 2014 we have extrapolated the 2013 data adjusted for production units. Following that method,  $CO_2$  equivalents for transport of raw materials amounted to 217,700 tonnes. 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 approximately 6.2 billion so-called tonnekilometres. 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 CO₂ 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 of both volume and 2013 data, we have estimated the total relevant CO₂ emissions to be 101,900 tonnes (100% by road).■



### Climate

Boundary: This strategic priority looks into energy use, climate change and greenhouse gas emissions. We limit our reporting to our own operations and transport from our suppliers and to our customers' gates.

All  $CO_2$  emissions from our paper and board mills (directly used or indirectly used through buying secondary energy) related to the production of paper. Only paper production is taken into account given its relative fuel use compared to our converting operations (90%) and hence its contribution to fossil fuel  $CO_2$  emissions.

Timeframe: Target to be reached by 2020.

**Progress made:** Original target of 20% reached in 2013. In 2014 a new target was set; currently we are at 21.6% reduction.

**Commitment #2**: Collaborate with customers to determine the carbon footprint of the packaging life cycle.

Timeframe: Continuous

**Progress made:** We have developed a suite of tools that help to determine the carbon footprint of our customers' packaging (Paper to Box and Pack Expert). In 2014 these tools were used in average more than 3,000 times a day.

Our perspective: The impact of climate change is one of the biggest challenges we as a society face.

Our use of energy, carbon footprint and GHG emissions are all material to Smurfit Kappa's business. We therefore need to find ways to fundamentally re-engineer our operations to be less fossil-fuel intensive. In our case it means reducing energy use and increasing energy efficiency and increasing the use of renewable sources where feasible.

Our opportunity is to design products that allow customers to take out energy usage in their supply chain.



# Our vision and priorities Water

# Using less water to create more packaging

### Summary

- Sustainable water management is increasingly important as fresh water becomes scarcer and more unequally distributed
- We are committed to reducing the organic content of water (COD) returned to the environment from our mills by one-third by 2020 compared to 2005 levels
- Between 2005 and 2014 the COD content of processed water returned to the environment has decreased by 28% relative to production
- We are performing water impact assessments on our sites and developing water usage measures as appropriate

Water is a key consideration for Smurfit Kappa. Our production processes require water to turn raw materials into our end products. While our operations are designed to use the minimum amount of water, our 38 paper and board mills nevertheless process 119 million m<sup>3</sup>. The supply of good quality water is therefore of material concern to our business.

We also aim to minimise our impact on the environment resulting from our water processing and discharge. Two-thirds of our usage is to facilitate production processes, the remaining part is used for cooling. We reuse our water a number of times at various production stages before treating it in our water treatment plants, thereby limiting our overall water intake. Although the majority of our mills are not located in areas of water stress, we have nevertheless taken the step of undertaking water risk assessments across our sites, a programme which we expect to be completed in 2017.

Our paper mills are neighbours to many different industries, communities, agricultural land and living areas. Therefore it is important to ensure that the water we discharge is in optimal condition. With over 90% of the water we use returned to water bodies in good condition, Smurfit Kappa is a processor of water – not simply a consumer.

### **Risks, challenges and opportunities**

A significant decrease in the availability of or an increase in the cost of fresh water will materially impact the ability of our business to operate.

Water is vital for the ecosystems and environments in which we operate. Water that is being returned to the environment by an industry can impact its ecosystem either by creating a nutrition imbalance, polluting the water or changing its temperature.

Regulatory requirements and continued scrutiny means that the quality and safety of the treated water we return to the public water bodies must always remain uncompromisingly high, to mitigate any impact on biodiversity. To this end, we have invested €39 million since 2005 in the development of our process water treatment plants.

### Q Case study

### Water saving programmes



### Tough objectives for kind solutions

Water levels in the Yaracuy river, Valencia lake and Guaire river in Venezuela have changed in recent years. Research indicated water sources near the Smurfit Kappa mills in San Felipe, Valencia, and Caracas needed more attention from industry and government. Local legislators mooted stricter regulations although Smurfit Kappa had already set in motion a Water Saving Programme for its Venezuelan mills supporting their ISO 14001 certification.

Our objective is to minimize the impact our water usage and discharge have on the environment. The three Venezuelan mills showed a high rate of water consumption that could be reduced by implementing several changes in the production process and with paper machines.

We developed a water management programme specifically tailored to this

challenge, including initiatives to recycle water in our paper making process, incorporating previously treated process water.

In addition, we trained personnel and installed temporised automatic valves for the press felts knock-off shower to reduce washing time and fresh water consumption. The mills replaced conventional mechanical seals with hydrodynamic seals, installed level control valves in clarified water tanks in the effluent treatment plant and rotating IPEC filters to reuse water and recover fibres. Pumps now recover 600 gallons/minute of treated water that is sent back to the process section and the irrigation system.

Consequently water consumption rate at the three mills dropped by 26%, making their operations significantly more sustainable.



### Water released The Americas mills



\*To note: this calculation does not include those of our mills which discharge their treated water to a community water treatment plant and not directly to a surface water body.



Water intake



The challenge for Smurfit Kappa will be to both maintain and demonstrate our responsible approach to water use as a low consumer of water. We must ensure that companies within our sector and more broadly, do not tolerate water waste even when they operate in areas with no water scarcity. Indeed, customers whose production processes are water intensive have demonstrated an interest in sharing knowledge with Smurfit Kappa on water management practices.

We have set ourselves a clear target of reducing the organic content of water (COD) by one-third by 2020 and we are assessing the risk related to water at our mills.

### Key achievements in 2014

We continuously implement best practices in water treatment in our mills. In 2014, over 90% of paper and board was produced at mills where best practice water treatment systems are in place. This involves treating process water to decrease the organic charge of effluent, through anaerobic and aerobic treatments, before returning to the environment.

Working with external auditors to monitor and manage ongoing water sustainability, we have conducted a high-level review of the water impact and risk of our operations based on the Aqueduct and Water Risk Filter (WRF) measurement, which takes into account additional water-related site-specific information. Where sites are identified to have a higher risk of water vulnerability, an on-site survey to design relevant risk mitigation and monitoring strategies has been developed.

In 2014, the first such in-depth assessment was carried out at our Cerro Gordo mill in Mexico. The mill is located in an area of considerable water stress and the process confirmed the – now addressed – need to monitor the long-term availability of sufficient water. Similar activities were carried out at our Spanish Mengibar mill in addition to our largest recycling mill, Roermond, in the Netherlands, during the first quarter of 2015. An ongoing programme of assessments will be carried out throughout 2015 and 2016 for additional mills.

Between 2005 and 2014 the COD content of processed water returned to the environment has decreased by 28% relative to production.

### Performance in 2014

In 2014, our total water intake decreased to 121 Mm<sup>3</sup> from 125 Mm<sup>3</sup> the previous year (-3%). For 2014 the average water intake by our paper and board mills equalled 17.2 m<sup>3</sup> per tonne of paper produced (in 2013 the average water intake was 17.7 m<sup>3</sup> per tonne).

The performance of our mills' organic content of water directly discharged to surface water bodies has improved by 28% in 2014 compared to the basis year 2005 and improved by 3% compared to 2013. >>

# Our vision and priorities **Water** continued



### Process water discharges European mills: COD



#### Process water discharges The Americas mills: COD Kg/tonne Ktonnes 18 18 15 15 12 12 9 9 6 6 3 3 0 0 2010 2011 2012 2013 2014 Absolute (ktonnes) - Specific (kg/tonne)

#### 🔍 Testimonia

### Smurfit Kappa's water stewardship strategy



In May 2014 Smurfit Kappa commissioned Deloitte to conduct a water-related risk assessment across Smurfit Kappa's global industrial operations. Assessing potential risks from water availability and quality is a complex process, which covers multiple aspects specific to each acographical location

Thirty-six Smurfit Kappa mills were screened using the WWF Water Risk Filter and WRI Aqueduct tools. In a second phase, on-site assessments were carried out performed using a tool specifically for Smurfit Kappa. This tool was used to perform the assessments which included the collection of data and engagement with external stakeholders. Three mills have been assessed to date. These assessments provide detailed water vulnerability evaluations and support Smurfit Kappa in enhancing the water sustainability of their operations. Companies such as Smurfit Kappa are increasingly moving towards the implementation of water stewardship strategies to evaluate operational risks and costs associated with disruptions to a company's water supply. Water stewardship strategies are forward looking as they quantify water-related risks and include actions to mitigate these risks.

Will Sarni is director and practice leader enterprise water strategy at Deloitte Consulting LLP, author, board member of the Rainforest Alliance, and a member in several organisations such as the Water Leadership Working Group for the World Business Council for Sustainable Development (WBCSD) and the scientific Program Committee for Stockholm World Water Week.

### Process water discharges European mills: TSS



Process water discharges European mills: BOD



### Process water discharges The Americas mills: TSS



### Process water discharges The Americas mills: BOD



Water-related data for all our operations (including details for individual mills in Europe and the Americas) are shown in the tables on pages 68 to 73. For the mills where water treatment is subcontracted to an external third party, in all disclosures relating to the process water content (COD, BOD, TSS), we report levels in the water discharged by the mills to these external treatment parties. To provide an accurate overview of 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 2014 in those mills.

### Water 🤤

Boundary: Under this strategic priority we concentrate on the water intake and discharge. It covers all Smurfit Kappa paper mills discharging their process water directly to bodies of water. Mills that have their process water treated externally are not included. Only paper production is taken into account because this contributes to 95% of all organic discharges.

Organic discharges in the process water is measured with the indicator COD.

**Commitment #1:** A reduction of the organic content of water returned to the environment from our mill plants (COD) by one-third compared to 2005 levels.

Timeframe: Target to be reached by 2020.

**Progress made:** At end of 2014, we achieved for the mills discharging directly to surface, 28% of COD reduction per tonne of paper produced compared to 2005.

**Commitment #2:** Perform environmental impact assessments of the water use of our sites (where relevant) and develop water usage measurements.

Timeframe: Target to be reached by 2017.

**Progress made:** Overall environmental impact assessment of the water use at our sites was made during 2014. As result of this work, a tool to assess mill specific risk related to water was created and piloted at our Cerro Gordo paper mill in Mexico.

Our perspective: Through a programme of investment and technological innovation in the treatment process of discharged water, our vision is to significantly reduce the water impact of our operations over time.

# Our vision and priorities **Waste**

# Moving to eliminate waste from production

### Summary

- Waste, the inefficient use of natural resources, is an important challenge in the production of paper – in particular recovered paper which contains unwanted auxiliary materials
- Paper-based packaging is one of the most recycled materials globally, and can be converted to a valuable resource for paper production, used up to 8-10 times through its wood fibre life cycle, before being further utilised as a source of energy or biodegradable material, particularly in agricultural applications
- Smurfit Kappa is committed to conducting company-wide assessments to minimise non-hazardous waste, hazardous waste and waste to landfill by the end of 2015

Our operations generate sizeable volumes of non-hazardous waste. As much as is economically and technically feasible, we have implemented processes to reuse our waste. Ultimately, our vision is to closely follow a circular economy model. We already use rest streams from other production processes-mostly recovered paper-as raw material. An efficient paper recovery system is therefore an important consideration for our business. Wherever possible we use recycled raw materials, resulting in recovered paper making up 74% of raw material in paper production. Finally, we maximise the use of recovered paper for producing paper and board before using it as fuel at the end of its life cycle.

To this end most of our waste from the recovered paper we use can be considered non-usable. On average we need 1,070 kg of recovered paper to produce one tonne of paper. The bales we receive contain plastic, metals, glass, sand and other non-usable parts. To reuse as much of the recovered materials as possible, we separate these elements from the production process by using water. Some of this water is retained by the non-usable materials and therefore contributes as much as 50% of the waste we 'generate'.

### Risks, challenges and opportunities

Our expressed aim is to closely follow a circular economy model and we are committed to working with the recycling and paper-producing industries to achieve this. This is one of the central pillars of our sustainability strategy. Our Roermond paper mill in the Netherlands is just one example of this and has realised new uses for 99.5% of its waste. We are also working with the World Economic Forum, participating in three pilot programmes through Project Mainstream, to progress the application of the circular economy.

### Q Case study

### **Central Chemical Dosing System**



### Hands-on and in control

Most packaging products made in Smurfit Kappa's Gdańsk plant (see picture) in Poland require high quality printing, die-cutting, combinations of paperboard, and multipoint gluing. The production process requires the use of various cleaning chemicals and glue. Often such industrial chemicals are concentrates that need to be diluted on site. This affects dosage control and consequently the impact on the environment.

There is also a possible safety risk for the employees responsible for the handling and dosage of the chemicals, and the chemical concentrates take up a lot of work space near converting machines.

Gdańsk's different types of packaging designs are mainly manufactured for food, pharmaceutical, cosmetics and consumer electronics companies. These often internationally active corporations place much emphasis on sustainability. Sustainability is also a key business driver for Smurfit Kappa.

Consequently, the people at Smurfit Kappa Gdańsk found a solution to overcome these safety and environmental issues with its Central Chemical Dosing System. A separate chemical warehouse was designed for the new system and equipped with cameras, electronic alarms and level sensors to constantly control and monitor chemicals. The substances are transported to the converting machines through a piping network with valves and pumps mostly controlled by a computer steering system. As a result, fewer chemicals are used, quality control improved, employees do not come in contact with the dangerous substances and more space was created around the converting machines.

Hands-on solutions to improve sustainability performance that have the potential to be implemented across Smurfit Kappa operations globally, are valuable innovations. Smurfit Kappa Gdańsk devised such a solution.

### Packaging recycle rate in EU (%) Source Eurostat



Paper and paper-based packaging is a highly recyclable material and currently the most recycled packaging material worldwide. While the overall paper industry in Europe generally achieves 72% recycling rates (which is lower than the 84% recycling rate for paper based packaging shown in the above graph), in the US and in Latin America 67% and 45% recycling rates respectively have upward potential.

The collected waste and by-products from our industry can become new raw materials. The central challenge for our industry is finding a means to process the many auxiliary materials added to paper by downstream industries. Although paper is 100% recyclable, these materials cannot be sorted from paper in the dry-sorting steps before they reach paper mills. Smurfit Kappa welcomes initiatives that make the recycling processes more efficient and environmentally friendly. We remain in favour of a strong EU Waste Directive that creates a level playing field across industries. Ambitious collection and recycling targets can be an important driver to increasing recycling levels. However, these should focus on setting incentivising parameters for those currently unable to meet industry standards, particularly in emerging economies.

The current debate around the Directive creates regulatory uncertainty that has an impact on the ability of companies within the sector to make investment decisions that have the potential to reduce waste and increase recycling rates.

We also welcome the various Extended Producer Responsibility (EPR) initiatives that extend responsibility for a product beyond the post-consumer stage. The central principle of the ERP is the creation of incentives throughout the production chain to make products more sustainable. This is ultimately characterised by the shifting of responsibility upstream toward the producer and the provision of incentives to producers to take into account environmental considerations when designing their products.

However, for these initiatives to succeed we believe it will be important to balance the financial burden throughout the value chain, rather than simply on producers. This creates a broader Chain of Custody and instigates others to also find ways of increasing waste collection and sorting.» Paper-based packaging recycling rates are at 84% in Europe whereas plastic is at 35%.

# Our vision and priorities **Waste** continued

### Q Case study

### **Recycling solutions**

### **Cleverly simple**

It is very rare to find a solution that pleases every party, is cost neutral, is easy to implement and is quickly replicable. It is even rarer that the solution also benefits the environment.

Against all the odds, that is exactly what the Smurfit Kappa Corrugated Division in France achieved with their client Glaces Thiriet.

Glaces Thiriet is one of the largest manufacturers of ice cream in France, producing more than 450 varieties of ice cream and frozen desserts. It also delivers over 750 other kinds of high-end frozen foods direct to consumers' homes. To do so, the company operates a fleet of more than 850 trucks, backed by a network of 90 distribution centres.

Meanwhile, Smurfit Kappa manufactures approximately six million trays per year for

Glaces Thiriet. These trays are packed with frozen foods and delivered to the consumer. But once the delicious food is eaten, it is down to the consumer to ensure the equivalent of 2,000 tons of waste paper is recycled through local waste collection.

To improve this, Smurfit Kappa and Glaces Thiriet now offer the consumer the option to ensure the paper products are recycled without any effort on their part. Packaging can be returned to the delivery person, who returns it to the distribution centre. From there the trays are collected by Smurfit Kappa and are put into the recycling process at our paper mills. A simple solution with a big impact. Or as Glaces Thiriet communicates to consumers: 'Pack delivered, pack returned. The planet thanks you!'



### 74% of our raw material comes from recycled sources

### Progress in 2014

Smurfit Kappa has gathered detailed information on its waste streams from all of its operations on a regular basis since 2008.

Over 90% of our waste is generated in our paper mills. The majority of this waste is generated in the recovered paper pulping and screening process, including reject materials. Other waste sources include sludge from the process water treated in our water cleaning facilities, calcium carbonate residues from lime kilns and ashes from biomass boilers. A large part of what is registered as waste is actually waste with a water content of approximately 50%.

