## Smurfit Kappa Group plc

#### SUSTAINABLE DEVELOPMENT 2010



Innovation through people and packaging



## SKG at a glance

Totally focused on packaging

With sales in 2010 in excess of €6.5 billion, Smurfit Kappa Group (SKG) is one of the world's leading paper-based packaging businesses. Operations are concentrated at some 330 sites in Europe and in Latin America, where the Group also owns and manages forests.

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



PRODUCT LIFE CYCLE





## Packaging Expertise

SKG is involved in all aspects of the production and use of paper-based packaging. The product life cycle starts with virgin and recovered fibres being processed through the mills to become paper and board, which are delivered to box converting plants where corrugated and solid board packaging is produced. Flat packaging is delivered to customers' packing and filling operations, where it is erected, filled and used to transport, protect, display and promote goods through the supply chain. The recycling process begins when the flattened used packaging is collected (mainly from retail outlets), sorted and then returned to the mills for reprocessing.

At every stage of this cycle SKG has the experience, expertise and passion for both success and sustainability.

## Expertise based on people

At every stage of this cycle the people working for SKG have the experience and expertise necessary to deliver customer satisfaction in a sustainable manner. 38,000 people are employed throughout the SKG operations and they understand the need to harness their expertise in pursuit of ensuring a sustainable as well as profitable business. They also clearly appreciate that this means supplying paper and packaging products which contribute to the success and sustainability of our customers' businesses, as well as meeting customers' commercial and technical expectations. Smurfit Kappa people are passionate about the very real contribution their efforts can make to customer success and a sustainable product life cycle.

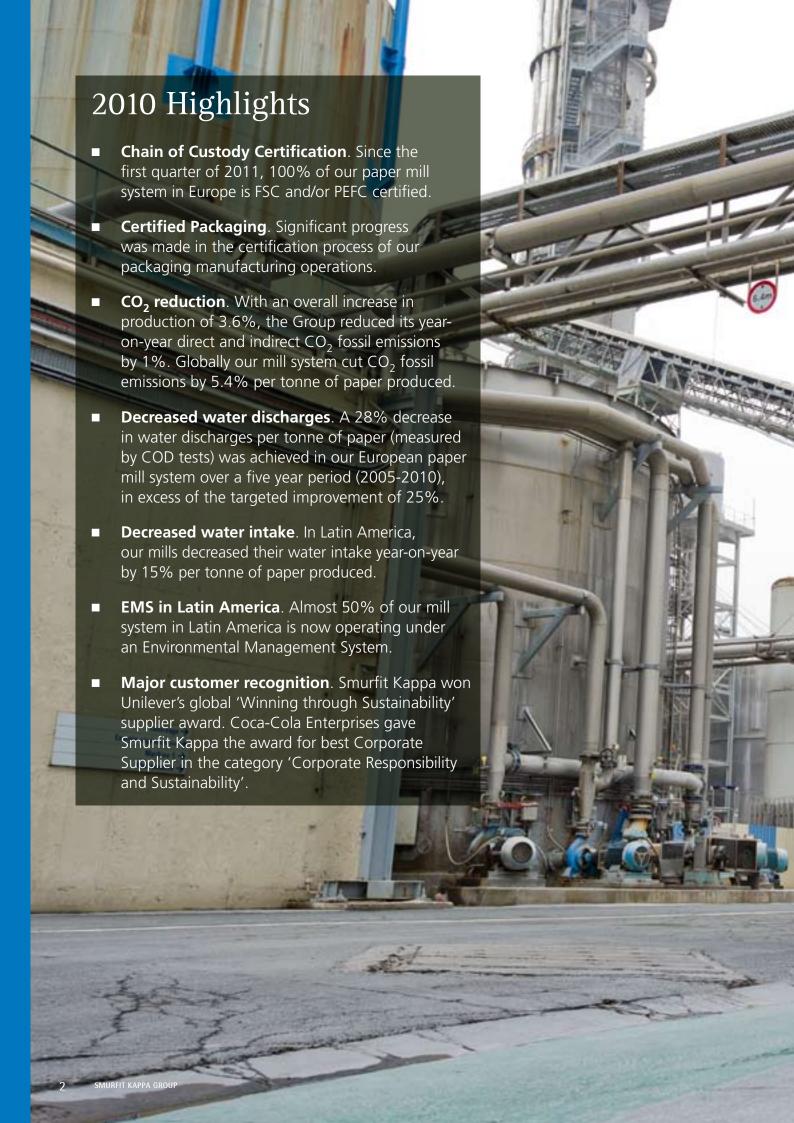
### Smurfit Kappa Group plc

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This report follows a similar structure to previous reports, beginning with a brief introduction by Gary McGann, the Group CEO, on page 5.

The first section of the report summarises our overall approach to sustainability, our achievements and long term commitments. The report is then divided into four parts covering Environment, Social Development, Sustainability in our Business and concluding with an Information section, including a glossary. In preparing this report every effort has been made to follow the Global Reporting Initiative (GRI) guidelines.







## **Letter from CEO**

#### Introduction by Gary McGann

I am pleased to introduce our Group's fourth annual Sustainable Development Report, showing our vision and activities in the important area of sustainability. Although business conditions improved compared to 2009, they continue to be very challenging. In particular raw material availability and costs have escalated rapidly. Notwithstanding these challenging conditions, Smurfit Kappa Group (SKG) is determined to continue to develop its efforts and commitments in this important area. I would like to take the opportunity to highlight the following points.

## Sustainability growing ever more important

Over the past 12 months, sustainability has become more important for consumers and hence for our customers and ourselves. Compared to a few years ago, consumers have a much better understanding of the subject of sustainability, taking the different stages in the value chain into consideration, thus requiring us to cooperate more closely with both customers as well as our suppliers. We also believe that it is critical to involve, inspire and get commitment from our own employees in this area. This creates a win-win-win situation as inspired employees will improve our products that will benefit our customers and ultimately consumers. Lastly, we believe that an open and transparent communication climate will soon become standard.

## SKG introduces long term commitments

SKG operates in, and focuses on, one main business area, that of paper based packaging. This brings us into contact with almost every other business involved in the manufacture or supply of products. Our packaging makes contributions to the general way of life by protecting products while being transported from their place of origin to the place of consumption and by packaging

various products that range from fragile and valuable to large and bulky.

SKG contributes to a sustainable world by designing and delivering cost effective packaging solutions for our customers, by preventing waste of packaged products by optimising material usage and by reducing transport trips through appropriate packaging design. Our customers increasingly recognise the sustainability value of our products reflected in Sustainability Awards and recognitions which we receive as a key supplier. Our products contribute to a sustainable world thanks to their recyclable and renewable characteristics. To further underpin our drive to improve the sustainability performance of our products, I am pleased to introduce long term measurable commitments in the area of emissions to air, water and Chain of Custody certification of our operations and products.

## Transparent and open communication

As mentioned earlier, we engage in an open and transparent communication process and we increasingly seek to engage in dialogue with our different stakeholder groups. We are also determined to have our progress in sustainability independently appraised and evaluated by others. Besides the introduction of the measurable targets mentioned above, I am also pleased to report that we have advanced our reporting in accordance with the Global Reporting Initiative (GRI) from level B+ to A+. Also, in early 2011 we have joined the Water Footprint Network to increase our understanding of the sustainability issues surrounding water usage. As for 2009, we sought external assurance on a number of environmental indicators. As commented upon in last year's Report, we continue to support the UN Global Compact initiative and the Social and Ethical Data Exchange (Sedex) and to participate in the Carbon Disclosure Project initiative

(CDP).



Gary McGann, Group Chief Executive Officer

## Availability and affordable access to raw materials our main challenge

Our main risks and challenges are detailed on pages 16 to 18 and they clearly indicate the importance of a constructive dialogue between legislators and the business community.

In all areas where we face risks and challenges both the national and European legislators hold the key to creating and maintaining fair trading conditions within a credible and reasonable legislative framework. In all its efforts to guide Europe to a competitive, sustainable, water and energy efficient and low-carbon economy, the EU needs to maintain the principle of a global level playing field thus ensuring that our industry has access, at affordable and competitive costs, to wood, recovered paper, and the capacity to secure adequate energy and water supply without distortive taxes and/or subsidies.

To guarantee the business conditions needed to satisfy all our key stakeholders, we will continue to work together with the Confederation of European Paper Industries (CEPI), the European Federation of Corrugated Board Manufacturers (FEFCO) and other industry associations to encourage key governmental decision makers to take the position of our industry into account when drafting legislative changes and/or allowing subsidies.

I hope you enjoy exploring the content of our 2010 Sustainable Development Report.

Gary McGann

GROUP CHIEF EXECUTIVE OFFICER



## Corporate Governance Statement

Members of the SKG Board and senior Mexican management at the board meeting in Mexico in August 2010.

Left to right: Roberto Silva, Paul Stecko\*, Frits Beurskens\*, Ian Curley\*, Gary McGann\*, German Esguerra, Samuel Mencoff\*, Tony Smurfit\*, Liam O'Mahony\*, Nicanor Restrepo\*, Juan Michelsen, Sergio Martínez, Luis Mercader, Javier Morgan, Rosemary Thorne\*, Michael O'Riordan, Thomas Brodin\*, Eduardo Ysunza, Mario Garza.

\* Member of the Board of Directors of SKG

The Directors are committed to maintaining the highest standards of corporate governance and this statement describes in summary the Group's governance at Board level. The full Corporate Governance Report is set out in the 2010 Annual Report.

#### **Board of Directors**

The Board is primarily responsible for assuring the long term success of the Company, for setting the Group's strategic aims, for the leadership and control of the Company and for reviewing the Group's system of internal control and risk management. There is a clear division of responsibilities within the Group between the Board and executive management, with the Board retaining control of strategic and other major decisions under a formal schedule of matters reserved to it.

#### Sustainability Governance

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

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





Left to right: Thomas Brodin, María Teresa Zaldívar, Mario Garza, Gary McGann, Juan Guillermo Castaneda

Left to right: Paul Stecko, Samuel Mencoff, Javier Morgan, Tony Smurfit

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

#### Membership of the Board

At the year-end there were fourteen Directors on the Smurfit Kappa Group plc Board, comprising: a non-executive Chairman, three executive Directors and ten non-executive Directors. More detail on the composition of the Board and biographical details of the Directors are set out in the 2010 Annual Report.

#### Chairman

The Chairman of the Board is independent and is responsible for the leadership and efficient and effective working of the Board. He sets and manages the Board agenda to ensure that it addresses all matters reserved to the Board and that adequate time is available for discussion on strategic issues.

#### Senior Independent Director

The Senior Independent Director's duties include being available to shareholders if they have concerns which cannot be resolved through the Chairman or Group Chief Executive Officer. He is also available to serve as an intermediary for other Directors if necessary.

#### **Group Secretary**

The Directors have access to the advice and services of the Group Secretary who is responsible for ensuring that Board procedures are followed and that compliance with applicable rules and regulations is achieved. The Directors also have access to independent professional advice, at the Group's expense, if and when required.

#### Meetings

The Board met six times in 2010 and details of the meetings held during the period, both of the Board and of the Board Committees, are contained in the 2010 Annual Report which also includes information on individual attendance. The Board holds at least one of its meetings each year in the Group operations to give the Directors an opportunity to meet with a wider range of management and to see at first hand the Group's operating activities. In 2010, the August Board meeting was held in Mexico.

#### **Induction and Development**

On appointment, all non-executive Directors receive comprehensive documents and briefings on the Group and its operations. During the year Directors meet with senior management, both at Board meetings and during individual site visits.

#### **Board Committees**

The Board has established three Committees to assist in the execution of specific matters within its area of responsibility. These are the Audit Committee, the Compensation Committee and the Nominations Committee. The responsibilities of each of these Committees are set out clearly in written terms of reference, which have been approved by the Board, are reviewed annually and are available on the Group's website. More details on the current membership and the roles and responsibilities of these Committees can be found in the 2010 Annual Report.

#### **Codes of Conduct**

SKG has a series of codes of conduct covering a number of areas related to its management and operations. These are based upon 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 Group provides the foundation for key components of internal control by ensuring appropriate discipline and structure through a number of policies and programmes which serve to define acceptable business practices, the resolution of conflicts of interest and the expected standards of ethical behaviour. We have also created specific policy statements in key areas of sustainability and they are integral in the drive to improve SKG'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.

#### **Ethical standards**

The Smurfit Kappa Group's Code of Business Conduct, which provides the underlying *modus operandi* for each and every employee in every jurisdiction, sets out the organisation's position in relation to compliance with the law, adherence to ethical standards and the Group's commitments to those with whom it comes in contact.

The fundamental objective of the Code of Business Conduct is to ensure that the Group operates its business in accordance with the highest ethical standards.

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

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

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

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

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

In addition to the annual audit, the Group's Internal Audit Department has its own extensive work programme in the context of the Company's overall Risk Management System. During the course of 2010, 66 such internal audits were completed.

The Group's Code of Business Conduct and Good Faith Reporting Statement have been made available and their purpose explained to employees.

An appropriate training programme to review and refresh the understanding of established employees and cater for the needs of recent employees will be developed during the course of 2011/12.

During 2010, there were 10 minor incidents of what the Group considers to be behaviour non-compliant with the organisation's Code of Business Conduct. These were investigated and appropriate and prompt remedial actions were taken.

#### **Public Policy**

As a multi-national organisation, Smurfit Kappa Group's businesses are subject to legislation and rules determined by the jurisdictions in which it operates.

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

At all times those representing the views of the Smurfit Kappa Group 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 criticisms of the organisation in this respect in 2010.

Any financial contributions made by Smurfit Kappa to political parties are in line with the Group's Code of Business Conduct. During the course of 2010, such contributions were negligible. No national government is a shareholder in SKG.

#### Compliance

It is Group policy to comply with the applicable laws and regulations in each of the countries in which it operates and to ensure that its employees are aware of this and conduct themselves appropriately. No significant fines were imposed on the Group in 2010 in respect of any breaches of such laws and regulations.

## Stakeholder Dialogue

SKG engages extensively with its key stakeholders on a range of issues in order to agree common objectives on sustainability and ways to achieve those. The ultimate aim of engagement with stakeholders is to reconcile their expectations and demands with the achievement by SKG of appropriate environmental and other standards and adequate economic returns. These interactions are summarized below and are explained in more detail in the appropriate sections of the report.

| 1 | Customers              | As well as the normal business interaction that one would expect, we have a very high degree of engagement with our customers on key sustainability issues and in various projects concerning carbon footprint and fibre sourcing, participation in conferences and customer sustainability initiatives.                                       |
|---|------------------------|--|
| 2 | Employees              | Our employees are the key to the success of the Smurfit Kappa Group. We place significant emphasis on their safety, health and welfare. There are numerous training activities ranging from training on the job to advanced management courses internally as well as externally in order that all our people can achieve their full potential. |
| 3 | Investors              | There is an extensive programme involving road shows, investor days, one-on-one meetings and telephone conferences, and participation in industry-related investor conferences.  |
| 4 | Suppliers              | As well as the usual levels of communication, there are specific initiatives such as audits and questionnaires. SKG's operations are encouraged to source products and services from local suppliers where possible, consistent with the need to ensure appropriate quality at the right price and support for sustainability.                 |
| 5 | (E)NGOs                | Various memberships, dialogue (both direct and indirect) and cooperation on specific topics like water and $\mathrm{CO}_2$ sequestration. The level of engagement with organisations active in the area of sustainability has increased appreciably in recent years.   |
| 6 | Local<br>communities   | Social projects, health, employment and environmental initiatives.<br>The underpinning principle is to assist communities in self-help.  |
| 7 | Government and society | Memberships of industry associations at national and international level, participation in forums related to broader business issues and society in general.   |



## Scope of the Report

The information in this report covers all the international activities of the Smurfit Kappa Group for the calendar year 2010 and includes some information relating to early 2011.

SKG fully recognises that sustainable development embraces social and business subjects as well as environmental topics. These subjects and topics have been selected on the basis of input from the various stakeholder groups. SKG collected data from all its manufacturing operations that were operational at the end of 2010. SKG does not have any joint ventures.

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.

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

For 2010, SKG applied the GRI at an A+ application level.

Every effort has been made to provide data that is as accurate as possible. Since 2008, data relating to environmental matters are gathered through a Group wide IT based reporting system implemented in all operations of the Group.

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

During 2010, significant efforts have been made to introduce new functionality to allow the individual operations to compare their performance with the previous reporting period, and to alert them where significant deviation occurs. Additionally during 2010, monitoring protocols (test methods, frequency of sampling, collation and aggregation) have been revised and further enhancements made to more precisely define protocols for each category of operations. Our goal is to ensure the continuous consistency of

data for both our European and Latin American operations.

For the most part, data are based on measured or metered quantities, or on best estimates based on industry knowledge and established calculation factors. CO<sub>2</sub> emission calculations have been based on established fuel consumption and specific CO<sub>2</sub> emission factors. Definitions and calculations for the performance indicators can be found in the glossary on pages 83 to 87.

We are making ongoing efforts to further standardise the data gathering system in SKG to improve data quality and consistency in the use of Group definitions and scope requirements of our key indicators. In 2010 we made progress on this by introducing internal data collection on a quarterly basis.

As in 2010, we involved an external assurance provider, whom we commissioned to provide limited assurance on a selected number of environmental parameters that are important to our business. The assurance report of KPMG can be found on pages 81 and 82.





## Paper Packaging Recycling

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

Paper based packaging is almost totally renewable and recyclable. The recycling rate for paper and board packaging within the EU's 27 member states for 2008, which is the latest year for which official statistics are available, reached 81%, up from 77% the previous year. [Source: EU DG Environment: "Rates of packaging recycling and recovery in the Member States of the EU".] Paper based packaging has a higher recycling rate than any other material.

The graph shows 2007 and 2008 recycling rates in Europe for the different raw materials.

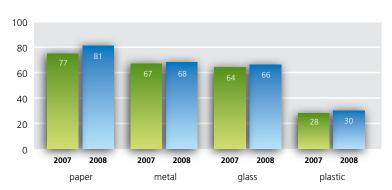
For SKG's manufacturing operations in Europe, 77% of our fibrous raw materials came from recycled fibres in 2010.

In Latin America, the rate of recycled fibres in all our fibrous raw materials was 70% for 2010 and, while official industry figures are not currently available, our recycling rate is considered to be significantly better than the industry average for that region.

Paper packaging is the most environmentally friendly form of

packaging available as the industry's raw material comes from renewable sources and the end product is fully recyclable. In SKG we consume over 5 million tonnes of used paper each year. Of this figure, 4.3 million tonnes are in Europe and most of this is supplied through our own recovery and recovered paper supply system which makes us the clear industry leader in this regard. Over 50% of our Latin American needs are also collected within our own system or secured through contracts with third party suppliers.

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







## Sustainable Development a Summary

#### **Our Commitment**

Sustainability implies a clear commitment to building a sound future for our Group on three important principles:

- Protection of the environment
- Beneficial social development
- Economic value generation

SKG regards sustainability as an integral part of its business strategy, considering sustainability and profitable growth to be perfectly compatible. In meeting its business objectives of creating increasing economic value, SKG will ensure that the social and natural environments within which SKG operates are respected and protected both today and into the future. The Group provides direct income to approximately 38,000 people and indirectly to a significantly greater

number, and it continues to carefully use and recycle a wide range of natural resources.

#### 1) Environment

SKG is committed to:

- Complying at a minimum with national and international environmental legislation and seeking to achieve best practice through the promotion of continuous improvement programmes
- Applying appropriate environmental management systems throughout the Group
- Continuing to use natural resources as efficiently as possible
- Meeting all reasonable expectations of stakeholders concerning environmental performance.



#### 2) Society

SKG is committed to:

- Ensuring that all employees work in a healthy and safe environment and that local legislation remains the minimum acceptable standard, with best international practice as the goal for all operations
- Applying the principle of equal employment opportunity
- Managing our business in an ethical and equitable manner and meeting all of our social responsibilities
- Ensuring that employees and suppliers are aware of the company policy on social responsibility
- Meeting our commitment to protect and advance human rights, particularly those of the indigenous communities where we have operations
- Promoting and enhancing strong relationships with the communities within which our businesses have the privilege to operate.

#### 3) Business

SKG is committed to:

- Ensuring the expectations of shareholders and other stakeholders are met with regard to profitable, sustainable long term business development in the changing local and global economies
- As the biggest global business in the field of paper based packaging, demonstrating leadership to customers and other stakeholders, when it comes to developing more sustainable packaging solutions
- Working closely with customers and other stakeholders to provide packaging with strong credentials regarding sustainability, taking account of factors such as packaging optimisation, recyclability and Chain of Custody
- Supporting suppliers, customers and others in the supply chain on their own sustainability development projects
- Providing packaging solutions which make a positive contribution to sustainability, especially by minimising customers' product wastage and by reducing their distribution and transportation requirements.

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

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

Whenever it is practical and economically feasible, SKG is committed to going further than complying with legal requirements. SKG recognises that factors such as ethical behaviour, transparency in governance standards, identification of risks and stakeholder engagement are fundamental for the sustainable success of the company. We seek to maintain and improve the recognition of SKG as a responsible company by all our stakeholders and by the community at large and as a progressive company for current and future employees.



#### Key Risks and Challenges

SKG recognises the fundamental role of natural resources for the global economy and fully supports shifting towards a resource efficient and low carbon economy. For SKG, it is a key objective to deliver on economic performance whilst efficiently using natural resources, mitigating climate change and minimising the environmental impact of all activities.

The key challenges and risks that face SKG and the paper packaging industry as a whole are:

#### 1) Fibre Availability

This is the most basic necessity for our business.

Wood and recovered paper are the fundamental raw materials which provide fibre for paper making. Sustainable forestry and paper recovery systems are of paramount importance for a company such as SKG.

Therefore, SKG is very concerned with the effect on the availability of its primary raw materials of the EU Renewable Energy policy targets. By 2020, the EU has stipulated that 20% of all energy consumed should be from renewable sources such as wind, solar energy and bio-energy. The last category can include the incineration of wood and/or recovered

paper for energy production. Financial support for wood as a renewable fuel feedstock is of particular concern, as this drives up prices for our raw materials and puts the paper and the paper packaging industry at a clear competitive disadvantage both globally and in comparison with alternative packaging materials. Given the Group's limited ownership of forests, particularly in Europe, we see this challenge as significant for our industry and a totally inappropriate primary use of wood. The National Renewable Energy Plans from the individual EU member states predict a large increase in the use of wood for renewable energy purposes.

The EUwood study confirms the likely future shortage of wood. The EU should reasonably be expected to have a biomass supply policy, just as it has a coal and gas supply policy. Further policies should be targeted at the agricultural sector, which is modelled to supply more than half of the biomass needed for energy, but for which there are no measures foreseen in the Common Agricultural Policy review in 2012. One possible solution would be to encourage the growth of crops suitable for biomass on set-aside farmland.

SKG also strongly advocates the concept of a resource hierarchy, giving priority to higher value added applications such as paper making over lower value added applications such as

thermal use. This is particularly the case when a reordering of a sequential use of this scarce resource will still fully achieve the renewability objectives.

Another reason for adhering to this hierarchy is the fact that the European paper industry is already the single largest user and producer of bioenergy, with further untapped potential. It should prove possible to extract even more benefits from wood fibres through the further development of integrated bio-refinery technologies.

SKG's risk concerning wood fibre availability is mitigated by our ownership of forestry in Latin America and the relationships we have developed and will continue to develop with key suppliers of wood.

Growth of global recovered paper consumption is high, predominantly led by China continuing its strong economic growth. Demand will rise at an even faster pace than supply, due to further investment in recycled-based paper and board capacity in the developing world, where suitable wood sources are in short supply, and by a modest increase in the usage rate of recovered paper in the developed world. Long term prices of recovered paper are on an upward trend and rising energy costs are also creating pressure for further recovered paper price increases. To ensure the future availability of suitable recovered paper, separate collection at source is



fundamental. Co-mingled collection drives down quality and threatens further improvements to recyclability rates. SKG is concerned to see an avoidance of any further increase in collection systems where this quality aspect is not taken into account.

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

#### 2) Energy and CO<sub>2</sub>

Our industry is amongst the most energy intensive in the world. Although energy intensive, the carbon intensity is mitigated by the extensive use of bio-energy in the sector. The long term upward trend in energy prices presents a key challenge for SKG and the entire industry. Despite the considerable cost increase associated with this long term trend. SKG fully supports the need for (fossil) CO<sub>2</sub> emission reductions to be realised through different Emission Trading Systems around the world, if and when a global level playing field and agreed carbon price are established.

The continued absence of a solid international agreement on CO<sub>2</sub> emissions makes it even more essential that the post 2012 European Emission Trading System (ETS) should function correctly and safely and that key issues

are dealt with properly. The European paper industry needs a continued recognised status as a 'carbon leakage' industry in order to remain competitive. Although we consider the benchmarks for specific paper and board grades that have been established in 2010 and have been adopted by the EU in early 2011 to be very tough, we accept that they have been made according to the rules set in the ETS legislation.

We consider it a major shortcoming in the agreed system, however, that no emission credits are allocated for the production of electricity through the system of Combined Heat and Power (CHP), which is the most efficient way of producing both electricity and heat (steam). This policy results in the majority of paper and board mills in the industry needing to buy CO<sub>2</sub> emission allowances (EUA) to meet emission targets despite the so-called 'carbon leakage' status of the industry. As the legislators chose to rule that there will be no free allocation to any electricity production in the EU ETS directive itself, this cannot be changed before 2020. The CHP measures in the 2020 energy efficiency plan for priority grid access can only support CHP to a certain extent. Therefore, we believe that this treatment of CHP is a conceptual flaw in the system.

Energy costs for SKG's European mill system will increase considerably under the post 2012 ETS, despite a continued

decrease in the use of direct fossil fuel and  $CO_2$  emissions per tonne of paper and board. This penal approach seems counter intuitive. SKG is committed to invest in energy efficiency projects and fuel mix changes shifting, where possible, from the use of fossil fuels to biogenic fuels.