The amount of waste sent to landfill has been steadily decreasing. The total amount sent to landfill from our operations has decreased by 13% since 2013. Waste sent to landfill per produced tonne of paper at our paper mills decreased by 12% since 2013. In 2014, the share of waste sent to landfill decreased to 53% from 56% in 2013, while 12 of our 24 paper and board mills in Europe effectively did not send waste to landfill. The total amount of non-hazardous waste generated in our operations decreased by 8% since 2013 and waste generated per produced tonne of paper at our paper mills decreased by 5% since 2013.

The majority of hazardous waste per produced tonne of product is being generated in our printing and converting operations when cleaning the machines from printing inks. Another part is irregular hazardous wastes from our operations that are generated typically during maintenance and include items such as used lighting.

The amount of hazardous waste has remained stable, at 8,800 tonnes in total. Variation between years is mainly due to the low frequency of disposal of hazardous waste that is being stored at mills before disposal of larger quantities at a time.

In 2014, a detailed assessment on waste reduction possibilities was launched at our paper mills. This assessment will be finished in 2015, contributing to targeted waste reduction and mill specific plans. We also started an in-depth analysis to understand the amount of hazardous waste in our waste streams in 2014. These hazardous waste streams are regular from our converting and printing operations and incidental from our paper mills.

### Work towards optimised use of raw materials

Paper recycling is fundamental for our raw material sourcing. Globally, 74% of our raw material comes from recycled sources. Producing paper from recycled raw material converts our customers' waste into valuable raw material. This creates a circular loop at a macro level.

Our converting operations send their paper clippings directly back to our paper mills delivering high-quality recovered fibres for the mills.

Our virgin and recycled paper production processes produce various side streams most of which are being utilised in a meaningful way. We continuously look for new uses for those side streams that would otherwise be our waste. In 2014, we were able to find a new solution at our Ania mill, where the mill now sends its high-energy value waste to be incinerated to generate energy. At the same time, we experienced a step back when the outlet for ashes from our Navarra mill was no longer available. The construction industry, for which ash is an important raw material, has been severely hit by the recession in Spain, which meant we lost our principal customer for the ashes from the mill. This means that we had to return to sending the ashes as waste to landfill again.

We are not only sending materials from our waste streams to other industries to use. On top of receiving recovered paper, we also seek to identify creative and efficient solutions with our stakeholders. One of those is that at our Roermond mill where we receive phosphorus from the baby food industry where it is an unwanted substrate and use it as nutrition for the bacteria in our anaerobic waste water treatment plant. There it is a vital element to keep the water cleansing bacteria live and well.

Other uses of our side streams include the agriculture, food and medicine industries and we continuously collaborate with other sectors to find more outlet for our side streams.

### Waste 👔

Boundary: Under this strategic priority we report on non-hazardous waste (recovered and landfilled) and hazardous waste generated from Smurfit Kappa's manufacturing processes.

**Commitment #1**: Company-wide assessment of non-hazardous waste and targets to minimise the burden of such waste.

Timeframe: Target set by end of 2015

**Progress made:** Assessments have begun in 2014 to assess and measure impact. Work to develop targets continues in 2015.

Commitment #2: Company-wide assessment to minimise waste to landfill and set targets according to 2014 assessments.

Timeframe: Target set by end of 2015.

**Progress made:** Assessments have begun in 2014 to assess and measure impact. Work to develop targets continues in 2015.

Commitment #3: Company-wide assessment to minimise hazardous waste and set targets according to 2014 assessments.

Timeframe: Target set by end of 2015.

**Progress made:** Assessments have begun in 2014 to assess and measure impact. Work to develop targets continues in 2015.

Our perspective: Our objective is to contribute to a circular economy. All paper packaging provided to our customers is already 100% recyclable. Eventually we will take all avoidable waste out of our

production system and minimise waste to landfill of those materials that are not further recyclable and/ or recoverable.



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# Our vision and priorities **People**

- Safeguarding our biggest asset: people
- Smurfit Kappa employs some 42,000 we take very seriously our responsibility to employees in the fields of health, safety, rights and fair treatment, pay, diversity, training and personal development
- We also see it as our responsibility to engage with and support the communities in which we operate, both as a local employer and as a major business
- We are committed to promoting and ensuring safe behaviour and well-being: reporting near misses and taking preemptive action to prevent accidents, reducing injuries by decreasing the lost-time accidents and injury rate by 5% annually over five years (2013-2017) and achieving zero fatalities
- We will also work to enable Smurfit Kappa foundations to reach 100,000 people in local communities by 2020, spending at least €1 million per annum on the education of children and €1 million per annum on (scientific) research on areas like biodiversity

Our people, the communities in which we operate and the people who form those communities are important to Smurfit Kappa. Supporting our people to reach their full potential is vital to the success of our business. Doing so will not only mark us out as a respected business, good corporate citizen and employer of choice; it also gives us the opportunity to make a genuine difference to people's lives. Accordingly, we are committed to adhering to and setting high ethical and professional standards. People's rights, health, safety and well-being are of primary importance.

### Health and Safety

We have an unwavering commitment to the health and safety of our workforce. At Smurfit Kappa we have a structured and systematic approach to health and safety and are confident of making further improvements to safety performance.

The commitments within our revised Group Health and Safety policies are consistent with those of the internationally recognised OHSAS 18001 occupational health and safety system application.

Key to our approach are the following principles and measures:

- Providing regular health and safety training and briefings to employees
- Health and safety as a primary agenda topic in all relevant management and employee meetings

- Sharing incident information across our operations
- Promotion through our annual excellence in health and safety awards programme
- Promoting technical and engineering improvements through our innovation in safety awards programmes
- Internal benchmarking of health and safety performance on a monthly basis using a suite of performance metrics
- Conducting cross audits in health and safety involving our panel of trained internal health and safety coordinators.

### 2014 in review

In 2014 we took several important steps to harmonise our Group-wide health and safety policies, programmes and reporting practices. In March 2014 we introduced a common one-page Group Health and Safety Policy statement which has been adopted by≈all mills and plants to promote more consistent understanding of our core health and safety commitments. The Group Health and Safety Policy statement was followed by a Group Good Health and Safety Practice Policy. The policy sets the standard of 16 elements that are being adopted as a minimum mandatory requirement across all divisions. Aligned with the policy process we standardised the reporting throughout all divisions and geographies. The key outcomes of this work in 2014 were the revised Health and Safety Incident and Injury Reporting Standard which defines the mandatory reporting requirements and has been applied across all Smurfit Kappa operations. The standard has led to more consistent, complete and robust reporting.

We also introduced a site level web-based self-assessment tool, which is a questionnaire consisting of 48 questions with which site managers can measure their site's compliance with the Group-wide policies and standards. Each country or cluster is responsible for managing the closure of gaps identified in this assessment. In 2014 we continued putting emphasis on good communications about health and safety with the ambition to drive behavioural change towards good practices. We introduced monthly Safety Incident Bulletins that have been adopted in each of the three divisions. An annual health and safety week was developed which gives a week-long focus on the topic throughout Group's communication channels followed with Health and Safety summits in Europe and the Americas for health and safety managers. Part of the health and safety week's communications is to give voice for testimonials from those involved in injury incidents within our operations. We also started to prepare for the introduction of behaviour based programmes that target changing our and our subcontractor's employees' attitudes towards best practice behaviours.»

An annual health and safety week was developed which gives a week long focus on the topic throughout the Group's communication channels.

#### Q Case study

### **Efficient production floors**



### On the crossroads to a safer factory

Smurfit Kappa Olomouc, in Czech Republic, produces laminated packaging printed in colours just as attractive as its pictures que surroundings along the Morava River. But while the surroundings are idyllic, the working environment was more serious.

The mill's MOSCA packaging machine was positioned in such a way that the walkway for employees and visitors between the finished goods section of the production facility and the expedition hall crossed the route of the mill's forklift trucks. In order to reduce risks, factory rules were introduced to make people more aware of the potentially dangerous situation.

Not stopping there, the mill's team took the initiative to improve the situation further – and discovered that changes could not only improve safety, but could also benefit energy consumption and transport needs.

The main focus of the team was to realise Smurfit Kappa's commitment to provide a healthy and safe working environment for employees and guests. By rearranging the gluing machines and moving the MOSCA packaging machine the team made some major changes to the layout of the factory. Not only did this create safer working conditions, it also resulted in a 7% reduction in forklift transport hours and accordingly in a significant cut in energy consumption with regard to in-company transport of finished goods. With the risk of colliding with forklift trucks fully eliminated Smurfit Kappa Olomouc has taken a responsible approach to improve working conditions for the employees who contribute to its success on a daily basis.

# Our vision and priorities **People** continued

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

### **Key developments**

- Our European Paper Division achieved a 34% reduction in its lost time accident frequency rate, reducing the rate from 0.76 in 2013 to 0.50 in 2014. 17 mills and other operations reported zero accidents in 2014 and since 2011 the number of lost time accidents decreased from 65 to 44, a decrease of 32%. The Total Recordable Injury Rate (TRIR) for 2014 was 1.65  Our European Corrugated Division experienced a slight increase in its lost time accident frequency rate from 0.57 in 2013 to 0.60 in 2014 mainly due to increases in the number of lost time accidents in France and Germany. 105 plants reported zero accidents in 2014 and since 2011 the number of lost time accidents decreased from 271 to 214, a decrease of 21%. The TRIR for 2014 was 1.61







Every Full Year 2013 vs 2014

### Number of Accidents Full Year 2013 vs 2014



- The Americas region's lost time accident frequency rate increased from 0.47 in 2013 to 0.50 in 2014. 48 mills, converting plants and other operations reported zero accidents in 2014 and since 2011 the number of lost time accidents decreased from 166 to 156, a decrease of 6%. The region's TRIR rate for 2014 was 1.15.
- For the Group as a whole the lost time accident frequency rate remained effectively flat at 0.55 in 2014 compared to 2013 and has decreased by 27% since 2011. Since 2011 the total number of accidents has decreased from 502 to 414, a decrease of 18%. The accident severity rate increased by 11%, from 13.75 in 2013 to 15.23 in 2014 but decreased by 21% since 2011. The TRIR for the Group in 2014 was 1.43.
- Accident reporting for subcontracted labour workers was initiated in 2014 with a total of 227 lost time accidents.
- There were no fatalities affecting employees across the Group in 2014.

 Regrettably, a subcontractor sustained fatal injuries arising from a fall from a loading platform while working on a capital improvement project at our Oude Pekela Board Mill in the Netherlands in October.

### Citizenship

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

In keeping with the United Nations Declaration of Human Rights and the Fundamental Principles and Rights at Work developed by the International Labour Organisation, the following principles and conditions are maintained in every country in which we have a presence.

### Discrimination

We prohibit discrimination on the grounds of race, colour, gender, sexual orientation, age, religion, national origin, disability or other legally protected status in the countries in which we conduct business. No issues of discrimination in any of these categories were reported in 2014.

### Freedoms of association and collective representation

We support freedom of association and collective bargaining. 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. We are not aware of any confirmed case in which either the association or bargaining rights of any individual or group(s) of employees have been denied to them during the course of 2014. The collective agreements currently applying in some 90% of the Group's sites and covering 66% of our employees are the result of either local and/or national negotiations in the countries concerned.

### Working fairly

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 2014. We do not approve or tolerate forced labour or »

### Q Case study

### **Skills and safety**



Our new forestry training centre

Understanding the importance of a topof-the-line safety strategy in forestry operations, the Forestry Division of Smurfit Kappa Colombia has invested in a modern training centre and an extensive safety education programme. The facility in Alto Potreros can accommodate 30 people at a time. It was specifically set up to improve labour skills of workers through education and training, and additionally to contribute to the development of the forestry sector in Colombia in general.

Its educational programme focuses on theoretical, technical and practical safety aspects for forestry workers. The initiative, located in an old coffee plantation house that was completely rebuilt, provides a structured learning method. It makes use of controlled simulators that allow training in high risk practices which are carried out inforestry operations on a daily basis. The main objective is to develop these practices into a structured operation that meets all the standards of a safe workplace.

The students are mostly workers of Smurfit Kappa's forestry operations. The training programme offers courses in chainsaw operation, hoe chucker setting, loading, equipment, operating, line chief management and supervising. The accommodation includes facilities like bedrooms, a kitchen, and classrooms. The property also features an area offorestry plantations and natural forests, where students can identify risks, and an area with simulators for practical training.

Last year Smurfit Kappa Colombia trained more than 500 contractor employees who regularly work for its Forestry Division. With the implementation of this programme in Alto Potreros Smurfit Kappa is confident that the technical level of the forestry workers will further improve and that this in turn will be reflected in the strengthening of safety as an important value in all forestry operations.

## Our vision and priorities **People** continued

We believe strongly in offering our employees the chance to increase and broaden their skillsets and knowledge, helping them to fulfil their potential.

physical abuse, 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 2014.

### Fair pay, compensation and benefits

We compensate fairly and review wage and salary levels at regular intervals. 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'.

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.

We reward employees based on market best practice. 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 a difference in responsibility, size of the job, experience, performance, country of residence and other factors. 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 an employee's remuneration package provided by the Group in various countries.

### Development

We believe strongly in offering people at all levels of the organisation the chance to increase and broaden their skillsets and knowledge, helping them to fulfil their potential and widen their career prospects. To achieve this, a broad range of training and development initiatives are driven centrally and at local levels. Two of the key programmes run in 2014 were the Advanced Management Development (AMD) programme for the Group's high potential talent, and the General and Mill Manager Programme (GMMP) for newly appointed front line senior managers. These programmes had 21 participants from 12 countries, and 23 participants from 13 countries respectively.

#### Q Case study

### Sustainability Academy



### Inspiring potential

Mortarboards were thrown high in the air by the 140 Smurfit Kappa Benelux employees who attended the first Smurfit Kappa Sustainability Academy in the Dutch town of Roosendaal. Employees active in management, external and internal sales, customer service and design experienced first hand how devoted Smurfit Kappa is to sustainability.

Sustainability is a key business driver for Smurfit Kappa. Smurfit Kappa Benelux realised it would benefit its employees to know more about its sustainability strategy and successful examples. The Smurfit Kappa Sustainability Academy was set up to inspire them, but also to give them sufficient knowledge about sustainability to be able to interact with customers and suppliers, and to differentiate Smurfit Kappa.

The organising team put together a very diverse programme featuring lectures, videos, a quiz and speeches. Different topics were covered such as sustainable packaging, Chain of Custody and FSC. At the end of the day the academy accomplished that employees gained more confidence to interact with customers on the subject of sustainability. The next step is to organise the Sustainability Academy for customers too.

In the meantime customers are made aware of Smurfit Kappa's sustainability efforts by an apple tree campaign. Corrugated apple trees were sent by post to communicate that Smurfit Kappa wants to build a sustainable future together and to draw attention to the then newly acquired Chain of Custody certification in the Benelux. As a follow-up account managers visited clients with a real mini apple tree, a striking way to kick off the dialogue about sustainability. Our business language is English. We have worked with a leading language school for almost 10 years to run up to seven programmes a year to improve employees English language skills. There are also many additional locally delivered programmes which are often the first step in developing language skills. In 2014 a significant emphasis was placed on English as a development objective for a number of employees. As part of this, a new e-learning tool was made available across the Group. Provided in collaboration with Education First (EF), the language skills of all non-native English speaking managers (approx. 1,100) were assessed according to an internationally recognised scale. Anyone who was found to be below the 'Upper Intermediate' level is now engaged in training to help improve their level of English.

Overall in 2014, each employee spent 16 hours on average in training.

As in previous years, Smurfit Kappa continues to enjoy close ties with leading European and American Business Schools in the area of Executive Development.

### **Employee Demographics**

At the end of 2014, the Group had some 42,000 employees, including both our own employees as well as contracted labour.

Some 43% of our own employees are 40 years of age or under, with almost a third of the total between the age of 41 and 50 years.

More than 50% of our employees have been with us for 11 years or more, 9% have been with Smurfit Kappa for over 30 years.

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

68% of our workforce is involved in production and manufacturing activities categorised as direct labour. Employees engaged in management, administrative or clerical activities – such as sales and marketing, finance, human resources and procurement – are categorised as indirect labour activities.

Of our total workforce, 80% were employed in ten countries (Mexico, Germany, France, Venezuela, Netherlands, United Kingdom, Colombia, Spain, Italy and Sweden), with the





remaining 20% distributed between the other 22 countries where we have production and/or a sales and marketing presence.

In 2014, 17% of all Smurfit Kappa employees were female and 83% were male. Of the indirect labour positions, almost 36% are occupied by women.

In 2014, over 2% of our workforce took parental leave of which close to 60% returned to work after their parental leave period (male: 74%, female 51%).

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 reviewed the areas and roles where the retention level and further advancement of women has the greatest potential for success. We promote female participation in management training programmes such as the Advanced Management Development programme. Since 2010, the participation rate of women has increased from 11% to 24% in 2014.We also pay extra attention to female managers and high potentials when reviewing our succession plans.

During 2014 some 17 nationalities were represented at the most senior levels in the organisation. While our policy is to select the best person for a 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), which is appropriate to our business needs. In general, the composition of the Group's workforce typically reflects local ethnic diversity, thereby enhancing the bond with local communities.

Employee turnover in 2014 in the organisation was stable at a level of 4%. Retirements and the pursuit of other careers or interests were the main reasons for over 68% of departures of employees in 2014, while rationalisation and redundancies accounted for 13% of the departures. There were 1,826 new entrants to the Group during 2014, of which 40% were in the Americas, linked to our recent acquisitions.

### **Retired employees**

Our retirees have a special relationship with Smurfit Kappa and we are grateful for their contribution to our 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 help to maintain the bonds the pensioners enjoyed as working colleagues.»

# Our vision and priorities **People** continued





While most of the activities are managed by the pensioner associations themselves, there is also ongoing Group support at local level.

### **Works Councils**

Smurfit Kappa recognises the right of employees to freely associate and all Smurfit Kappa employees are free to join trade 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 which 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. During 2014 we had two regular EWC forums and four Select Committee meetings.

#### 🔍 Community Testimonia

### Fundación Smurfit Kappa México



### Children activity after school

Ecatepec is the most populous suburb of Mexico City and the 15th-most-populous suburb in the world. So many people, but only a few green areas for children to take part in sport. A problem that Fundación Smurfit Kappa México helped tackle.

In alliance with the Smurfit Kappa Foundation and Smurfit Kappa in Mexico, the Foundation created a football school to help the community and perhaps find the next Enrique Borja, Oswaldo Sánchez or Javier Hernández!

The grass roots facility's – and Smurfit Kappa's – real goal is to contribute to local children's development by promoting sportsmanship, fitness and competition. All fundamental building blocks for a healthy lifestyle. The sporting activities open opportunities to talk with children about related topics like nutrition, health, safety, bullying, self-esteem, and many other issues. By developing a health and sports conscious culture among the children, the project hopes to keep the kids away from crime.

There are two Smurfit Kappa companies located in Ecatepec. The Cerro Gordo Complex houses subsidiaries specialised in corrugated packaging and folding carton packaging.

The football facilities were built right behind the storage yard of the mill, where 1,700 students from surrounding elementary schools can make use of it, just like the 60 children from Smurfit Kappa employees. The school's first goal was to enrol 250 kids, kicking off on 6 December 2014 in the presence of more than 200 guests. Thereafter, relationships with local elementary schools were built to enable Smurfit Kappa to promote the football school to all local children.



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.

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
- early retirement where appropriate

Where the change has transnational implications, and/or decisions that will significantly impact on the interests of its employees in two or more EU member States, a consultation process with the

### Total employees by Gender



European Works Council must take place prior to any decision being made. This is in addition to local and country actions and consultations.

This set of actions, at the appropriate level, 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 period of notice, measured in terms of the time between the initial communications to the employees concerned and the introduction of the changes, ranges 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, continuing with the acquisition will be reconsidered.

There were four acquisitions during the course of 2014 and no such issues arose.

### Groupawards

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 2014 we recognised our mills, plants and employees in the following categories:

Companies of the Year and Health and Safety Awards »

### Management by Gender



# Our vision and priorities **People** continued

### **Engagement survey**

On October 1st, Smurfit Kappa launched its first Group-wide Employee Engagement Survey, 'MyVoice2014'.

Engagement is the state of emotional and intellectual involvement and commitment that leads people to do their best at work. It is expected (proven and recognised by a number of international researchers) that a company with engaged employees shows better results in the long term in a number of business areas such as higher growth, faster innovation and greater customer satisfaction, etc.

The engagement survey is a 'business tool' which offers each Smurfit Kappa business manager the opportunity of understanding the level of engagement of their direct population and strengths/areas of improvement in their organisation. Based on the outcomes of the analysis, all Smurfit Kappa business managers will have the opportunity to identify the actions that, if feasible and in accordance with their local strategy, can help make their organisation a better place to work. With MyVoice2014, Smurfit Kappa has offered to all its employees (permanent and temporary), in all its 32 countries to say what they really think about their working experience in Smurfit Kappa, using a questionnaire with 63 questions based on a tailor-made engagement model.

Official response rate for the entire Group is 80%, with high consistency across the organisation. We consider this as an excellent result, far above the initial expectations that were targeted around 60-65%.

A top-down approach has already been considered to ensure a smooth deployment of all the outcomes of the survey along the organisation. Reports will be provided to divisions, countries, all plants and mills in that sequence. It is a fundamental requirement of this process that all employees receive a transparent and clear report of the results and main outcomes of the survey of their operation.

During Q1/2015, following a bottom-up approach, each business manager will have to decide on an action plan for their organisation, in response to the main outcomes of the survey and in the context of the local strategies. A consolidation of all action plans at country and divisional level will then take place. It is also intended that we have an overall consolidation at Group level, with common organisation-wide trends to be addressed by company-wide actions, if required.

During 2015 all action plans will be implemented, and results analysed. It is planned to repeat the survey in late 2016 or early 2017 in order to track improvements and ensure an ongoing engagement process.

### **Community Involvement**

Smurfit Kappa is committed to creating and maintaining positive relationships with host communities in a socially responsible manner. We invest significantly in those communities contributing to their economic and social development. We also take into account the concerns and interests of the wider communities at national and international level. Community involvement builds trust and also serves as a link to issues close to us, such as the value of forests and

#### 🔍 Employee testimonial

### Alessandro Ferullo, Smurfit Kappa Anzio (Italy)



The GMIMP programme provides a valuable source of knowledge, strategy and experience shat can make the difference. The programme s a great opportunity to gain a clear insight into she Group, its strategy, its vision and its future.

The approach is really modern and provides all the right information necessary to change my mindset towards the goal of achieving success. The company makes a huge investment to ensure my future success. Smurfit Kappa is a customer-focused company and it is extremely determined to create value for both us and for our clients. A clear demonstration of that was in the analysis of our tools, our Research and Development Center, our approach to innovation and our aim to become the realleader of the future. I enjoyed the topics that were discussed during the programme, but the best result was the fantastic team spirit created by our lecturers and speakers. the education of (young) people. Local general managers are expected to represent the company as part of the local community and play a positive part in its development.

We focus on areas such as self-help initiatives, education and health programmes and we contribute through financial donations and through volunteering by local employees. Another key part of our approach is the work our foundations undertake and support.

Although no central record is kept of charitable donations by our operations, we estimate that as a Group close to €1 million was donated in cash and kind in 2014 on a wide range of activities, including education of children and research on areas such as biodiversity.

The Smurfit Kappa Foundation reached in 2014 the amount of €1.5 million it was able to commit in the three-year period 2011-2014. Other Smurfit Kappa foundations operating at national level donated approximately €3 million to educational, research, health and social inclusiveness projects and reached approximately 100,000 people.

### **Smurfit Kappa Foundation**

The Smurfit Kappa Foundation supports projects in the countries where we operate, with the focus being 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 Colombia, Germany, Ireland, the Netherlands and the UK.

The following initiatives have been recently assisted by the Foundation:

### **UK:Nechells**

The Nechells POD ('Place Of Dreams') is a 'Safe Haven' in the heart of Nechells in Birmingham, United Kingdom, where it is based in one of the most disadvantaged areas of the city. The goal of the POD is to develop children and young people as well as supporting the local community to raise aspirations, bring about social cohesion and develop community empowerment. Smurfit Kappa SSK is based in Birmingham and some of its employees are actively involved with this charity. One of the programmes which the Nechells POD organises is the Bookshare Project for young children and the Smurfit Kappa Foundation is now funding this.

The project involves giving every child in year one in the Nechells Education Action Zone schools a brand new book every month for a year. This gives every child their own mini library to share and enjoy with their family thus fostering a culture of reading by the children and their immediate families.

### The Richard Krajicek Foundation

The Richard Krajicek Foundation (RKF) is based in the Netherlands. This charitable foundation is involved with over 100 sport playgrounds in many municipalities throughout the country, including seven where Smurfit Kappa has operations. The playgrounds, which cater for different sports, are generally situated in parks in or near disadvantaged areas. »

#### 🔍 Employee testimonia

### **Udo Lück,** Smurfit Kappa Baden Karton (Germany)



The GMMP programme offers a deep insight into the Smurfit Kappa organisation and the future strategic direction of the company. I received a comprehensive mix of development tools in leadership as well as specific feedback on how to use my personal skills more effectively in context with team achievement.

In particular I appreciated meeting the senior management and receiving the presentation about their respective area of responsibility as well as their specific guidance to my leadership role. l highly value the opportunity to network with colleagues who are at a similar managerial function in an international context.

Overall I feel that through the programme I have gained a deeper understanding of Smurfit Kappa organisation, expanded my network inside the Group and gained valuable support to broaden my capabilities as a leader that I can directly apply at work.

# Our vision and priorities **People** continued

The Smurfit Kappa Foundation supports projects in the countries where we operate, with the focus being on projects involving young disadvantaged children in the areas of health and nutrition. The model of the RKF is that they organise the 'software': initiatives for new grounds, organisation, management, etc. and that the 'hardware': the playgrounds and facilities, are mostly provided by the local municipality. The local municipality also puts in place a sports leader at the playground.

The RKF, working with help of the sports leader, tries to find older youths with some potential, and offers them modest scholarships for further education and follow-up study: this is usually at second level. In return, the scholarship recipients have to devote time supervising and helping children at the playgrounds and in this role, they frequently become coaches and important mentors for the children.

The Smurfit Kappa Foundation has provided funding for 25 scholarships.

### Netherlands: Studying Mothers Support

In Rotterdam and other areas of the Netherlands, young single mothers who are claiming social security find it difficult to resume work and advance their careers through further study and training due to the high costs of childcare.

The Studying Mothers Support initiative, which was founded in 2006, specifically focuses on making a study-work-lifebalance possible for such mothers. In collaboration with a number of state agencies and NGOs, the programme provides free online/telephone expert advice as well as workshops and coaching sessions about the options available for education, training and care/childcare costs. In addition, in some cases they also provide finance directly to help with childcare costs for children up to seven years of age to enable the mothers to undertake courses of study or training. This structured reintegration programme helps to improve the chances of the participating mothers to re-enter the job market.



### People Health and safety



**Boundary:** Health and safety reporting applies to our own employees. When applicable to subcontracted labour workers this is specifically indicated.

### Commitment:

- Zero fatalities
- Safe behaviour and well-being: Promote reporting of near misses and pre-emptive action to prevent accidents
- Injuries: Reduce the lost-time and injury rate by 5% annually for the next five years (2013-2017)

Timeframe: Continuous

**Progress made:** No fatalities affecting employees across the Group in 2014. However, regrettably a subcontractor sustained a fatal injury.

The LTA frequency rate remained effectively flat compared to 2013, however the LTA severity rate increased by 11%.

In 2014, we witnessed more comprehensive accident reporting throughout the Group as a consequence of the special focus given to improving awareness of the precise reporting requirements within plant management and closer monitoring by divisional and group management.

Throughout 2014, progress was made throughout our operations in introducing a set of core practices deemed critical to creating a safer and healthier working environment.

Our perspective: The Total Recorded Incident Rate is being added to our existing suite of Group health and safety performance metrics. The TRIR metric does provide a more representative indicator of safety performance since it captures a larger pool of less serious injuries including restricted work cases and medical treatment cases in addition to lost time injury cases. Many of these less serious accidents are a good forecaster of more serious accident potential.

### Citizenship

**Boundary:** All Smurfit Kappa operations both in Europe and the Americas,

**Commitment:** Local management teams (mill/plant level) to comprise at least 90% local citizens in every country where we operate.

Timeframe: Continuous

**Progress made:** We believe local management teams comprise at least 90% local citizens in every country where we operate.

Our perspective: We believe it is very important that our business embraces local cultures, employing people from the community at all levels. Our goal is, therefore, to mainly hire local people where feasible.

### **Community involvement**

**Boundary:** The local communities or regions where we have the privilege to operate.

**Commitment:** Smurfit Kappa foundations to reach 100,000 people in local communities by 2020, spending at least €1 million per annum on the education of children and €1 million per annum on (scientific) research on areas like biodiversity.

Timeframe: Continuous

**Progress made:** By the end of 2014, Smurfit Kappa Foundation has dedicated 100% of its committable funds ( $\leq 1.5$  million) for the three-year period since 2011.

Close to  $\notin$ 4 million in charitable donations were made by the Group and its foundations operating at national level to activities including educational, research, health and social inclusiveness projects.

Our perspective: Our management teams in plants throughout the Group have undertaken local community initiatives over the past years ranging from charity fundraising to volunteering activities in local projects and activities.





# Supporting data

What is in this section	
nput/OutputEurope	
nput/Output the Americas	
Environmental data	
Paper and Board Mills Europe	
Operations total Europe	
Paper and Board Mills the Americas	
Operations total the Americas	
Total Group Operations	
Aanagement system certifications	
Employee, Health and Safety and Sourcing	

### Supporting data

## Input/Output 2014 Europe

Input	
Wood and fibre	
Wood <sup>(1)</sup>	5,151 ktonnes ar
Market virgin pulp	99 ktonnes ar
Other pulp	32 ktonnes ar
Recovered Paper	4,178 ktonnes ar
Paper or Board purchased	1,684 ktonnes ar
Plastic films, other plastic item (BIB)	21 ktonnes
Starch (all types)	249 ktonnes ar
Inorganic raw materials	234 ktonnes ar
Other organic raw materials	190 ktonnes ar

Energy	
Energy from fossil fuels	27,344 TJ
Energy from purchased biofuels	4,375 TJ
Electricity from grid	1,835 GWh

9 Mm <sup>3</sup>
8

Output		
Production		
Papers (All grades)	4,655 ktd	onnes
Corrugated Packaging*	4,609 ktd	onnes
Board and laminated Boards*	859 ktd	onnes
Converted Board*	286 kto	onnes
Sacks*	– kto	onnes
Other packaging	21 ktc	onnes
Emissions to air <sup>(3)</sup>		
CO <sub>2</sub> fossil	1,624 ktd	onnes
CO <sub>2</sub> biogenic	3,175 ktd	onnes
Dust from fuels	0.5 ktd	onnes
SO <sub>x</sub> from processes	0.6 ktd	onnes
NO <sub>x</sub> from processes	3.8 kto	onnes
Energy output		
Electricity to third party	320 GV	Vh
Thermal energy to third party	174 TJ	
Biomass sold	2,228 TJ	
Wastes		
Hazardous wastes	6.1 ktc	onnes
Non-hazardous Wastes sent to landfill	212 kto	onnes
Non-hazardous wastes recovered	318 kto	onnes
Other non-hazardous wastes	26 kto	onnes
Discharges to water		
Water released	82 Mr	m <sup>3</sup>
COD	26 kto	onnes
BOD	8.8 ktd	onnes
Total Suspended Solids	4.9 ktd	onnes
N	0.6 ktd	onnes
P	0.09 ktd	onnes

### Notes

(1) Wood & sawmill chips as delivered to the mill

(2) Water intake includes rainwater and waste water from another organisation

(3) Includes emissions from own production and energy sold to third parties
\* Partly produced with Smurfit Kappa paper or board

ktonnesar:kilotonnesasreceived

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 68-69. The latter pages show the energy consumption for the production of the paper or board manufactured.

1.1 ktonnes

### The Americas

Input	
Wood and fibre	
Wood <sup>(1)</sup>	1,016 ktonnes ar
Market virgin pulp	2.8 ktonnes ar
Other pulp	– ktonnes ar
Recovered Paper	1,187 ktonnes ar
Paper or Board purchased	373 ktonnes ar
Plastic films, other plastic item (BIB)	1.9 ktonnes
Starch (all types)	36 ktonnes ar
Inorganic raw materials	85 ktonnes ar
Other organic raw materials	55 ktonnes ar

Energy		
Energy from fossil fuels	16,592 TJ	
Energy from purchased biofuels	678 TJ	
Electricity from grid	703 GWh	

Water	
Water intake <sup>(2)</sup>	32 Mm <sup>3</sup>

Output	
Production	
Papers (All grades)	1,212 ktonnes
Corrugated Packaging*	1,105 ktonnes
Board and laminated Boards*	168 ktonnes
Converted Board*	64 ktonnes
Sacks*	53 ktonnes
Other packaging	1.8 ktonnes
Emissions to air <sup>(3)</sup>	
CO <sub>2</sub> fossil	1,058 ktonnes
CO <sub>2</sub> biogenic	544 ktonnes
Dust from fuels	0.09 ktonnes
SO <sub>x</sub> from processes	2.2 ktonnes

### Energy output

 $NO_x$  from processes

Electricity to third party	0.4 GWh
Thermal energy to third party	– TJ
Biomass sold	– TJ

Wastes	
Hazardous wastes	2.6 ktonnes
Non-hazardous Wastes sent to landfill	233 ktonnes
Non-hazardous wastes recovered	47 ktonnes
Other non-hazardous wastes	0.7 ktonnes

Discharges to water	
Water released	31 Mm <sup>3</sup>
COD	13 ktonnes
BOD	3.3 ktonnes
Total Suspended Solids	5.0 ktonnes
Ν	0.2 ktonnes
P	0.03 ktonnes

### Notes

(1) Wood as delivered to the mill

(2) Water intake includes rainwater and waste water from another operation

(3) Includes emissions from own production and energy sold to third parties
\* Partly produced with Smurfit Kappa paper or board

ktonnes ar: kilotonnes as received

The table reports total energy consumption of the sites, 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 page 71. The latter pages show the energy consumption for the production of the paper or board manufactured.