In 2010, the use of non-fossil fuels ratio in our European mill system was 51%, an improvement of 8% compared to 2009. The use of non-fossil fuel in our mill system in Latin America accounted for 23% of primary energy consumption. This is similar to the level in 2009. The biomass energy produced by Cali mill in Colombia has increased by 4% compared to 2009 but our virgin mill at San Felipe in Venezuela operated for half the year as a recycled mill due to energy restrictions in that country. Consequently the overall ratio for Latin America remained the same as that in 2009.

In 2010, SKG's costs for energy were approximately €450 million which equates to 7.1% of our total costs. We are focusing our efforts on reducing specific types of energy usage and we are also aiming to reduce greenhouse gas emissions by investing in more energy efficient systems such as CHP plants, alternative energy options such as biomass, and by driving production efficiencies.



Nicolas Dejeux at the Smurfit Kappa Bag-in-Box plant at Epernay, FR

Tim Snijckers and Willem Schoenmakers at the Smurfit Kappa Roermond paper mill, NL

#### 3) Water

Global pressure on freshwater resources is increasing. This development is gaining speed because of the impact of climate change. As our business is dependent on this natural resource, both water availability and the impact of our water usage are high on our agenda. Sufficient availability of good quality water at an affordable cost is key for an industry like ours. As we support initiatives to develop 'water footprints' and water stewardship standards, in early 2011 SKG joined the Water Footprint Network, which is a frontrunner in developing such standards. The transparency these standards provide for water usage is especially needed in those places where availability of freshwater is already an issue or is fast becoming one. SKG is closely monitoring the upcoming ISO standard on water footprinting and the work of the Alliance of Water Stewardship and European Water Partners via its industry association CEPI.

The paper industry is seen as a water intensive industry. However, there is a misconception in this assertion. The paper industry is predominantly processing rather than consuming significant volumes of water. After treatment in modern water treatment

plants, over 90% of the water intake is returned to the water systems from which it was extracted. SKG is strongly committed to find ways to further improve water usage efficiency and to reduce discharges. Underpinning this commitment SKG has invested over €20 million in upgrading existing installations or building new water treatment plants since 2007 and will continue to do so where appropriate.

## 4) Food Contact and Food Safety

The challenge our industry faces on food safety reflects the fact that we endeavour to repeatedly recycle our paper materials as much as we can in the interest of environmental sustainability and cost efficiencies.

As our raw material is mostly postconsumer recovered paper there are traces of additives such as ink, starch and other chemicals in the recycled product. Our industry, therefore, has to go to great lengths to extract these substances, where necessary, or to ensure that they will not be detrimental to packaged goods. More specifically, we must also ensure that they comply with the European Regulation on materials that come into contact with food. Our industry actively continues its efforts to ensure the safety of recycled packaging. A successful example is the phase out of DIBP (di-isobutyl-phthalate) glue, after a recommendation made by the German authorities in 2008. CEPI and other associated federations (FEICA. EuPIA, CITPA), jointly recommended phasing out the use of DIBP from paper and packaging applications. A survey performed by CITPA in 2010 confirmed that one year after the recommendation to phase out the use of phthalates in adhesives, 60% of recycled fibres used for food packaging contained quantities of DIBP below the recommended limit (0.3mg DIBP/kg food), versus only 20% the previous year. Further decreases are expected in the coming years.

SKG contributed actively within the European paper and packaging associations CEPI and FEFCO to develop industry initiatives and to define best practices. SKG has an internal team that is dedicated to food contact and product food safety issues.



### CORPORATE GOVERNANCE

**HEALTH AND SAFETY** 

# OUR PERFORMANCE IN 2010

In our 2009 Sustainable Development Report we published a roadmap which identified commitments to be reached over the coming years. The information which now follows measures our performance against the 2010 commitments.

**ENVIRONMENT** -

ACHIEVED

PARTIALLY ACHIEVED

NOT ACHIEVED

OTHER STAKEHOLDER DIALOGUE

| KEY AREA                                  |  |  |  |  |  |
|---|--|--|--|--|--|
| Code of Business Conduct                  |  |  |  |  |  |
| Social Citizenship                        |  |  |  |  |  |
| Employee Development                      |  |  |  |  |  |
| Community                                 |  |  |  |  |  |
| Policy                                    |  |  |  |  |  |
| Continuous Improvement                    |  |  |  |  |  |
| Policy SKG                                |  |  |  |  |  |
| EMS Europe                                |  |  |  |  |  |
| EMS Latin America                         |  |  |  |  |  |
| CoC Europe                                |  |  |  |  |  |
|   |  |  |  |  |  |
| CoC Latin America                         |  |  |  |  |  |
| Pulp Purchase                             |  |  |  |  |  |
| Third Party Paper Suppliers Europe        |  |  |  |  |  |
|   |  |  |  |  |  |
| Third Party Paper Suppliers Latin America |  |  |  |  |  |
| Energy Europe                             |  |  |  |  |  |
| Energy Latin America                      |  |  |  |  |  |
| Water Discharges Europe                   |  |  |  |  |  |
| Water Discharges Latin America            |  |  |  |  |  |
| Hazardous Chemicals Europe                |  |  |  |  |  |
| Hazardous Chemicals Latin America         |  |  |  |  |  |
| Air Emission Europe                       |  |  |  |  |  |
| Air Emission Latin America                |  |  |  |  |  |
| Suppliers                                 |  |  |  |  |  |
| Customers                                 |  |  |  |  |  |
| Social Responsibility Investment Ratings  |  |  |  |  |  |
| GRI Reporting Guidelines                  |  |  |  |  |  |
|   |  |  |  |  |  |

| COMMITMENT 2010  | RESULTS  |  |  |
|--|--|--|--|
| Review where appropriate and maintain.   | We maintained implementation of this Code in all our operations and implemented it in operations acquired in 2010.   |  |  |
| Continue to apply in all operations worldwide.<br>This is delegated locally.   | For details see page 41 to 55.   |  |  |
| Continue to have programmes to help educate, train and promote employee opportunities.   | For details see page 44 and 45.  |  |  |
| Continually encourage local involvement appropriate to local needs.  | For details see page 53 to 55.   |  |  |
| Ensure full adherence.   | We maintained implementation of this policy in all our operations and implemented it in operations acquired in 2010.   |  |  |
| Continue to improve on previous year's performance with an annual improvement of 10% in the frequency rate.  | The average improvement in the frequency rate, year-on-year, over the past three years is 7%; nevertheless the targeted improvement of 10% in 2010 vs 2009 has not been met (see page 51).   |  |  |
| Action to ensure policies are understood and implemented in all operations. Review and refine as necessary.  | We maintained implementation of these policies in all our operations and implemented it in operations acquired in 2010.  |  |  |
| Maintain the certification of all European mills. Environmental Management System is implemented in all European mills (containerboard and board mills) from June 2009.  | Certification has been maintained in all mills.  |  |  |
| Two additional mills to be certified EMS by end of 2010.   | Cerro Gordo and Los Reyes, two of our Mexican mills have been Certified ISO 14001 (Environmental Management System standard) in the course of 2010.  |  |  |
| Achieve 100% certification of our recycled mills (paper and board mills) by 2010.  Continue our programme of CoC certification of the converting units to reflect customer demand.                             | At end of 2010, 86% of our production of recycled containerboard paper was certified Chain of Custody under the FSC and/or PEFC scheme.  The overall level of certification reached 100% at end of the first quarter of 2011. 33% of our European converting units reached Chain of Custody certification during 2010. For details see page 66 and 67. |  |  |
| Continue to maintain CoC certification in Colombia.  | FSC certification of our Colombian forest and Chain of Custody certification attained in 2009 for all Colombian operations (mills and converting units) have been maintained in 2010. This process on CoC certification in Venezuela is still on hold.   |  |  |
| Continue to apply the commitment on pulp purchase according to SKG Forestry policy.  | European and Latin American mills, purchase market bleached pulp only from pulp mills with Chain of Custody certification under PEFC or FSC schemes.   |  |  |
| Communication and commitment process continued to ensure compliance by strategic suppliers by end of 2010.   | Implementation of a specific protocol assessing compliance of all third party virgin papers suppliers with our forestry policy.  Strategic suppliers complied with forestry policy as planned at end of 2010.  Received written confirmation of compliance for 80% of purchased virgin paper.  |  |  |
| Communication and commitment process will commence in 2010. Ensure 60% compliance by end of 2010.  | Progress made in assessing our external paper suppliers during the year 2010.<br>At end of 2010, 82% of the strategic virgin paper supplies were compliant.  |  |  |
| Commissioning new boiler in Zülpich and start up of the Dalkia<br>biomass boiler in Cellulose du Pin in 2010. Re-commissioning of CHP<br>(from a closed mill) to our solid board mill in Nieuweschans by 2010. | Achieved as planned in all three sites - for details see page 31.  |  |  |
| Rate of biofuel usage in our mill system to increase to 27% by 2010.   | Rate of biofuel usage reached 26% by end of 2010. (Rate adjusted for the fact that our kraftliner mill in San Felipe (Venezuela) in 2010 operated for 6 months as a recycled mill due to energy disruptions in the country.)   |  |  |
| The second upgrade phase of the fifth WTP is due to start mid 2010. Achieve 25% reduction in COD discharge by 2010 over 2005.  | Upgraded WTP started mid 2010 as planned in Sanguesa mill (Spain). Compared to 2005, a COD reduction of 28% was achieved in 2010 in our European mill system. Reduction is expressed per tonne of paper and board produced.  |  |  |
| Target 2% reduction in each of the next four years to 2013 on COD, BOD and TSS.  | Compared to 2009 and relative to production, reduction of COD, BOD and TSS discharges reached 8%, 11% and 3% respectively.   |  |  |
| Continue to maintain best practices to minimise use of hazardous chemicals.  | Minimising use of hazardous chemicals is fully integrated into the procedures defined in the EMS in place in all mills.  |  |  |
| Start assessment to minimise usage of chemicals hazardous to environment each time it is technically possible.   | Process on how to minimise use of hazardous chemicals implemented in all our Latin America mills. In five of our mills hazardous chemicals were replaced by less hazardous ones.   |  |  |
| Air emission monitoring of our European mill boilers will comply with new EU/IPPC regulations by 2010. By law, compliance has to be achieved by 2014.  | At end of 2010, monitoring systems of emissions to air recommended by the new EU Regulation (Industrial Emissions Directive) is in place in all our large combustion plants using fossil fuel.  Not all black liquor boilers yet have the required monitoring protocols.   |  |  |
| Implementation of the monitoring system will start – 70% to be achieved by 2010.   | The operating boilers at all facilities (mills and converting units) performed at least one air emission monitoring in 2010 for each air contaminant listed in their permit.   |  |  |
| Continuous implementation and assessment to achieve compliance by strategic suppliers.   | Started a compliance verification programme applicable to all strategic suppliers of inks, glues, starch and chemicals including physical audits on site. Objective to complete verification programme by end 2011 and to continue these verifications of compliance thereafter. Final aim is to conduct an operational risk assessment.               |  |  |
| Continue agreements with customers on Sustainable Packaging Strategies. Include Sustainability Metrics in our Customer Support Tools.  | Continuous cooperation with customers on their pressing sustainability issues, building targets together and achieving them. Clear acknowledgement through public awards by some customers of our work on sustainability. Sustainability metrics included in our tools (Pack Expert and Paper-to-Box).   |  |  |
| Participate when appropriate in ratings and other relevant initiatives.  | Signatory to UN Global Compact initiative, participating in Carbon Disclosure Project and continued membership of Sedex.   |  |  |
| Continue to report as previous years and increase our transparency.  | Objective is to achieve A+ reporting status in 2012.   |  |  |



## Our Long Term Sustainable Development Commitments

In this section of the Report, we set out our key commitments under four headings: sustainable use of fibre; CO<sub>2</sub> emissions; water; and code of business conduct.

#### 1. Sustainable use of fibre

Fibres account for more than 90% of the raw materials used for SKG's products. Our main concern is that 100% of the wood, wood fibres and pulp used by SKG originates from non-controversial sources.

#### COMMITMENT

#### By 2015:

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

Because of our relatively small forestry ownership (only in Latin America), over 90% of the wood we use is delivered by third parties. Our approach has been to implement Chain of Custody certification within all our operations to ensure a sustainable supply of paper we produce or source externally, to support well managed forest practice and to provide our customers with third party verified sustainable packaging.

SKG recognises and utilises FSC and PEFC, the two major international forest certification bodies, to qualify the wood and the virgin fibre based products we purchase as well as the paper, board and packaging we produce in our operations.

#### Achievements to date

- Our Colombian forests have been certified FSC since 2003, with the remaining operations in Colombia certified since 2009.
- Since January 2009 all our virgin paper mills in Europe are certified PEFC or FSC.
- In 2009 we started to implement FSC and PEFC Chain of Custody certification in our EU recycled paper and board mill system.



#### Activities and results in 2010

- 72% of the paper and board we produce in our Group mill system is certified for further labelling Chain of Custody according to either PEFC or FSC.
- At the end of 2010, 32% of our converting operations at Group level are certified Chain of Custody according to either PEFC or FSC.
- In 2010 we reviewed our suppliers and ensured that no wood fibre originated from controversial sources.

#### Current and future activities

- Early in 2011 we completed the Chain of Custody certification of our EU recycled paper and board mill system.
- At the end of 2013, we aim to have at least 85% of our converting operations, both in Europe and in Latin America, Chain of Custody certified according to either PEFC or FSC.
- At the end of 2013, we aim to have over 85% of the paper and board produced in our Group certified Chain of Custody.

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

Climate change represents the most important sustainability issue for SKG today. We have taken global initiatives to address this subject.

#### COMMITMENT

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

#### Achievements to date

- SKG has been switching from fossil fuel to renewable energy where possible and economically feasible (Piteå biomass boiler installed in 2007, new black liquor boiler in Cali mill installed in August 2008, Cellulose du Pin (Facture) biomass boiler commissioned in August 2010).
- For over two decades SKG has been focused on reducing CO<sub>2</sub> emissions from fossil fuels relative to production (see pages 36-37 for examples).

#### Activities and results in 2010

In 2010, total CO<sub>2</sub> fossil emissions of all SKG operations were reduced by 4.0% compared to 2009. This emission comparison is volume adjusted.

#### Current and future activities

- In our sack kraft paper mill in Nervión (Spain), we are constructing a new larger steam turbine to increase the production of biomass-based renewable energy. This new turbine is due to start operating towards the end of 2011 and will further reduce fossil based CO<sub>2</sub> emissions from the mill.
- In our kraft paper mill in Navarra (Spain), producing testliner and machine glazed paper, in mid 2011 we will start to transform the current boiler into a bubbling fluidised bed combustor. The mill will reach a doubling of the production of steam with 100% generated by biomass. The upgraded boiler is scheduled to start up in the second half of 2012.





#### 3. Water

After fibres, water is the second natural resource that is vital to our business. We have worked hard during the last five years to continuously reduce the environmental impact of the water we discharge after usage.

#### COMMITMENT

Reduce the organic content discharged in our process water (COD) by 10% by 2020 compared to 2010. The reduction is relative to the organic discharge measured by COD, expressed per tonne of paper produced.

#### Achievements to date

- Between 2007 and 2010 we invested over €20 million to upgrade existing plants and to build new water treatment plants in our European mill system.
- This investment programme resulted in a 28% reduction, relative to production, of the organic content in the water discharges (COD) of our European mill system in 2010 compared to 2005. This achievement exceeded the target reduction of 25%.

#### Activities and results in 2010

- In 2010, water intake by the European operations relative to production decreased by 11% compared to 2009.
- Relative to production, the water intake of the Latin American mills was reduced by 15% compared to 2009.

#### Current and future activities

- There are several investments in water treatment facilities in both Europe and Latin America that are ready for decision and implementation in the next few years.
- We are implementing a programme of best practice in the treatment of our process water both in Europe and Latin America. Best practice for water treatment includes biological treatment before discharging.
- We became a member of the Water Footprint Network (WFN) in March 2011.

#### 4. Code of Business Conduct

We have operations in 31 countries on different continents and we employ approximately 38,000 employees. As a truly multinational Group, the employee base has grown considerably not only in size but also in cultural and social diversity. This diversity demands the development and adherence to shared core values and business principles in the area of business practice, health and safety, employee relations, human rights, environment and community involvement. The Group's commitment to these principles is confirmed by our Code of Business Conduct, to which all of our companies and employees alike must adhere.

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

#### COMMITMENT

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





#### Achievements to date

- Established and implemented a number of Group wide policies in areas like ethical business behaviour, finance, health and safety, environment and sourcing.
- Code of Business Conduct is applicable to all employees across the Group.
- Appointment of a Group Compliance officer with an active reporting role to the Group Board (Audit Committee).
- Good Faith Reporting Policy Statement ('Whistleblower Code') provides channels to all employees to confidentially raise concerns in relation to perceived improper actions.

#### Activities and results in 2010

- In 2010 we became a signatory to the UN Global Compact initiative.
- Through our Sustainability Sourcing Policy we commenced auditing our strategic suppliers on their Code of Conduct programmes.
- A Safety Opinion Survey was carried out in all our European plants to measure safety conditions and to identify areas for improvement.

- Where concerns with regard to our Code of Business Conduct were raised investigations took place and, where appropriate, disciplinary actions were taken.
- Every level of management throughout the Group has a responsibility to monitor and enforce the Group's guidelines on Competition Policy. Approximately 900 managing and sales directors, sales managers and other senior management across the Group confirmed their understanding of the Group's zero tolerance policy with regard to anti-competitive behaviour. The process required written certification from each manager that he had not been engaged in, nor was aware of, any such actions.
- An internal control questionnaire was completed at each of our 330 operations. All general managers and financial controllers confirmed their understanding and adherence to the Code of Business Conduct. This process required written certification that all employees had been made aware of the Code of Business Conduct and Whistleblower Code and that any known or suspected violations had been reported appropriately.

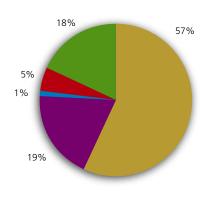
#### **Current and future activities**

- The Code of Business Conduct and related policy statements will be benchmarked against best practices and revised as appropriate.
- An awareness campaign will be undertaken, including translation of the business codes into 17 languages, and the development of appropriate guidelines explaining the implications of the various codes.
- A Corporate Social Responsibility (CSR) programme is in place at operating company level which aims to support certain community involvement programmes and to increase the transparency of all community involvement of the Group's operating companies.
- New Board-approved Group Foundation for CSR co-investment activity to be set up in 2011.



## **Environment**

## Fibre origins 2010 All operations



Recycled pulp produced internally
Wood pulp produced internally
Market virgin pulp

Virgin papers purchased

Recycled paper purchased

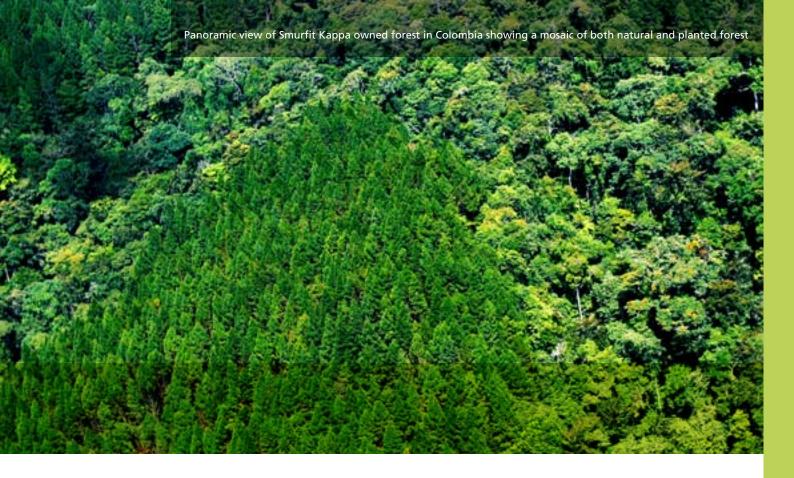
## 1. Sustainable use of fibres

SKG aims to produce products using only raw materials with noncontroversial origins. For this reason we have very strict policies in place, applicable to all operations, to monitor the origin of the fibres forming the basis of our products. Our packaging products are mainly produced with paper and board consisting of virgin and recycled fibres that is manufactured within our own Group. 25% of fibres used by SKG are virgin and 75% come from recovered paper. Less than 10% of the wood we use for the production of virgin fibres originates from SKG owned forests. We are very active in ensuring with suppliers that the supply of wood is from sustainable origins, that our suppliers implement strict policies for monitoring the origin of wood fibres and ensuring the protection of natural resources in the countries from which we source them

The chart on this page indicates the source of fibres used in our operations.

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

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



Typical products involved are wood, virgin pulp and paper and board containing virgin fibres.

SKG recognises and utilises the two major international forest certification schemes, The Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification (PEFC), as well as the schemes that have gained international recognition by the PEFC council.

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

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

## SKG's sustainable fibre approach in forestry

SKG owns and manages forests in Colombia and Venezuela, where we have over 105,000 hectares. These plantations provide the mills in both countries with almost all of their virgin fibre requirements.

SKG's largest forest plantations are in Colombia. Here, we have 69,500 hectares, including 6,700 hectares under management. This area comprises 44,350 hectares of commercial plantations, 21,400 hectares of protected natural forest and 3,750 hectares for infrastructure. Of the commercial plantations, 62% is pines with the remaining 38% Eucalyptus. The company manages its forest estate based on sustainable development principles, promoting economic growth, a responsible use of natural resources and fostering social equity in the regions where the forest plantations are located. SKG is operating its Colombian forest under a management system that has been certified in accordance with FSC since 2003.

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

The forest plantations in Venezuela have not yet been certified but are well advanced in terms of best practice and will seek certifications when local circumstances permit.

The main species harvested in both countries are varieties of Eucalyptus and the ones most commonly planted in our forests are *grandis* and *urograndis*.

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

#### SKG sustainable fibre approach Overview of certification in place at the end of 2010\*

#### SK Mills and Converting plants Certified Chain of Custody under PEFC or FSC

| VIRGIN PAPER                                       | Production<br>ktonnes           | Production<br>capacity with<br>CoC certification | %<br>certified<br>paper |
|--|---------------------------------|--|-------------------------|
| EUROPE   |                                 |  |                         |
| Kraftliner products                                | 1,571                           | 100%   | 70%                     |
| Other virgin papers (sack paper,<br>MG paper)      | 245                             | 100%   | 26%                     |
| LATIN AMERICA                                      |                                 |  |                         |
| Kraftliner, printing and writing paper, SC fluting | 285                             | 91%  | 91%                     |
| RECYCLED PAPERS AND BOARD                          | Production<br>ktonnes           | Production<br>capacity with<br>CoC certification | %<br>certified<br>paper |
| EUROPE   |                                 |  |                         |
| Containerboard recycled papers                     | 2,869                           | 86%  | 86%                     |
| Solid board and carton board                       | 947                             | 100%   | 82%                     |
| LATIN AMERICA                                      |                                 |  |                         |
| Containerboard recycled papers                     | 634                             | 21%  | 21%                     |
| Cartonboard  | 163                             | 0%   | 0%                      |
| PACKAGING  | Number<br>of sites<br>certified | Percentage of<br>sites with CoC<br>Certification |                         |
| EUROPE   |                                 |  |                         |
| Solid and carton packaging                         | 7                               | 88%  |                         |
| Corrugated packaging                               | 60                              | 31%  |                         |
| LATIN AMERICA                                      |                                 |  |                         |
| Corrugated packaging                               | 6                               | 23%  |                         |
| Folding packaging                                  | 0                               | 0%   |                         |
| Sacks  | 3                               | 40%  |                         |

## SKG's sustainable fibre approach in paper and board production

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

As mentioned in the Roadmap in our previous report, from 2009 we have been working to achieve Chain of Custody certification for all our recycled paper and board mills.

By early 2011 we successfully achieved this certification for our complete paper and board mill system in Europe consisting of mills producing virgin and recycled containerboard, cartonboard, solid board, sack paper and machine glazed papers.

Certification of our mills in the Latin America region is progressing with Chain of Custody certification in place in all Colombian operations since 2009 and a commitment to achieve certification for our other paper and board mills in Argentina and Mexico by the end of 2013. Venezuela is currently not included in this commitment.

See page 29 for explanation of this table

<sup>\*</sup> Within KPMG assurance scope. The assurance report can be found on pages 81 and 82.



## SKG's sustainable fibre approach in packaging operations

In 2009 we initiated a programme in our packaging operations to supply customers with Chain of Custody certified products. This programme has been very successful so far and to date 32% of our packaging operations are Chain of Custody certified (FSC and/or PEFC). Our objective is to reach a level of 90% of our packaging operations certified by the end of 2015.

## SKG's sustainable fibre approach to suppliers

To make further progress on the certification of our products, in 2010 we commenced a verification programme with our external paper suppliers to ensure that, as a minimum, all virgin fibres contained in the supplied papers or board are of non-controversial origin and are preferably certified by PEFC or FSC schemes. This verification process includes all our external paper suppliers and is based both on questionnaires and physical audits. Our objective is to reach 95% of external paper supplies to be Chain of Custody certified by the end of 2012.

A complete overview of the status of the certification programme of our operations at the end of 2010 is shown on page 28.

The first two sections of the table give the ratio of our paper or board production capacity operating with Chain of Custody certification while the last column reports the exact percentage of the paper or board that can be sold certified for a further labelling of the packaging. This information is disclosed by type of paper and board produced by SKG in both regions.

These percentages reflect the situation at the end of 2010. To simplify the calculation, where a mill obtained the certificate during the year, the annual production of the mill is taken into account for calculating the ratio.

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

#### **Biodiversity**

As all our forest ownership is located in Latin America, the following comments are concentrated on that region. In Colombia 31% of the total forest area of 69,500 hectares is protected natural forest, while in Venezuela 37% of the 35,000 hectares owned by the Group is protected natural forest. These protected parts of our forests are kept as natural forest and not

replaced by plantations, thus maintaining biodiversity, preserving watersheds and helping to conserve natural habitats.

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

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

In Colombia, Smurfit Kappa Cartón de Colombia (SKCC) is continuously investing in research projects, frequently in cooperation with other research institutes as the following examples show.