# Paper and Board Mills Europe Environmental data 2014

Production     Kannes     Add     109     465     973     62     311     411     75     472     200     72       Production     Kannes     64     109     465     973     62     311     411     75     472     205     72       Conspensation     CWH     155     64     350°     350     - <t< th=""><th></th><th></th><th>Nettingsdorfer, Austria</th><th>Navarra, Spain</th><th>Cellulose du Pin, France</th><th>Piteå, Sweden</th><th>Morava, Czech Republic</th><th>CD Haupt, Germany<sup>(s)</sup></th><th>Hoya, Germany<sup>isi</sup></th><th>Viersen, Germany</th><th>Zülpich, Germany</th><th>Mengibar, Spain</th><th>Alfa D'Avignon, France</th><th></th></t<>			Nettingsdorfer, Austria	Navarra, Spain	Cellulose du Pin, France	Piteå, Sweden	Morava, Czech Republic	CD Haupt, Germany <sup>(s)</sup>	Hoya, Germany <sup>isi</sup>	Viersen, Germany	Zülpich, Germany	Mengibar, Spain	Alfa D'Avignon, France	
Productionktone43410946570362311711712205723Electricity			bkl, tl	tl, mg paper	bkl, wtkl, wttl	bkl, wtkl, wttl	tl, fl	wttl, sb, fl, tl	fl, tl, cart	Ę	A, tl	fl, tl, wttl	¢	
Energy     Image: Constraint of the second	Production	ktonnes	434	109	465	703	62	311	411	75	472	205	72	
Electricity     Image: Conjenerated     Conjene	Energy													
Co-generated GWh 155 6.4 330° 330 - 67 110 - 164 107 - 60 For supply GWh 000 7 7	Electricity													
Self-generated     GWh     0     -     -     -     -     -     -     -     -     0.01       Grid supply     GWh     139     75     66     274     20     29     57     23     26     - <sup>JUN</sup> 28       Total electricity     GWh     139     396     604     22     29     57     23     26     - <sup>JUN</sup> 28       Total electricity     GWh     294     135     302     1.55     2.21     319     3.006     1.75     370       Total fuels     TJ     1.185     21.57     578     123     302     1.519     3.006     1.75     370       Total fuels     TJ     4.647     2.547     9.361     10.455 <sup>IUN</sup> 311     1.589     2.367     319     3.291     1.519     370       Total water <sup>IM</sup> Mm <sup>3</sup> 4.8     8.2     34     0.4     0.5     -     -     1.7     1.6     0.6     0.6     0.6     0.6     0	Co-generated	GWh	155	64	330(1)	330	-	67	110	-	164	107	-	
Hydro power GWh 0.00 1.4 0.2	Self-generated	GWh	-	-	-	-	-	-	-	-	-	-	0.01	
Grid supply     GWh     139     75     66     274     20     29     57     23     26 $-^{c0}$ 28       Total electricity     GWh     234     139     396     604     22     96     167     23     190     107     28       Fuelusage     V     V     1185     215     578     10.32     10.0     54     77     -     284     45     -       Foreinsine     TJ     4.647     2.547     9.561     10.455%     302     1.535     2.291     319     3.006     1.475     370       Water withdrawal     V     4.647     2.547     9.561     10.455%     311     1.589     2.367     319     3.006     1.475     370       Water withdrawal     V     4.68     8.2     3.44     0.4     1.2     2.4     0.3     2.1     1.7     0.6       Grid     Mm <sup>4</sup> 1.3     4.8     9.7     3.4     0.4     1.2     2.4 <th< td=""><td>Hydro power</td><td>GWh</td><td>0.00</td><td>-</td><td>-</td><td>-</td><td>1.4</td><td>0.2</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td></td></th<>	Hydro power	GWh	0.00	-	-	-	1.4	0.2	-	-	-	-	-	
Total electricity   GWh   294   139   396   604   22   96   167   23   190   107   28     Biofuels   TJ   3,462   2,331   8,783   10,352   10   54   77   -   284   45   -     Fossifiuels   TJ   1,185   215   578   123   302   1,535   2,291   319   3,006   1,475   370     Total fuels   TJ   4,467   2,547   9,361   10,455%   311   1,589   2,367   319   3,291   1,519   370     Total fuels   Mm <sup>3</sup> 13   4.8   8,2   34   0,4   0,5   -   -   1,7   1,6   0,6     Ground   Mm <sup>3</sup> 0.6   0.00   0.02   0.07   0.00   0.01   0.01   0.06   -   <	Grid supply	GWh	139	75	66	274	20	29	57	23	26	_(2)	28	
Fuel usage     Image of the second state of the se	Total electricity	GWh	294	139	396	604	22	96	167	23	190	107	28	
Biofuels TJ 3,462 2,331 8,783 10,32 10 54 77 - 284 45 - Fossilfuels TJ 4,647 2,547 9,361 10,455 <sup>(3)</sup> 311 1,589 2,367 319 3,291 1,519 370 Totalfuels TJ 4,647 2,547 9,361 10,455 <sup>(3)</sup> 311 1,589 2,367 319 3,291 1,519 370 Totalfuels TJ 4,647 2,547 9,361 10,455 <sup>(3)</sup> 311 1,589 2,367 319 3,291 1,519 370 Surface Mm <sup>3</sup> 1 3 4.8 8,2 34 0,4 0.5 1,7 1,6 0,6 Ground Mm <sup>3</sup> 0,09 - 0,00 0,7 2,2 0,3 0,4 Grid Mm <sup>3</sup> 0,6 0,00 0,02 0,07 0,00 - 0,16 0,01 0,01 0,06 - Totalwater <sup>(4)</sup> Mm <sup>3</sup> 1 3 4.8 9,7 34 0,4 1,2 2,4 0,3 2,1 1,7 0,6 Discharges	Fuel usage													
Fossificities     TJ     1.185     215     578     123     302     1.555     2.291     319     3.006     1.475     370       Total fuels     TJ     4.647     2.547     9.361     10.455 <sup>50</sup> 311     1.589     2.367     319     3.291     1.519     370       Water withdrawal     -     -     0.9     -     0.00     0.7     2.2     0.3     0.4     -     -     -     -     -     0.9     -     0.00     0.01     0.01     0.06     -     -     -     -     -     0.9     -     0.00     0.01     0.01     0.06     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     0.6     0.01     0.01     0.06     -     -     -     -     -     -     -     -     0.6     0.10     0.00     0.0     0.1     1.17     0.6     0.29     1.18     0.1	Biofuels	TJ	3,462	2,331	8,783	10,332	10	54	77	-	284	45	-	
Total fuels     TJ     4,647     2,547     9,361     10,455 <sup>33</sup> 311     1,589     2,367     319     3,291     1,519     370       Water withdrawal     Mater withdrawal     Mat	Fossil fuels	TJ	1,185	215	578	123	302	1,535	2,291	319	3,006	1,475	370	
Water withdrawal     Image: Construct of the second secon	Total fuels	TJ	4,647	2,547	9,361	10,455 <sup>(3)</sup>	311	1,589	2,367	319	3,291	1,519	370	
Surface   Mm³   13   4.8   8.2   34   0.4   0.5   -   -   1.7   1.6   0.6     Ground   Mm³   -   -   0.9   -   0.00   0.7   2.2   0.3   0.4   -   -     Grid   Mm³   0.06   0.00   0.02   0.07   0.00   -   0.16   0.01   0.01   0.06   -     Olscharges   C   C   C   C   C   C   C   C   C   C     Co_fossil direct   ktonnes   68   15   33   11   17   86   129   18   239   84   21     Co_fossil direct   ktonnes   564   22   4.1   4.7   12   14   27   11   12   -   1.7     Dust   tonnes   55   14   27   342   0.1   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0 <t< td=""><td>Water withdrawal</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Water withdrawal													
Ground   Mm <sup>3</sup> -   -   0.9   -   0.00   0.7   2.2   0.3   0.4   -   -     Grid   Mm <sup>3</sup> 0.06   0.00   0.02   0.07   0.00   -   0.16   0.01   0.01   0.06   -     Total water <sup>(4)</sup> Mm <sup>3</sup> 13   4.8   9.7   34   0.4   1.2   2.4   0.3   2.1   1.7   0.6     Discharges   Co. fossil indirect   ktonnes   68   15   33   11   17   86   129   18   239   84   21     Co, fossil indirect   ktonnes   30   2.2   4.1   4.7   12   14   2.7   11   12   -   1.7     Co, fossil indirect   ktonnes   364   258   940   1.154   0.8   4.1   6.8   -   25   6.4   1.7     Dust   tonnes   2.52   130   779   829   9.1   55   85   6.1   2.53   361   17      tonnes   3.1   <	Surface	Mm <sup>3</sup>	13	4.8	8.2	34	0.4	0.5	-	-	1.7	1.6	0.6	
Grid     Mm <sup>3</sup> 0.06     0.00     0.00     -     0.16     0.01     0.01     0.06     -       Total water <sup>40</sup> Mm <sup>3</sup> 13     4.8     9.7     34     0.4     1.2     2.4     0.3     2.1     1.7     0.6       Discharges     -     1.1     12     -     -     1.7     CO, biogenic ktonnes     364     258     940     1,154     0.8     4.1     6.8     -     253     3561     17       Dust     tonnes     31     115     40     34     1.6     0.2     4.1<	Ground	Mm <sup>3</sup>	-	-	0.9	-	0.00	0.7	2.2	0.3	0.4	-	-	
Total water**     Mm*     13     4.8     9.7     34     0.4     1.2     2.4     0.3     2.1     1.7     0.6       Discharges     Co.	Grid	Mm³	0.06	0.00	0.02	0.07	0.00	-	0.16	0.01	0.01	0.06	-	
Discharges     Image: Constraint of the constrai	Total water <sup>(4)</sup>	Mm³	13	4.8	9.7	34	0.4	1.2	2.4	0.3	2.1	1.7	0.6	
loar     Co.     Co. </td <td>Discharges</td> <td></td>	Discharges													
CO_tossil direct     ktonnes     68     15     53     11     17     86     129     18     239     84     21       CO_tossil indirect     ktonnes     30     22     4.1     4.7     12     14     27     11     12     -     1.7       CO_biogenic     ktonnes     354     258     940     1.154     0.8     4.1     6.8     -     25     6.4     1.7       Dust     tonnes     55     14     27     342     0.1     0.0     0.0     0.3     1.4     0.0       NO, as NO_     tonnes     31     115     40     34     1.6     0.2     41     0.2     112     47     7.7       So, as O_2     tonnes     31     115     40     31     0.3     0.3     1.8     0.2     -     1.3     0.5       Cooling water     Mm³     7.4     -     -     21     -     0.5     0.05     -     1.0     -	loair		<u> </u>	4.5			47	0.0	100	10	0.70	0.4	0.4	
CO2 rossil indirect     ktonnes     30     22     4.1     4.7     12     14     27     11     12     -     1.7       CO2 biogenic     ktonnes     364     258     940     1.154     0.8     4.1     6.8     -     25     6.4     1.7       CO2 biogenic     tonnes     55     14     27     342     0.1     0.0     0.0     0.0     0.0     3.14     0.0       NO, as NO2     tonnes     252     130     779     829     9.1     55     85     6.1     253     361     17       SO, as SO2     tonnes     31     115     40     34     1.6     0.2     4.1     0.2     112     47     7.7       Towater     Mm³     5.3     4.5     9.9     13     0.3     0.3     1.8     0.2     -     1.3     0.5       COD     tonnes     7.790     277     4.669     3.379     34     86     260     N/A     -	CO <sub>2</sub> fossil direct	ktonnes	68	15	33	11	1/	86	129	18	239	84	21	
CO2 biogenic     ktonnes     354     258     940     1,154     0.8     4.1     6.8     -     25     6.4     1.7       Dust     tonnes     55     14     27     342     0.1     0.0     0.0     0.0     0.3     1.4     0.0       NO, as NO2     tonnes     252     130     779     829     9.1     55     85     6.1     253     361     17       SO, as SO2     tonnes     31     115     40     34     1.6     0.2     4.1     0.2     112     47     7.7       Towater     Mm³     5.3     4.5     9.9     13     0.3     0.3     1.8     0.2     -     1.3     0.5       Cooling water     Mm³     7.4     -     -     21     -     0.5     0.05     -     1.0     -     -     -     605     1.9     4.8     10     N/A     -     227     53       BOD     tonnes     7.790	CO <sub>2</sub> fossil indirect	ktonnes	30	22	4.1	4./	12	14	27	11	12	-	1./	
Dust     tonnes     55     14     27     342     0.1     0.0 <td></td> <td>ktonnes</td> <td>364</td> <td>258</td> <td>940</td> <td>1,154</td> <td>0.8</td> <td>4.1</td> <td>6.8</td> <td>-</td> <td>25</td> <td>6.4</td> <td>1./</td> <td></td>		ktonnes	364	258	940	1,154	0.8	4.1	6.8	-	25	6.4	1./	
NO, as NO2     tonnes     252     150     7/9     829     9.1     55     85     6.1     253     561     17       SO, as SO2     tonnes     31     115     40     34     1.6     0.2     4.1     0.2     112     47     7.7       To water     Mm³     5.3     4.5     9.9     13     0.3     0.3     1.8     0.2     -     1.3     0.5       Cooling water     Mm³     7.4     -     -     21     -     0.5     0.05     -     1.0     -     -       COD     tonnes     7.790     277     4.669     3.379     34     86     260     N/A     -     227     53       BOD     tonnes     4.146     40     1.221     656     1.9     4.8     10     N/A     -     16     5.5       Total Suspended Solids     tonnes     3.4     0.9     79     76     5.7     0.2     22     N/A     -     1.6<	Dust	tonnes	55	170	27	342	0.1	0.0	0.0	0.0	0.5	1.4	0.0	
SO <sub>4</sub> as SO <sub>2</sub> tornes     S1     115     40     34     1.6     0.2     4.1     0.2     112     47     7.7       To water     Mm³     5.3     4.5     9.9     13     0.3     0.3     1.8     0.2     -     1.3     0.5       Cooling water     Mm³     7.4     -     -     21     -     0.5     0.05     -     1.0     -     -     -       COD     tonnes     7.790     277     4.669     3.379     34     86     260     N/A     -     227     53       BOD     tonnes     4.146     40     1.221     656     1.9     4.8     10     N/A     -     166     5.5       Total Suspended Solids     tonnes     39     7.9     76     5.7     0.2     22     N/A     -     28     13       Total N     tonnes     3.4     0.9     21     19     0.4     0.2     1.5     N/A     -     1.6 <td><math>\frac{NO_x as NO_2}{SO_2 as SO_2}</math></td> <td>tonnes</td> <td>252</td> <td>130</td> <td>//9</td> <td>829</td> <td>9.1</td> <td>55</td> <td>85</td> <td>6.1</td> <td>253</td> <td>361</td> <td>1/</td> <td></td>	$\frac{NO_x as NO_2}{SO_2 as SO_2}$	tonnes	252	130	//9	829	9.1	55	85	6.1	253	361	1/	
To water   Mm <sup>3</sup> 5.3   4.5   9.9   13   0.3   0.3   1.8   0.2   -   1.3   0.5     Cooling water   Mm <sup>3</sup> 7.4   -   -   21   -   0.5   0.05   -   1.0   -   -   -   0.5   0.05   -   1.0   -   -   -   -   0.5   0.05   -   1.0   -   -   -   -   -   0.5   0.05   -   1.0   -   -   -   -   -   -   -   -   -   -   0.5   0.05   -   1.0   -   1.13   MA   -   1.6   2.0   -	$SO_x as SO_2$	tonnes	51	115	40	54	1.6	0.2	4.1	0.2	112	47	1.1	
Process water   Mm   3.3   4.3   9.9   13   0.3   0.3   1.8   0.2   Image: Constraint of the straint	Drocoss water	Mm <sup>3</sup>	ΕZ	1 E	0.0	1 7	0.7	0.7	1 0	0.2		1 Z	0.5	
Cooling water   Print   7.4   P   2   21   P   0.3   0.03   P   1.0   P   P     COD   tonnes   7.790   277   4.669   3.379   34   86   260   N/A   -   227   53     BOD   tonnes   4.146   40   1.221   656   1.9   4.8   10   N/A   -   16   5.5     Total Suspended Solids   tonnes   633   97   613   634   6.2   2.5   45   N/A   -   16   5.5     Total Suspended Solids   tonnes   3.9   7.9   79   76   5.7   0.2   22   N/A   -   28   13     Total N   tonnes   3.4   0.9   21   19   0.4   0.2   1.5   N/A   -   1.6   2.0   3.0     Solid wastes   tonnes   21.384   26.025   42.735   30.995   9.253   15.701   34.479   8.289   20.093   35.299   3.441     Landfill   tonnes   3.719	Cooling water	Mm <sup>3</sup>	5.5	4.3	9.9	21	0.5	0.5	1.0	0.2	1.0	1.5	0.5	
COD   tonnes   7,730   277   4,803   3,779   34   60   200   N/A   -   227   33     BOD   tonnes   4,146   40   1,221   656   1.9   4.8   10   N/A   -   16   5.5     Total Suspended Solids   tonnes   633   97   613   634   6.2   2.5   45   N/A   -   79   5.9     Total N   tonnes   39   7.9   79   76   5.7   0.2   22   N/A   -   28   13     Total P   tonnes   3.4   0.9   21   19   0.4   0.2   1.5   N/A   -   1.6   2.0     Solid wastes   tonnes   21.384   26.025   42.735   30.995   9.253   15.701   34.479   8.289   20.093   35.299   3.441     Landfill   tonnes   3.719   9.985   9.186   1.142   3.824   -   19   -   9.630   35.161   3.383     Material non-hazardous   wastes   tonnes		toppos	7.4	277	1 6 6 0	Z Z Z Z Z		0.5	260		1.0	227		
DOD   tonnes   4,140   40   1,221   030   1.3   4.3   10   1/V/A   -   10   5.3     Total Suspended Solids   tonnes   633   97   613   634   6.2   2.5   45   N/A   -   79   5.9     Total Suspended Solids   tonnes   39   7.9   79   76   5.7   0.2   22   N/A   -   28   13     Total P   tonnes   3.4   0.9   21   19   0.4   0.2   1.5   N/A   -   1.6   2.0     Solid wastes   tonnes   21.384   26.025   42.735   30.995   9.253   15.701   34.479   8.289   20.093   35.299   3.441     Landfill   tonnes   3.719   9.985   9.186   1.142   3.824   -   19   -   9.630   35.161   3.383     Material Mon-hazardous   tonnes   3.719   9.985   9.186   1.142   3.824   -   19   -   9.630   35.161   3.383     Material Mones <td>BOD</td> <td>tonnes</td> <td>1,190</td> <td>277</td> <td>4,009</td> <td>5,579</td> <td>10</td> <td>1.8</td> <td>10</td> <td>N/A</td> <td></td> <td>16</td> <td>55</td> <td></td>	BOD	tonnes	1,190	277	4,009	5,579	10	1.8	10	N/A		16	55	
Total N   tonnes   39   7.9   79   76   5.7   0.2   22   N/A   -   28   13     Total N   tonnes   3.4   0.9   21   19   0.4   0.2   1.5   N/A   -   28   13     Total P   tonnes   3.4   0.9   21   19   0.4   0.2   1.5   N/A   -   28   13     Solid wastes   tonnes   3.4   0.9   21   19   0.4   0.2   1.5   N/A   -   28   13     Total non-hazardous   wastes   tonnes   21.384   26.025   42.735   30.995   9.253   15.701   34.479   8.289   20.093   35.299   3.441     Landfill   tonnes   3.719   9.985   9.186   1.142   3.824   -   19   -   9.630   35.161   3.383     Recovery   tonnes   17.629   16.039   33.549   29.853   5.428   15.701   33.855   8.289   1.170   138   53     Other   ton	Total Suspanded Solids	tonnos	4,140	40	617	634	6.2	4.0	10			70	5.0	
Total P   tonnes   3.4   0.9   21   19   0.4   0.2   1.5   N/A   -   2.8   1.5     Solid wastes   50   3.4   0.9   21   19   0.4   0.2   1.5   N/A   -   1.6   2.0     Solid wastes   50   21.384   26.025   42.735   30.995   9.253   15.701   34.479   8.289   20.093   35.299   3.441     Landfill   tonnes   3.719   9.985   9.186   1.142   3.824   -   19   -   9.630   35.161   3.383     Recovery   tonnes   17.629   16.039   33.549   29.853   5.428   15.701   33.855   8.289   1.170   138   53     Other   tonnes   3.6   -   -   -   -   9.293   -   4.3     Hazardous wastes   tonnes   200   82   560   271   4.0   21   36   4.8   39   30   6.9	Total N	tonnos	20	70	70	76	5.7	0.2	43			28	17	
Solid wastes   Connes   21,384   26,025   42,735   30,995   9,253   15,701   34,479   8,289   20,093   35,299   3,441     Total non-hazardous wastes   tonnes   21,384   26,025   42,735   30,995   9,253   15,701   34,479   8,289   20,093   35,299   3,441     Landfill   tonnes   3,719   9,985   9,186   1,142   3,824   -   19   -   9,630   35,161   3,383     Recovery   tonnes   17,629   16,039   33,549   29,853   5,428   15,701   33,855   8,289   1,170   138   53     Other   tonnes   36   -   -   -   -   605   -   9,293   -   4.3     Hazardous wastes   tonnes   200   82   560   271   4.0   21   36   4.8   39   30   6.9		tonnes	39 Z A	7.9	21	10	0.4	0.2	1.5	N/A		1.6	2.0	
Total non-hazardous wastes     tonnes     21,384     26,025     42,735     30,995     9,253     15,701     34,479     8,289     20,093     35,299     3,441       Landfill     tonnes     3,719     9,985     9,186     1,142     3,824     -     19     -     9,630     35,161     3,383       Recovery     tonnes     17,629     16,039     33,549     29,853     5,428     15,701     33,855     8,289     1,170     138     53       Other     tonnes     36     -     -     -     -     605     -     9,293     -     4.3       Hazardous wastes     tonnes     200     82     560     271     4.0     21     36     4.8     39     30     6.9	Solid wastes	LUITIES	5.4	0.9	21	19	0.4	0.2	1.J	11//4		1.0	2.0	
Wastes     tonnes     21,384     26,025     42,735     30,995     9,253     15,701     34,479     8,289     20,093     35,299     3,441       Landfill     tonnes     3,719     9,985     9,186     1,142     3,824     -     19     -     9,630     35,161     3,383       Recovery     tonnes     17,629     16,039     33,549     29,853     5,428     15,701     33,855     8,289     1,170     138     53       Other     tonnes     36     -     -     -     -     605     -     9,293     -     4.3       Hazardous wastes     tonnes     200     82     560     271     4.0     21     36     4.8     39     30     6.9	Total non-hazardous													
Landfill     tonnes     3.719     9.985     9.186     1.142     3.824     -     19     -     9.630     35,161     3.383       Recovery     tonnes     17,629     16,039     33,549     29,853     5,428     15,701     33,855     8,289     1,170     138     53       Other     tonnes     36     -     -     -     -     605     -     9,293     -     4.3       Hazardous wastes     tonnes     200     82     560     271     4.0     21     36     4.8     39     30     6.9	wastes	tonnes	21,384	26.025	42,735	30,995	9,253	15,701	34,479	8,289	20,093	35,299	3,441	
Recovery     tonnes     17,629     16,039     33,549     29,853     5,428     15,701     33,855     8,289     1,170     138     53       Other     tonnes     36     -     -     -     -     605     -     9,293     -     4,3       Hazardous wastes     tonnes     200     82     560     271     4,0     21     36     4.8     39     30     6.9	Landfill	tonnes	3.719	9,985	9,186	1.142	3.824		19		9.630	35.161	3.383	
Other     tonnes     36     -     -     -     -     605     -     9,293     -     4.3       Hazardous wastes     tonnes     200     82     560     271     4.0     21     36     4.8     39     30     6.9	Recoverv	tonnes	17.629	16.039	33,549	29.853	5.428	15.701	33.855	8.289	1,170	138	5.3	
Hazardous wastes tonnes 200 82 560 271 4.0 21 36 4.8 39 30 6.9	Other	tonnes	36	-	_	-	-	_	605	_	9,293	-	4.3	
	Hazardous wastes	tonnes	200	82	560	271	4.0	21	36	4.8	39	30	6.9	