Together with the National Centre for Coffee Research (CENICAFÉ) and with the Forestry Engineering School of Universidad Nacional de Colombia in Medellin, SKCC has continued its research on the water consumption of *Eucalyptus grandis*, which is one of the main sources of short fibre for

our Colombian mills. The field work is now complete for *Eucalyptus grandis* and also for *Pinus tecunumanii* plantations throughout the forestry land base. A mathematically modelled testing and validation of assumptions for both species will be carried out during 2011 and final results are expected by the end of 2012.

In addition to the water usage project, SKCC and CENICAFÉ worked on the potential carbon sequestration capabilities of the pine and eucalyptus species planted by SKCC. A model for estimating the amounts of carbon and CO<sub>2</sub> equivalents was developed during 2010. The model named "3CFix" (Cartón de Colombia Carbon Fix) allows SKCC to calculate the amount of carbon captured in the standing plantations as well as in the wood delivered to the virgin paper mill in Cali.

In flora and fauna research projects a total of over 500 flora and fauna species have been identified and recorded since 2005. SKCC together with staff from local universities identifies, classifies and counts populations of endangered species.

All species recorded are checked against the threatened species lists published by the International Union for the Conservation of Nature, the Convention on International Trade in Endangered Species of Wild Fauna and Flora and the Colombian Ministry of the Environment and Land Development. Of the species recorded,

14 are considered threatened under the different classification categories. The threatened species included five species of flora, five species of birds and four species of mammals of which several have been classified as vulnerable or endangered. Examples include the Andean Walnut tree *Juglans neotropica*, a species of bird, the Baudo Guan *Penelope ortoni*, and the Spectacled Bear *Tremarctos ornatus*.

The identification of flora and fauna biodiversity within natural forests benefits the scientific community and serves to further optimise the natural forest protection policies of SKCC. Community education and support schemes for the endangered species are being developed.

At the Claridad farm, located in the Cauca region of Colombia, a seed orchard has been established using the best clones from the genetic improvement programme, involving hybrid crosses between diverse tree species. These combine the optimum features of the species in relation to growth, disease resistance and quality of fibre.

The study designed by the Forestry Engineering School of Medellin and the Forestry Research Department of SKCC concerning a micro river basin with pastures, native forest regeneration and eucalyptus plantations on former grassland has been accepted by the Programa de Monitoramento e Modelagem

de Bacias Hidrográficas do Brasil (PROMAB) as part of a comprehensive effort to understand how commercial forestry plantations compare and interact with other similar soil uses and nearby communities in tropical and sub-tropical regions. The selected micro river basins are expected to be fully equipped with measuring instrumentation by the end of 2011.

Besides these research projects, SKCC fully recognises the responsibilities that come with being members of the community. Through the programmes it has with local communities and with the help of its social foundation, SKCC helps to improve the living condition of the communities near our operations. There are several programmes on work skills, harvesting, forestry, etc.

SKCC also contributes to the development of a forestry culture through open information exchange with interested individuals and organisations. There is also a continuous dialogue with customers, communities, government, employees and investors aimed at improving goods and services obtained from sustainable forest management.

#### **Protected Areas**

We have identified the SKG operations which are either within or in close proximity to legally protected areas or areas of high biodiversity value.

Natura 2000 is an ecology network of protected areas in the territory of the European Union which has been created in 1992 after governments adopted legislation protecting the most seriously threatened habitats and species across Europe. Ten of our European sites are located within or adjacent to such protected areas.

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

SKG is keenly aware of these situations and continues to take all necessary steps to ensure both the environmental protection and the sustainability of these sensitive areas.

The complete list of these sites can be found on our website at: http://www.smurfitkappa.com/NR/rdonlyres/51C8AA92-70AE-4DE2-B171-7AF2DFC88B38/0/ProtectedareasSKG2009.pdf

## 2. Efficient use of energy and carbon management

## Contributing to action on climate change

The pulp and paper industry is energy intensive and has a responsibility to look carefully at the impact of fossil fuels. Given the volatility in the pricing of energy over the past number of years, there is also a commercial imperative to achieve the most efficient use of energy. SKG looks upon improved energy usage as a major priority.

SKG's overall energy from biomass has increased by 6% since 2009. This improvement is the result of our most recent investments in biomass boilers in Europe and Latin America.

## Reduction of fossil CO<sub>2</sub> emissions through investments in co-generation

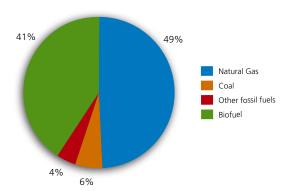
Since mid 2010 at our mill in Zülpich (Germany) the new multi-fuel boiler for the production of electricity and steam for the paper is in operation. With this new power boiler, producing both steam and electricity, the ratio of cogenerated electricity for this mill reached 95% at end of 2010. Fuel for the boiler consists of brown coal mined in the region of the mill, organic waste from the paper recycling process and biogas derived from the anaerobic process water treatment at the mill.

In June 2010 a new gas turbine at our solid board mill in Nieuweschans (Netherlands) was commissioned, allowing the mill to cogenerate the total electricity needed for its production.

The boiler house at our paper mill in Bernal (Argentina) was originally designed to provide steam and electricity with multiple boilers and steam turbines for six paper machines. Now there is only one paper machine to supply and consequently a new steam boiler with an economiser connected to it has been constructed. With this configuration, an efficiency of more than 90% is reached, which significantly reduces the CO<sub>2</sub> emissions of Bernal. The mill is also investing in a new water treatment plant which produces biogas in the anaerobic stage. In the future it will also be possible to burn this biogas in the new boiler further reducing the fossil CO<sub>2</sub> emissions of the mill.

The new outsourced biomass boiler at our paper mill Cellulose du Pin (France) came into operation at the end of 2010, substantially raising the cogenerating power of the mill. From 2011, we expect to significantly reduce the fossil CO<sub>2</sub> emissions resulting from a significant increase in non fossil fuel usage at this site.

### Fuel consumption 2010 European and Latin American operations



#### Energy efficiency initiatives

An internal study done in 2010 has produced an overview of all (theoretically) possible savings on energy needs per tonne of paper produced, both in electrical and steam usage, as well as on the efficiency of the energy conversion. Projects for specific CO<sub>2</sub> have also been identified in this study. All European paper mills have been included to date but the study will continue in 2011 including the mills in the Specialties Division and Latin America. The results of this study will form an important element in decision making on energy related capital expenditure projects.

#### Germany Hoya increasing energy efficiency

In our Hoya Papier mill, since 2009 we have been working on a project to extend the paper machine for the production of lightweight paper. This project is a good example of a commercial and environmental win-win project, as there will also be much more efficient energy usage. During 2010 the mill completed the first part of the project, which involved improvements in the stock approach system, the forming section, the dry-end system and replacement and installation of new elements like a film press, electrical drives and white water heating.

In 2010, many of our operations, both mills and converting operations, have taken energy efficiency initiatives. The following examples highlight the breadth of these initiatives.

In our Spanish virgin paper mills, the upgrade of the biomass power plant at Nervión made considerable progress, while it was decided to invest in an increased usage of biomass in the boiler in the SK Navarra mill at Sanguesa.

The pulper cleaning loop project at the recycled paper stock preparation of mills, analogous to the principle which has been introduced at SK Roermond Papier (Netherlands), has been started. This will result in savings on electricity usage per tonne of paper in these mills.

The Swisswell corrugated plant in Möhlin (Switzerland) has refurbished its steam boiler resulting in a reduction of fossil  $\mathrm{CO}_2$  emissions by one third. The modernised steam generator came into operation at the end of 2010.

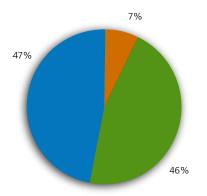
In our Burgos packaging plant in Spain an energy saving lighting system was introduced. The roof of the plant which is located in a part of Spain that enjoys much sunshine but at the same time experiences cold winters is constructed such that it maximises both insulation and the use of sunshine in the plant. Inside

the plant a lighting system is installed that automatically switches off when the correct light level required for each area is reached. This system results in a reduction of 20% in electricity consumption used for lighting.

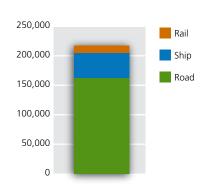
Compared to 2009, in 2010 the co-generation ratio for the usage of electricity increased in Europe by 4% for all our operations, despite the closure of our mill in Sturovo (Slovakia), which generated half of its electricity needs. This increase is the result of the installation of the new CHP installations mentioned earlier. In Latin America, the increase was even higher as the rate of self produced electricity increased by 12% resulting from the new recovery boiler in Cali (Colombia), with its additional capacity for electricity generation. This boiler has been operating since 2009.

Energy, CO<sub>2</sub> emissions and other air emissions related data are reported for all our operations (including details for individual mills in Europe and Latin America) in the tables on pages 64 and 65 and pages 68 to 73. The methods applied for calculations as well as details on specific definitions are given in the glossary on pages 83 to 87. From 2008 the web-based reporting tool is in place in all our operations. In 2010 we made a major step forward to increase the data quality by implementing a new functionality in the reporting tool

#### Distribution of raw materials by mode of transport 2010 European operations



#### CO<sub>2</sub> emissions for transport of raw materials 2010 European operations



dedicated to operations for their own internal checking. Alerts are automatically generated where deviations in reported data are noticed compared to the previous period.

We realise that energy and  $\mathrm{CO}_2$  information from biofuel involves uncertainty due to the nature of the data. In this report, measured Lower Heating Values and  $\mathrm{CO}_2$  emission factors have been used to calculate the energy use and  $\mathrm{CO}_2$  emissions from biofuels. The purpose is to have more accurate figures compared to the default values which were used by most mills in 2009.

We have reprocessed the energy and  ${\rm CO_2}$  data from biofuels for the years 2007, 2008 and 2009 to provide consistent data in the graphs on the next page, giving the trend of biofuel and fossil fuel usage over the years 2007-2010.

We will continue to focus on improving the quality of our environmental data and for this purpose we will enhance internal controls on data quality across the Group.

## 3. Reducing CO<sub>2</sub> emissions

In 2010, the total fossil  $\mathrm{CO}_2$  emissions (sum of direct and indirect emissions) of our European operations, amounted to 2,323 ktonnes. The absolute  $\mathrm{CO}_2$  fossil emissions decreased by 109 ktonnes compared to 2009 and the specific  $\mathrm{CO}_2$  emissions (expressed per tonne of production) decreased by 7% compared to the previous year. The main reason for this decrease was the closure of the Sturovo (Slovakia) mill at the beginning of 2010, which had produced energy with a coal fired power plant.

In Latin America the absolute total fossil based  $CO_2$  emissions increased by 63 ktonnes. However, the  $CO_2$  emissions relative to production were identical to 2009, mainly as a result of the new recovery boiler in Cali.

At Group level, the specific total fossil based  $CO_2$  emissions dropped by 4.0% year-on-year.

Historic trends in fossil  $CO_2$  emissions for both Europe and Latin America are shown in the graphs on page 34.

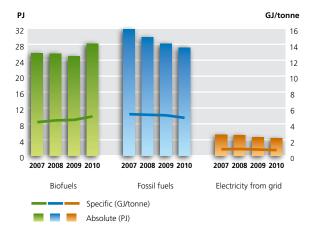
SKG endorses the emission reduction targets defined in the EU ETS Directive post 2012. SKG is committed to reducing its  $CO_2$  emissions relative to production by 20% between 2005

and 2020. On a project by project basis, we develop more ambitious reduction targets from time to time if commercially viable. As CO<sub>2</sub> emissions reduction and energy savings are of high importance to us, CO<sub>2</sub> reduction is progressively taken into account in investment decisions.

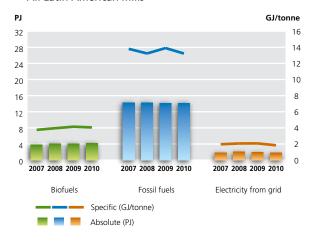
#### Mexico Boiler improvements

In our Los Reyes corrugated plant, boiler improvements led to reductions in energy consumption and emissions. Through technical improvements to the boiler, combustion gases from the chimney can be fed back into the boiler's burners. The improvements, consisting of additional piping and boiler control mechanisms, increased the boiler's efficiency, reduced natural gas consumption by 9% relative to production and reduced emissions of NO<sub>x</sub> (40%) and  $CO_2$  (5%).

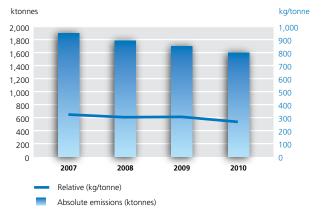
# Energy consumed: biofuels, fossil fuels, electricity from grid All European mills



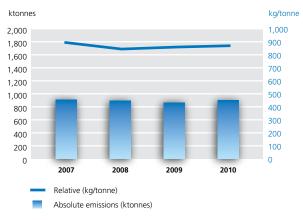
# Energy consumed: biofuels, fossil fuels, electricity from grid All Latin American mills



### Direct (Scope 1) CO<sub>2</sub> emissions All European mills



#### Direct (Scope 1) CO<sub>2</sub> emissions All Latin American mills



#### Transport

In Europe we calculated the CO<sub>2</sub> emissions related to the transport of our main raw materials to our mills and converting plants.

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

While the calculation of  $\mathrm{CO}_2$  emissions for the transport of reels between our own mills and the converting plants (representing 75% of reels) is accurate, we believe we have made a good estimate of emissions for the transport of the remaining reels of

paper supplied to our corrugated plants by external parties.

For 2010,  $\rm CO_2$  equivalent amounted to 217 ktonnes. The breakdown by mode of transport is shown in the graph on page 33. The  $\rm CO_2$  emission factors by transport mode are extracted from the European Reference Life Cycle Database version II (ELCD).

Volumes transported by road and by sea, adjusted for distance, are similar and account for 93% of the total volume, the balance being transported by train.

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

# The Netherlands Road "Trains"

Smurfit Kappa is co-sponsoring and participating in a project testing the use of extra-long "road trains" (some 25 metres in length) for paper deliveries from our paper mill in Roermond to our local corrugated plant in Etten-Leur. This is a real innovation, as long/heavy trucks are not very common and only accepted by Dutch law on a temporary basis. EU legislation has yet to be developed and so far, these long/heavy trucks operate on an approved exception basis. If successful, this method of transport could help to reduce CO<sub>2</sub> emissions in transport.





Dr Steinmüller (r.) of the Johannes Kepler Universität of Linz, Austria handing over the certificate for exemplary energy management to Dr Fuhrmann (Smurfit Kappa Nettingsdorfer).

#### ENERGY reduction Nettingsdorfer and Roermond

#### Introduction

Paper producers in Europe have been engaged for many years in a continuous process of reduction in energy consumption. Two excellent examples of what has been achieved in some of our paper mills are Nettingsdorfer, our Austrian kraftliner mill, and Roermond, our Dutch recycled paper mill.

#### Nettingsdorfer paper mill (Austria)

### A successful balance - 20 years of energy management

"As an energy-intensive industrial location, we began to deliberately focus on energy saving potential and systematic energy management at a relatively early point in time" said Ferdinand Fuhrmann, CEO of Nettingsdorfer.

In the last 20 years, Nettingsdorfer management have made internationally recognised progress in the area of energy management and have identified significant potential for energy savings by thoroughly analysing the production process.

Continuous improvements and optimisations have resulted in a reduction of over 50% in fossil based CO<sub>2</sub> emissions relative to production. Although paper production increased

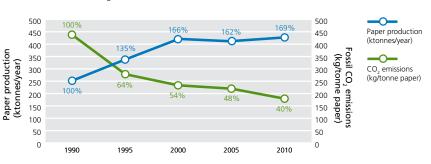
by 69% since 1990, however
Nettingsdorfer was able to decrease
CO<sub>2</sub> emissions from fossil fuels by 32%
and fuel consumption per tonne of
paper by 34%. These improvements
are far greater than the reductions
needed for the Kyoto and/or European
emission reduction targets.

Consequently, energy consumption per tonne of paper in Nettingsdorfer is currently some 20% lower than that of the European competition.

Nettingsdorfer was the first Austrian paper producer to receive a certificate for exemplary energy management from the Energie Institut of the Johannes Kepler Universität of Linz (Austria) in February 2011.

The graph depicts the performance achieved during the 20 past years.

60% less CO<sub>2</sub> fossil fuel per tonne of paper in the last 20 years Nettingsdorfer





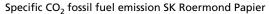
#### Roermond paper mill (Netherlands)

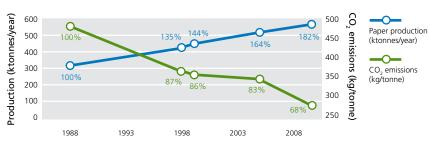
In 1989 a contract was signed between the Dutch government and the Dutch Paper Association (Royal VNP) with the goal of saving 20% of total energy per tonne of paper produced in 1998. Both primary energy (fuel consumption) and electricity taken from the national grid were covered by this agreement, with the aim to promote CHP. Smurfit Kappa Roermond Papier joined this initiative.

Subsequently, a second agreement, concerning primary energy, was signed between both partners.

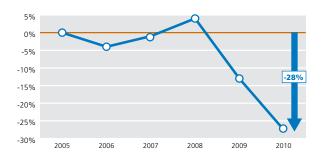
The goal of this agreement is that all Dutch paper mills should reach 'best practice' level in 2012.

Although the Roermond mill was already at world class level in energy consumption when this second agreement took effect in 1999, the mill improved its energy performance even further relative to production in the last decade. Since 1989, energy consumption per tonne of paper decreased by 31%. As the graph below shows, during the same period the CO<sub>2</sub> emissions per tonne of paper decreased by 32%.

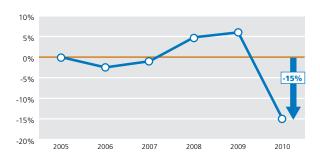




### **European mills:** COD discharge (relative to production)



### **European mills:** Process water discharge (relative to production)



#### 4. Water Management

Water is essential for manufacturing paper. Although this natural resource is a vital element for our process, actual water consumption is less than 9% of our water intake. Over 90% of the quantity of fresh water needed in our processes is returned to the source after cleaning.

SKG continuously invests in the best available techniques to treat the water before returning it to the water source. SKG has made considerable efforts and sizeable investments in upgrading its water treatment facilities in the last five years in order to increase efficiency in the use of water and to improve the quality of water discharged, thereby lowering the impact of our activities on the environment. In general, SKG mills practise a high degree of water re-use with one mill in Germany, Zülpich, operating a totally closed loop system for process water.

During 2010, we carried out a survey in all of our European recycled paper mills under the title 'Sustainable Mill Project'. The main objective of this "water audit" was to find opportunities to decrease water intake and to increase the quality of the discharged water. The survey also aimed at finding opportunities to improve the water systems in our production sites. The survey has resulted in a list per mill of theoretical opportunities to improve

our performance. Where economically feasible, we will implement these opportunities over time.

#### 4.1 Europe

Our objective is to continuously improve the quality of water we discharge to the environment. Therefore, in our 2007 Sustainable Development Report we committed to reducing the organic content (COD) of process water discharged by our European mill system by 25%. In 2010, our European mill system successfully met this target with an achievement of 28% reduction relative to production in comparison to 2005.

COD measures the organic content in water. The graph above (on the left) shows the trend in the quality of process water discharged over the years 2005 - 2010.

In that period also many actions were undertaken to improve water usage efficiency resulting in 15% less process water being used in our European paper and board mills (relative to production) as shown in the graph above (on the right).

Both of these achievements are a result of an ambitious investment programme of over €20 million in five years in upgrading and/or building new process water treatment facilities in five of our major European mills,

starting in 2005. This was also achieved through continuous improvement of our existing water systems and water treatment facilities.

In August 2010, our Navarra paper mill in Sanguesa (Spain) commissioned the second phase of the upgrade of its water treatment plant. This new phase included the conversion of the old sedimentation basins into activated sludge basins and a new secondary clarifier, involving aerobically activated sludge treatment.

The CD Haupt recycled paper and board mill at Wrexen in Germany rebuilt its water treatment plant in 2010 and started up the new installation in December 2010. The project consisted of a new anaerobic reactor, followed by flash aeration and activated sludge treatment. Biogas produced at the anaerobic stage is further treated to remove hydrogen sulphide in order to burn it in the existing boiler.

In 2011 we will invest in an extension of the water treatment facilities in our paper mill in Ania (Italy). The current installation will be extended with an anaerobic reactor. By desulphurising we can burn the generated biogas with energy recovery in the mill boiler.



### Water performance of the European paper and board mills

In 2010, water intake by the European operations relative to production decreased by 11% compared to 2009.

All water indicators measuring the impact of process water discharges were significantly improved in 2010 compared to 2009. COD decreased by 16%, BOD by 38% and TSS by 12%.

These improvements reflect our significant investment programme in water treatment facilities since 2005. The graphs on page 41 give an overview of our total performance concerning water usage and treatment.

#### 4.2 Latin America

The water systems for most of the Latin American mills performed well in 2010. Significant improvements have been achieved for all water indicators.

During 2010 the Latin American operations committed to revise their water consumption rates resulting in a significantly decreased water intake of 15%, relative to production, while the absolute water intake for all Latin America operations showed a drop of 10%.

The insert, on the following page, describes all major actions undertaken by the Latin American operations for this programme.

With regard to the quality of water discharges, good overall improvement has been achieved by the Latin American mill system. As reported in the chapter "Our performance in 2010", COD discharges per tonne of product produced dropped by 8%, BOD by 11% and TSS by 3%.

The system has more than achieved the 2010 2% target reduction for these three indicators.

As well as the paper mills, other Latin American operations have improved their process water discharges during 2010.

Our sack plant in Costa Rica has commissioned a plant to treat process water, previously contaminated with glue and ink. A complete waste water treatment plant has been installed. It is composed of a physical-chemical treatment stage, followed by an aerobic biological treatment. An activated coal filter at the final stage removes soluble chemicals such as pigments that have not been eliminated by the two previous stages.

The treatment plant is highly efficient and successfully reduces COD and TSS initially present in the process water by 99% and the initial BOD by 91%.

In September 2010, our Bernal mill in Argentina was non compliant on discharges for COD and TSS for a short period of time. As a result, the local authorities requested us to halt production in December 2010 for a few days to discuss how the discharge situation could be improved. Since then, the mill has been operating normally and is now regularly communicating data on its discharges to the local authorities.

The capital project, agreed at the end of 2009, to build a water treatment plant in the Bernal mill is on schedule and is due to start in the first quarter of 2012. An anaerobic reactor followed by an activated sludge basin are currently being built.

#### 4.3 Performance data

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

Water related data are reported for all our operations (including details for individual mills in Europe and Latin America) in the tables on pages 64 and 65 and pages 68 to 73.

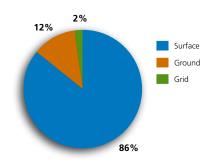


#### Water Reduction Initiatives in Latin America

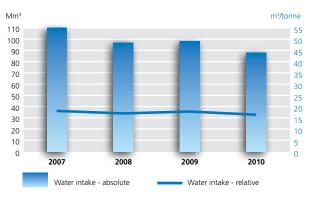
During 2010, all Latin American operations committed to revise their water consumption rates and to find opportunities to decrease water usage within the production process. These efforts resulted in a decrease in water total intake by 10% in the region for 2010 compared to 2009.

- Cali mill (Colombia). By far the largest reduction was achieved at this paper mill. Water usage was reduced by 28%, mainly by installing three cooling towers to reuse water from the recovery boiler.
- Bernal mill (Argentina) achieved a 15% reduction by replacing the use of fresh water with clarified water in vacuum pumps and by re-using collected water from the paper machine floor at the pulping stage.
- **Los Reyes mill (Mexico)** achieved a 23% reduction in fresh-water usage per tonne of paper produced through reformulating the fibre furnish and increasing the use of treated water in the stock-preparation and on the paper machine. Besides these operational improvements, major action was taken to stop fresh-water leakage through the various pipelines.
- Monterrey mill (Mexico) achieved reductions in fresh-water usage of approximately 0.5 cubic metre per tonne of paper produced by increasing the recirculation of treated water. Secondary or biologically treated water was used to replace fresh water in the dilution process of certain chemicals.
- **Guadalupe Corrugated (Mexico)** converted into a zero effluent plant by improving its water management system through the installation of an electro-coagulation water treatment plant. Currently the treated water is used in the starch preparation, for the cleaning of machinery and gardening. Savings of water consumption exceeded over 100 m³ per month.
- Cagua Corrugated (Venezuela) reduced water consumption by 12%. Water coming out from the single facer is reused in the same system. Fresh water is used only to replace evaporated water.
- Valencia Corrugated (Venezuela) installed closed water systems for the starch process and the cooling system for the flexo feeding pump seal. These measures reduced water consumption by 760 m³ per month.

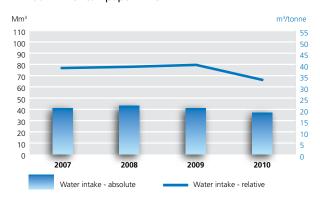
#### Waters sources 2010 European and Latin American operations



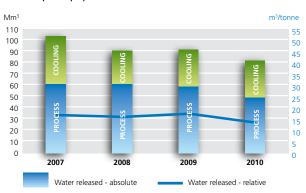
Water intake European paper mills



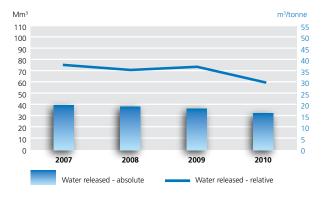
Water intake Latin American paper mills



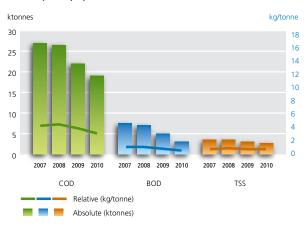
Water released European paper mills



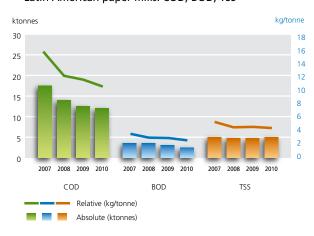
Water released Latin American paper mills



Process water discharges European paper mills: COD, BOD, TSS



Process water discharges Latin American paper mills: COD, BOD, TSS





# Social Development

In this section, under the heading of Social Development, we deal with three subjects relating to Corporate Social Responsibility:

- 1. Social Citizenship
- 2. Health and Safety
- 3. Community Involvement.