### Notes

(1) CHP partly or totally outsourced

(2) Electricity exported by CHP (3) Part of heat exported outside the Group

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

(5) Both C.D. Haupt and Hoya consist of two mills on one site. Data are aggregated data per site

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

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

Supporting data

	i triangle intervention inte	<pre></pre>	збра сене		Current control of the second hole of the second ho	Papuko XSS XX 223 223 223 223 223 223 223 223 223 2	buendary buend	Jiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	255 255 255 255 255 1.092 1.15 225 1.092 1.095 1	<b>57</b> <b>57</b> <b>57</b> <b>57</b> <b>57</b> <b>57</b> <b>57</b> <b>57</b>
03	0	0.01	37	12	0.01		2.2		10	
0.3	0.	0.01	0.00	1.2	0.01	1.0	2.2	1 7	1.9	0.5
0.01	0.0	0.2	0.00	-	0.04	0.1	0.2	1.7	0.01	0.5
0.01	0.0	0.02	3.7	1.2	0.03	1 1	2.3	1 7	1 9	0.00
0.5	0.	0.0	5.7	1.2	0.07	1.1	2.5	1.1	1.5	0.0
						_				
17	1	21	87	59	0.27	75	163	65	61	17
5.0	- 5.	-	5.5	-	1.4	-	15	15	6.0	1.4
-		-	-	-	-	3.6	11	2.0	26	1.8
0.00	0.0	0.00	0.3	0.00	0.0	0.0	0.0	0.0	0.2	0.4
5.8	5.	20	69	23	0.16	134	133	50	62	17
0.04	0.0	0.04	9.1	0.50	0.14	1.3	18	0.5	2.0	3.0
0.2	0	0.2	1 3	0.9	0.01	0.8	16	15	16	04
-		-	2.2	0.08	-	-	-	-	-	- 0.7
33		22	162	118	-	3,829	284	133	866	37
1.2	1.	0.7	11	8.4	_	1,269	9.2	12	158	6.4
3.8	3.	3.0	26	6.6	-	1,629	26	20	479	9.3
1.3	1.	1.1	1.5	0.69	-	111	24	12	97	2.1
0.1	0.	0.1	0.2	0.07	-	15.9	2.4	1.5	16	0.2
						_				
2.074	2.07	4,817	18,482	12,431	10.747	25,943	36,258	22,545	30,356	5.044
		.,01/	52	-	1.040	20,926	-	6.3.3	25,922	1.119
2,074	2,07	4,817	18,430	314	9,707	5,017	36,106	21,912	4,433	3,922
-	•	-	-	12,117	0.16	-	153	-	-	3.8
					0.7.4	= 0	4.4	47	17	
2,074	2,07		4,817	18,430 4,817	314     18,430     4,817       12,117     -     -	9,707     314     18,430     4,817       0.16     12,117     -     -	5,017 9,707 314 18,430 4,817 - 0.16 12,117	36,106     5,017     9,707     314     18,430     4,817       153     -     0.16     12,117     -     -	21,912     36,106     5,017     9,707     314     18,430     4,817       -     153     -     0.16     12,117     -     -	4,433     21,912     36,106     5,017     9,707     314     18,430     4,817       -     -     153     -     0.16     12,117     -     -