#### 1. Social Citizenship

SKG is committed to managing its business in accordance with its declared values which recognise that good social citizenship, reflected in the manner in which we interact with our employees, business partners and local communities, is an essential ingredient in creating and maintaining a sustainable future.

This policy statement summarises the Group's commitments in this regard. SKG's Social Citizenship Policy statement covers subjects such as:

- human rights
- freedom of association
- child labour
- forced labour and abuse
- employee respect
- diversity and non-discrimination
- fair compensation.

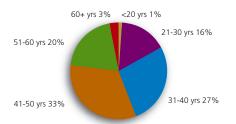
The full policy statement can be downloaded from SKG's website www.smurfitkappa.com.

### **Employee demographics** and turnover

- During 2010, the Group had some 38,000 employees, of whom 5% were managerial, sales and administrative and 95% were production and support personnel.
- Of the total number employed, almost 80% were in France, Germany, Benelux, Mexico,



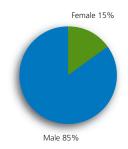
#### Total Employees by Age 2010



Venezuela, Colombia, Spain, United Kingdom, Italy and Sweden, with the remaining 20% distributed between the other 20 countries in which the Group has a production and/or sales and marketing presence.

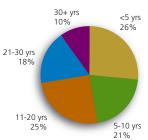
There were some 16 nationalities represented at the most senior levels in the Group. Although we have a policy of hiring the best person available for any position, in practice over 90% of senior operational management positions are held by local managers (same nationality as country where operation is located) and over 95% of our non-management employees are of local origin. Thus, the composition of our workforce typically reflects local ethnic diversity thereby enhancing bonds with the local communities.

#### Management Gender 2010



- In terms of gender, 86% of all employees were male and 14% were female.
- Of approximately 1,600 management employees, 85% were male and 15% female.
- In terms of age profile, 17% of SKG employees were under 30 years of age, 60% were between 30 and 50, and 23% were over 50 years of age.
- Over 50% of employees have 10 or more years of service while 28% have 20 or more years of service.
- Headcount numbers at the end of 2010 were down by 1.5% compared to 2009, primarily reflecting decreases in the Specialties Division in Europe as a result of the sale of our sack converting business.

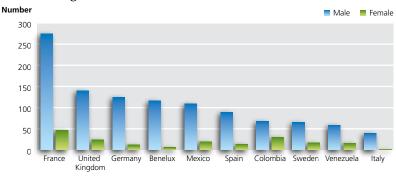
#### Length of Service Total Employees 2010



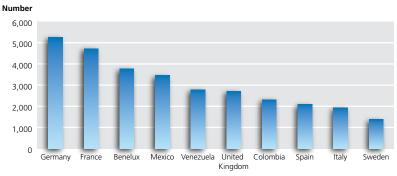
- A total of approximately 1,700 people left the organisation during 2010. Of this number, over 1,100 left as a result of retirement or to pursue other careers and interests. Over 600 employees left the organisation mainly as a result of operational changes in response to market and competitive circumstances. In a number of cases, we were able to transfer employees to other nearby Group locations.
- There were over 1,300 new entrants to the Group during 2010.
- Overall employee turnover at 5.4% is considered relatively low.

In common with many large businesses, Smurfit Kappa Group provides a range of employee benefits. Some, such as, maternity

#### Management Gender 2010



Top 10 Countries Headcount 2010



and paternity leave, are provided under the legislation of the country in question.

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

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

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

SKG values the differences reflected in its diverse workforce.

It is committed to the elimination of any unfair practices which may arise in the day-to-day conduct of the business – whether it be in relation to its own employees or external parties with whom employees of the Group may have contact. During the course of 2010, no incidents of discrimination were reported.

#### Child Labour

SKG is committed to ensuring that it will not employ in any capacity any individual, male or female, who has not either reached the mandated school leaving age or the minimum age set for employment in his/her country.

No such issues under either heading were identified in 2010.

# Forced and Compulsory Labour

The organisation does not, and will not, condone forced labour or physical abuse.

No issues under this heading have arisen during 2010.

#### Indigenous communities

The Group is committed to developing and maintaining a constructive and mutually supportive relationship with its host communities.

There were no incidents of violation of the rights of indigenous people during 2010.

# Employee Training and Development

Continuous training and development of our employees is a key objective of the organisation, with each employee encouraged to reach his or her potential.

SKG supports learning and development programmes reflecting the necessity to constantly review and, where necessary, raise the standards of business performance. We also encourage the exchange of best practice in terms of knowledge and skill transfer and health and safety. SKG ensures that the Group's business ethics and standards are fully understood by all and reflected in their day-to-day conduct.

The company promotes opportunities for individual progression and supports development and learning activities, all of which aim to result in:

- better performance
- higher commitment
- better team motivation
- a learning organisation
- a meritocratic organisation.

SKG places the development of its people at the top of its agenda. The company seeks to create an



environment that facilitates people at all levels of the organisation to realise their potential. This is evident in the range and scope of training and development activities at Group, regional and country level.

Across the organisation during 2010, the number of training hours in respect of the entire suite of learning and development initiatives averaged 20 hours per employee.

The total direct expenditure on training and development during the year amounted to approximately €3 million with further significant indirect costs.

At Group level, the Advanced Management Development Programme (AMD), which has now been running for 11 years, helps to develop managers, both professionally as well as personally, to progress within the company. The AMD programme has been continuously improved every year and this year's version will bring the total number of participating managers since 2000 to more than 240. Many of these participants have achieved significant advancement within the Group.

The English Immersion Programme, which is run various times during the year, is now well established with close to 300 participants since 2007. It forms a crucial programme in conjunction with English language courses at national or local level in advancing English language skills of our employees - English being the official business language of the company.

The Group also continued strong links with the London Business School and various senior executives have completed its highly regarded general management programmes.

Over the last two years, internal business economics training courses were successfully implemented in Europe with more than 1,800 employees participating. This activity and others such as the Continuous Improvement Workshops, are being rolled out across the Group.

A further initiative is a Talent Development Programme for line and staff functions across all of its operating divisions, designed by Smurfit Kappa Benelux, dealing with team building and situational leadership.

At country level, Graduate Trainee Programmes are now well established and secure talent inflow for the Group. The format and structure of each programme are adapted to the local business needs and exchange among the participants across the organisation is facilitated. This network aims to support and develop our trainees, creating a multi-cultural environment, which will enhance individual development and business performance.

Smurfit Kappa Italy has been running an internal training school since 2007, covering training courses in different functional areas, ranging from sales and marketing to health and safety.

The school provides the opportunity to employees from different plants to share experience, benchmark performance and to learn skills and capabilities from other colleagues. This significant initiative ties in seamlessly with local activities at plant level as well as development programmes at Group Level, fostering training throughout the entire organisation.

Smurfit Kappa Latin America has a long-standing relationship with Purdue University and other recognised schools in the USA. For the past 15 years, it has taken a slightly different approach offering studies in those institutions for degrees in business and paper technology. This programme has benefited approximately 30 managers since the late 1990s.

The organisation currently undertakes an annual Performance and Development Review of 90% of its managers.

Typically, these are conducted on a one-to-one basis involving the individual concerned and his/her immediate manager.

Performance reviews are also conducted with non-managerial employees, currently applying to some 50% of this category of personnel.

#### **Internal Communication**

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

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

In addition, there is an extensive network of local employee newsletters and we also publish a high-profile customer magazine "People and Packaging" which is translated into several languages.

SKG respects the rights of its employees to join Trade Unions and be represented by them. In the event of employees not being members of Trade Unions, the Group is committed to respecting the rights of those employees to be represented by bona fide employee representatives.

Trade Unions currently represent some 13,000 employees or 35% of the Group's workforce of 38,000, with the level of representation and conduct of formal bargaining arrangements varying from country to country.

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

We are not aware of the association or bargaining rights of any individual employee or group(s) of employees either being at risk or being denied to them.

#### European Works Council

The SKG European Works Council (EWC), which covers the entire workforce of the Group in the European Union, was created to assist in the development of an open, two way communication process with all employees as prescribed by European regulations.

The council currently consists of 30 members representing all employees. The procedure for selection, nomination and election of the various members is in accordance with national regulations or practices. The EWC is not a negotiating forum, but complements existing local structures where information dissemination and consultation take place.

The matters covered at such meetings include:

- the Group's financial status
- projected developments
- relocation, production curtailments or business closures in any country where there are transnational implications
- environmental protection
- employment opportunities
- health and safety.

For consultation purposes the following matters are covered:

- transnational issues affecting employees' interests in two or more businesses in different countries
- mergers and/or acquisitions having social impacts.

The Council meets at least twice a year. Experts, who may be full-time trade union officials, are allowed to attend a pre-EWC meeting at the request of the relevant EWC member.

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

The four year agreement signed in May 2006 between the Company and the EWC describing how the Company and the EWC will work together is due for renewal. By mutual consent, the term of that agreement was extended

to the end of 2011. During the second half of 2011 the EWC and the Company will enter into discussions with a view to arriving at a new agreement by the year-end.

When a decision is taken to introduce any change, employee consultation and/or negotiation, as appropriate, takes place at the earliest possible time. During the course of such discussions, the impact of the proposed changes, together with the implementation plans, is discussed with employees and their representatives.

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

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

#### **Human Rights**

Respect for Human Rights as defined under the internationally recognised Conventions and Declarations underpins the approach by the SKG to its operations, proposed investments and supplier/contractor selection processes.

In this regard, the Group is a participant in the UN Global Compact Initiative which includes human rights among its core principles.

### Investment and Procurement Practices

A key aspect of due diligence in any acquisition process involving SKG 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 issues arising as a result, the acquisition process will be reviewed, as to the appropriateness of continuing with it.

There were three acquisitions during the course of 2010 and no such issues arose.

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

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

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

Strategic suppliers are being encouraged to join the UN Global Compact Initiative. They are also being encouraged to disclose relevant data in this regard, either directly to SKG or through a recognised organisation.

During the course of 2010, we developed a robust questionnaire to facilitate the auditing of key suppliers in respect of a number of indicators such as human rights.

This is currently under test and review, prior to its more general introduction in 2012/2013.

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



Senior SKG, Divisional and plant management at the presentation of safety award to Smurfit Kappa's Swisswell corrugated plant in Switzerland.

Left to right: Roberto Villaquiran, Bill Fox, Thomas Berndt, Manfred Howald, Tony Smurfit, Georg-Dieter Fischer.



Senior SKG, Divisional and plant management at the presentation of safety award to Smurfit Kappa Recycling Germany.

Left to right: Erik van den Bos, Alain Baudant, Thomas Greitenevert, Klaus Ulbricht, Tony Smurfit, Henri Vermeulen.

#### **Group Awards**

In 2010, as in previous years, there were recognition awards at divisional level for the Best Plant of the Year and the Innovation of the Year. At regional and divisional level there were also awards in the area of Safety, recognising not only the Best Overall Performance but also the Most Improved Performance.

In early 2011 a decision was taken to add a sustainability award to the existing award schemes. This reflects the importance to the Group of excellence in the different areas of sustainability. With this competition, SKG wants to show its commitment to environmental improvements, social and health and safety activities and community involvement both internally and externally. The competition also provides an excellent way to communicate and share activities and successes in sustainability within the Group.

Group, regional and divisional awards serve several purposes. The core objective is to recognise, reward and encourage entrepreneurship, innovation and superior performance whether it is in the area of operations, innovation, safety or sustainability. The awards are visible to the 38,000 employees of the Group and this helps in sharing the objectives of the organisation, creating an aspirational climate and enforcing its priorities.

Our retirees have a special relationship with the Group which is grateful for their contribution to its growth and success over many years. Today there are over 11,500 pensioners from SKG and there are a variety of different associations in different countries that manage a host of social activities which greatly help to maintain the bonds the pensioners enjoyed as working colleagues.

Whilst most of the activities are managed by pensioner associations themselves, there is also ongoing Group support.

#### 2. Health and Safety

SKG is conscious of its responsibilities towards its employees and towards others with whom it comes into contact. At all times SKG promotes safe and healthy working conditions and conduct within the working environment.

Health and safety is an important agenda item at all Group, regional, divisional, operational board, management and employee meetings. We recognise that a formal statement of our health and safety policy and the appropriate focus on its implementation are essential features of the working of the Group.

The Health and Safety Policy has an opening Declaration of Intent which notes that:

SKG will conduct its activities in a responsible manner, taking care of the health, safety and welfare of everyone affected by its activities and minimising the impact of the business on the environment. Health and safety will be an integral part of our business and we will promote adherence to the highest standards in the operation of our facilities.

To achieve this SKG will:

- measure and benchmark health and safety performance on a continuous basis
- continually assess our processes in order to reduce risks and to seek continuous improvement in health and safety practice and performance
- maintain management systems that help to protect employees, visitors, contractors and the public from injury and ill health
- take all practical steps to develop a positive safety culture and safe behaviour throughout the Group
- include health and safety performance as an important element by which all managers are measured.

The elements of the policy and subsequent working standards were designed in accordance with the OHSAS (ISO) 18001 Health and Safety Management System.

#### **Retired Employees**



Senior SKG, Divisional and plant management at the presentation of safety award to Smurfit Kappa's Trimbach solid board packaging plant in the Netherlands.

From left to right: Ad Smit, Alain Merle, Tony Smurfit, Jan van de Moosdijk, Fred Bosman, Bauke van der Molen Kuipers.

The policy document includes:

- the general requirements
- the policy statement
- planning for risk assessment and control
- implementation and operation
- checking, reporting and corrective action
- management review.

When significant accidents do occur, each is reported and details are communicated to every manufacturing plant General Manager and onward to our employees. In this way, experiences are shared which in turn can help the prevention of similar accidents elsewhere in the Group.

The Group has drawn up a written document covering an extensive list of Health and Safety Standards which, together with the Policy document, has been issued to every SKG site and made available to every employee via notice boards, intranet, meetings and other appropriate media.

As a minimum, induction programmes must include a review of the company's health and safety policies and regulations, emergency procedures, escape routes, assembly points and the specific rules of the job to be undertaken. These are also given to temporary workers and contractors.

As a common practice, the Group performs cross audits in health and safety using the in-house Health and Safety coordinators and conducts briefings and training sessions with all new employees.

The majority of the Group's sites have a medical doctor or nurse who attends at regular intervals – typically twice a week - for designated periods.

He/she typically deals with preemployment medicals, return-to-work assessments following absence due to illness or occupational injury and current health issues.

Advice and support on lifestyle matters, such as diet, smoking, exercise and other health-related issues with consequences for employees, their families and communities is also provided by these professionals. Such issues, both occupational and non-occupational, cover topics such as HIV/AIDS, diabetes and stress.

In addition, an appropriate number of trained personnel qualified in First Aid are designated for each site. The objectives are to be able to provide:

- initial treatment for injury or ill health until professional medical help arrives
- treatment of minor injuries which would otherwise have no treatment, or which do not require treatment by a medical professional.

Every site is required to have appropriate equipment and facilities to enable first aid to be carried out.

It is obligatory for each site to have a Safety Committee which must include representatives from all levels of the organisation and must be illustrated in the safety organisation chart for the business unit. The safety meetings are chaired by the site General Manager and are required to be held on a regular basis (at a minimum, monthly for the larger plants).

There are safety coordinators at country and subdivision level who liaise with the Group Safety Manager who in turn reports to the Group VP Human Resources.

The responsibilities of the Group Safety Manager include:

- elaboration of Group safety policy and standards
- measurement of performance through safety statistics, reviews and audits
- development and the fostering of best practices
- provision of communication and fostering assistance to divisions and plants where needed
- proactively identifying developing best practice.

All performance reviews at plant, country, division and regional level have safety as a priority on the agenda. Annual management performance reviews include measurement of progress in safety performance against pre-agreed targets.

Since January 2008, all plants are requested to report details to Group HQ on:

- injuries to contracted employees
- restricted workday cases
- medical treatment cases
- first aid cases
- near misses.

The Group presents annual awards to the' safest plant' and the 'most improved plants' in each reporting division and region for their safety achievements.

After several years of improvement in our health and safety performance, disappointingly in 2010 our frequency rate increased from 0.75 to 0.81, and our severity rate increased from 18.1 to 19.5.

While future target improvements vary between divisions and regions, the Group commitment is to continue to improve on the previous year's performance by means of an ongoing annual re-check.

### Group Health and Safety initiatives

The Group has decided to promote new operating standards to ensure better segregation between pedestrians and vehicles in its operations. The access of pedestrians into warehouses is restricted and permitted only when lift trucks are not in operation. All our new lift trucks will be equipped with a set of safety devices, including speed governors or limitation devices, in order to improve the safety of drivers and of pedestrians in the vicinity.

More focus is also being placed on a new approach to risk analysis, in order to go deeper into the identification of hazards and to have a better assessment of potential risks. These renewed risk assessments have, for example, led to the ranking of some hazards such as work on roofs at a higher level than previously. As a consequence it has been necessary to equip roofs with new safety devices such as mobile hand rails, walkways, and protection of roof windows, together with the integration of these elements into the design of new buildings.

In our recycling facilities all our employees are now wearing Radio Frequency Identification Device (RFID) transponders on their wrist or attached to their belts, and our conveyor belts are equipped with control units and specific antennae. In the event of unexpected access or someone falling unconscious on the conveyors, the

safety system immediately stops the conveyor line and all other equipment in line with the conveyor, such as shredders and balers.

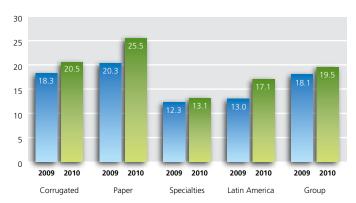
Positive communication is more and more seen as an effective tool to promote safety. Increasingly, plants are organising safety events to communicate the importance of safety with employees, the families of employees, subcontractors, local authorities and neighbouring communities.

At the beginning of 2010 a Safety Opinion Survey was carried out in all our European plants. The objective of the survey was to measure the safety conditions in each operation and to identify improvement opportunities. We plan to carry out this survey every two years which will enable us to measure progress and help to raise the importance of health and safety in each operation.

# Health and Safety Initiatives at local level - examples

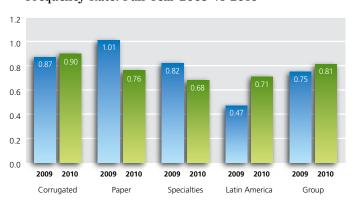
In order to achieve better commitment from suppliers and subcontractors to meet SKG's own internal health and safety standards, our Roermond paper mill (Netherlands) has introduced formal Third Party Regulations. All suppliers and subcontractors working at the mill have to sign and comply with these regulations. The objective is to create safer working conditions with a goal of zero accidents or incidents with suppliers and subcontractors.

#### Severity Rate: Full Year 2009 vs 2010



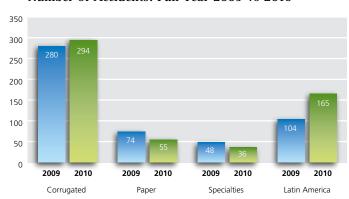
Severity rate: Number of days lost x 100,000/Number of hours worked

Frequency Rate: Full Year 2009 vs 2010

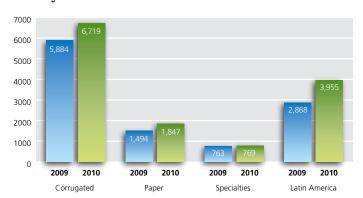


Frequency rate: Number of accidents x 100,000/Number of hours worked

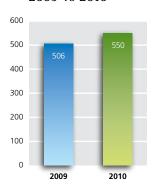
Number of Accidents: Full Year 2009 vs 2010



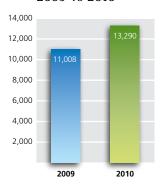
Days Lost Due to Accidents: Full Year 2009 vs 2010



SKG: Number of Accidents, 2009 vs 2010



SKG: Days Lost 2009 vs 2010





Resulting from a health checking programme for all employees the Roermond mill initiated a programme under the name BRAVO which in Dutch and other languages means 'well done'. The individual letters of the word BRAVO stand in this programme for more physical exercise, less smoking and alcohol, healthy nutrition and sufficient recreation and relaxation. As part of the programme a rowing competition was held, fitness stimulated and a cycling plan was promoted.

Our corrugated packaging facilities at Obaly Sturovo (Slovakia) celebrated 1,000 days without an accident in October 2010, demonstrating this facility's dedication to health and safety.

The plant at Almeria (Spain) received external recognition for its health and safety management system, when it was presented with an award by the local mayor.

Our Finnish organisation focused on improving employees' health and fitness through a project in co-operation with a company specialising in advanced heart beat analysis. The main idea of the project was that a fitter employee performs better at work with the additional benefit of lower sick leave rates. Every employee including management participated in the programme, which was partly financed by a Finnish company providing pension insurance.

#### UK - Occupational Health

Smurfit Kappa SSK has employed the services of an Occupational Health provider since 2003. The Occupational Health programme comprises activities such as pre employment health screening, health surveillance of employees and also includes a service ensuring that employees on sick leave are helped to return to work utilising rehabilitation and recovery programmes. SSK is very proactive also in preventing ill health in the workplace by supporting training and health promotion.

Over the years, many specific topics have been highlighted to support employees covering such areas as mental well-being, stress, managing weight, giving up smoking and the benefits of healthy eating and exercise. On the planned days, the plant board room is turned into a walk in clinic for employees, fresh fruit is made available and goody bags containing free health conscious giveaways such as energy drinks, healthy snacks or relaxation aids. On the stress awareness day, two trained massage therapists were employed to offer head and shoulder massages to employees.

In our UK mills a great deal of emphasis is placed upon improving safety. This is often extended to involving employees' families in safety awareness, achieved by various initiatives, including safety magazines. There is also significant attention given to involving suppliers in safety matters.

Health awareness featured as the most common aspect of new activities aimed at employees. Attention was given to raising awareness about the dangers of stress and excess weight and the benefits of general fitness, together with the need for health checks. The local health authorities were sometimes involved. A specific initiative at Townsend Hook in the UK encouraged cycling to work – now being incentivised by the UK tax authorities.

The Zülpich recycled paper mill in Germany introduced an ambitious new training and development plan. The aim is to improve the knowledge and functional capacity of plant personnel through a systematic training programme. The subject matter covered includes not only the different technical skills needed to operate the various processes in the plant, but also topics such as English language skills and computer software training. The intention is to have a specific training programme tailored for each of the 200 employees in the plant and already significant progress has been achieved through a number of in-house training courses.

Our corrugated operation Massa Lombarda at Imola (Italy) was awarded the highest recognition for its business practices by the Confindustria Ravenna (district of Ravenna Industrial and Entrepreneurs Association). 2010 was the first year that this association had set out to honour a local company in this manner and Massa Lombarda



Students at a Farming and Stockbreeding Technical School in Venezuela that is funded by Smurfit Kappa Cartón de Venezuela.

achieved first place. The award was based on its achievement with regard to both environmental (ISO 14001) and health and safety (OHSAS 18001) standards. Competitors for the award came from many different branches of industry and the local association intends to make this an annual event.

# 3. Our involvement with the Community

SKG has over 330 manufacturing facilities in 31 countries. Community activity and involvement is both encouraged and promoted and this element of our social responsibility is mainly delegated to local plant level where managers and staff are best positioned to make a positive contribution in supporting the community.

An important element of every plant manager's role is to represent the company as part of the local community and play a positive part in its development. Community involvement can take many forms and typically includes:

- co-investment in projects where the local community is working to improve their welfare
- charitable donations to local volunteer groups or welfare organisations
- support to local sport organisations

- participation in school initiatives by offering items such as printing material or facilitating school visits for educational purposes
- meeting and offering time to citizen groups that represent local communities
- playing a positive role in supporting and contributing to the disadvantaged
- mentoring small/start-up businesses and co-operatives.

Our particular bias is towards partnership to assist communities in self-help activities.

SKG is involved in community activities in many different ways. The Group maintains an active dialogue with the communities that live in close proximity to its facilities. In particular, we respond promptly at a senior level to any complaints or issues of concern to the communities around us and take appropriate remedial action where necessary and possible. In some cases, our local manager will personally visit the homes of local residents in order to resolve any issues that arise.

The examples which follow illustrate the wide breadth of activities both in Europe and in Latin America.

#### Fundraising in the UK

In the UK, employees of Smurfit Kappa Composites climbed to the top of Scafell Pike, the highest mountain in England, to raise money in memory of their late colleague, Chris Pae. The money raised will be donated to the Palliative Care Ward of a local hospital.

Also in the UK, Chris Martin from our Yate facility raised money for a charity close to his heart. He collected his sponsorship money from friends and family after running his first ever marathon and made the donation to St Peter's Hospice.

# Improving Health in Venezuela

The Health Brigades programme in Venezuela was originally designed to offer preventive health service in the rural communities around the forestry division of Smurfit Kappa Cartón de Venezuela in Portuguesa, Lara and Cojedes States. In two years the programme has benefited 43 communities providing medical service to more than 75,000 people and helping them with more than 335,000 items of medicine. The Health Brigades, like so many social activities, depend very much on the voluntary support of our employees.



Children are among the main beneficiaries of the Smurfit Kappa Health Brigades programme in Venezuela.

#### Sponsoring Community Activities in Austria and Spain

In Austria, Smurfit Kappa Interwell donated €3,500 to a prominent Upper Austrian newspaper, Oberösterreichische Nachrichten (Upper Austria News), which each year organises a Christmas donation programme to support people in need.

Also in Austria, Smurfit Kappa Wellkart sponsored the ARS ELECTRONICA festival which is an annual event in Linz (Upper Austria) attracting some 30,000 visitors. This year's motto was "Sustainability" and all furniture displayed was designed by a group of artists using corrugated board from Smurfit Kappa - in total over 200 pieces.