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

mg paper: machine glazed paper sb: solid board tl: testliner

wtkl: white top kraftliner wttl: white top testliner N/A: not available

Supporting data

# Operations total Europe Environmental data 2014

Pager & board     corrugated operations     operations operations     operations operations       Production     ktomes     5,513     4,334     S80     2,487       Energy     Corregenerated     S90     2,487     Corregenerated     S90     2,487       Electricity     Corregenerated     GWh     1.863     6.6       1,869       Self-generated     GWh     0.001       6.00       6.00       Grid supply     GWh     1.041     500     87     3.44     3.507       Total feet/tricity     GWh     2.210     S07     87     3.44     3.507       Total feet/tricity     GWh     2.2472     3.987     1718     92     2.65,728       Total fuels     TU     2.2472     3.987     1718     92     2.65,681       Vater withdrawal     U     S0.00     Coresitiant etc.     80     3.00.00     0.01     82       Surface     Mm <sup>3</sup> 8.3     0.3     0.00     0.				Integrated	Other		
millsoperationsop			Paper & board	corrugated	packaging	Other	Total
Production     ktonnes     5,51     4,334     580     2,487       Energy </th <th></th> <th></th> <th>mills</th> <th>operations</th> <th>operations</th> <th>operations</th> <th>operations</th>			mills	operations	operations	operations	operations
Energy     Image: Constraint of the second	Production	ktonnes	5,513	4,334	580	2,487	
Electricity     Image: Consider and the second se	Energy						
Co-generated     GWh     1.863     6.6     -     -     -     -     0.01       Hydro power     GWh     6.0     -     -     -     6.0       Grid supply     GWh     1.041     500     87     3.4     3.507       Fuel usage     -     -     -     -     28,953       Biofuels     TJ     28,831     122     -     -     28,953       Total electricity     GWh     2,472     3,987     1.78     92     26,728       Total fuels     TJ     51,303     4.109     1.78     92     26,728       Total wear with drawal     -     -     -     28,953     5,661       Water with drawal     0.0     1.78     92     25,561     3,534     1.6     0.1     0.01     2.2       Surface     Mm <sup>3</sup> 0.8     1.3     0.09     0.01     2.2     10     1.6     3.1     1.01     89     Discharges     -     -     3.154     1.589	Electricity						
Self-generated     GWh     0.01        0.01       Grid supply     GWh     1.041     500     87     3.4     1,631       Total electricity     GWh     2.910     507     87     3.4     1,631       Total electricity     GWh     2.910     507     87     3.4     1,631       Total electricity     GWh     2.910     507     87     3.4     1,631       Biofiels     TJ     28.831     122       28,653       Total fuels     TJ     28.831     4.109     178     92     26,528       Total fuels     TJ     51.303     4.109     178     92     26,5681       Water withdrawal     -     -     -     77     Ground     Mm <sup>4</sup> 8.3     0.03     0.02     8.7       Surface     Mm <sup>4</sup> 8.7     1.6     0.1     0.01     8.8     1.89       Discharges     -     -     -     3.3.3     4.5 <td< td=""><td>Co-generated</td><td>GWh</td><td>1,863</td><td>6.6</td><td>-</td><td>-</td><td>1,869</td></td<>	Co-generated	GWh	1,863	6.6	-	-	1,869
Hydro power     GWh     6.0     -     -     -     6.0       Oridi supply     GWh     1.041     500     87     3.4     1,631       Total electricity     GWh     2.910     507     87     3.4     3,507       Fuel usage     -     -     28,953     505     11     22,872     3,987     178     92     26,728       Total fuels     TJ     22,472     3,987     178     92     25,681       Total fuels     TJ     13,103     4,109     178     92     55,681       Water with/drawal     -     -     -     77     0.03     .     77       Ground     Mm <sup>4</sup> 0.8     0.3     0.009     0.01     2.2     7       Grid water <sup>(11)</sup> Mm <sup>4</sup> 0.8     1.3     0.09     0.01     2.2     7       Grid water <sup>(11)</sup> Mm <sup>4</sup> 0.8     1.3     0.09     0.01     2.2       Total water <sup>(11)</sup> Mm <sup>4</sup> 0.8     1.3	Self-generated	GWh	0.01	-	-	-	0.01
Grid supply     GWh     1.041     500     87     3.4     1,631       Total electricity     GWh     2.910     507     87     3.4     3,507       Prelusage     I     28,851     122       28,955       Total fuels     TJ     28,851     122       28,955       Total fuels     TJ     28,472     3,987     178     92     25,681       Straface     Mm <sup>3</sup> 151,303     4.109     178     92     55,681       Water withdrawal	Hydro power	GWh	6.0	-	-	-	6.0
Total leschicity     GWh     2.910     507     87     3.4     3,507       Fuel usage     TJ     28,831     1.22     -     -     28,953       Fossi fuels     TJ     22,472     3,987     1.78     92     26,5728       Total fuels     TJ     22,472     3,987     1.78     92     25,661       Water withdrawal     T     0.03     0.87     77     Ground     Mm <sup>3</sup> 73     0.03     0.01     2.22       Ground     Mm <sup>3</sup> 8.3     0.3     0.02     .87     77       Ground     Mm <sup>3</sup> 8.7     1.6     0.1     0.01     89       Discharges	Grid supply	GWh	1,041	500	87	3.4	1,631
Fuel usage     Image: Control of the second secon	Total electricity	GWh	2,910	507	87	3.4	3,507
Biofuels     TJ     28.831     122       28,953       Fossifuels     TJ     22,472     3,987     178     92     25,568       Wate withdrawal	Fuel usage						
Fossil fuels     TJ     22,472     3,987     178     92     26,728       Total fuels     TJ     51,303     4,109     178     92     55,681       Water withdrawal         77       Ground     Mm <sup>3</sup> 77     0.03     0.02     8.7       Ground     Mm <sup>4</sup> 8.3     0.03     0.02     8.7       Total water <sup>610</sup> Mm <sup>4</sup> 8.7     1.66     0.1     0.01     89       Discharges          77       CO, fossil direct     ktonnes     1.344     229     10     6.68     1.589       Co, fossil direct     ktonnes     1.344     229     10     6.68     1.589       Co, fossil direct     ktonnes     3.140     13     -     -     3.154       Dust     tonnes     3.672     8.3     3.3     4.5     3.762       Co, as Co,     tonnes     3.672     8.3     3.3     4.5     3.76	Biofuels	TJ	28,831	122	-	-	28,953
Total fuels     TJ     51,303     4.109     1.78     92     55,681       Water withdrawal	Fossil fuels	TJ	22,472	3,987	178	92	26,728
Water withdrawal     Image of the state of the	Total fuels	TJ	51,303	4,109	178	92	55,681
Surface     Mm³     77     0.03     0.02     77       Ground     Mm³     8.3     0.3     0.02     8.7       Ground     Mm³     8.3     0.3     0.02     8.7       Ground     Mm³     0.8     1.13     0.09     0.01     2.2       Total water <sup>(1)</sup> Mm³     87     1.6     0.1     0.01     89       Discharges	Water withdrawal						
Ground     Mm <sup>3</sup> 8.3     0.3     0.02     8.7       Grid     Mm <sup>3</sup> 0.8     1.3     0.09     0.01     2.2       Total water <sup>10</sup> Mm <sup>3</sup> 87     1.6     0.1     0.01     89       Discharges	Surface	Mm <sup>3</sup>	77	0.03			77
Grid     Mm³     0.8     1.3     0.09     0.01     2.2       Total water <sup>13</sup> Mm³     87     1.6     0.1     0.01     89       Discharges     Co     Co     Co     Co     Co       To air     Co, fossil indirect     ktonnes     1,344     229     10     6.8     1,589       CO, fossil indirect     ktonnes     2.12     161     3.1     1.4     406       Co, bisgin indirect     ktonnes     3.140     1.3     -     -     3,154       Dust     tonnes     3.672     83     3.3     4.5     3,762       SO, as SO_     tonnes     5.20     4.5     1.7     4.2     571       Towater     To     -     -     49     0.6     0.05     -     499       Cooling water     Mm³     32     0.1     0.00     -     32       COD <sup>10</sup> tonnes     24.478     1.736     -     489       CoD <sup>20</sup> tonnes     5.30	Ground	Mm³	8.3	0.3	0.02		8.7
Total water <sup>(1)</sup> Mm <sup>3</sup> 87     1.6     0.1     0.01     89       Discharges     Co     Co     Co     Co     Co       To air     Co     Sisti direct     ktonnes     1.344     229     10     6.8     1,589       CO <sub>2</sub> fossil indirect     ktonnes     2.12     16.1     3.1     1.4     406       CO <sub>2</sub> fossil indirect     ktonnes     3.140     1.3     -     -     -     3.154       Dust     tonnes     3.672     8.3     3.3     4.5     3.762       SO, as SO <sub>2</sub> tonnes     3.672     8.3     3.3     4.5     3.762       SO as SO <sub>2</sub> tonnes     5.20     4.55     1.7     4.2     571       Towater     Mm <sup>3</sup> 4.9     0.6     0.05     -     4.99       CoD <sup>(2)</sup> tonnes     8.379     4.63     2     4.651     2     2	Grid	Mm³	0.8	1.3	0.09	0.01	2.2
Discharges     Co.       To air     Co.       CO2, fossil direct     ktonnes       C02, fossil indirect     ktonnes       C02, fossil direct     ktonnes       Dust     131       Dust     tonnes       As NO2     tonnes       SO, as NO2     tonnes       SO, as SO2     tonnes       Process water     Mm³       Process water     Mm³       COD <sup>(2)</sup> tonnes       SO, as SO2     tonnes       Process water     Mm³       COD <sup>(2)</sup> tonnes       SO, as SO2     tonnes       SO, as SO2     tonnes       Process water     Mm³       COD <sup>(2)</sup> tonnes       SOBOP <sup>(2)</sup> tonnes       COD <sup>(2)</sup> tonnes       BOD <sup>(2)</sup> tonnes       Total N <sup>(2)</sup> tonnes       SO3     21       Total Supended Solids <sup>(2)</sup> tonnes       SO1     463       Total N <sup>(2)</sup> tonnes       SO3     21 <tr< td=""><td>Total water<sup>(1)</sup></td><td>Mm³</td><td>87</td><td>1.6</td><td>0.1</td><td>0.01</td><td>89</td></tr<>	Total water <sup>(1)</sup>	Mm³	87	1.6	0.1	0.01	89
To air     Image: Color of the second secon	Discharges						
CO2 fossil direct     ktonnes     1.344     229     10     6.8     1,589       CO2 fossil indirect     ktonnes     212     161     31     1.4     406       CO2 fossil indirect     ktonnes     3.140     13     -     -     -     3,154       Dust     tonnes     3.140     13     -     -     -     3,154       Dust     tonnes     3.672     83     3.3     4.5     3,762       SO, as SO2     tonnes     5.20     45     1.7     4.2     571       To water     -     -     -     -     49     0.0     -     49     0.00     -     32     0.1     0.00     -     32     0.1     0.00     -     32     0.1     0.00     -     32     0.1     0.00     -     32     26,213     3     34.5     3.53     34.5     3.53     34.5     3.53     34.5     3.53     34.5     3.50     26,213     30.00     -     32	To air						
CO2 fossil indirect     ktonnes     212     161     31     1.4     406       CO2 biogenic     ktonnes     3,140     13     -     -     3,154       Dust     tonnes     467     4.1     0.09     0.01     471       NOx as NO2     tonnes     3,672     83     3.3     4.5     3,762       SO, as SO2     tonnes     520     45     1.7     4.2     571       To water	CO <sub>2</sub> fossil direct	ktonnes	1,344	229	10	6.8	1,589
CO2 biogenic     ktonnes     3.140     13       3,154       Dust     tonnes     467     4.1     0.09     0.01     471       NQ, as NQ2     tonnes     3,672     83     3.3     4.5     3,762       SQ, as SQ2     tonnes     520     45     1.7     4.2     571       To water	CO <sub>2</sub> fossil indirect	ktonnes	212	161	31	1.4	406
Dust     tonnes     467     4.1     0.09     0.01     471       NO, as NO2     tonnes     3,672     83     3.3     4.5     3,762       SO, as SO2     tonnes     520     45     1.7     4.2     571       To water	CO <sub>2</sub> biogenic	ktonnes	3,140	13	-	-	3,154
NOx as NO2     tonnes     3,672     83     3.3     4.5     3,762       SOx as SO2     tonnes     520     45     1.7     4.2     571       To water     Mm³     49     0.6     0.05      49       Process water     Mm³     32     0.1     0.00      32       COD <sup>(2)</sup> tonnes     24,478     1,736      49       COD <sup>(2)</sup> tonnes     8,379     463      4,889       Total Suspended Solids <sup>(2)</sup> tonnes     4,452     407      4,859       Total N <sup>(2)</sup> tonnes     530     21       551       Total N <sup>(2)</sup> tonnes     87     0.7	Dust	tonnes	467	4.1	0.09	0.01	471
SO <sub>x</sub> as SO <sub>2</sub> tonnes     520     45     1.7     4.2     571       To water            571       Process water     Mm³     49     0.6     0.05     -     49       Cooling water     Mm³     32     0.1     0.00     -     32       COD <sup>(2)</sup> tonnes     24,478     1,736      26,213     8,841       BOD <sup>(2)</sup> tonnes     8,379     463       8,841       Total Suspended Solids <sup>(2)</sup> tonnes     4,452     407       4,859       Total N <sup>(2)</sup> tonnes     530     21       8,841       Total P <sup>(2)</sup> tonnes     87     0.7      87       Solid wastes     tonnes     509,599     27,360     7,314     11,966     556,239       Landfill     tonnes     203,627     5,382     1,812     873     211,694       Recovery     tonnes     283,760	NO <sub>x</sub> as NO <sub>2</sub>	tonnes	3,672	83	3.3	4.5	3,762
To water     Image: Constraint of the second secon	SO <sub>x</sub> as SO <sub>2</sub>	tonnes	520	45	1.7	4.2	571
Process water     Mm³     49     0.6     0.05      49       Cooling water     Mm³     32     0.1     0.00      32       COD <sup>[2]</sup> tonnes     24,478     1,736     26,213     26,213       BOD <sup>[2]</sup> tonnes     8,379     463     26,213     36,841       Total Suspended Solids <sup>[2]</sup> tonnes     4,452     407     463     4,859       Total Suspended Solids <sup>[2]</sup> tonnes     530     21     551     551       Total N <sup>[2]</sup> tonnes     87     0.7     87     87       Solid wastes     tonnes     87     0.7     87       Total P <sup>[2]</sup> tonnes     509,599     27,360     7,314     11,966     556,239       Landfill     tonnes     203,627     5,382     1,812     873     211,694       Recovery     tonnes     283,760     18,398     5,160     11,092     318,410       Other     tonnes     22,212     3,580     342     1.6     26,135 <td>To water</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	To water						
Cooling water     Mm³     32     0.1     0.00     -     32       COD <sup>(2)</sup> tonnes     24,478     1,736     26,213     26,213       BOD <sup>(2)</sup> tonnes     8,379     463     28,841     36,841       Total Suspended Solids <sup>(2)</sup> tonnes     4,452     407     463     4,859       Total Suspended Solids <sup>(2)</sup> tonnes     530     21     551     551       Total N <sup>(2)</sup> tonnes     87     0.7     87     551       Total P <sup>(2)</sup> tonnes     87     0.7     87     87       Solid wastes     tonnes     509,599     27,360     7,314     11,966     556,239       Landfill     tonnes     203,627     5,382     1,812     873     211,694       Recovery     tonnes     283,760     18,398     5,160     11,092     318,410       Other     tonnes     22,212     3,580     342     1.6     26,135       Hazardous wastes     tonnes     1,782     3,432     901	Process water	Mm³	49	0.6	0.05	-	49
COD <sup>[2]</sup> tonnes     24,478     1,736     26,213       BOD <sup>[2]</sup> tonnes     8,379     463     8,841       Total Suspended Solids <sup>[2]</sup> tonnes     4,452     407     463     4,859       Total Suspended Solids <sup>[2]</sup> tonnes     530     21     551     551       Total N <sup>[2]</sup> tonnes     87     0.7     87     87       Solid wastes     tonnes     87     0.7     87     87       Solid wastes     tonnes     509,599     27,360     7,314     11,966     556,239       Landfill     tonnes     203,627     5,382     1,812     873     211,694       Recovery     tonnes     283,760     18,398     5,160     11,092     318,410       Other     tonnes     22,212     3,580     342     1.6     26,135       Hazardous wastes     tonnes     1,782     3,432     901     1.0     6,117	Cooling water	Mm³	32	0.1	0.00	-	32
BOD <sup>(2)</sup> tonnes     8,379     463     8,841       Total Suspended Solids <sup>(2)</sup> tonnes     4,452     407     463     4,859       Total Suspended Solids <sup>(2)</sup> tonnes     530     21     551     551       Total N <sup>(2)</sup> tonnes     87     0.7     87     87       Solid wastes     tonnes     87     0.7     87     87       Solid wastes     tonnes     509,599     27,360     7,314     11,966     556,239       Landfill     tonnes     203,627     5,382     1,812     873     211,694       Recovery     tonnes     283,760     18,398     5,160     11,092     318,410       Other     tonnes     22,212     3,580     342     1.6     26,135       Hazardous wastes     tonnes     1,782     3,432     901     1.0     6,117	COD <sup>(2)</sup>	tonnes	24,478	1,736			26,213
Total Suspended Solids <sup>(2)</sup> tonnes     4,452     407     44,859       Total N <sup>(2)</sup> tonnes     530     21     551       Total P <sup>(2)</sup> tonnes     87     0.7     87       Solid wastes     tonnes     509,599     27,360     7,314     11,966     556,239       Landfill     tonnes     203,627     5,382     1,812     873     211,694       Recovery     tonnes     283,760     18,398     5,160     11,092     318,410       Other     tonnes     22,212     3,580     342     1.6     26,135       Hazardous wastes     tonnes     1,782     3,432     901     1.0     6,117	BOD <sup>(2)</sup>	tonnes	8,379	463			8,841
Total N <sup>[2]</sup> tonnes     530     21     551       Total P <sup>(2)</sup> tonnes     87     0.7     87       Solid wastes      509,599     27,360     7,314     11,966     556,239       Landfill     tonnes     203,627     5,382     1,812     873     211,694       Recovery     tonnes     283,760     18,398     5,160     11,092     318,410       Other     tonnes     22,212     3,580     342     1.6     26,135       Hazardous wastes     tonnes     1,782     3,432     901     1.0     6,117	Total Suspended Solids <sup>(2)</sup>	tonnes	4,452	407			4,859
Total P <sup>(2)</sup> tonnes     87     0.7     87       Solid wastes         87       Total non-hazardous wastes     tonnes     509,599     27,360     7,314     11,966     556,239       Landfill     tonnes     203,627     5,382     1,812     873     211,694       Recovery     tonnes     283,760     18,398     5,160     11,092     318,410       Other     tonnes     22,212     3,580     342     1.6     26,135       Hazardous wastes     tonnes     1,782     3,432     901     1.0     6,117	Total N <sup>(2)</sup>	tonnes	530	21			551
Solid wastes     Image: Constraint of the system     Solid wastes	Total P <sup>(2)</sup>	tonnes	87	0.7			87
Total non-hazardous wastestonnes509,59927,3607,31411,966556,239Landfilltonnes203,6275,3821,812873211,694Recoverytonnes283,76018,3985,16011,092318,410Othertonnes22,2123,5803421.626,135Hazardous wastestonnes1,7823,4329011.06,117	Solid wastes						
Landfilltonnes203,6275,3821,812873211,694Recoverytonnes283,76018,3985,16011,092318,410Othertonnes22,2123,5803421.626,135Hazardous wastestonnes1,7823,4329011.06,117	Total non-hazardous wastes	tonnes	509,599	27,360	7,314	11,966	556,239
Recovery     tonnes     283,760     18,398     5,160     11,092     318,410       Other     tonnes     22,212     3,580     342     1.6     26,135       Hazardous wastes     tonnes     1,782     3,432     901     1.0     6,117	Landfill	tonnes	203,627	5,382	1,812	873	211,694
Other     tonnes     22,212     3,580     342     1.6     26,135       Hazardous wastes     tonnes     1,782     3,432     901     1.0     6,117	Recovery	tonnes	283,760	18,398	5,160	11,092	318,410
Hazardous wastes tonnes 1,782 3,432 901 1.0 <b>6.117</b>	Other	tonnes	22,212	3,580	342	1.6	26,135
	Hazardous wastes	tonnes	1.782	3,432	901	1.0	6,117

### Notes

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

 $(2) \, {\rm Sum\,of\,available\,data\,(for mills\,details\,are\,reported\,in\,individual\,tables)}$ 

 $\label{eq:loss} Individual cell entries have been rounded. The figures in the total column may not tally due to rounding differences$
# Paper and Board Mills the Americas Environmental data 2014

		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
		fi, ti	fi), ti	P&W, sack paper, cart, tl, sc fl, virgin pulp, bkl, wtkl, wttl	tl, fl	fl, tl	fl, tl, cart	tl, cart, fl	fl, tl	cart, tl, wttl	cart	bkl, sc fl	tl, fl	
Production	ktonnes	67	49	266	60	76	76	292	34	14	47	103	298	1,380
Energy														
Electricity														
Co-generated	GWh	-	-	232	38	-	-	-	-	-	4.2	121	44	439
Self-generated	GWh	-	_	_	0.04	-	_	-	-	2.5	42	0.1	-	44
Hydro power	GWh	-	-	-	-	-	-	-	-	-	-	-	-	-
Grid supply	GWh	33	17	104	0.8	38	49	166	20	5.4	12	1.1	97	543
Total electricity	GWh	33	17	337	39	38	49	166	20	8.0	58	122	140	1,026
Fuel usage														
Biofuels	TJ	-	_	4,166	-	-	_	-	-	-	_	748	675	5,589
Fossil fuels	TJ	411	219	5,636	665	408	532	1,275	219	172	1,172	3,362	1,049	15,121
Total fuels	TJ	411	219	9,802	665	408	532	1,275	219	172	1,172	4,110	1,725	20,710
Water withdrawal														
Surface	Mm <sup>3</sup>	0.074	-	22	1.2	0.5		-		0.5	-	-		24
Ground	Mm <sup>3</sup>	0.6	0.3	0.1			0.4	1.6	0.1		0.8	3.2		7.0
Grid	Mm <sup>3</sup>	-	-	-	0.01	-	-	-	0.02	0.2	0.04	-	0.6	0.8
Total water <sup>(1)</sup>	Mm <sup>3</sup>	0.7	0.3	22	1.2	0.5	0.4	1.6	0.1	0.7	0.8	3.2	0.6	32
Discharges														
To air														
CO <sub>2</sub> fossil direct	ktonnes	23	12	424	37	32	30	72	12	10	66	191	59	969
CO <sub>2</sub> fossil indirect	ktonnes	13	6.7	11	0.08	4.1	22	75	9.1	1.3	2.9	0.3	49	194
CO <sub>2</sub> biogenic	ktonnes	0.7	-	383	-	-	-	-	0.3	-	-	86	74	544
Dust	tonnes	0.00	0.06	55	1.2	0.6	0.7	2.0	0.00	0.00	0.09	25	4.8	89
NO <sub>x</sub> as NO <sub>2</sub>	tonnes	21	9.4	554	7.5	22	24	67	5.5	16	111	195	58	1,091
SU <sub>x</sub> as SU <sub>2</sub>	tonnes	4.8	0.1	2,008	0.4	85	0.06	0.6	0.04	0.8	4.0	6.2	23	2,134
lowater														
Process water	Mm <sup>3</sup>	0.4	0.2	24	0.9	0.3	0.2	0.8	0.07	0.6	0.4	2.6	0.08	31
	Mm <sup>3</sup>	0.2	-	-	-	-	-	-	-	-	-	1 707	-	0.2
	tonnes	50	65	6,277	1,828	1,809	24	266	46	616	93	1,307	3/5	12,/5/
	tonnes	16	9.2	998	005 1 5 7 4	/14	1.0	55	5.6	1/9	10	149	208	3,212
Total Suspended Solids	tonnes	0./	25	2,595	1,554	185	1.0	52	0.5 0.1	407	18	128	9.4	4,946
	tonnes	5.6	6.5	158	14	6.0	0.8	4.8	2.1	0.0	5.1	54	5.0	242.7
Solid wastes	Lonnes	0.5	0.2	19	0.1	0.4	0.5	2.0	0.4	0.2	0.1	5.1	0.6	20
Total non-bazardoura														
wastes	tonnes	6 3 1 0	2 085	111 034	2 088	7 3 5 3	2 090	46 866	5.019	678	7931	40 948	31 476	263,881
Landfill	tonnes	6 2 3 9	2.068	109 354	2 043	5 664	1 825	14 253	4 783	658	7 777	35 477	31 344	221.486
Recoverv	tonnes	72	17	1,415	4.5	1.682	264	32,613	236	20	1.57	5,391	1.32	42.042
Other	tonnes	-		265	-	7.2		-		-		80	-	352
Hazardous wastes	tonnes	30	4.9	129	18	5.9	9.1	30	9.8	9.7	9.7	340	0.02	597