In Spain, our plant in Huelva sponsors the main football team Smurfit Kappa Palma in Palma del Condado city. This team plays in the highest regional football league. The Huelva plant also financed the provision of a large tent for civil protection (disaster relief, traffic accidents, etc).

A number of the Smurfit Kappa recycled paper mills in Spain and the UK pursued active social development activities during 2010 as follows.

#### Sport

Many Smurfit Kappa units sponsor sporting activities for employees and also for local people, especially children. Among the activities supported were women's cycling, competitive rowing and ever popular local football leagues. Financial support was given to gyms and boxing club facilities.

#### **Promoting Recycling**

Several sites undertook initiatives to promote the benefits of recycling. There was also much support given to improving local environments in general. One unit was involved in a "beat the trash" initiative. Another was involved in new public amenity herbaceous planting and a third in establishing a wildlife garden.

#### Education

Several sites continued with activities in support of the Group's "learning is for life" commitment. There was involvement with local schools and universities.

# UK - Adding colour to recycling

In Birmingham (UK), Smurfit Kappa Recycling, together with our SSK paper mill, sponsored the installation of a recycled paper bank and the subsequent decoration of the bank with a special floral montage. This was done by local volunteers and school children as part of a local project which works alongside Birmingham City Council's environmental wardens and street cleansing departments to improve the neighbourhoods around Nechells where the plant is situated.

The project's aim was to encourage recycling and involve school children and local residents in local community activities.

# UK - local community involvement by Smurfit Kappa SSK

The SSK paper mill also donates to the 'Nechells in Bloom' initiative that promotes a partnership approach between the local community in the Nechells neighbourhood and the local businesses working together on improving the environment through planting projects in the immediate area. Smurfit Kappa SSK also helps to organise specific projects such as turning a small piece of wasteland into an attractive planted area which SSK regularly maintains. On site, SSK's planted areas are well maintained and form part of the area judged for a local competition.

In 2010, SSK organised an open day for local residents, allowing them to take a tour of the mill site and see the paper-making process in action. It is the intention to make this an annual event. SSK has also run a number of tours for the University of the Third Age who are promoting self managed lifelong learning co-operatives for older people no longer in full time work.



Students in their new computer class at one of the ITAF schools in Cajibio, Colombia.

### Supporting Employment Initiatives in the Netherlands

In the Netherlands, our Roermond mill continued the cooperation with a municipal action plan to help people under 27 find employment, resulting in grants to job-applicants, job fairs, etc. Resulting from this programme, we recruited 11 new employees in 2010, who all enrolled in a two year apprenticeship programme including an 'on the job' training element in the mill.

# Fostering education in forestry and agriculture in Colombia and Venezuela

In Colombia, we have been involved in education since 1986 with initiatives which developed into the Agricultural and Forestry Technical Institutes (Institutos Técnicos Agropecuarios y Forestales – ITAF). The schools are financially supported and guided by the Forestry Division and the Smurfit Kappa Cartón de Colombia (SKCC) Foundation in Colombia. Students pay a nominal fee to cover supplies and food and provide their own transportation. In addition, 365 company employees support 107 students through scholarships. The three schools had 510 students enrolled in 2010.

The best two graduates from each ITAF receive a scholarship from the SKCC Foundation to continue their education. Currently there are 33 scholarship recipients who are pursuing technical and professional degrees in universities.

In Venezuela, various education programmes have been supported for many years. The Farming and Stockbreeding Technical School supporting talented students of local rural communities has been the main educational project of Smurfit Kappa Cartón de Venezuela for the last 15 years. Starting in 2009, an internship programme with our Venezuelan organisation was offered to graduates as well. 19 young people have taken part during 2009 and 2010, working in different areas within the company, receiving a salary and gaining real work experience.

In another programme, the Environmental Education Programme, focus is on primary school students. The objective is to familiarise them with our activities and our efforts to preserve the environment. This programme has been rolled out to more than 15 schools in Venezuela.

Also in 2010, with the help of company volunteers, four schools were restored and redecorated in a joint effort with the local community, some of our customers and suppliers.

These activities have benefited more than 2,000 students in the local rural communities.

#### Donating Logistical Help and Health Aid to Haitian Earthquake Victims

On 12 January, 2010 Haiti suffered a catastrophic earthquake that took the lives of over 230,000 people and left 1.3 million people homeless. Smurfit Kappa Dominican Republic (SKDR) sells about 10% of its production in Haiti. Immediately following the earthquake it provided cartons for the transportation of the most urgently needed goods. SKDR also contributed to the health of the homeless population by donating funds for the building and furnishing of five community shelters, construction of 100 latrines and payment for the waste collection. All work was done by Haitians on a "cash for work" basis. Our efforts supported surviving victims to re-organise their daily lives after this catastrophe.



# Sustainability in our Business

#### Introduction

SKG is an integrated paper and paperboard manufacturer and converter with operations in Europe and Latin America. Operating in 31 countries on two continents, the Group's activities are divided into Packaging Europe, Specialties Europe and Latin America.

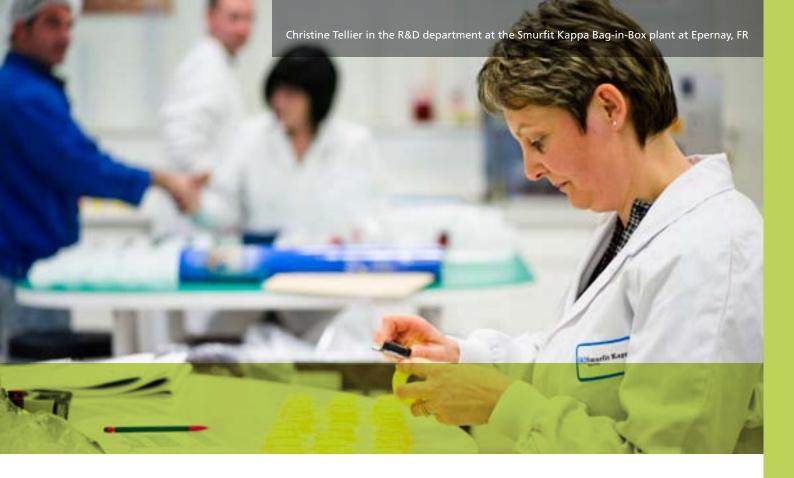
In Europe, the Packaging segment, which is highly integrated, includes a system of mills, corrugated and converting plants that produce a full line of containerboard that is converted into corrugated containers and display packaging. The Specialties segment comprises paper based activities dedicated to the needs of alternative packaging markets or niche markets. These areas include solid board, folding boxboard and Bag-in-Box.

The Latin American segment comprises forestry, paper, corrugated, folding cartons and paper sack activities in 9 Latin American countries.

Except for our Bag-in-Box product line, all our products are virgin and/or recycled paper based and are therefore renewable.

# Product Responsibility and Product Safety

As a business-to-business company SKG produces material to manufacture and also manufactures packaging products. Most packaging produced by SKG is used for distribution, transportation and retail display purposes.



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

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

SKG had no recorded incidents of non-compliance with regulations or voluntary codes in the area of product safety and product responsibility. Our Product Safety Department was set up to manage such issues, in particular with regard to food contact end use. The department is equipped with a laboratory that tests the purity of SKG products (papers, boards, corrugated and solid board packaging). It conducts research and implements development projects in the area of food contact. SKG regularly submits its products to the set of analyses recommended by various European and national legislation applying to our products. This department is third party accredited according to the ISO 17025 standard.

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

European regulations that apply to packaging intended for food contact have been revised and reinforced over recent years. Implementation of the Guide for Good Manufacturing Practice (GMP) in paper mills and converting operations producing packaging for food applications is now required by law.

GMP that fulfils the requirements of EU regulations has been implemented at all our European paper mills. We have also made progress in implementing the CEN 15 593 standard on management of hygiene in the production of packaging for foodstuffs in our production facilities. During 2010, the Herzberger solid board mill and converting operation (Germany), the solid board converting facility in Neuss (Germany) and the Sanguesa paper mill in Spain were successfully certified according to this standard

Driven by customer needs, some 42% of our converting plants now have processes in place and are certified by one of the following recognised hygiene codes or standards: ISO 22000, CEN 15 593, BRC (British Retail Consortium), AIB (American Institute of Baking) or International Good Manufacturing Practice for Corrugated and Solid Board Packaging.

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

As a result of our central set-up, we are able to monitor our progress in performance with regard to both safety and hygiene for food and this

in turn allows us to respond to any market concerns. Our Product Safety department responds as required to food safety alerts coming from European or National authorities. Our analyses and knowledge permit us to modify our papers in response to these alerts in the shortest possible time.

The strong involvement in product safety of the entire paper based packaging industry in the last few years has been demonstrated by the phthalate alert. Through a considerable joint effort with our suppliers, the concentration of di-isobutyl phthalate has been reduced by two thirds since 2007 in all our recycled paper and board grades.

In the course of 2010 a piece of research indicated that traces of undesirable mineral oil could enter packaged food possibly resulting from mineral oil present in the recycled raw material for paper making and/or the inks used for printing the packaging. According to the Bundesinstitut für Risikobewertung (BfR, or German Federal Institute for Risk Assessment), the research is still incomplete. However, SKG takes the issue seriously and is cooperating with the various parties involved to develop adequate solutions when and if the findings are validated.

#### Registration, Evaluation, Authorisation and restriction of Chemicals (REACH)

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

Additionally, our kraft mills are themselves producers of chemicals (liquors, tall oil, tall oil soap and turpentine).

At an early stage, before REACH regulations came into force, SKG appointed a REACH Implementation Specialist to ensure timely compliance with REACH by all our EU operations. Duties include the careful assessment of the current and future impact of the legislation on our business and our product portfolio.

All of our European virgin mills have registered (before December 2010) the relevant by-products generated in the kraftliner manufacturing process in a timely manner.

One of the main tasks of our REACH specialist is to liaise with our customers and to provide complete and updated information on the position of our products with regard to these regulations.

Smurfit Kappa Group will pro-actively follow the development of the REACH regulations and in particular the update of the so-called candidate list (Substances of Very High Concern), thereby assessing possible consequences for all our products and mitigated them appropriately.

### Working together with customers

Increasingly, customers demand packaging to be sustainable, innovative, fit for purposes, as well as cost effective. SKG works closely with customers to achieve more sustainable solutions. For example, we deliver packaging which uses less material or lighter material and transit packaging which makes it possible to reduce primary packaging. Our creative design teams explore what is possible in the most open minded way.

Working innovatively together with customers on sustainability has two main aspects to it. Firstly, SKG gives customers a credible guarantee that the packaging it supplies is produced in the most sustainable way, using materials from sustainable sources and utilising every possible design skill.

But looking at the packaging alone is not enough, as the direct CO<sub>2</sub> impact of our packaging is only around 4% in a typical customer's supply chain. However the packaging related indirect impact (damage/destruction of the packed product, logistics, waste, disposal, etc) is much more significant for the sustainability of a customer's

supply chain. Therefore the second aspect on which we focus is the design and development of packaging which minimises a customer's total sustainability impact per unit of product delivered to the consumer.

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

#### Customer satisfaction

As SKG strives to be a customeroriented and market-led company. the satisfaction of our customers is of utmost importance to us. Besides aiming to provide our customers with optimal packaging solutions we also want to ensure that they are satisfied with our proactive approach and services. In our mills we have a 'first time right' monitoring system in place measuring the percentage of production delivered to the customer's satisfaction. In our converting operations we welcome the regular audits that are done by major customers on our performance.

To ensure customer satisfaction each customer is served by dedicated teams of designers, sales and service people and this important consideration is discussed routinely with every customer.

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

# Innovation in sustainable packaging solutions

As a market-focused company, SKG knows innovation is of strategic importance in securing and retaining our customers' business, especially in current challenging times. Innovative design is a unique selling point for the Group and serves to differentiate us in the marketplace. To foster innovation, we share best practice among the plants and divisions in the Group using our web-based tools

such as Innobook. We hold regular Innovation Award competitions to assess the effectiveness and originality of our joint developments with customers. The competitions are held in both Europe and Latin America, with judging panels drawn from our key customer base. These measures promote the pursuit of excellence in design and, most crucially, a close alignment with the needs of our customers.

A selection process was undertaken throughout Europe to identify the designs which would be considered for European Awards. To demonstrate the importance of sustainability within SKG, the impact on the environment was one of the main criteria used in the selection processes.

The awards jury looks for a balance between the ability of packaging to protect products, transport them efficiently and to assist in the in-store marketing of the customer's product at point of sale. Sustainability is also a key consideration. All of the designs considered in the competitions are added to Innobook, the unique SKG design resource, thereby further enriching the database. As part of the process of using design innovation as a means of developing sustainable packaging, we continue to work with customers to:



SKG is proud to have received this testimony from Pernod Ricard, resulting from collaborative work between the two businesses.

# Working in partnership with our main suppliers

Pernod Ricard and Smurfit Kappa have both benefited from several years of mutual cooperation. During these years many common challenges were successfully resolved. When it comes to Sustainability, a very hot topic on the market today, we can confirm the aligned approach of both companies towards this topic which has resulted in common targets and vision. This can be illustrated by the following examples:

- 1. Both companies support the UN Global Compact initiative.
- 2. Pernod Ricard promotes sustainable agriculture and Smurfit Kappa certifies according to FSC/PEFC Chain of Custody schemes, so as to be able to provide guarantees of sustainably sourced raw materials.
- 3. Pernod Ricard is constantly implementing energy reductions in their processes, as does Smurfit Kappa, which now uses approximately 50% of biomass as energy in paper production.
- 4. Carbon footprint reduction, water usage reduction and waste reduction are also on the sustainability agendas of both companies.

As a strategic supplier Smurfit Kappa supported Pernod Ricard in a packaging material optimisation project which brought reductions of carbon emissions for Smurfit Kappa and thereby reduced the carbon footprint of Pernod Ricard products. We see Smurfit Kappa as a partner today, and in the future, for tackling other sustainability issues, thus continuing to bring benefits to both businesses.



Innovative collection box created and produced by Smurfit Kappa in the UK to collect batteries.

- design packaging solutions that are both efficient and user friendly
- optimise the supply chain, including palletisation, warehousing and distribution
- reduce over-packing by looking at fit for purpose specifications based on optimisation, rather than the use of historical data
- reduce complexity in the packaging portfolio as this leads to higher productivity, less material usage and less waste.

#### **Business Development Stories**

### New "clever" battery recycling box in the UK

Smurfit Kappa UK was instrumental in supporting the development of an ambitious, 'closed loop' battery recycling collection system by Valpak, one the UK's leading providers of environmental compliance and consultancy services. The scheme will result in the prevention of batteries going into landfill, the prevention of chemical leakage into the ground and the recovery of re-usable metals.

The recycling of batteries will be achieved through a 'closed loop' system – using uniquely designed innovative collection boxes from Smurfit Kappa. The innovative collection boxes were designed for use in a variety of community spaces, so that the recycling of batteries is made convenient for the consumer.



The Governor of the Leningrad region of the Russian Federaton, Valery Serdukov, presenting the Innovative Enterprise award to Patrik Strom (Smurfit Kappa St. Petersburg).

The eye-catching exterior of the box is designed to attract attention to the collection point.

To date, with the help of battery scheme members like Energiser and The Co-operative Group which allows consumers to drop off their old batteries while picking up their shopping at the local neighbourhood store, Valpak has installed over 30,000 collection points where batteries can be dropped off.

# Russia – innovative enterprise award

In December 2010, Smurfit Kappa St. Petersburg won an award for being the best Innovative Enterprise of the Leningrad Region. The award ceremony took place in the Leningrad Region Legislative Assembly buildings in St. Petersburg where the Governor of the Leningrad region, Mr. Valery Serdukov, presented a certificate signifying the award to the Managing Director of SK St. Petersburg, Mr. Patrik Strom.

In his speech Mr. Serdukov emphasised that the modernisation of industry is one of the key development targets for the region and the award recognised Smurfit Kappa St. Petersburg's significant contribution to this goal.

# Innovation awards for VITOP® the Smurfit Kappa patented taps for Bag-in-Box

Smurfit Kappa is a regular winner of external awards for packaging innovation. While the awards are usually for corrugated and solid board packaging, another frequent winner is our patented tap for our Bag-in-Box systems.

During 2010 VITOP received an innovation award from the region of Alessandria in Italy and also a Gold medal for the innovative measure tap for viscous liquids.

#### Scandinavian study shows Bag-In-Box packaging has a low carbon footprint

August 2010 saw the publication of a "Nordic Life Cycle Assessment Wine Package" study, conducted by Bio Intelligence for Systembolaget and Vinmonopolet (the Swedish and Norwegian alcohol retail monopolies respectively) and several package manufacturers (including Smurfit Kappa Bag-in-Box). The principal goal was to identify the environmental impact of various wine packaging solutions.

Five different packaging solutions, PET bottles, glass bottles, beverage cartons, Bag-in-Box and Stand-up Pouches) were assessed. This study clearly demonstrated that the 3 litre Bag-in-Box package (with respectively 159kg CO<sub>2</sub> equiv./1,000 litres in Sweden and 157kg CO<sub>2</sub> equiv./1,000 litres in Norway) has a very low carbon footprint, which is five times less than that of a 75cl glass bottle.

Among the parameters that significantly lessen the environmental impact for Bag-in-Box are:

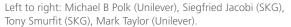
#### Package optimisation

A 3 litre Bag-in-Box package only weighs a total of 179g (reference weight for the study) of which 144g is corrugated board (which is recyclable and renewable) and just 35g of plastics (bag and tap).

#### Optimisation of waste management

Recycling of the raw materials is a major factor contributing to a reduced carbon footprint. Incineration with energy recovery is also an effective option - more preferable to landfill. As 80% of a 3 litre Bag-in-Box package consists of corrugated board (which in Scandinavia is recycled at a rate of 85%), effectively 68% of the package is recycled, with the remaining plastic materials (other than PET) being recycled at a rate of 76%.







Left to right: Hubert Patricot (Coca-Cola Enterprises) presents the CRS supplier award to Roberto Villaquiran (SKG), together with Arco Berkenbosch (SKG) and Dim Mozin (Coca-Cola Enterprises).

#### Los Reyes award

The Los Reyes corrugated plant in Mexico received special recognition from the Mexican Environment Ministry, and from both Johnson & Johnson and Grupo Jumex, the latter a large Mexican multinational company in the food industry that specialises in fruit juices, by participating in a programme for environmental improvement entitled "Environmental Leadership for Competitiveness".

The site undertook a programme of improvements to its boiler (outlined on page 33) consequently allowing both Johnson & Johnson and Grupo Jumex to reduce the carbon footprint of the boxes they use, therefore supporting environmental improvement in the supply chain.

# Significant Sustainability Customer Awards

# Unilever: 'Winning through Sustainability' Award

SKG's efforts to contribute to sustainability were recognised by Unilever through a global supplier award on sustainability.

At the Unilever 'Partner to Win' event in March 2011 in London, some outstanding examples of partnerships were recognised through a Supplier Awards ceremony within different categories: Innovation, Sustainability, Business Integration, Winning in Developing and Emerging Markets. The category 'Winning through Sustainability' in which SKG won the Award, was created to recognise suppliers who have helped Unilever to create competitive supply chains, making positive contributions to the environment, to social development or economic development thus delivering tangible benefits to Unilever's brands, consumers or customers.

Unilever commented on SKG winning this award as follows: 'Smurfit Kappa's end-to-end approach to sustainable paper packaging has made them the leader in the field. They look at the whole process from raw material sourcing through to the recyclability of the consumer pack, as well as assisting Unilever in the development of our Paper and Board policy. One example of their focus on sustainable packaging, coupled with customer market insight and leading R&D facilities is the newly developed "Shopper Pack". This was developed for Unilever's Household cleaning category in Europe. The packaging looks more appealing on the shelf, and has enabled Unilever to remove around 140 tonnes of coated-polyester tear-tape, greatly improving its recyclability - and all of that at lower cost to the consumer.'

#### Coca-Cola Enterprises: 'Corporate Responsibility and Sustainability' Supplier Award

Coca-Cola Enterprises (CCE) recently held its second annual Supplier Sustainability Summit and Awards Ceremony in Europe and Smurfit Kappa won the prestigious Corporate Responsibility and Sustainability supplier award. The Sustainability Summit brought CCE together with its key suppliers to discuss collaboration on sustainability issues across its supply chain – from bottling and distributing, to selling and consuming beverages.

The Summit was followed by an Awards Ceremony, where CCE's Chairman and CEO, John Brock, and President of Europe, Hubert Patricot, presented awards to those suppliers who contributed most to the success of the business in 2010. The Sustainability Summit underlined CCE's commitment to Corporate Responsibility and Sustainability (CRS).

#### Ink Supplier Siegwerk Supports Children's Education for a Brighter Future

Our Sustainability Sourcing Policy expressly states that we encourage suppliers to develop strong relationships with the communities within which they operate.

Many of our suppliers adhere to this policy and share our declared values in good social citizenship. As an example, Siegwerk's "Supporting Children's Education for a Brighter Future" charity concept centres on the education and development of disadvantaged young people through local foundations or programmes in many countries including India, Argentina, Chile and Germany itself.







TimSafe Optimised Logistic Solution for Unicef.

To drive forward Siegwerk's social commitment, every country organisation will be asked to start its own CSR project. In addition to these local activities, Siegwerk started a global "lighthouse project" which will award the best local social development project supporting children. An internal competition will be held to select the Siegwerk 'lighthouse project' for 2011.

SKG recognises the significant importance Siegwerk attributes to its CSR activities and encourages all its suppliers to further develop strong local community relationships.

#### Sustainability through Simply Optimised Solutions (SOS) in solid board

Smurfit Kappa is always searching for generic solutions to improve fundamental packaging issues such as palletisation.

With our new Simply Optimised Solutions (SOS), trucks can hold more pallet loads. The solutions consist of a pallet lid and bottom, cardboard collar and an interleaving sheet. The lid is made of PE coated solid board for increased protection against moisture. The lid and bottom are double folded to increase stability and add strength when strapping. The collar is made of extremely strong and moisture resistant heavy duty corrugated board. For simpler handling in and out of the collar, the sheet has rounded corners.

Weight savings are approximately 40% compared to traditional solutions.

#### TimSafe Boxes for UNICEF

Last year we reported on our activities on this project for UNICEF, involving the disposal of used syringes worldwide. More recently, we have made considerable improvements by means of TOLS, the Timsafe Optimised Logistic Solution.

Through newly designed boxes, we can transport double the amount of syringes per container while the transport costs for UNICEF have halved. The new box allows us to reach considerable production economies and glue and pack the boxes 50% faster with our new auto packer. Increased container loading is also achieved due to optimised packaging, utilising a slip sheet solution.

#### Memberships in organisations

SKG is an active member of a number of industry and business organisations. These include CEPI, both at Group level and through various national paper organisations, FEFCO through a number of national corrugated organisations, the International Corrugated Cases Association (ICCA), the European Solid Board Organisation (ESBO) and the European sack kraft manufacturers' association (Eurokraft). Several senior SKG executives are board members of CEPI, CEPI Containerboard, FEFCO and ESBO.

In addition, a number of executives play an active role on the committees of CEPI, FEFCO and other relevant industry organisations.

SKG is also actively involved as a member of, or participant in, a number of organisations active in the area of environmental reporting and sustainability. These include the Carbon Disclosure Project (CDP), the Supplier Ethical Data Exchange (Sedex), the Water Footprint Network (WFN) and the World Business Council for Sustainable Development (via its local chapter in Colombia). Membership of such organisations is not passive and customarily involves providing them with a significant amount of information on our operations, usually in the form of a detailed questionnaire.

SKG's participation in the UN Global Compact is explained more fully on page 80.

The Group CEO is a member of the European Round Table, a forum of over 40 chief executives and chairmen of major multinational companies of European parentage covering a wide range of industrial and technological sectors.

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

# Input/Output for 2010 All European Operations

#### **INPUT**

| Wood and fibre                          |       |            |
|---|-------|------------|
| Wood (1)                                | 4,689 | ktonnes ar |
| Market virgin pulp                      | 82    | ktonnes ar |
| Recovered Paper                         | 4,367 | ktonnes ar |
| Paper or Board purchased                | 1,715 | ktonnes ar |
| Plastic films, other plastic item (BIB) | 16    | ktonnes    |
| Starch (all types)                      | 239   | ktonnes ar |
| Inorganic raw materials                 | 230   | ktonnes ar |
| Other organic raw materials             | 193   | ktonnes ar |
|   |       |            |

# Energy Energy from purchased fossil fuels 31,917 TJ Energy from purchased biofuels 2,140 TJ Electricity from grid 1,931 GWh

| Water       |    |                 |
|-------------|----|-----------------|
| Fresh water | 90 | Mm <sup>3</sup> |

#### **OUTPUT**

| OUTPUT                                |       |                 |
|---------------------------------------|-------|-----------------|
| Production                            |       |                 |
| Papers (All grades)                   | 4,689 | ktonnes         |
| Corrugated Packaging *                | 4,584 | ktonnes         |
| Board and laminated Boards *          | 944   | ktonnes         |
| Converted Board *                     | 313   | ktonnes         |
| Sacks *                               | 9     | ktonnes         |
| Other packaging                       | 15    | ktonnes         |
| Emissions to air                      |       |                 |
| CO <sub>2</sub> fossil (direct)       | 1,878 | ktonnes         |
| CO <sub>2</sub> biogenic              | 3,106 | ktonnes         |
| Dust from fuels                       | 0.5   | ktonnes         |
| SO <sub>X</sub> from processes        | 0.6   | ktonnes         |
| NO <sub>X</sub> from processes        | 4.7   | ktonnes         |
|                                       |       |                 |
| Energy output                         |       |                 |
| Electricity to third party            | 178   | GWh             |
| Thermal energy to third party         | 470   | TJ              |
| Biomass sold                          | 1,693 | TJ              |
|                                       |       |                 |
| Wastes                                |       |                 |
| Hazardous wastes                      | 6.1   | ktonnes         |
| Non Hazardous wastes sent to landfill | 196   | ktonnes         |
| Non Hazardous wastes recovered        | 391   | ktonnes         |
|                                       |       |                 |
| Discharges to water                   |       |                 |
| Water released                        | 82    | Mm <sup>3</sup> |
| COD                                   | 20    | ktonnes         |
| BOD                                   | 3.3   | ktonnes         |
| Total Suspended Solids                | 3.0   | ktonnes         |
| AOX                                   | 0.008 | ktonnes         |
| N                                     | 0.4   | ktonnes         |
| P                                     | 0.07  | ktonnes         |
|                                       |       |                 |

ktonnes ar: kilotonnes as received

(1): wood and sawmill chips as delivered to the mill

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 to 70. The latter pages show the energy consumption for the production of the paper or board manufactured.

<sup>\*</sup> partly produced with SKG paper or board

# Input/Output for 2010 All Latin American Operations

#### **INPUT**

| Wood and fibre              |     |            |
|-----------------------------|-----|------------|
| Wood (1)                    | 967 | ktonnes ar |
| Market virgin pulp          | 3.3 | ktonnes ar |
| Recovered Paper             | 891 | ktonnes ar |
| Paper or Board purchased    | 246 | ktonnes ar |
| Starch (all types)          | 28  | ktonnes ar |
| Inorganic raw materials     | 87  | ktonnes ar |
| Other organic raw materials | 34  | ktonnes ar |

| Energy                             |        |     |
|------------------------------------|--------|-----|
| Energy from purchased fossil fuels | 15,172 | TJ  |
| Energy from purchased biofuels     | 0      | TJ  |
| Electricity from grid              | 611    | GWh |

| Water       |    |                 |
|-------------|----|-----------------|
| Fresh water | 38 | Mm <sup>3</sup> |
|             |    |                 |

#### **OUTPUT**

| COTFOT                                |       |                 |
|---------------------------------------|-------|-----------------|
| Production                            |       |                 |
| Papers (All grades)                   | 907   | ktonnes         |
| Corrugated Packaging *                | 772   | ktonnes         |
| Board                                 | 176   | ktonnes         |
| Converted Board *                     | 49    | ktonnes         |
| Sacks *                               | 46    | ktonnes         |
|                                       |       |                 |
| Emissions to air                      |       |                 |
| CO <sub>2</sub> fossil (direct)       | 1,007 | ktonnes         |
| CO <sub>2</sub> biogenic              | 437   | ktonnes         |
| Dust from fuels                       | 0.2   | ktonnes         |
| SO <sub>X</sub> from processes        | 2.9   | ktonnes         |
| NO <sub>X</sub> from processes        | 0.9   | ktonnes         |
|                                       |       |                 |
| Energy output                         |       |                 |
|                                       |       |                 |
| Electricity to third party            | 0     | GWh             |
| Thermal energy to third party         | 40    | TJ              |
|                                       |       |                 |
| Wastes                                |       |                 |
| Hazardous wastes                      | 6.3   | ktonnes         |
| Non Hazardous wastes sent to landfill | 167   | ktonnes         |
| Non Hazardous wastes recovered        | 48    | ktonnes         |
|                                       |       |                 |
| Discharges to water                   |       |                 |
| Water released                        | 33    | Mm <sup>3</sup> |
| COD                                   | 13    | ktonnes         |
| BOD                                   | 3.3   | ktonnes         |
| Total Suspended Solids                | 5.0   | ktonnes         |
| AOX**                                 | N/A   |                 |
| N                                     | 0.2   | ktonnes         |
| Р                                     | 0.04  | ktonnes         |
|                                       |       |                 |

ktonnes ar: kilotonnes as received

(1): wood chips as delivered to the mill

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 70 and 71. The latter pages show the energy consumption for the production of the paper or board manufactured.

<sup>\*</sup> partly produced with SKG paper or board

<sup>\*\*</sup>AOX is not measured in our Latin American operations because this is not required under any of the relevant permits for our plants in that region.

# Certification of Management System

| Foresti   | ry .  | Forest                                      |  |                      |
|-----------|---|---|--|----------------------|
| Latin Ame | rica  | Management*                                 |  |                      |
| СО        | Colombia Forest                                     | FSC   |  |                      |
| VE        | Venezuela Forest                                    |   |  |                      |
| Wood S    | ourcing   | Chain of<br>Custody*                        |  |                      |
| ES        | Central Forestal                                    | PEFC & FSC                                  |  |                      |
| FR        | SK Comptoir du Pin Aquitaine                        | PEFC & FSC                                  |  |                      |
| Europea   | n Mills   | Quality<br>Management<br>System<br>ISO 9001 | Environmental<br>Management<br>System<br>ISO 14001 | Chain of<br>Custody* |
| Virgin mi | lls   |   |  |                      |
| AT        | SK Nettingsdorfer                                   | •   | •  | PEFC & FSC           |
| ES        | SK Navarra  | •   | •  | PEFC & FSC           |
|           | SK Nervión  | •   | •  | PEFC & FSC           |
| FR        | SK Cellulose du Pin                                 | •   | •  | PEFC & FSC           |
| SE        | SK Piteå  | •   | •  | PEFC & FSC           |
| Recycled  | mills   |   |  |                      |
| CZ        | SK Morava   | •   | •  | PEFC & FSC           |
| DE        | SK Baden Karton                                     | •   | •  | PEFC & FSC           |
|           | SK CD Haupt   | •   | •  | PEFC & FSC           |
|           | SK Herzberger                                       | •   | •  | FSC                  |
|           | SK Hoya   | •   | •  | PEFC & FSC           |
|           | SK Viersen  | •   | •  | PEFC & FSC           |
|           | SK Zülpich  | •   | •  | PEFC & FSC           |
| ES        | SK Mengibar   | •   | •  | PEFC & FSC           |
| FR        | SK Papier Recycle France - Papeterie Alfa d'Avignon | •   | •  | PEFC & FSC           |
|           | SK Papier Recycle France - Papeterie de La Seine    | •   | •  | PEFC & FSC           |
|           | SK Papier Recycle France - Papeterie de Rethel      | •   | •  | PEFC & FSC           |
|           | SK Papier Recycle France - Papeterie de Saillat     | •   | •  | PEFC & FSC           |
| IT        | SK Ania   | •   | •  | PEFC & FSC           |

Certificates acquired in 2011 are shown in italics

<sup>\*</sup> Within KPMG assurance scope. The assurance report can be found on pages 81 and 82.

| Europea               | n Mills   | Quality<br>Management<br>System | Environmental<br>Management<br>System | Chain of<br>Custody* |  |
|-----------------------|---|---------------------------------|---------------------------------------|----------------------|--|
|                       |   | ISO 9001                        | ISO 14001                             |                      |  |
| Recycled              | mills   |                                 |                                       |                      |  |
| NL                    | SK SBM Coevorden  | •                               | •                                     | PEFC & FSC           |  |
|                       | SK SBM Hoogkerk   | •                               | •                                     | PEFC & FSC           |  |
|                       | SK SBM Nieuweschans   | •                               | •                                     | PEFC & FSC           |  |
|                       | SK SBM Oude Pekela  | •                               | •                                     | PEFC & FSC           |  |
|                       | SK Roermond   | •                               | •                                     | PEFC & FSC           |  |
| UK                    | SK SSK  | •                               | •                                     | PEFC & FSC           |  |
|                       | SK Townsend Hook  | •                               | •                                     | PEFC & FSC           |  |
|                       |   | System  ISO 9001                | System ISO 14001                      |                      |  |
| Virgin mi             | lls   |                                 |                                       |                      |  |
| CO                    |   |                                 |                                       |                      |  |
| VE                    | SK Cali   |                                 | •                                     | FSC                  |  |
| VE                    | SK Cali<br>SK San Felipe  |                                 | •                                     | FSC                  |  |
| Recycled              | SK San Felipe   |                                 | •                                     | FSC                  |  |
|                       | SK San Felipe   |                                 | (1)                                   | FSC                  |  |
| Recycled              | SK San Felipe mills   |                                 |                                       | FSC                  |  |
| Recycled              | SK San Felipe mills  SK Coronel Suarez  |                                 |                                       | FSC                  |  |
| <b>Recycled</b><br>AR | SK San Felipe  mills  SK Coronel Suarez  SK Bernal  |                                 | (1)                                   |                      |  |
| <b>Recycled</b><br>AR | SK San Felipe  mills  SK Coronel Suarez  SK Bernal  SK Barranquilla   | •                               | (1)                                   | FSC                  |  |
| AR CO                 | SK San Felipe  mills  SK Coronel Suarez  SK Bernal  SK Barranquilla  SK Barbosa                               | •                               | (1)                                   | FSC                  |  |
| AR CO                 | SK San Felipe  mills  SK Coronel Suarez  SK Bernal  SK Barranquilla  SK Barbosa  SK Cerro Gordo               | •                               | (1)                                   | FSC                  |  |
| AR CO                 | SK San Felipe  mills  SK Coronel Suarez  SK Bernal  SK Barranquilla  SK Barbosa  SK Cerro Gordo  SK Los Reyes | •                               | (1)                                   | FSC                  |  |

<sup>(1):</sup> national scheme

Certificates acquired in 2011 are shown in italics

<sup>\*</sup> Within KPMG assurance scope. The assurance report can be found on pages 81 and 82.

# European Mills 2010 Environmental Data

| _                                  |                 |                            |                   |                             |                    |                           |                      |                  |                     |                     |                    |                           |  |
|------------------------------------|-----------------|----------------------------|-------------------|-----------------------------|--------------------|---------------------------|----------------------|------------------|---------------------|---------------------|--------------------|---------------------------|--|
|                                    |                 | Nettingsdorfer,<br>Austria | Navarra,<br>Spain | Cellulose du Pin,<br>France | Piteå,<br>Sweden   | Morava,<br>Czech Republic | CD Haupt,<br>Germany | Hoya,<br>Germany | Viersen,<br>Germany | Zülpich,<br>Germany | Mengibar,<br>Spain | Alfa d'Avignon,<br>France |  |
|                                    |                 | bkl, tl                    | tl, mg<br>paper   | bkl, wtkl,<br>wttl          | wtkl, bkl,<br>wttl | tl, fl                    | fl, sb, tl           | tl, fl,<br>cart  | fl, tl              | fl, tl              | fl,<br>wttl, tl    | tl                        |  |
| PRODUCTION                         |                 |                            |                   |                             |                    |                           |                      |                  |                     |                     |                    |                           |  |
|                                    | ktonnes         | 426                        | 105               | 484                         | 661                | 57                        | 304                  | 369              | 70                  | 452                 | 197                | 73                        |  |
| ENERGY                             |                 |                            |                   |                             |                    |                           |                      |                  |                     |                     |                    |                           |  |
| Electricity                        |                 |                            |                   |                             |                    |                           |                      |                  |                     |                     |                    |                           |  |
| Co Generation                      | GWh             | 162                        | 58                | 170                         | 325                | -                         | 65                   | 92               | -                   | 169                 | 121                | 13 <sup>(1)</sup>         |  |
| Hydro electric power               | GWh             | 0.1                        | -                 | -                           | -                  | 3.3                       | 0.2                  | -                | -                   | -                   | -                  | -                         |  |
| Net Grid supply                    | GWh             | 139                        | 75                | 227                         | 270                | 20                        | 31                   | 59               | 23                  | 13                  | 13                 | 18 <sup>(2)</sup>         |  |
| Total electricity                  | GWh             | 302                        | 133               | 397                         | 595                | 23                        | 96                   | 150              | 23                  | 181                 | 134                | 30                        |  |
| Fuel usage                         |                 |                            |                   |                             |                    |                           |                      |                  |                     |                     | ,                  |                           |  |
| Biofuels                           | TJ fuel         | 3,516                      | 1,996             | 8,020                       | 11,005             | 9                         | 26                   | 57               | -                   | 231                 | -                  | -                         |  |
| Fossil fuels                       | TJ fuel         | 1,212                      | 443               | 926                         | 176                | 311                       | 1,452                | 2,324            | 324                 | 3,194               | 1,537              | 454                       |  |
| Total fuels                        | TJ fuel         | 4,728 <sup>(3)</sup>       | 2,440             | 8,947                       | 11,181             | 319 <sup>(3)</sup>        | 1,478                | 2,382            | 324                 | 3,425               | 1,537              | 454                       |  |
| WATER WITHDRAWAL                   |                 |                            |                   |                             |                    |                           | ·                    |                  |                     |                     |                    |                           |  |
| Surface                            | Mm <sup>3</sup> | 12                         | 5.0               | 9.6                         | 33                 | 0.3                       | 0.0                  | -                | -                   | 1.8                 | 1.3                | 0.9                       |  |
| Ground                             | Mm <sup>3</sup> | -                          | -                 | 1.0                         | -                  | 0.0                       | 0.8                  | 2.3              | 0.3                 | 0.4                 | 0.0                | -                         |  |
| Grid                               | Mm <sup>3</sup> | 0.0                        | 0.0               | 0.0                         | 0.1                | 0.0                       | 0.0                  | 0.2              | 0.0                 | 0.0                 | 0.1                | -                         |  |
| Total                              | Mm³             | 12                         | 5.0               | 11                          | 33                 | 0.3                       | 0.8                  | 2.5              | 0.3                 | 2.2                 | 1.4                | 0.9                       |  |
| DISCHARGES                         |                 |                            |                   |                             |                    |                           |                      |                  |                     |                     |                    |                           |  |
| To air                             |                 |                            |                   |                             |                    |                           |                      |                  |                     |                     |                    |                           |  |
| CO <sub>2</sub> fossil direct      | ktonnes         | 75                         | 29                | 54                          | 16                 | 17                        | 81                   | 130              | 18                  | 234                 | 88                 | 26                        |  |
| CO <sub>2</sub> fossil indirect    | ktonnes         | 28                         | 29                | 20                          | 11                 | 11                        | 13                   | 25               | 10                  | 5.4                 | 5.1                | 1.6                       |  |
| CO <sub>2</sub> biogenic           | ktonnes         | 367                        | 210               | 899                         | 1,185              | 0.6                       | 2.3                  | 4.8              | -                   | 19                  | 3.4                | 1.1                       |  |
| Dust                               | tonnes          | 36                         | 25                | 46                          | 372                | 0.2                       | -                    | 0.4              | -                   | 1.1                 | -                  | 0.5                       |  |
| NO <sub>X</sub> as NO <sub>2</sub> | tonnes          | 250                        | 111               | 1,227                       | 780                | 10                        | 71                   | 93               | 8.2                 | 248                 | 425                | 33                        |  |
| SO <sub>X</sub> as SO <sub>2</sub> | tonnes          | 28                         | 76                | 20                          | 94                 | 2.9                       | -                    | 1.1              | 0.3                 | 77                  | 57                 | 0.5                       |  |
| To water                           |                 |                            |                   |                             |                    |                           |                      |                  |                     |                     |                    |                           |  |
| Process water                      | Mm³             | 5.2                        | 3.0               | 10                          | 13                 | 0.3                       | 0.4                  | 2.0              | 0.2                 | -                   | 1.2                | 0.6                       |  |
| Cooling water                      | Mm <sup>3</sup> | 6.9                        | 1.9               | -                           | 20                 | 0.0                       | 0.0                  | 0.1              | -                   | 1.3                 | -                  | -                         |  |
| COD                                | tonnes          | 6,773                      | 1,048             | 3,947                       | 1,403              | 30                        | 111                  | 312              | N/A                 | -                   | 297                | 39                        |  |
| BOD                                | tonnes          | N/A                        | 507               | 1,047                       | 103                | 3.4                       | 6.7                  | 12               | N/A                 | -                   | 52                 | 5.1                       |  |
| Total Suspended Solids             | tonnes          | 168                        | 185               | 740                         | 116                | 3.2                       | N/A                  | N/A              | N/A                 | -                   | 112                | 10                        |  |
| Total N                            | tonnes          | 37                         | N/A               | 74                          | 40                 | 2.5                       | 0.6                  | 13               | N/A                 | -                   | 14                 | N/A                       |  |
| Total P                            | tonnes          | 9.1                        | 2.1               | 18                          | 10                 | 0.1                       | 0.3                  | 1.1              | N/A                 | -                   | 2.3                | 2.6                       |  |
| Solid wastes                       | '               |                            |                   |                             |                    |                           | ,                    |                  |                     |                     | ,                  |                           |  |
| Landfill                           | tonnes          | 5,968                      | 2,717             | 16,495                      | 10,438             | 5,492                     | -                    | -                | 2.5                 | 7,481               | 25,579             | -                         |  |
| Lanum                              |                 |                            |                   |                             |                    |                           |                      |                  |                     |                     |                    |                           |  |
| Recovery                           | tonnes          | 18,674                     | 8,694             | 38,789                      | 28,189             | 2,446                     | 22,639               | 21,595           | 6,767               | 11,924              | 960                | 6,617                     |  |

bkl: brown kraftliner cart: carton board fl: recycled flute mg: machine glazed sb: solid board tl: testliner wtkl: white top kraftliner wttl: white top testliner

water emissions in grey italics: external waste water treatment

| Rethel,<br>France | Saillat,<br>France | La Seine,<br>France | Ania,<br>Italy | Roermond,<br>the Netherlands | SSK,<br>UK | Townsend Hook,<br>UK | Badenkarton,<br>Germany | Herzberger,<br>Germany | Oude Pekela,<br>the Netherlands | Hoogkerk,<br>the Netherlands | Coevorden,<br>the Netherlands | Nieuweschans,<br>the Netherlands | Nervión,<br>Spain | Total mills |
|-------------------|--------------------|---------------------|----------------|------------------------------|------------|----------------------|-------------------------|------------------------|---------------------------------|------------------------------|-------------------------------|----------------------------------|-------------------|-------------|
| tl                | tl, fl             | fl                  | fl, tl         | tl, fl                       | tl, fl     | fl, tl               | cart                    | sb                     | sb                              | sb                           | sb                            | sb                               | sack<br>paper     |             |
|                   |                    |                     |                |                              |            |                      |                         |                        |                                 |                              |                               |                                  |                   |             |
| 62                | 232                | 39                  | 204            | 561                          | 192        | 222                  | 147                     | 249                    | 53                              | 112                          | 97                            | 124                              | 142               | 5,633       |
|                   |                    |                     |                |                              |            |                      |                         |                        |                                 |                              |                               |                                  |                   |             |
|                   |                    | (4)                 |                |                              |            | (4)                  |                         |                        |                                 |                              |                               |                                  |                   |             |
| -                 | 61 <sup>(1)</sup>  | 20 <sup>(1)</sup>   | 36             | 117                          | 62         | 98 <sup>(1)</sup>    | 63                      | 81                     | 18                              | -                            | 19                            | 23                               | 87                | 1,861       |
| -                 | 2.1                | -                   | -              | -                            | -          | -                    | 1.0                     | 1.5                    | -                               | -                            | -                             | -                                | -                 | 8.1         |
| 22                | 53 <sup>(2)</sup>  | _(2)                | 39             | 39                           | 5          | _(2)                 | -                       | 10                     | _(2)                            | 19                           | 7                             | 15                               | 96                | 1,200       |
| 22                | 116                | 20                  | 75             | 156                          | 67         | 98                   | 64                      | 92                     | 18                              | 19                           | 26                            | 37                               | 183               | 3,069       |
| 10                | 20                 |                     |                | 157                          | F3         |                      |                         |                        |                                 |                              |                               |                                  | 2 002             | 20 405      |
| 18                | 26                 | -                   | 1 200          | 157                          | 1 260      | 2 202                | 1 176                   | 1 60E                  |                                 | - 494                        | - 424                         | - 607                            | 3,082             | 28,185      |
| 304               | 1,622              | 444                 | 1,209          | 2,842                        | 1,260      | 2,303                | 1,176                   | 1,605                  | 369                             | 484                          | 434                           | 697                              | 62                | 27,167      |
| 322               | 1,649              | 444                 | 1,209          | 2,999                        | 1,311      | 2,303                | 1,176 <sup>(3)</sup>    | 1,605 <sup>(3)</sup>   | 369                             | 484                          | 434                           | 697                              | 3,144             | 55,351      |
| _                 | 1.8                | 0.5                 | 1.7            | 2.2                          | _          | 1.2                  | 2.1                     | 3.2                    | 0.0                             | 0.4                          | 0.4                           | 0.4                              | 2.5               | 80          |
| 0.5               | -                  | 0.5                 | -              | -                            | 0.9        | 0.3                  | -                       | 0.0                    | 0.2                             | -                            | 0.4                           | -                                | -                 | 6.7         |
| 0.0               | 0.0                | 0.0                 | 0.0            | 0.1                          | 0.3        | 0.0                  | 0.0                     | 0.0                    | 0.0                             | 0.0                          | 0.2                           | 0.1                              | 0.0               | 1.0         |
| 0.5               | 1.8                | 0.5                 | 1.7            | 2.3                          | 1.0        | 1.5                  | 2.1                     | 3.2                    | 0.0                             | 0.4                          | 0.6                           | 0.1                              | 2.5               | 88          |
| 0.5               | 1.0                | 0.5                 | 1.7            | 2.5                          | 1.0        | 1.5                  | 2.1                     | 3.2                    | 0.2                             | 0.4                          | 0.0                           | 0.5                              | 2.5               | 00          |
|                   |                    |                     |                |                              |            |                      |                         |                        |                                 |                              |                               |                                  |                   |             |
| 17                | 87                 | 25                  | 68             | 161                          | 72         | 129                  | 66                      | 90                     | 21                              | 27                           | 25                            | 40                               | 4                 | 1,601       |
| 2.0               | 4.7                | -                   | 15             | 16                           | 2.7        | -                    | -                       | 4.1                    | -                               | 7.9                          | 2.7                           | 6.7                              | 37                | 263         |
| 1.4               | 4.1                | -                   | -              | 11                           | 4.4        | 3.2                  | -                       | -                      | -                               | -                            | -                             | 0.6                              | 351               | 3,070       |
| 1.5               | -                  | -                   | -              | -                            | -          | -                    | -                       | 0.3                    | -                               | -                            | -                             | -                                | 30                | 513         |
| 24                | 106                | 129                 | 26             | 128                          | 116        | 250                  | 59                      | 74                     | 24                              | 9.1                          | 21                            | 35                               | 278               | 4,533       |
| 7.4               | 0.7                | 0.4                 | -              | 20                           | -          | -                    | 0.5                     | 10                     | -                               | -                            | -                             | -                                | 0.3               | 396         |
|                   |                    |                     |                |                              |            |                      |                         |                        |                                 |                              |                               |                                  |                   |             |
| 0.4               | 1.5                | 0.4                 | 1.5            | 1.8                          | 0.7        | 1.2                  | 1.7                     | 1.3                    | 0.1                             | 0.2                          | 0.1                           | 0.3                              | 1.7               | 49          |
| -                 | -                  | 0.0                 | -              | -                            | -          | -                    | 0.2                     | 1.5                    | -                               | -                            | 0.4                           | -                                | -                 | 33          |
| 65                | 877                | 161                 | 167            | 284                          | 956        | 106                  | 198                     | 174                    | 15                              | 39                           | 1,013                         | 60                               | 980               | 19,054      |
| 8.8               | 221                | 70                  | 35             | 7.3                          | 417        | 11                   | 18                      | 13                     | 0.5                             | 1.2                          | 570                           | 3                                | N/A               | 3,110       |
| 10                | 380                | <i>7</i> 8          | 34             | 34                           | 841        | 47                   | 14                      | 19                     | 2.5                             | 2.1                          | 22                            | 4                                | 76                | 2,899       |
| 3.2               | 76                 | N/A                 | 12             | 29                           | 46         | 3.3                  | 1.1                     | 1.3                    | 0.9                             | 1.9                          | 2                             | 2                                | N/A               | 360         |
| 0.4               | 11                 | 1                   | 1.4            | 3.0                          | 8.5        | 0.1                  | 0.1                     | 0.3                    | 0.1                             | 0.3                          | 0.2                           | 0.3                              | N/A               | 73          |
|                   |                    |                     |                |                              |            |                      |                         |                        |                                 |                              |                               |                                  |                   |             |
| 2,004             | 14,880             | 2,588               | 2,102          | 2,863                        | 19,900     | 26,548               | -                       | 98                     | 200                             | -                            | -                             | 160                              | 41,212            | 186,727     |
| 3,233             | 3,265              | 2,489               | 19,517         | 37,819                       | 4,765      | 7,280                | 18,057                  | 19,953                 | 10,783                          | 3,291                        | 5,516                         | 8,977                            | 42,874            | 355,114     |
| -                 | 16                 | 25                  | 1.0            | 21                           | 27         | 133                  | 89                      | 18                     | 8.7                             | 9.0                          | 23                            | 17                               | 16                | 1,194       |
|                   |                    |                     |                |                              |            |                      |                         |                        |                                 |                              |                               |                                  |                   |             |