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

P&W: printing and writing grade scfl:semi-chemicalfluting tl:testliner

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

wttl:whitetoptestliner

Notes

(1) 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

 $\label{eq:loss} Individual \, cell \, entries have been rounded. \, The figures in the total \, column \, may not tally \, due \, to \, rounding \, differences \, description \, d$ 

#### Supporting data

# Operations total the Americas Environmental data 2014

		Paper and Board Mills	Other Operations	Total Operations
Production	ktonnes	1,379	3,011	
Energy				
Electricity				
Co-generated	GWh	439	-	439
Self-generated	GWh	44	0.05	44
Hydro power	GWh	-	-	-
Grid supply	GWh	543	159	702
Total electricity	GWh	1,026	159	1,185
Fuel usage				
Biofuels	LT	5,589	2.7	5,592
Fossil fuels	LT	15,121	1,471	16,592
Total fuels	LT	20,710	1,474	22,184
Water withdrawal				
Surface	Mm <sup>3</sup>	24	0.02	24
Ground	Mm <sup>3</sup>	7.0	0.3	7.3
Grid	Mm³	0.8	0.4	1.2
Total water <sup>(1)</sup>	Mm <sup>3</sup>	32	0.7	32
Discharges				
To air				
CO₂ fossil direct	ktonnes	969	89	1,058
CO <sub>2</sub> fossil indirect	ktonnes	194	59	253
CO <sub>2</sub> biogenic	ktonnes	544	0.3	544
Dust	tonnes	89	1.4	91
NO <sub>x</sub> as NO <sub>2</sub>	tonnes	1,091	34	1,125
SO <sub>x</sub> as SO <sub>2</sub>	tonnes	2,134	23	2,157
To water				
Process water	Mm <sup>3</sup>	31	0.1	31
Cooling water	Mm <sup>3</sup>	0.2	0.00	0.2
COD	tonnes	12,757	146	12,903
BOD	tonnes	3,212	47	3,259
Total Suspended Solids <sup>(2)</sup>	tonnes	4,946	35	4,981
Total N <sup>(2)</sup>	tonnes	243	2.7	245
Total P <sup>(2)</sup>	tonnes	26	0.2	27
Solid wastes				
Total non-hazardous wastes	tonnes	263,881	16,696	280,577
Landfill	tonnes	221,486	11,424	232,910
Recovery	tonnes	42,042	4,958	47,001
Other	tonnes	352	314	666
Hazardous wastes	tonnes	597	2,053	2,650

Notes

(1) Total water includes rainwater and waste water from another organisation
 (2) Sum of available data (for mills details are reported in individual tables)

 $\label{eq:link} Individual cell entries have been rounded. The figures in the total column may not tally due to rounding differences.$ 

# Total Group Operations Environmental data 2014

	All operations					
		2014	2013	2012	2011	2010
Energy						
Electricity						
Co-generated <sup>(1)</sup>	GWh	2,308	2,350	2,405	2,401	2,250
Self-generated	GWh	44	33	-	-	-
Hydro power	GWh	6.0	7.0	5.5	5.5	8.3
Grid supply	GWh	2,333	2,330	2,081	2,049	2,321
Total electricity	GWh	4,692	4,720	4,491	4,456	4,580
Fuel usage						
Biofuels	TJ	34,545	34,461	31,936	33,102	32,769
Fossil fuels	TJ	43,320	43,868	44,723	46,202	46,631
Total fuels	TJ	77,865	78,329	76,659	79,304	79,400
Water withdrawal						
Surface	Mm³	101	106	104	103	109
Ground	Mm <sup>3</sup>	16	15	16	15	15
Grid	Mm <sup>3</sup>	3.4	3.5	3.1	3.0	3.2
Total water <sup>(2)</sup>	Mm <sup>3</sup>	121	125	126	122	127
Discharges						
To air						
CO <sub>2</sub> fossil direct	ktonnes	2,647	2,681	2,775	2,860	2,861
CO <sub>2</sub> fossil indirect	ktonnes	659	683	584	572	661
CO <sub>2</sub> biogenic	ktonnes	3,698	3,716	3,622	3,606	3,517
Dust	tonnes	562	561	665	699	772
NO <sub>x</sub> as NO <sub>2</sub>	tonnes	4,887	4,367	4,688	4,767	5,595
SO <sub>x</sub> as SO <sub>2</sub>	tonnes	2,728	2,411	3,334	3,893	3,691
To water						
Process water	Mm <sup>3</sup>	80	81	79	78	82
Cooling water	Mm <sup>3</sup>	33	34	34	32	33
COD <sup>(3)</sup>	tonnes	39,116	38,188	35,665	36,278	35,024
BOD <sup>(3)</sup>	tonnes	12,100	12,253	11,473	11,638	11,404
Total Suspended Solids <sup>(3)</sup>	tonnes	9,840	9,526	7,752	8,504	8,033
Total N <sup>(3)</sup>	tonnes	796	888	711	643	653
Total P <sup>(3)</sup>	tonnes	114	86	91	97	109
Solid wastes						
Total non-hazardous wastes	tonnes	836,816	906,764	919,084	906,389	888,775
Landfill	tonnes	444,604	512,101	565,345	525,854	453,240
Recovery	tonnes	365,411	363,976	322,712	329,880	377,493
Other	tonnes	26,801	30,686	31,026	50,655	58,043
Hazardous wastes	tonnes	8,767	9,523	12,813	10,717	12,448

#### Notes

(1) For the years 2010, 2011 and 2012 electricity is co-generated and self-generated (2) Total water includes rainwater and waste water from another organisation

(3) Sum of available data (for the individual mills details are reported in regional tables)

#### Supporting data

# Management System Certifications

Fores	stry	Forest	Woo	od Sourcing	Chain of	External Paper Sourcing	Chain of
The /	Americas	Management	Euro	ope	Custody	Europe	Custody
СО	Colombia Forest	FSC	ES	Central Forestal	PEFC & FSC	European Paper Sourcing (EPS)	PEFC & FSC
VE	Venezuela Forest	FSC CW FSC	FR	Comptoir Du Pin Aquitaine	PEFC & FSC		
		March 2015					

Eurc	pean Mills	Quality Management System	Environmental Management System	Health and safety System	Hygiene Management for Foodstuffs packaging	Chain of Custody
Virg	n mills	ISO 9001	ISO 14001	OHSAS 18001	EN15 593	
					(or alternatives)	
AT	Nettingsdorfer	•	•		•	PEFC & FSC
ES	Navarra	•	•		•	PEFC & FSC
	Nervíon	•	•		•	PEFC & FSC
FR	Cellulose Du Pin	•	•	•	•	PEFC & FSC
SE	Piteå	•	•		ISO 22001	PEFC & FSC
Recy	vcled mills					
CZ	Morava	•	•	•	•	PEFC & FSC
DE	Baden Karton	•	•	•	•	PEFC & FSC
	CD Haupt	•	•	•	•	PEFC & FSC
	Herzberger	•	•	•	•	PEFC & FSC
	Ноуа	•	•	•	•	PEFC & FSC
	Viersen	•	٠	•	٠	PEFC & FSC
	Zülpich	•	٠	•	٠	PEFC & FSC
ES	Mengibar	•	٠	•	٠	PEFC & FSC
FR	Alfa d'Avignon	•	٠		٠	PEFC & FSC
	Rethel	•	٠		٠	PEFC & FSC
	Saillat	•	٠	•	٠	PEFC & FSC
IT	Ania	•	•		FEFCO GMP	PEFC & FSC
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

The Americas Mills		Quality	Environmental	Health and	Chain of
		Management System	Management System	safety System	Custody
Virg	in mills	ISO 9001	ISO 14001	OHSAS 18001	
CO	Cali		•		FSC
VE	San Felipe		٠		FSC
Recv	vcled mills				5anaary 2015
AR	Bernal		•		FSC
	Coronel Suarez		•		FSC
СО	Barbosa		٠		FSC
	Barranquilla		•		FSC
MX	Cerro Gordo	•	•		FSC
	Los Reyes	•	•		FSC
	Monterrey	•	•		FSC
US	Forney				PEFC & FSC & SFI
VE	Caracas		•		FSC
					January 2015
	Valencia		•		FSC
					January 2015

# Employee, Health and Safety and Sourcing Total Group

	2014	2013	2012	2011
Employee demographics				
Total number of employees				
(including contracted labour)	41,816	40,654	37,757	37,556
of whom female (%)	17%	17%	16%	14%
Employees leaving the company	1,675	1,598	1,596	1,524
of whom % of resignation & retirement	62%	59%	53%	53%
Employees joining the company	1,826	1,743	1,890	1,404
Age distribution (%)				
< 20 years	1%	1%	1%	1%
21-30 years	16%	16%	16%	16%
31-40 years	25%	26%	26%	27%
41-50 years	31%	31%	32%	32%
51-60 years	23%	22%	22%	21%
> 60 years	4%	4%	3%	3%
Employee turnover (%)	4.0%	3.9%	4.1%	4.0%
Length of service, above 11 years (%)	51%	52%	54%	53%
Female in Management (%)	17%	16%	16%	14%
	2014	2013	2012	2011
Health and safety				
Lost Time Accidents (LTA) (%)	414	405	440	502
Contractor Lost Time Accidents (CLTA)	227	N.A.	N.A.	N.A.
Days Lost due to Accidents (DLA)	11,460	10,211	10,362	12,948
LTA Accident Severity Rate (ASR)	15.23%	13.8%	15.4%	19.4%
LTA Frequency Rate (FR)	0.55	0.55	0.65	0.75
Fatalities				
Own employees	0	1	0	3
(Sub)contractors	1	1	2	0
	2014	2013	2012	2011
Sourcing data				
Number of audits				
Strategic suppliers	22	23	26	12
Important suppliers	21	31	9	3
Satisfactory scores				
Strategic suppliers	19	22	26	11
Important suppliers	18	28	8	2



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bout this report	
SRI-Index	
Business in the Community Ireland	84
JN Global Compact	85
Blossary	86
ndependent Assurance Report	88

### About this report

The information in this report covers the international activities of the Smurfit Kappa Group for the calendar year 2014 and also includes some information for early 2015, where mentioned specifically. We cover in this report our environmental and social activities at our own operations as well as our approach to sourcing and how we support our customers' targets.

The report describes Smurfit Kappa's vision, approach to sustainability, and activities across environment, economic and social areas.

At the end of 2014, our operations included 352 facilities in 32 countries across Europe and the Americas. This includes a small number of joint ventures and minority holdings. Information from all the operations where Smurfit Kappa has majority ownership is included in this report excluding the four operations acquired in 2014 (see below). For these companies, 2014 data is only included when specifically mentioned in the relevant section of the report.

Employee demographics covers our own employees. Contract labour is only included if specifically indicated.

### Acquisitions, divestitures and closures 2014

During 2014, Smurfit Kappa acquired the following companies and/or activities:

- Colombia: (66%, 1 May 2014), certain assets and business of Corrumed S.A.
- Dominican Republic: (100%, 4 September 2014), certain assets and business of Cartonera Rierba S.A.
- United States: (100%, 24 October 2014), Bates Containers, consisting of four packaging plants located in Texas, and
- United States: (100%, 24 October 2014), Brian Thomas, a sheet plant located in Texas

There were two closures (Preston, UK and Vercellli, Italy) and no divestitures. Environmental data on the acquired and closed sites is not included in this report. The acquisitions, divestitures and closures do not impact our targets that are being measured on specific volume performance. Apart from the acquisitions and closures 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 issues as well as environmental ones. These issues have been selected on the basis of input from various stakeholder groups. Smurfit Kappa collected data from all its manufacturing operations that were operational at the end of 2014 with the exception of the above-mentioned acquired and closed operations.

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 G4 Sustainability Reporting Guidelines issued by the Global Reporting Initiative (GRI). The GRI is an independent institution whose mission is to provide a trusted and credible framework for sustainability reporting. Smurfit Kappa applied the GRI guidelines at a comprehensive level.

Every effort has been made to provide data that is as accurate as possible. Data relating to environmental factors is gathered through a Group-wide IT-based reporting system implemented in all Smurfit Kappa operations. This tool is integrated into the Group's intranet, enabling sites to report their environmental data online according to GRI guidelines. As the information is stored centrally, this allows for easier and faster processing.

We make continuous efforts to introduce new functionality to allow individual operations to compare their performance with 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 our mills in developing their own internal protocols for the reporting of environmental indicators to ensure a robust and fully traceable reporting of their environmental data in strict compliance with Group reporting protocol. This contributes to our objective of ensuring the consistency of reported data across our global operational system. This programme has been extended to more paper and board mills in 2014 and will be completed in 2015.

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 86 and 87.

Ongoing initiatives continue to further standardise the data gathering system at Smurfit Kappa to improve data quality and consistency in the use of Group definitions and scope requirements of our key indicators.

We commissioned an external assurance provider, KPMG, to provide limited assurance on the data and the text of the report. KPMG's assurance report can be found on page 88.

## GRI-Index

KPMG has provided limited assurance on the full Sustainable Development Report 2014 of Smurfit Kappa. Please refer to page 88 of the report for the Independent Auditor's Assurance Report. Where cross-references are made to sections in the report, the respective information is included in the scope of this assurance engagement. For other references, assurance is not applicable.

GRI-G4	Description	Source/Comment	Page(s)
Profile			
1.1	CEO Statement on relevance of sustainability to the organisation and its strategy	SDR	4-6
1.2	Description of key impacts, risks and opportunities	SDR	12, 16, 27, 30, 32, 34-35, 38-39, 44-45, 48-49
Organisat	ional Profile		
2.1	Name of the organisation	SDR	Cover
2.2	Primary brands, products, and/or services	SDR	1, 13, 18-19
2.3	Operational structure of the organisation	Website	
2.4	Location of organisation's headquarters	SDR	Outside back cover
2.5	Countries where the organisation operates	SDR	18-19
2.6	Nature of ownership and legal form	AR	16-17
2.7	Markets served	Website	
2.8	Scale of the reporting organisation	AR	3-5
2.9	Significant changes during the reporting period in size, structure and ownership	SDR	78
2.10	Awards received in the reporting period	Website	
Report pr	ofile		
28	Reporting period (e.g. fiscal/calendar year) for information provided	SDR	78
29	Date of most recent previous report (if any)	SDR	78
30	Reporting cycle (annual, biennial, etc.)	SDR	78
31	Contact point for questions regarding the report or its contents	SDR	Outside back cover
32	Report the 'in accordance' option the organisation has chosen	SDR	78
33	Report the organisation's policy and current practice with regard to seeking external assurance for the report	SDR	78
34	Report the governance structure of the organisation	AR	38-42
35	Report the process for delegating authority for economic, environmental and social topics from the highest governance body to senior executives and other employees	SDR	24
36	Report whether the organisation has appointed an executive-level position or positions with responsibility for economic, environmental and social topics, and whether post holders report directly to the highest governance body	AR	38-42
37	Report processes for consultation between stakeholders and the highest governance body on economic, environmental and social topics. If consultation is delegated, describe to whom and any feedback processes to the highest governance body	AR	38-42
38	Report the composition of the highest governance body	AR	38-42
39	Report whether the Chair of the highest governance body is also an executive officer	AR	38-42
40	Report the nomination and selection processes for the highest governance body	AR	39
41	Report processes for the highest governance body to ensure conflicts of interest are avoided and managed	AR	38-39
42	Report the highest governance body's and senior executives' roles in the development, approval and updating of the organisation's purpose, value or mission statements, strategies, policies, and goals related to economic, environmental and social impacts.	AR	39
43	Report the processes for evaluation of the highest governance body's performance	AR	40