<sup>(1):</sup> CHP is outsourced

N/A: not available

<sup>(2):</sup> net electricity export by CHP

<sup>(3):</sup> part of heat exported

## **European Operations 2010**

| <b>.</b>                           | 1               |                          |  |                                  |                     |                     |
|------------------------------------|-----------------|--------------------------|--|----------------------------------|---------------------|---------------------|
|                                    |                 | Paper and<br>Board Mills | INTEGRATED<br>CORRUGATED<br>OPERATIONS | OTHER<br>PACKAGING<br>OPERATIONS | OTHER<br>OPERATIONS | TOTAL<br>OPERATIONS |
| PRODUCTION                         |                 |                          |  |                                  |                     |                     |
|                                    | ktonnes         | 5,633                    | 4,312                                  | 608                              | 1,567               |                     |
| ENERGY                             |                 |                          | , -                                    |                                  |                     |                     |
| Electricity                        |                 |                          |  |                                  |                     |                     |
| Co Generation                      | GWh             | 1,861                    | 22                                     | -                                | -                   | 1,883               |
| Hydro electric power               | GWh             | 8.1                      | -                                      | 0.1                              | -                   | 8.3                 |
| Grid supply                        | GWh             | 1,200                    | 476                                    | 81                               | 3.1                 | 1,761               |
| Total electricity                  | GWh             | 3,069                    | 498                                    | 81                               | 3.1                 | 3,652               |
| Fuel usage                         |                 |                          |  |                                  |                     |                     |
| Biofuels                           | TJ fuel         | 28,185                   | 120                                    | 0.4                              | -                   | 28,305              |
| Fossil fuels                       | TJ fuel         | 27,167                   | 4,327                                  | 222                              | 79                  | 31,794              |
| Total fuels                        | TJ fuel         | 55,351                   | 4,447                                  | 222                              | 79                  | 60,099              |
| WATER WITHDRAWAL                   |                 |                          |  |                                  |                     |                     |
| Surface                            | Mm <sup>3</sup> | 80                       | 0.1                                    | -                                | -                   | 80                  |
| Ground                             | Mm <sup>3</sup> | 6.7                      | 0.4                                    | -                                | -                   | 7.2                 |
| Grid                               | Mm <sup>3</sup> | 1.0                      | 1.3                                    | 0.1                              | 0.0                 | 2.5                 |
| Total                              | Mm <sup>3</sup> | 88                       | 1.8                                    | 0.1                              | 0.0                 | 90                  |
| DISCHARGES                         |                 |                          |  |                                  |                     |                     |
| To air                             |                 |                          |  |                                  |                     |                     |
| CO <sub>2</sub> fossil direct      | ktonnes         | 1,601                    | 256                                    | 13                               | 6.1                 | 1,876               |
| CO <sub>2</sub> fossil indirect    | ktonnes         | 263                      | 157                                    | 26                               | 1.4                 | 447                 |
| CO <sub>2</sub> biogenic           | ktonnes         | 3,070                    | 13                                     | 0.0                              | -                   | 3,082               |
| Dust                               | tonnes          | 513                      | 14                                     | 0.4                              | 0.0                 | 528                 |
| NO <sub>X</sub> as NO <sub>2</sub> | tonnes          | 4,533                    | 120                                    | 4.5                              | 3.9                 | 4,661               |
| $SO_X$ as $SO_2$                   | tonnes          | 396                      | 169                                    | 5.4                              | 3.6                 | 575                 |
| To water                           |                 |                          |  |                                  |                     |                     |
| Process water                      | Mm <sup>3</sup> | 49                       | 0.6                                    | 0.1                              | -                   | 49                  |
| Cooling water                      | Mm <sup>3</sup> | 33                       | 0.1                                    | 0.0                              | -                   | 33                  |
| COD                                | tonnes          | 19,054                   | 859                                    | N/A                              | N/A                 | 19,912              |
| BOD                                | tonnes          | 3,110                    | 211                                    | N/A                              | N/A                 | 3,321               |
| Total Suspended Solids             | tonnes          | 2,899                    | 129                                    | N/A                              | N/A                 | 3,028               |
| Total N                            | tonnes          | 360                      | 11                                     | N/A                              | N/A                 | 371                 |
| Total P                            | tonnes          | 73                       | 0.5                                    | N/A                              | N/A                 | 74                  |
| Solid wastes                       |                 |                          |  |                                  |                     |                     |
| Landfill                           | tonnes          | 186,727                  | 6,115                                  | 736                              | 2,362               | 195,940             |
| Recovery                           | tonnes          | 355,114                  | 22,355                                 | 5,709                            | 8,213               | 391,392             |
| Hazardous wastes                   | tonnes          | 1,194                    | 4,034                                  | 898                              | 6.1                 | 6,132               |

N/A: not available

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

## Latin American Mills 2010 Environmental Data

|                                    |                 | Bernal,<br>Argentina | Coronel Suarez,<br>Argentina | Cali,<br>Colombia  | Barranquilla,<br>Colombia | Barbosa,<br>Colombia | Los Reyes,<br>Mexico | Cerro Gordo,<br>Mexico | Monterrey,<br>Mexico | Caracas,<br>Venezuela | Valencia,<br>Venezuela | San Felipe,<br>Venezuela | Total mills |
|------------------------------------|-----------------|----------------------|------------------------------|--|---------------------------|----------------------|----------------------|------------------------|----------------------|-----------------------|------------------------|--------------------------|-------------|
|                                    |                 | fl, tl               | fl, tl                       | P&W,<br>sack<br>paper,<br>cart, bkl,<br>tl, sc fl,<br>wtkl, wttl | tl, fl                    | fl, wttl             | fl, tl,<br>wttl      | tl, fl                 | fl, tl               | cart, tl,<br>wttl     | cart                   | tl, fl, sc<br>fl         |             |
| PRODUCTION                         |                 |                      |                              |  |                           |                      |                      |                        |                      |                       |                        |                          |             |
|                                    | ktonnes         | 75                   | 49                           | 260  | 65                        | 71                   | 74                   | 281                    | 36                   | 17                    | 52                     | 104                      | 1,083       |
| ENERGY                             |                 |                      |                              |  |                           |                      |                      |                        |                      |                       |                        |                          |             |
| Electricity                        |                 |                      |                              |  |                           |                      |                      |                        |                      |                       |                        |                          |             |
| Co Generation                      | GWh             | -                    | -                            | 244  | 39                        | -                    | -                    | -                      | -                    | 3.6                   | 31                     | 73                       | 391         |
| Hydro electric power               | GWh             | -                    | -                            | -  | -                         | -                    | -                    | -                      | -                    | -                     | -                      | -                        | -           |
| Grid supply                        | GWh             | 37                   | 19                           | 84   | 1.1                       | 35                   | 49                   | 159                    | 20                   | 8.7                   | 19                     | 69                       | 501         |
| Total electricity                  | GWh             | 37                   | 19                           | 328  | 40                        | 35                   | 49                   | 159                    | 20                   | 12                    | 51                     | 142                      | 893         |
| Fuel usage                         |                 |                      |                              |  |                           |                      |                      |                        |                      |                       |                        |                          |             |
| Biofuels                           | TJ fuel         | -                    | -                            | 3,836  | -                         | -                    | -                    | -                      | -                    | -                     | -                      | 383                      | 4,218       |
| Fossil fuels                       | TJ fuel         | 592                  | 286                          | 5,935  | 1,170                     | 403                  | 601                  | 1,340                  | 216                  | 222                   | 1,138                  | 2,292                    | 14,198      |
| Total fuels                        | TJ fuel         | 592                  | 286                          | 9,771  | 1,170                     | 403                  | 601                  | 1,340                  | 216                  | 222                   | 1,138                  | 2,675                    | 18,416      |
| WATER WITHDRAWA                    | L               |                      |                              |  |                           |                      |                      |                        |                      |                       |                        |                          |             |
| Surface                            | Mm³             | 0.98                 | -                            | 25.8   | 1.0                       | 0.7                  | -                    | -                      | -                    | 0.6                   | -                      | -                        | 29          |
| Ground                             | Mm³             | -                    | 0.4                          | 0.2  | -                         | -                    | 0.3                  | 1.5                    | 0.1                  | -                     | 0.9                    | 3.7                      | 7.2         |
| Grid                               | Mm <sup>3</sup> | -                    | -                            | 0.0  | 0.0                       | -                    | -                    | -                      | 0.0                  | 0.2                   | 0.2                    | -                        | 0.5         |
| Total                              | Mm <sup>3</sup> | 0.98                 | 0.4                          | 26   | 1.0                       | 0.7                  | 0.3                  | 1.5                    | 0.2                  | 0.8                   | 1.1                    | 3.7                      | 37          |
| DISCHARGES                         |                 |                      |                              |  |                           |                      |                      |                        |                      |                       |                        |                          |             |
| To air                             |                 |                      |                              |  |                           |                      |                      |                        |                      |                       |                        |                          |             |
| CO <sub>2</sub> fossil direct      | ktonnes         | 34                   | 16                           | 461  | 66                        | 34                   | 34                   | 76                     | 12                   | 13                    | 65                     | 132                      | 945         |
| CO <sub>2</sub> fossil indirect    | ktonnes         | 13                   | 6.7                          | 11   | 0.1                       | 4.5                  | 27                   | 87                     | 11                   | 1.8                   | 4.0                    | 14                       | 180         |
| CO <sub>2</sub> biogenic           | ktonnes         | -                    | -                            | 401  | -                         | -                    | -                    | -                      | -                    | -                     | -                      | 36                       | 437         |
| Dust                               | tonnes          | -                    | -                            | 150  | 74                        | 3.1                  | 3.1                  | 2.5                    | -                    | -                     | -                      | 8                        | 241         |
| NO <sub>X</sub> as NO <sub>2</sub> | tonnes          | 87                   | 11                           | 544  | 35                        | 32                   | 15                   | 27                     | 7.2                  | 12                    | 20                     | 112                      | 902         |
| SO <sub>X</sub> as SO <sub>2</sub> | tonnes          | -                    | 1.3                          | 2,727  | 55                        | 86                   | -                    | 0.4                    | -                    | -                     | -                      | 5.6                      | 2,876       |
| To water                           |                 |                      |                              |  |                           |                      |                      |                        |                      |                       |                        |                          |             |
| Process water                      | Mm <sup>3</sup> | 0.9                  | 0.4                          | 24   | 0.9                       | 0.5                  | 0.1                  | 0.6                    | 0.1                  | 0.8                   | 0.9                    | 3.2                      | 32          |
| Cooling water                      | Mm <sup>3</sup> | -                    | -                            | -  | -                         | -                    | -                    | -                      | -                    | -                     | -                      | -                        | -           |
| COD                                | tonnes          | 833                  | 98                           | 6,148  | 1,144                     | 2,025                | 23                   | 404                    | 114                  | 510                   | 324                    | 945                      | 12,569      |
| BOD                                | tonnes          | 274                  | 15                           | 997  | 633                       | 779                  | 0.5                  | 41                     | 58                   | 206                   | 68                     | 229                      | 3,300       |
| Total Suspended<br>Solids          | tonnes          | 349                  | 8.5                          | 2,463  | 191                       | 105                  | 2.8                  | 70                     | 39                   | 1,438                 | 108                    | 196                      | 4,971       |
| Total N                            | tonnes          | N/A                  | 0.7                          | 175  | 6.3                       | 6.7                  | 0.4                  | 9.4                    | N/A                  | N/A                   | 5.2                    | N/A                      | 204         |
| Total P                            | tonnes          | 2.6                  | 0.1                          | 28   | 0.3                       | 0.7                  | 0.1                  | 0.6                    | 0.5                  | 0.6                   | 0.8                    | 1.1                      | 35          |
| Solid wastes                       |                 |                      |                              |  |                           |                      |                      |                        |                      |                       |                        |                          |             |
| Landfill                           | tonnes          | 6,309                | 2,533                        | 102,423  | 2,675                     | 1,726                | 81                   | 17,223                 | 5,954                | 745                   | 12,999                 | 8,831                    | 161,498     |
| Recovery                           | tonnes          | 643                  | 1,439                        | 3,380  | 34                        | 1,516                | 4,553                | 26,996                 | 48                   | 26                    | 107                    | 8,300                    | 47,044      |
| Hazardous wastes                   | tonnes          | 10                   | 4.7                          | 198  | 9.3                       | 10                   | 5.2                  | 18                     | 6.6                  | 2.3                   | 22                     | 5,796                    | 6,082       |

bkl: brown kraftliner cart: carton board fl: recycled flute N/A: not available P&W: printing and writing grade sc fl: semi-chemical flute tl: testliner wtkl: white top kraftliner wttl: white top testliner

# Latin American Operations 2010

|                                    |                 | PAPER AND<br>BOARD MILLS | OTHER<br>OPERATIONS | TOTAL OPERATIONS |
|------------------------------------|-----------------|--------------------------|---------------------|------------------|
| PRODUCTION                         |                 |                          |                     |                  |
|                                    | ktonnes         | 1,083                    | 2,257               |                  |
| ENERGY                             |                 |                          |                     |                  |
| Electricity                        |                 |                          |                     |                  |
| Co Generation                      | GWh             | 391                      | -                   | 391              |
| Hydro electric power               | GWh             | -                        | -                   | -                |
| Grid supply                        | GWh             | 501                      | 109                 | 611              |
| Total electricity                  | GWh             | 893                      | 109                 | 1,002            |
| Fuel usage                         |                 |                          |                     |                  |
| Biofuels                           | TJ fuel         | 4,218                    | -                   | 4,218            |
| Fossil fuels                       | TJ fuel         | 14,198                   | 930                 | 15,128           |
| Total fuels                        | TJ fuel         | 18,416                   | 930                 | 19,346           |
| WATER WITHDRAWAL                   |                 |                          |                     |                  |
| Surface                            | Mm <sup>3</sup> | 29                       | 0.1                 | 29               |
| Ground                             | Mm <sup>3</sup> | 7.2                      | 0.4                 | 7.6              |
| Grid                               | Mm <sup>3</sup> | 0.5                      | 0.2                 | 0.7              |
| Total                              | Mm <sup>3</sup> | 37                       | 0.7                 | 38               |
| DISCHARGES                         |                 |                          |                     |                  |
| To air                             |                 |                          |                     |                  |
| CO <sub>2</sub> fossil direct      | ktonnes         | 945                      | 57                  | 1,002            |
| CO <sub>2</sub> fossil indirect    | ktonnes         | 180                      | 41                  | 221              |
| CO <sub>2</sub> biogenic           | ktonnes         | 437                      | -                   | 437              |
| Dust                               | tonnes          | 241                      | 3.2                 | 244              |
| NO <sub>X</sub> as NO <sub>2</sub> | tonnes          | 902                      | 24                  | 926              |
| SO <sub>X</sub> as SO <sub>2</sub> | tonnes          | 2,876                    | 39                  | 2,915            |
| To water                           |                 |                          |                     |                  |
| Process water                      | Mm <sup>3</sup> | 32                       | 0.1                 | 33               |
| Cooling water                      | Mm <sup>3</sup> | -                        | -                   | -                |
| COD                                | tonnes          | 12,569                   | 238                 | 12,807           |
| BOD                                | tonnes          | 3,300                    | 48                  | 3,349            |
| Total Suspended Solids             | tonnes          | 4,971                    | 34                  | 5,004            |
| Total N                            | tonnes          | 204                      | 2.9                 | 207              |
| Total P                            | tonnes          | 35                       | 0.4                 | 35               |
| Solid wastes                       |                 |                          |                     |                  |
| Landfill                           | tonnes          | 161,498                  | 5,465               | 166,963          |
| Recovery                           | tonnes          | 47,044                   | 1,061               | 48,105           |
| Hazardous wastes                   | tonnes          | 6,082                    | 234                 | 6,316            |

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

# **Total Group Operations 2010**

| ENERGY All                         |                 |         |  |  |
|------------------------------------|-----------------|---------|--|--|
| Electricity                        |                 |         |  |  |
| Co Generation                      | GWh             | 2,274   |  |  |
| Hydro electric power               | GWh             | 8.3     |  |  |
| Grid supply                        | GWh             | 2,372   |  |  |
| Total electricity*                 | GWh             | 4,654   |  |  |
| Fuel usage                         |                 |         |  |  |
| Biofuels                           | TJ fuel         | 32,524  |  |  |
| Fossil fuels                       | TJ fuel         | 46,921  |  |  |
| Total fuels*                       | TJ fuel         | 79,445  |  |  |
| WATER WITHDRAWAL                   |                 |         |  |  |
| Surface                            | Mm <sup>3</sup> | 109     |  |  |
| Ground                             | Mm <sup>3</sup> | 15      |  |  |
| Grid                               | Mm <sup>3</sup> | 3.2     |  |  |
| Total*                             | Mm <sup>3</sup> | 127     |  |  |
| DISCHARGES                         |                 |         |  |  |
| To air                             |                 |         |  |  |
| CO <sub>2</sub> fossil direct*     | ktonnes         | 2,878   |  |  |
| CO <sub>2</sub> fossil indirect*   | ktonnes         | 669     |  |  |
| CO <sub>2</sub> biogenic*          | ktonnes         | 3,520   |  |  |
| Dust                               | tonnes          | 772     |  |  |
| NO <sub>X</sub> as NO <sub>2</sub> | tonnes          | 5,587   |  |  |
| SO <sub>X</sub> as SO <sub>2</sub> | tonnes          | 3,489   |  |  |
| To water                           |                 |         |  |  |
| Process water                      | Mm³             | 82      |  |  |
| Cooling water                      | Mm <sup>3</sup> | 33      |  |  |
| COD*                               | tonnes          | 32,719  |  |  |
| BOD                                | tonnes          | 6,670   |  |  |
| Total Suspended Solids*            | tonnes          | 8,033   |  |  |
| Total N                            | tonnes          | 578     |  |  |
| Total P                            | tonnes          | 109     |  |  |
| Solid wastes                       |                 |         |  |  |
| Landfill                           | tonnes          | 362,903 |  |  |
| Recovery                           | tonnes          | 439,496 |  |  |
| Hazardous wastes                   | tonnes          | 12,448  |  |  |

<sup>\*</sup> Within KPMG assurance scope. The assurance report can be found on pages 81 and 82.

## Relationship To GRI Guidelines

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

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

framework for voluntary reporting on an organisation's economic, environmental and social performance.

The index below has been prepared using the current GRI Sustainability Reporting Guidelines (version G3.1) and it provides a list of the GRI indicators reported by SKG for 2010. All core Indicators have been addressed and are included in the table. The index refers to information in our 2010 Sustainable Development Report (SDR), our 2010 Annual Report (AR), our website: www.smurfitkappa.com and the Carbon Disclosure Project website.

We declare that our 2010 reporting applies to a GRI "A+" application level. An "A" application level requires reporting on a specified range of criteria, on the management approach to disclosures for each indicator category and a response on each core G3.1 indicator. We have sought assurance from an external party which expands the application level to "A+".

| GRI-G3  | Description   | Source/comment | Page(s)   |
|---------|---|----------------|---|
| Profile |   |                |   |
| 1.1     | CEO Statement on relevance of sustainability to the organisation and its strategy | SDR            | 5   |
| 1.2     | Description of key impacts, risks and opportunities                               | SDR            | 16-18   |
| Organis | ational Profile   |                |   |
| 2.1     | Name of the organisation  | SDR            | Cover   |
| 2.2     | Primary brands, products, and/or services   | SDR<br>AR      | Inside front cover<br>Inside front cover<br>2-3 |
| 2.3     | Operational structure of the organisation   | Website        |   |
| 2.4     | Location of organisation's headquarters   | SDR            | 88  |
| 2.5     | Countries where the organisation operates   | AR             | Inside front cover<br>2-3                       |
| 2.6     | Nature of ownership and legal form  | AR             | 162, 165  |
| 2.7     | Markets served  | Website        |   |
| 2.8     | Scale of the reporting organisation   | AR             | Inside front cover<br>2-3, 4                    |
| 2.9     | Significant changes during the reporting period in size, structure and ownership  | AR             | 159-161   |
| 2.10    | Awards received in the reporting period   | Website        |   |
| Report  | Parameters  |                |   |
| 3.1     | Reporting period (e.g. fiscal/calendar year) for information provided             | SDR            | 5   |
| 3.2     | Date of most recent previous report (if any)                                      | SDR            | 5   |
| 3.3     | Reporting cycle (annual, biennial, etc.)  | SDR            | 5   |
| 3.4     | Contact point for questions regarding the report or its contents                  | SDR            | 88  |
| 3.5     | Process for defining report content   | SDR            | 10  |
| 3.6     | Boundary of the report  | SDR            | 10  |
| 3.7     | Any specific limitations on the scope or boundary of the report                   | SDR            | 10  |

| GRI-G3 | Description   | Source/comment       | Page(s)                       |
|--------|---|----------------------|-------------------------------|
| 3.8    | Basis for reporting on joint ventures, subsidiaries, etc.   | SDR                  | 10                            |
| 3.9    | Data measurement techniques and the bases of calculations   | SDR                  | 10, 32                        |
| 3.10   | Explanation of effect of re-statements of information provided previously   | SDR                  | 10                            |
| 3.11   | Significant changes in scope, boundary, or measurement methods  | SDR                  | 10, 32                        |
| 3.12   | Table identifying the location of the Standard Disclosures in the report  | SDR                  | 74-78                         |
| 3.13   | Policy and current practice on seeking external assurance for the report  | SDR                  | 5, 74<br>81-82                |
| Govern | ance, Commitments, and Engagement   |                      |                               |
| 4.1    | Governance structure of the organisation  | AR                   | 36-45                         |
| 4.2    | Indicate if Chair of the Board is also an executive officer   | AR                   | 39                            |
| 4.3    | The Board members that are independent and/or non-executive members   | AR                   | 37                            |
| 4.4    | Ways for shareholders and employees to provide recommendations or direction to the Board                              | SDR<br>AR            | 46-47<br>42                   |
| 4.5    | Link between compensation of Board and management with SDR performance  | AR                   | 49                            |
| 4.6    | Processes in place for the Board to ensure conflicts of interest are avoided  | Website              |                               |
| 4.7    | Process for determining the qualifications and expertise of the Board   | AR                   | 38-40                         |
| 4.8    | Internally developed statements of mission or values, codes of conduct, and principles                                | SDR<br>AR<br>Website | 7-8<br>10-11, 36-41           |
| 4.9    | Procedures of the Board for overseeing identification and management of performance                                   | AR                   | 40                            |
| 4.10   | Processes for evaluating the Board's own SDR performance  | AR                   | 40                            |
| 4.11   | Explanation of whether and how the precautionary approach or principle is addressed by the organisation               | AR                   | 43, 44                        |
| 4.12   | Externally developed economic, environmental and social charters & principles   | SDR                  | 7                             |
| 4.13   | Memberships in associations   | SDR                  | 63                            |
| 4.14   | List of stakeholder groups engaged by the organisation  | SDR                  | 9                             |
| 4.15   | Basis for identification and selection of stakeholders with whom to engage  | SDR                  | 9, 46-47<br>53, 58-60         |
| 4.16   | Approaches to stakeholder engagement  | SDR                  | 9, 46-47, 53, 58-60           |
| 4.17   | Key topics and concerns raised through stakeholder engagement   | SDR                  | 46-47, 53                     |
| Econom | iic   |                      |                               |
|        | Disclosure on management approach   | SDR<br>AR            | 10, 14<br>10-11, 30-33, 70-90 |
| EC1    | Direct economic value generated and distributed   | AR                   | 91-97                         |
| EC2    | Financial implications and other risks and opportunities for the organisation's activities due to climate change      | CDP 2011 Investor    | 5, 6                          |
| EC3    | Coverage of the organisation's defined benefit plan obligations   | AR                   | 83, 125-132                   |
| EC4    | Significant financial assistance received from government   | AR                   | 63, 82, 96                    |
| EC6    | Policy, practices and proportion of spending on locally-based suppliers at significant locations of operation         | SDR                  | 9                             |
| EC7    | Local hiring and proportion of senior management hired from the local community at significant locations of operation | SDR                  | 43                            |

## Relationship To GRI Guidelines (continued)

| GRI-G3  | Description  | Source/comment   | Page(s)                      |
|---------|--|--|------------------------------|
| EC8     | Development and infrastructure provided primarily for public benefit   | SDR<br>Other than local<br>community<br>involvement, no<br>engagement by SKG | 55-57                        |
| Environ |  |  |                              |
|         | Disclosure on management approach  | SDR  | 5, 10, 21, 32                |
| EN1     | Materials used by weight or volume   | SDR  | 64-65                        |
| EN2     | Percentage of materials used that are recycled input materials   | SDR  | 12, 26, 38                   |
| EN3     | Direct energy consumption by primary energy source tables  | SDR  | 33, 34, 68-73                |
| EN4     | Indirect energy consumption by primary source  | SDR  | 32, 68-73                    |
| EN5     | Energy saved due to conservation and efficiency improvements   | SDR  | 31-33, 36-37                 |
| EN6     | Energy-efficient or renewable energy products and services   | SDR  | 31-34                        |
| EN8     | Total water withdrawal by source   | SDR  | 41, 68-73                    |
| EN10    | Percentage and total volume of water recycled and reused   | SDR  | 38-41, 68-73                 |
| EN11    | Location and size of land by protected areas and areas of high biodiversity value                              | SDR<br>Website   | 30, 31                       |
| EN12    | Description of significant impacts of activities, products and services on biodiversity                        | SDR  | 29, 30                       |
| EN16    | Total direct and indirect greenhouse gas emissions by weight   | SDR  | 34, 68-73                    |
| EN17    | Other relevant indirect greenhouse gas emissions by weight   | SDR  | 33-34                        |
| EN18    | Initiatives to reduce greenhouse gas emissions and reductions achieved   | SDR  | 33-34, 36-37                 |
| EN19    | Emissions of ozone-depleting substances by weight  | website  |                              |
| EN20    | $\mathrm{NO}_{\mathrm{X}}$ , $\mathrm{SO}_{\mathrm{X}}$ and other significant air emissions by type and weight | SDR  | 68-73                        |
| EN21    | Total water discharge by quality and destination   | SDR  | 68-73                        |
| EN22    | Total weight of waste by type and disposal method  | SDR  | 68-73                        |
| EN23    | Total number and volume of significant spills  | website  |                              |
| EN26    | Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation        | SDR  | 20-21, 22-24<br>26-41        |
| EN27    | Percentage of products sold and their packaging materials that are reclaimed by category                       | SDR  | Inside front cover<br>12, 26 |
| EN28    | Significant fines and non-monetary sanctions for non-compliance with environmental law                         | SDR  | 8                            |
| EN29    | Significant environmental impact from transport  | SDR  | 33-34                        |
| Labour  | Practices  |  |                              |
|         | Disclosure on management approach  | SDR  | 14-15, 21, 43-47             |
| LA1     | Total workforce by employment type and region  | SDR  | 43-44                        |
| LA2     | Total number and rate of employee turnover by age group, gender, and region                                    | SDR  | 43-44                        |
| LA3     | Benefits provided to full-time employees   | SDR  | 43-44                        |
| LA4     | Percentage of employees covered by collective bargaining agreements  | SDR  | 46                           |
| LA5     | Minimum notice period(s) regarding significant operational changes   | SDR  | 47                           |
| LA6     | Employees covered by collective bargaining agreements  | SDR  | 46                           |

| GRI-G3 | Description   | Source/comment            | Page(s)               |
|--------|---|---------------------------|-----------------------|
| LA7    | Rates of injury, occupational diseases, lost days and absenteeism, and number of work-related fatalities by region  | SDR                       | 50-51                 |
| LA8    | Education, training, counselling, prevention and risk-control programmes in place to assist workforce members, their families or community members regarding serious diseases | SDR                       | 49                    |
| LA10   | Average hours of training per year per employee by employee category  | SDR                       | 45                    |
| LA11   | Programmes for skills management and lifelong learning  | SDR                       | 44-45                 |
| LA12   | Employees receiving performance and career development reviews  | SDR                       | 45                    |
| LA13   | Composition of governance bodies and breakdown of employees per<br>category according to gender, age group, minority group membership,<br>and other indicators of diversity   | AR<br>SDR                 | 34-35, 40-42<br>43-44 |
| LA14   | Ratio of basic salary of men to women by employee category  | SDR<br>Same job, same pay | 44                    |
| Human  | Rights  |                           |                       |
|        | Disclosure on management approach   | SDR                       | 14, 21                |
| HR1    | Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening                              | SDR                       | 47                    |
| HR2    | Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken   | SDR                       | 47                    |
| HR4    | Total number of incidents of discrimination and actions taken   | SDR<br>Website            | 47                    |
| HR5    | Operations 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                       | 46                    |
| HR6    | Operations with significant risk for incidents of child labour, and measures taken to eliminate   | SDR                       | 44                    |
| HR7    | Operations with significant risk of forced or compulsory labour, and measures to eliminate  | SDR                       | 44                    |
| 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   | No significant<br>issues  | 44                    |
| Social |   |                           |                       |
|        | Disclosure on management approach   | SDR                       | 14, 21, 53            |
| SO1    | Nature, scope, and effectiveness of any programmes and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting  | SDR                       | 53-55                 |
| SO2    | Business units analysed for risks related to corruption   | SDR                       | 8                     |
| SO3    | Percentage of employees trained in organisation's anti-corruption policies and procedures   | SDR                       | 8                     |
| SO4    | Actions taken in response to incidents of corruption  | SDR                       | 8                     |
| SO5    | Public policy positions and participation in public policy development and lobbying   | SDR                       | 8                     |

## Relationship To GRI Guidelines (continued)

| GRI-G3     | Description   | Source/comment   | Page(s)                 |
|------------|---|--|-------------------------|
| SO6        | Total value of financial and in-kind contributions to political parties, politicians and related institutions by country  | SDR  | 8                       |
| <b>SO7</b> | Total number of legal actions for anti-competitive behaviour, anti-trust and monopoly practices and their outcomes  | SDR  | 8                       |
| SO8        | Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations   | SDR  | 8                       |
| Product    | t Responsibility  |  |                         |
|            | Disclosure on management approach   | SDR  | 10, 12, 42              |
| 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  | 57                      |
| 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  | 57                      |
| PR3        | Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements  | SDR  | 10, 26, 29<br>56, 64-73 |
| 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  | 57                      |
| PR5        | Practices related to customer satisfaction, including results of surveys measures customer satisfaction   | SDR  | 59                      |
| PR6        | Programmes for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship   | SDR  | 59                      |
| 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  | 59                      |
| PR8        | Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data   | No substantiated<br>complaints<br>identified   |                         |
| PR9        | Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services  | No fines and/or<br>substantiated<br>claims for non-<br>compliance with<br>laws or regulations<br>concerning the<br>provision and use<br>of products and<br>services were<br>identified |                         |

## **Business in the Community Ireland**

## External Commentary – Smurfit Kappa Group Sustainable Development Report 2010

We welcome the publication of this fourth full-spectrum report issued by Smurfit Kappa Group on its sustainable development activities in 2010. The report presents a good balance between the various sections of activity reported, which shows an improvement on previous reports where a significant proportion of the document was devoted to environmental activities and a much smaller section included social and employee data and practices. This improvement is clear evidence that the Social Development and Business Development dimensions of the report have incorporated more data disclosure as well as case studies and examples to convey the impact of practices in place. Also worth noting and as stated in the scope of the report is the introduction of systems to improve data gathering to allow for comparisons between individual Group companies on material areas of performance. In particular, we note the adoption of measurements on water discharges and of CO<sub>2</sub> fossil emissions per tonne of paper produced as clear measurements linked to production output that can help drive improvement.

Despite the current economic climate and the challenging business conditions the company faces, it is important to highlight several of the improvements and achievements on the environmental performance of the Group including the achievement of 100% FSC and/or PEFC certified paper used in European mill operations; the reductions in water discharges and CO<sub>2</sub> fossil emissions or the addition of an internal sustainability award to recognise best practice. Probably the most important recognition of all those featured in this report are the awards received by Smurfit Kappa from Unilever, on its global "Winning through Sustainability" supplier award and from Coca-Cola Enterprises as best Corporate Supplier in the category "Corporate Responsibility and Sustainability". These awards recognise the excellence and innovation in product development and in this sense Smurfit Kappa is raising its profile as a key partner in the delivery of company's sustainability strategies.

Another significant element in this report is the introduction of long term sustainable development commitments, in the areas of sustainable use of fibre, CO<sub>2</sub> emissions, water and code of business conduct.

The public disclosure of these targets demonstrate the company's transparency and its commitment to report on progress against these over the coming years and we look forward to the presentation of further short to medium term targets.

As noted by the Group CEO in his introduction, this report has achieved the highest level of compliance with the G3.1 Global Reporting Initiative (GRI) Sustainability Reporting Guidelines, a notable improvement from last year's report. We also highlight the company's involvement in the Water Footprint Network to improve its assessment of best practice in the Group as well as benchmarking performance against industry leaders. We are also pleased to see that this report continues the trend set last year of seeking external assurance. We would have liked to see in this report more evidence as to how external endorsements and assurance are helping to improve data gathering and disclosure to optimise practices and procedures.

Looking at further improvements in the reporting process, we recommend a review of the presentation of information in this report to reflect an appropriate balance between the description of procedures and policies already referred to in previous reports or in the company website and updates on progress against set targets. We would also be keen to see further evidence of how this report is used as a tool to promote the company and its best practices and how it promotes a process of two-way communication with key stakeholders and how external and internal stakeholder feedback informs the development of practices and of future reports.

We commend the company and in particular their management and Sustainability Working Group for advancing the responsible business agenda across the organisation.

Tina Roche

Chief Executive

Business in the Community Ireland

Business in

Community

Ireland

## **UN Global Compact**

SKG became a participant in the United Nations Global Compact, a worldwide corporate citizenship initiative, in May 2010. This is now a network of more than 8,700 businesses and other participants from over 130 countries who promote ten core principles in the areas of human rights, labour, environment and anti-corruption. These principles are listed in the table below.

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

The Sustainable Development Report provides a number of examples of ongoing activities, as well as relevant key performance indicators, which illustrate SKG's support for the ten Global Compact principles in its everyday business. Measurements of performance related to the Global Compact principles are given using indicators provided by the Global Reporting Initiative (GRI), wherever feasible. In particular, GRI performance indicators relating to human rights, labour and anti-corruption principles are presented in the Social Development section while environmental performance indicators reported in the Environment section. A complete GRI index can be found on pages 74 to 78 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.

| UN  | GC principles  | GRI indicators                |
|-----|--|-------------------------------|
| Hui | man Rights   |                               |
| 1   | Businesses should support and respect the protection of internationally proclaimed human rights and                      | HR1-9, LA7-9, LA13-14,<br>PR8 |
| 2   | Businesses should make sure that they are not complicit in human rights abuses.  | HR1-9                         |
| Lab | our  |                               |
| 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.                      | LA2, LA13-14, HR4             |
| Env | rironment  |                               |
| 7   | Businesses are asked to support a precautionary approach to environmental challenges;                                    | EN18, 26                      |
| 8   | Businesses should undertake initiatives to promote greater environmental responsibility; and                             | EN1-29, PR3-4                 |
| 9   | Businesses should encourage the development and diffusion of environmentally friendly technologies                       | EN2, 5-7, 10, 18, 26-27       |
| Ant | ti-corruption  |                               |

**SO3-4** 

Businesses should work against corruption in all its forms, including extortion and bribery.



# Independent Assurance Report to Smurfit Kappa Group plc

### Introduction

We were engaged by the management of Smurfit Kappa Group plc (SKG) to provide assurance on the 2010 data for selected environmental indicators in the SKG Sustainable Development Report 2010 (further referred to as the 'Report'). The Report, including the identification of material issues, is the responsibility of the Company's management. Our responsibility is to issue an independent assurance report.

Our engagement was designed to provide limited assurance on whether the 2010 data for the following environmental indicators are, in all material respects, presented in accordance with SKG's reporting criteria:

- Energy consumption: total electricity and total fuels (page 73);
- CO<sub>2</sub> emissions: CO<sub>2</sub> fossil direct, CO<sub>2</sub> fossil indirect and CO<sub>2</sub> biogenic (page 73);
- Water withdrawal: Total water withdrawal (page 73);
- Water discharge: Chemical Oxygen Demand (COD) and Total Suspended Solids (page 73);
- Fibre certification (pages 28 and 66-67).

The data for these indicators are shown by an asterisk (\*) on the pages mentioned above, together with the text 'Within KPMG assurance scope'.

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

SKG applies the Sustainability Reporting Guidelines of the Global Reporting Initiative (G3) together with internal corporate guidelines, as detailed in approach to sustainability reporting in the section Scope of the Report on page 10. It is important to view the performance data within the assurance scope in the context of this explanatory information. We believe that these criteria are suitable in view of the purpose of our assurance engagement.

We conducted our engagement in accordance with the International Standard for Assurance Engagements (ISAE) 3000: Assurance Engagements other than Audits or Reviews of Historical Financial Information, issued by the International Auditing and Assurance Standards Board. This standard requires, amongst others, that the assurance team members possess the specific knowledge, skills and professional competencies needed to understand and review the information and that they comply with ethical requirements, including independence requirements.

### Work undertaken

We made inquiries, primarily of persons responsible for the preparation of data for the selected environmental indicators, and we applied analytical and other evidence gathering procedures, as appropriate. These procedures included:

- Reviewing the systems and processes for collecting and processing the information for the selected environmental indicators as well as internal controls at corporate level relating to this information.
- Interviewing relevant staff at corporate level responsible for the reported information on the selected indicators.
- Reviewing the data submitted by all sites for central aggregation for the selected environmental indicators, together with an assessment of the indicator calculations and the quality of the data validation process at corporate level.
- Reviewing the reliability of the local data and the design and implementation of local validation processes at five sites: Piteå (Sweden), Zülpich (Germany), Bad Nieuweschans (the Netherlands), Cerro Gordo (Mexico) and Hoogeveen (the Netherlands).

# Independent Assurance Report to Smurfit Kappa Group plc (continued)

### Conclusion

Based on the procedures performed, as described above, nothing came to our attention to indicate that the 2010 data for the selected indicators are not, in all material respects, presented in accordance with the reporting criteria, as described in the section Scope of the Report on page 10.

### Other observation

Without affecting the conclusions presented above, we would like to draw the readers' attention to the following:

During 2010 Smurfit Kappa Group further implemented the reporting process against the GRI guidelines. We recommend Smurfit Kappa Group to further define the process of identifying the stakeholders of the company and to systematically assess their information needs as the basis for the Long Term Sustainable Development Commitments and the Sustainable Development Report of the company.

Amstelveen, 30 June 2011

Wim Bartels Partner

on behalf of KPMG Sustainability, part of KPMG Advisory N.V.

# Glossary

| AOX              | Absorbable Organic Halogens: amount of organic compounds containing chlorine and other halogens. AOX can be produced during bleaching of pulp when using halogenated bleaching agents.  |
|------------------|---|
| BOD              | Biochemical Oxygen Demand (one element of the COD, unit: $mg O_2/litre$ ) refers to the level of oxygen uptake by micro-organisms in a sample of water measured over a period of five days.   |
| Biodiversity     | General term to describe the variety of life forms (flora and fauna) in an ecosystem.   |
| 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     | Liquid residue from pulping that contains organic compounds (like lignin). This residue is burnt in paper mills to produce energy. The energy recovered is classified as renewable as it is coming from biomass.  |
| CDP              | The Carbon Disclosure Project is an independent not-for-profit organization holding the largest database of primary corporate climate change information in the world.  |
|                  | Thousands of organizations from across the world's major economies measure and disclose their greenhouse gas emissions, water use and climate change strategies through CDP. This information can then be used for financial and policy decision-making.  |
| CEN              | Comité Européen de Normalisation. The European Committee for Standardisation is major provider of European standards and technical specifications.  |
| CEPI             | CEPI, the Confederation of European Paper Industries, is located in Brussels. It is a non profit organisation representing the European pulp and paper industry. CEPI's mission is to promote the members' business sector by taking specific actions and analysing activities in the areas of environment, energy, forestry, recycling and research.   |
| 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 an SKG site for delivering electricity and steam to the SKG 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 SKG production facility.  |
| CITPA            | International Confederation of Paper and Board Converters in Europe.  |
| 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-generation    | Electricity generated by a CHP system.  |
| co generation    |   |

## **Glossary (continued)**

| Corrugated board                                 | Structured board made by a corrugator usually formed by gluing one fluting to two flat-facing sheets of containerboard (kraftliner or testliner).  |
|--|--|
| CO <sub>2</sub> biogenic                         | Carbon dioxide emitted when burning biofuels. This ${\rm CO_2}$ is considered to be carbon neutral as it is removed from the atmosphere and stored in biomass within a short period of time.   |
| CO <sub>2</sub> fossil                           | Carbon dioxide emitted when burning fossil fuels for the production of paper. The calculation is made according to international guidelines from the carbon content of each fuel.  |
| 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. 2008: " $\rm CO_2$ emissions from fuel combustion (2008 Edition)".  |
| Carbon dioxide<br>equivalent CO <sub>2</sub> -eq | A metric measure used to compare the emissions from various greenhouse gases based upon their climate change potential (CCP). The ${\rm CO_2}$ -eq carbon dioxide equivalent for other emissions is derived by multiplying the amount of the emission by the associated CCP factor. For example, the CCP factor for methane is 21 and for nitrous oxide 310.                           |
| CSR  | Corporate Social Responsibility: a concept whereby organisations consider the interests of society by taking responsibility for the impact of their activities on customers, suppliers, employees, shareholders communities and the environment in all aspects of their operations.  |
| 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.  |
| EBITDA   | Earnings before interest, taxes, depreciation and amortisation.  |
| EIA  | Energy Information Administration. The EIA is part of the US Department of Energy and collects, analyses, and disseminates independent and impartial energy information to promote policymaking, efficient markets, and public understanding of energy and its interaction with the economy and the environment.   |
| ELCD   | European Reference Life Cycle Database. The ELCD has been developed within the "European Platform on Life Cycle Assessment" that is a project of the European Commission, carried out by the Commission's Joint Research Centre, Institute for Environment and Sustainability (JRC-IES) in collaboration with DG Environment, Directorate for Sustainable Development and Integration. |
| EMS  | Environmental Management Systems. A set of processes and practices that enable an organisation to reduce its environmental impact and increase its operating efficiency.   |
| ENGO   | Environmental NGO (Non-Governmental Organisation)  |
| ETS  | Emission Trading Scheme: a scheme calculated to allocate greenhouse gas allowances for a list of specific activities. The "allowance" means the entitlement to emit 1 tonne of carbon dioxide. This scheme was created to follow the guidelines of the Kyoto Protocol to promote reduction of greenhouse gas emissions.  |
| EuPIA  | European Printing Ink Association.   |
| EUwood   | The EUwood project, financed by the Intelligent Energy Europe programme, brings together data and analyses from a wide range of sources in order to provide a detailed and transparent estimate of future potential wood supply in Europe.   |
| FEICA  | Association of the European Adhesive and Sealant Industry.   |
| Fluting  | The 'wavy' middle layer in corrugated board.   |
| Fossil fuels                                     | Fuels originating from natural resources (gas, oil, coal, peat and lignite).   |

| FSC                        | Forestry Stewardship Council. The FSC is an independent, non-governmental, organisation established to promote the responsible management of the world's forests. The FSC has developed internationally recognised forestry certification principles and a system of tracing, verifying and labelling timber and wood/fibre products which is based on FSC-certified forests.   |
|----------------------------|---|
| Gigajoule                  | Unit of energy that generally applies to fuel. 1 gigajoule (GJ) = one billion joules = $10^9$ joules.   |
| GRI                        | The GRI (Global Reporting Initiative) reporting framework is the generally accepted framework for reporting on an organisation's economic, environmental and social performance. The sustainability reporting guidelines give the reporting principles, and the list of performance indicators, for each of the three key areas that should be disclosed in a sustainability report.  |
| 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).  |
| Hazardous                  | Residues of oils and other hazardous wastes (building wastes containing asbestos, old fuels, ink residues, etc.). All these wastes are treated by external authorised companies.  |
| Hectare                    | A unit of area. One hectare (Ha) = $10,000 \text{ m}^2$ . One hectare = $2.471 \text{ acres}$ .   |
| ILO                        | International Labour Organisation.  |
| Inorganic raw<br>materials | Raw material used for manufacturing our products that are not organic such as: fillers, sodium hydroxide, sodium sulphate and calcium oxide.  |
| Innotools                  | Innotools is a unique software suite for developing fit-for-purpose packing. It comprises: Innobook, an internal library with over 30,000 proven design solutions used extensively by designers in SKG; Pack Expert, an advanced statistical model used to determine the packaging performance in the customer's supply chain; and Paper-to-Box, a sophisticated software tool used to predict box performance based on board design and composition. |
| ISO 9001                   | Scheme certified by independent third party that ensures that the operation certified applies internationally recognised standards and procedures of quality management.  |
| ISO 14001                  | Scheme certified by independent third party that ensures that the operation certified applies internationally recognised standards and procedures of environmental management.  |
| ISO 17025                  | This international standard lists the requirements to allow the accreditation by authorised third party of a testing laboratory and to verify its proficiency.  |
| ktonne                     | One ktonne = 1,000 tonnes, where one tonne (metric tonne) = 1,000 kilograms.  |
| Kraftliner                 | Paper made mainly from virgin wood fibres.  |
| Landfill                   | The disposal of solid waste in either internal or external landfill in accordance with national legislation.  |
| Mm <sup>3</sup>            | 1 million cubic metres.   |
| MJ                         | Megajoule, a unit of energy. 1 megajoule (MJ) = 1 million joules = $10^6$ joules.   |
| MWh                        | Unit of energy, generally applies to electricity $-1$ MWh (MegaWatt hour) = 1,000 KWh (KiloWatt hour).  |
| Natura 2000                | Natura 2000 is an ecological network of protected areas in the territory of the European Union. In May 1992, governments of the European Union adopted legislation designed to protect the most seriously threatened habitats and species across Europe. This legislation is called the Habitats Directive and complements the Birds Directive adopted in 1979.   |

## **Glossary (continued)**

| NCASI                       | The National Council for Air and Stream Improvement is an independent, non-profit research institute that focuses on environmental topics of interest to the forest products industry. Established in 1943, NCASI is recognised as the leading source of reliable data on environmental issues affecting this industry and has more than 75 member companies throughout the US and Canada.  |
|-----------------------------|---|
| NGO                         | A Non-Governmental Organisation (NGO) is a legally constituted organisation created by private persons or organisations with no participation or representation of any government. In those cases where NGOs are funded totally or partially by governments, the NGO maintains its non-governmental status insofar as it excludes government representatives from membership of the organisation.   |
| NO <sub>X</sub>             | Mix of nitrogen oxides (NO and $NO_2$ ) calculated as $NO_2$ (nitrogen dioxide) coming from combustion of fuels. They can contribute to the acidification of soil and water. $NO_X$ emissions are measured mainly by the mills. Where $NO_X$ is not measured (converting plants), emissions are calculated from fuel consumption using the emission factors listed in the Ecoinvent database version 2.1.   |
| OECD                        | Organisation for Economic Co-operation and Development.   |
| 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 dyes.   |
| PEFC                        | Programme for the Endorsement of Forest Certification. The PEFC is an independent, non-governmental organisation which promotes sustainably managed forests through independent third party certification.  |
| 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 directly for external treatment (municipal water treatment). In all cases, levels of pollutants released are reported as outputs of the company even in the case of operations that send process water to external treatment.  |
| Purchased pulp              | Pulp produced by third party companies and purchased by our mills to produce paper or board (the pulps are mainly bleached).  |
| REACH                       | REACH is the Regulation for Registration, Evaluation, Authorisation and Restriction of Chemicals. It came into force on 1 June 2007 to streamline and improve the former legislative framework on the use of chemicals within the European Union (EU). REACH places greater responsibility on industry to manage the risks that chemicals may pose to the health and the environment. In principle, REACH applies to all chemicals: not only chemicals used in industrial processes but also in our day-to-day life, for example in cleaning products, paints as well as in articles such as clothes, paper, and packaging.   |
| Recovered paper             | Used paper and board separately collected and classified for the purpose of recycling. Mechanical treatment is used to remove unusable materials.   |
| Recovery                    | Part of wastes that are recycled, used in agricultural uses or incinerated with recovery of energy.   |
| Renewable energy            | Energy coming from sources that are naturally renewable (e.g. biomass, hydro electricity).  |
| Sludge                      | A solid waste that is produced during water treatment from biological activity (mainly aerobic stage).  |
| Sedex                       | Sedex, the Supplier Ethical Data Exchange, is a membership organisation for businesses committed to continuous improvement of the ethical performance of their supply chains. Sedex is a not-for-profit organisation based in London, UK and seeks to be the leading knowledge management provider of choice for measuring and implementing ethical and responsible practices in the global supply chain. Sedex enables member companies to manage efficiently the ethical and responsible practices of their global supply chains, generating transparency through the provision of a secure, robust, and user-friendly data exchange. Sedex focuses on four pillars: Labour Standards, Health and Safety, Environment and Business Integrity. |

| SO <sub>X</sub>           | Mix of sulphur oxides calculated as $SO_2$ coming from combustion of fuels. Sulphur dioxide contributes to the acidification of soil and water. $SO_X$ emissions are measured mainly by the mills. Where $SO_X$ is not measured (converting plants), emissions are calculated from fuel consumption using the emission factors listed in the Ecoinvent database version 2.1.  |
|---------------------------|---|
| SRI                       | Socially Responsible Investment.  |
| SVHC                      | Substances of Very High Concern are defined in Article 57 of REACH Regulation (EC) No 1907/2006 and include substances which are:   |
|                           | <ul> <li>Carcinogenic, Mutagenic or toxic to Reproduction (CMR), meeting the criteria for classification<br/>in category 1 or 2 in accordance with Directive 67/548/EEC,</li> </ul>   |
|                           | <ul> <li>Persistent, Bioaccumulative and Toxic (PBT) or very Persistent and very Bioaccumulative (vPvB)<br/>according to the criteria in Annex XIII of the REACH Regulation, and/or</li> </ul>  |
|                           | • Identified, on a case-by-case basis, from scientific evidence as causing probable serious effects to human health or the environment of an equivalent level of concern as those above (e.g. endocrine disrupters).  |
| Testliner                 | Paper manufactured from recycled fibres.  |
| TJ                        | Terajoule, a unit of energy that generally applies to fuel.<br>1 terajoule = 1,000 gigajoules = 10 <sup>12</sup> joules.  |
| Total N (nitrogen)        | Total Kjeldahl Nitrogen or TKN is the sum of organic nitrogen, ammonia, $\mathrm{NH_3}$ and ammonium, $\mathrm{NH_4^+}$ in biological water release.  |
| Total P<br>(phosphorous)  | Total phosphorous is the sum of phosphorous compounds in biological water release.  |
| Total Suspended<br>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.   |
| Solid Wastes              | The wastes taken into account are all solid wastes and oil residues that are sent to external/internal landfill or collected for recovery. Wood wastes and corrugated board shavings are excluded.  |
| WBCSD                     | The World Business Council for Sustainable Development is a CEO-led, global association of some 200 companies dealing exclusively with business and sustainable development. The Council provides a platform for companies to explore sustainable development, share knowledge, experiences and best practices, and to advocate business positions on these issues in a variety of forums, working with governments, non-governmental and intergovernmental organisations.                    |
| WFN                       | Water Footprint Network (WFN) is a non-profit international network. The mission of the WFN is to promote the sustainable, fair and efficient use of fresh water resources worldwide. It does this by advancing the concept of the 'water footprint', increasing the awareness of various public and private stakeholders, and encouraging forms of water governance that reduce the negative ecological and social impacts of the water footprints of communities, countries and businesses. |
| WRI                       | World Resources Institute. The WRI is an independent organisation that undertakes research and analysis addressed to global resource and environmental issues.  |
| WRI/WBCSD<br>GHG Protocol | The WBCSD and the WRI have worked together to develop the Greenhouse Gas Protocol.  The GHG Protocol is the most widely used international accounting tool for government and business leaders to understand, quantify, and manage greenhouse gas emissions.  |
| WTP                       | Water Treatment Plant: facility that treats process water by a combination of physical, chemical and biological processes before discharging the water to the environment.  |

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## Smurfit Kappa Group plc

### TOP LINE LEFT TO RIGHT

- 1 Young forestry plantation in Colombia
- 2 Åsa Lindfors of the Technical Centre laboratory at the Smurfit Kappa Piteå paper mill, SE
- 3 Julie Robinson of Smurfit Kappa Group at Aldi Liverpool, Uk
- 4 Anne Slabbers and Wim van der Borgh at the Smurfit Kappa paper mill at Roermond, NL
- 5 Philippe Hulot with a visitor beside PM6 at the Smurfit Kappa Cellulose du Pin paper mill at Facture, near Bordeaux, FR
- 6 Children participating in the Health Brigade Project in Venezuela
- 7 Hans Alatalo at the Smurfit Kappa Piteå paper mill, SE

### BOTTOM LINE LEFT TO RIGHT

- 8 Cendrine Fundari and Ana-Paula Welsterbach at the Smurfit Kappa Bag-in-Box plant at Epernay, FR
- 9 Ronald Sterk and Bob van den Berg at the Smurfit Kappa Zedek print & display plant at Deventer, NL
- 10 Forestry workers, Colombia
- 11 Liam O'Mahony (Chairman) meeting Asunción Soto Rivera, SK Mexico