## **GRI-Index**

GRI-G4	Description	Source/Comment	Page(s)
44	Report the processes for evaluation of the highest governance body's performance with respect to governance of economic, environmental and social topics. Report whether such evaluation is independent or not, and its frequency. Report whether such evaluation is a self-assessment	AR	38-42
45	Report the highest governance body's role in the identification and management of economic, environmental and social impacts, risks, and opportunities	AR	38-42
46	Report the highest governance body's role in reviewing the effectiveness of the organisation's risk management processes for economic, environmental and social topics	AR	32-33, 38-42
47	Report the frequency of the highest governance body's review of economic, environmental and social impacts, risks, and opportunities	AR	At least 5 times per year, 40, 42
48	Report the highest committee or position that formally reviews and approves the organisation's sustainability report and ensures that all material aspects are covered	SDR AR Website	24 41
49	Report the process for communicating critical concerns to the highest governance body	SDR	24
50	Report the nature and total number of critical concerns that were communicated to the highest governance body and the mechanism(s) used to address and resolve them	SDR	24
51	Report the remuneration policies for the highest governance body and senior executives	AR	39
52	Report the process for determining remuneration	SDR	39
53	Report how stakeholders' views are sought and taken into account regarding remuneration, including the results of votes on remuneration policies and proposals, if applicable		Views are not actively sought. Independent Directors and AGM have approved remuneration policies and remuneration packages
54	Report the ratio of the annual total compensation for the organisation's highest-paid individual in each country of significant operations to the median annual total compensation for all employees (excluding the highest-paid individual) in the same country	SDR	No information provided due to privacy reasons
55	Report the ratio of percentage increase in annual total compensation for the organisation's highest-paid individual in each country of significant operations to the median percentage increase in annual total compensation for all employees (excluding the highest-paid individual) in the same country	SDR	No information provided due to privacy reasons
Economic	Indicators		
	Disclosure on management approach	SDR	
EC1	Direct economic value generated and distributed	AR	10, 68, 88, 90-91
EC2	Financial implications and other risks and opportunities for the organisation's activities due to climate change	CDP 2013 Investor	Module risks and opportunities
EC3	Coverage of the organisation's defined benefit plan obligations	AR	106-109
EC4	Significant financial assistance received from government		No financial assistance received from government
EC6	Policy, practices and proportion of spending on locally based suppliers at significant locations of operation	SDR	16-17
EC7	Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation	SDR	56
EC8	Development and infrastructure provided primarily for public benefit	SDR	60-63 Other than local community involvement, no engagement by Smurfit Kappa

GRI-G4	Description	Source/Comment	Page(s)
Environm	ental Indicators		
	Disclosure on management approach	SDR	
EN1	Materials used by weight or volume	SDR	66-67
EN2	Percentage of materials used that are recycled input materials	SDR	32,50
EN3	Energy consumption within the organisation	SDR	39-41,66-73
EN4	Energy consumption outside of the organisation	SDR	Only relevant factor is transport, 42-43
EN5	Energy intensity	SDR	40-41,66-73
EN6	Reduction of energy consumption	SDR	39-43
EN7	Reductions in energy requirements of products and services	SDR	10-11, 14-15
EN8	Total water withdrawal by source	SDR	44-47,66-73
EN9	Water sources significantly affected by withdrawal of water	SDR	44-46
EN10	Percentage and total volume of water recycled and reused	SDR	45
EN11	Location and size of land by protected areas and areas of high biodiversity value	SDR Website	35-37
EN12	Description of significant impacts of activities, products and services on biodiversity	SDR	36-37
EN13	Habitats protected or restored	SDR	37 Dermonont protection
EN14	Total number of IUCN Red List species and national conservation list species with habitats in areas affected by operations. by level of extinction risk	SDR	37
EN15	Direct greenhouse gas (GHG) emissions (Scope 1)	SDR	39
EN16	Energy indirect greenhouse gas (GHG) emissions (Scope 2)	SDR	39,66-73
EN17	Other relevant indirect greenhouse gas emissions by weight	SDR	40-41.66-73
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved	SDR	39-43
EN19	Reduction of greenhouse gas (GHG) emissions	SDR	38-43
EN20	Emissions of ozone-depleting substances by weight	SDR	66-73
EN21	NOx, SOx and other significant air emissions by type and weight	SDR	66-73
EN22	Total water discharge by quality and destination	SDR	45-47
EN23	Total weight of waste by type and disposal method	SDR	49-51
EN24	Total number and volume of significant spills	SDR	No significant spills in 2014
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation	SDR	44
EN27	Extent of impact mitigation of environmental impacts of products and services	SDR	32, 38, 44, 48
EN28	Percentage of products sold and their packaging materials	SDR	32-36
EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	SDR	27
EN30	Significant environmental impacts of transporting products and other goods and materials for the organisation's operations, and transporting members of the workforce	SDR	42-43
Labour Pr	actice Indicators		
	Disclosure on management approach	SDR	
LA1	Total workforce by employment type and region	SDR	57-59,75
LA2	Total number and rate of employee turnover by age group, gender and region	SDR	57-59,75
LA3	Benefits provided to full-time employees	SDR AR	56 105-109
LA4	Percentage of employees covered by collective bargaining agreements	SDR	55
LA5	Minimum notice period(s) regarding significant operational changes	SDR	59

## **GRI-Index**

GRI-G4	Description	Source/Comment	Page(s)
LA6	Type of injury and rates of injury, occupational diseases, lost days, absenteeism, and total number of work-related fatalities, by region and by gender	SDR	54, 75 Not by gender
LA7	Rates of injury, occupational diseases, lost days and absenteeism, and number of work-related fatalities by region	SDR	54,75
LA8	Education, training, counselling, prevention and risk-control programmes in place to assist workforce members, their families or community members regarding serious diseases	SDR	56-57, 60-61
LA9	Average hours of training per year per employee by gender, and by employee category	No distinction made between employee catego (opportunities) provided where appropriate	ries/gender; training
LA10	Average hours of training per year per employee by employee category	SDR	57
LA11	Programmes for skills management and lifelong learning	SDR	56-57
LA12	Employees receiving performance and career development reviews	SDR	56
LA13	Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity	SDR AR	34 57
LA14	Ratio of basic salary of men to women by employee category	SDR	56 Samo job, samo pay
LA15	Return to work and retention rates after parental leave, by gender (partial reporting)	SDR	57
Human Ri	ghts Indicators		
	Disclosure on management approach	SDR	55-56
HR1	Percentage and total number of significant investment agreements that include human rights clauses or that have≈undergone human rights screening	SDR	55
HR2	Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken	SDR	17
HR3	Total hours training on policies and procedures concerning human rights	Employees are made aware of relevant policies t programmes regarding Code of Business Condu	hrough awareness act
HR4	Total number of incidents of discrimination and actions taken	SDR Website	55-56
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	SDR	17,55
HR6	Operations with significant risk for incidents of child labour, and measures taken to eliminate	SDR	55-56
HR7	Operations with significant risk of forced or compulsory labour, and measures to eliminate	SDR	55-56
HR8	Percentage of security personnel trained in the organisation's policies or procedures concerning aspects of human rights that are relevant to operations	Not applicable	
HR9	Incidents of violations involving rights of indigenous people and actions taken	SDR	55-56
HR10	Percentage and number of operations subject to human rights reviews	SDR	55-56
HR11	Number of grievances related to human rights addressed and resolved	SDR	26, 55
Social			
	Disclosure on management approach	SDR	55-56
SO1	Percentage of operations with implemented local community engagement, impact assessments and development programmes	SDR	60-61
SO2	Percentage and total number of business units analysed for risks related to corruption	SDR	27
SO3	Percentage of employees trained in organisation's anti-corruption policies and procedures	SDR Awa	26 reness campaign completed in 2014

GRI-G4	Description	Source/Comment Page(s)
SO4	Actions taken in response to incidents of corruption	SDR No such incidents occurred
SO5	Public policy positions and participation in public policy development and lobbying	SDR 4-6, 21, 34-35, 38-39, 44-45, 48-49
SO6	Total value of financial and in-kind contributions to political parties, politicians and related institutions by country	SDR 27
SO7	Total number of legal actions for anti-competitive behaviour, anti-trust and monopoly practices and their outcomes	SDR 27
SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	SDR 27
SO9	Operations with significant potential or actual negative impact on local communities	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
SO10	Prevention and mitigation measures in operations with significant potential or actual negative impact on local communities	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
SO11	Total number of grievances about impacts on society filed through formal grievance mechanisms during the reporting period	No such grievances have been filed during the reporting period
Product R	esponsibility Indicators	
	Disclosure on management approach	SDR 14-15
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	SDR 12-13
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	SDR 12-13
PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements	SDR Not applicable. Our products are B2B and in general no such information is required
PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labelling, by type of outcomes	SDR Not applicable. Our products are B2B and in general no such information is required
PR5	Practices related to customer satisfaction, including results of surveys that measure customer satisfaction	SDR 20
PR6	Programmes for adherence to laws, standards and voluntary codes related to marketing communications, including advertising, promotion and sponsorship	SDR 16
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	SDR Not applicable. Our products are B2B and this indicator is not relevant to our business
PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	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	No material fines and/or substantiated claims for non-compliance with laws or regulations concerning the provision and use of products and services were identified

### Business in the Community Ireland External Commentary – Smurfit Kappa Group plc

#### Sustainable Development Report 2014

Smurfit Kappa delivers sustainable packaging solutions to 64,000 customers and employs 42,000 people in 32 countries.

Sustainability is the lens through which innovation in the business is focused and it is fantastic to see that Smurfit Kappa is now designing for a circular economy. The details are impressive:

The company has committed to 100% sustainably sourced new fibre from forests, where biodiversity and human rights are assured to the highest, globally recognised standards. 98% of the paper-based packaging produced in the Group is Chain of Custody certified, well exceeding the 90% target by 2015.

Recycled raw materials are used whenever possible – recovered paper now constitutes 75% of raw material in paper production.

A 2014 highlight includes the launch of the Catcherboard MB12 – an innovative, recyclable solution that maximises food safety for customers. This is an example of how Smurfit Kappa is able to tailor packaging solutions to customer needs.

For by way of business as normal, the company offers a suite of design software to customers (Innobook, Paper to Box, Pack Expert & Shelf Viewer) to optimise the direct and indirect environmental impact of the packaging on the supply chain; increase the quantity of product loaded and reduce the transport carbon footprint. Such tools require ongoing innovation to deliver new shapes, sizes and print colours in an economically and sustainable way.

It is not at all surprising that in September 2014, Smurfit Kappa was listed on the FTSE4Good Index in recognition of the ongoing efforts to minimise environmental impact and increase the social benefit created.

#### **5 Strategic Priorities**

Following on from the well-illustrated materiality analysis, Smurfit Kappa Group has five strategic priorities. Note the progress made in 2014:

Forest: 100% of paper and board mills, and 92% of converting operations, are Chain of Custody Certified according to FSC and/or PEFC. Wood biomass (that cannot be used in any higher value production) is used in some locations for energy generation and the by-products of bioenergy production (e.g. black liquor) are reused as a fuel in the production processes.

Since 2013, Smurfit Kappa has been estimating the CO<sub>2</sub> emissions of the transport of customer products from European corrugated operations to customer points of delivery. Attention is now being given to re-engineer operations to be less fossil fuel intensive by reducing energy use, increasing efficiency (via CHP and heat exchangers) and using renewable sources where feasible.

Water: the company has reduced COD discharge by 28% on 2005 figures. In 2014, over 90% of paper and board was produced at mills where best practice water treatment systems are in place. Total water intake decreased by 3%.

Waste: 12 out of 38 paper mills sent no waste to landfill in 2014. Total waste sent to landfill decreased by 13%. The Roermond paper mill in the Netherlands has identified new uses for 99.5% of its waste.

People: the first ever survey of all 42,000 employees (to give each employee a greater voice in shaping the direction of the company) had a response rate of 80%.

Employees are also being engaged via the Smurfit Kappa Sustainability Academy, so that they understand the detail and efforts made by the company on sustainability when interacting with customers and suppliers.

On Health & Safety, 2014 saw more comprehensive accident reporting across the Group to improve awareness of precise reporting requirements within plant management, and closer monitoring by divisional and group management.

#### Sustainable procurement in action

Sourcing is the single largest cost item for Smurfit Kappa. In 2014,  $\leq$ 4.7 billion was spent on purchased products and services (e.g. raw materials, energy, transportation maintenance & repairs). While the procurement of major items is co-ordinated centrally to achieve economies of scale, 74% of deliveries can be classified as local, providing support for a vast number of local economies.

100% of strategic suppliers in Europe (supplying materials, resources and services) and 45% of important suppliers have been audited on sustainability. 90% of suppliers scored satisfactorily and the remaining 10% will become compliant on the completion of a continuous improvement plan. There is also an aim to increase the number of suppliers who commit to the UN Global Compact and report their social data to Sedex.

We were interested to read that Smurfit Kappa Group is sharing knowledge and expertise with suppliers (via training courses and workshops) to help them become more sustainable and inspire new initiatives to 're-engineer the vision of the industry on sustainability'.

#### Company risks articulated well

As with previous reports, Smurfit Kappa excels in the articulation of the risks facing the company. Challenges are outlined around the deteriorating quality of recovered fibre; the differing levels of implementation of the March 2013 EU Timber Regulation; and the need for the continuous improvement of the forest certification schemes FSC and PEFC.

#### Good use of case studies

The case studies on the use of carnation stems (page 21) as an alternative source of fibre and how 150t of CO<sub>2</sub> emissions were reduced by transporting by freight train instead of truck (page 41) are worth a read.

We also enjoyed the story of how Smurfit Kappa and Glaces Thiriet (page 50) ask for packaging on home deliveries to be instantly returned to the delivery person, who brings it to the distribution centre for it to be recycled at the paper mill. In this way, customer waste is converted into valuable raw material and it is a great example of the circular economy in action.

### UN Global Compact

#### **Conclusion and recommendations**

From this Report, it is clear Smurfit Kappa is deeply committed to making company processes more sustainable. We warmly commend the company for the emphasis placed on stakeholder engagement and materiality assessment in addition to the increased level of reporting in accordance with the GRI G4 Guidelines – Comprehensive.

However, there seem to be a few areas of overlap in key achievements that were also conveyed last year. In addition, while the case studies included are very good, more examples would be welcome to give credit to Ùthe range of exciting innovations that are being introduced.

We are delighted to see that our recommendation last year to utilise the corporate website to convey the company's key impacts and leadership role in the packaging industry was taken on board.

Smurfit Kappa might also consider using the website to convey the main elements of this report in bite-size segments to encourage increased readership, e.g. the company impact at a glance, the strategic objectives, the challenges and risks faced and how these are addressed.

We would also welcome a change in how the information in the hard copy Report is presented, so as to more fully engage the reader; it would also benefit from being shorter.

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



Community

Ireland

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 ongoing 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 79 to 83 of the Report.

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

UNGC Principles		GRI Indicators	
Human Rights			
1	Businesses should support and respect the protection of internationally proclaimed human rights; and	HR1-11, LA5, LA7-8, LA13-15, PR8	
2	Businesses should make sure that they are not complicit in human rights abuses.	HR1-11	
Lat	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	
Env	vironment		
7	Businesses should support a precautionary approach to environmental challenges;	EC2, EN18-19, 26-27	
8	Businesses should undertake initiatives to promote greater environmental responsibility; and	EN1-30, PR3-4	
9	Businesses should encourage the development and diffusion of environmentally friendly technologies.	EN2, 5-7, 10, EN18-19, 26-28	
An	ti-Corruption		
10	Businesses should work against corruption in all its forms, including	SO2-4	



## 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 a 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: $mg O_2$ /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 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 CO <sub>2</sub> is considered to be carbon neutral as it is removed from the atmosphere and stored in biomass within a short period of time.
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 2011. 'CO₂ emissions from fuel combustion – 2013 Edition'.
Carbon dioxide equivalent $CO_2$ -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 on 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.
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 22001	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 work 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, NH3 and ammonium, NH4+ discharged with the process water.
NO <sub>x</sub>	Mix of nitrogen oxides (NO and NO2) calculated as NO2 (nitrogen dioxide) coming from combustion of fuels. They can contribute to the acidification of soil and water. NO <sub>x</sub> emissions are measured mainly by the mills. Where NO <sub>x</sub> is not measured (converting plants), emissions are calculated from fuel consumption using the emission factors listed in the Ecoinvent database version 2.1.
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:</li> <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 forests to plantations or non-forest use;</li> <li>e) Wood from forests in which genetically modified tress are planted.</li> </ul>
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 colourant 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.
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 organisation 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 if 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.).
SOx	Mix of sulphur oxides calculated as SO2 coming from combustion of fuels. Sulphur dioxide contributes to the acidification of soil and water. SO <sub>x</sub> emissions are measured mainly by the mills. Where SO <sub>x</sub> is not measured (converting plants), emissions are calculated from fuel consumption using the emission factors listed in the Ecoinvent database version 2.1.
Testliner	Paper manufactured from recycled fibres.
TJ	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.

## Independent Auditor's Assurance Report

#### To the readers of the Sustainable Development Report 2014 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 2014 (further: 'the Report'). The Executive Directors of Smurfit Kappa are responsible for the preparation of the Report, including the identification of material aspects. 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 G4 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 (G4) 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, among 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 Alfa d'Avignon (France), Ania (Italy), Facture (France), Forney (United States), Gallargues (France), Rethel (France) 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 G4 Guidelines of the Global Reporting Initiative.

Amstelveen, 12 June 2015 KPMG Sustainability, part of KPMG Advisory N.V.

W. J. Bartels, Partner

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