

Global Responsibility Report

Stora Enso 2012

Global Responsibility Report

Stora Enso 2012

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Stora Enso's Business Areas

Stora Enso in brief

Stora Enso is the global rethinker of the paper, biomaterials, packaging and wood products industry. We always rethink the old and expand to the new to offer our customers innovative solutions based on renewable materials. Stora Enso employs some 28 000 people worldwide, and our sales in 2012 amounted to EUR 10.8 billion.

Stora Enso's annual production capacity is 5.2 million tonnes of chemical pulp, 12.1 million tonnes of paper and board, 1.3 billion square metres of corrugated packaging and 6.0 million cubic metres of sawn wood products, including 3.0 million cubic metres of value-added products. The Group is listed in Helsinki and Stockholm.

Printing and Reading

Stora Enso Printing and Reading is a world class responsible supplier of renewable paper solutions for print media and office use. Its customers – publishers, retailers, printing houses, merchants, converters and office suppliers among others – are served with products that best fit their purpose. The offering includes newsprint, book paper, super calendared magazine paper, coated paper and office paper that are used for example in newspapers and supplements, books, magazines, advertising, note books, art books and in office environment.

The Business Area's mission is to inspire the world with sustainable paper, as it believes in the power of paper in communication, learning and creative expression. Printing and Reading is continuously developing its products and service offering with innovative solutions like PrimaPress and Berga Lite that are lightweight papers achieving greater material efficiency and lower environmental impacts without compromising on printing quality.

Printing and Reading has production facilities mainly in Europe, but it also has one mill in Brazil and two in China. Three of the 16 mills produce paper based on 100% recycled fibre.

Biomaterials

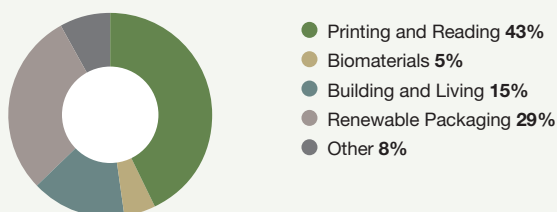
Stora Enso Biomaterials offers a variety of pulp grades to meet the demands of paper, board and tissue producers. Pulp, made from renewable resources in a sustainable manner, is an excellent raw material with many different end uses. When Stora Enso starts operating its new pulp mill in Montes del Plata in Uruguay in 2013, Biomaterials will have even wider product offering covering both long and short fibre products. The offering will include Northern bleached softwood kraft and bleached hardwood kraft pulp (birch and eucalyptus) – which are used for a variety of paper grades, packaging paperboards and tissue – as well as fluff pulp for hygiene applications and dissolving pulp for the textile industry.

The mission of Biomaterials is to find new, innovative ways to utilise the valuable raw material, wood while simultaneously running existing pulp and by-products businesses as efficiently as possible, based on the needs of its customers.

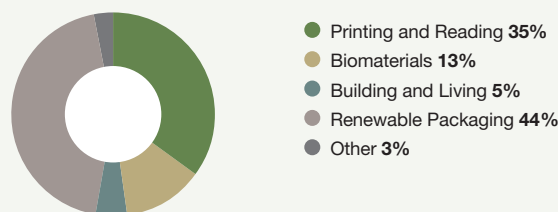
Biomaterials operates the Nordic stand-alone pulp mills Enocell and Sunila in Finland, and Skutskär in Sweden, as well as the joint ventures Veracel in Brazil and Montes del Plata in Uruguay with corresponding

External sales and operational EBIT* by segments

Sales EUR 10 814.8 million



Operational EBIT EUR 618.3 million



* For more information see our Financial Report 2012: www.storaenso.com/annualreports

plantations. Biomaterials also run the plantations in Rio Grande do Sul in Brazil, the trial plantations in Laos, and the Pulp Competence Centre and Biorefinery in Europe.

Building and Living

Stora Enso Building and Living provides wood-based innovations and solutions for everyday living and housing needs. Its product range covers all areas of urban construction – from supporting structures to interior design and environmental construction. The further-processed products include massive wood elements and housing modules, wood components, pellets and a variety of sawn timber goods. Building and Living serves public and private sector customers, such as construction companies, merchandisers and retailers.

With more than 20 production units in Europe, Building and Living operates globally with main markets in Europe, Middle East and North Africa, and Asia Pacific. The products are made of renewable, high-quality European pine or spruce with 100% traceability. With carbon dioxide stored in the wood products, they offer a truly sustainable alternative for minimising the impact on global warming.

Renewable Packaging

Stora Enso Renewable Packaging offers fibre-based packaging materials and innovative packaging solutions for consumer goods and industrial applications. Renewable Packaging operates throughout the value chain, from pulp production to production of materials and packaging to recycling.

Consumer Board products cover all major board categories, including liquid packaging boards, food service boards, graphical boards, and carton boards for packaging cosmetics, luxury goods, beverages, chocolates and confectionery.

Packaging Solutions products include corrugated packaging for consumer and transport packages, containerboard, cores and core-board, paper sacks, and sack and kraft paper.

Renewable Packaging is expanding in growth markets such as China, India and Pakistan to meet the rising demand in these markets. Renewable Packaging plans to build an integrated consumer board and pulp mill in Guangxi in Southern China.

Renewable Packaging has operations also in Finland and Sweden, and in Eastern and Central Europe. In Southern Europe, it operates the Barcelona Mill, which runs solely on recycled fibre.

Other

The segment Other includes the Nordic forest equity accounted investments, Stora Enso's shareholding in Pohjolan Voima, operations supplying wood to the Nordic mills and Group shared services and administration.

Geographical distribution of external sales and market share

Printing and Reading

	Europe	Latin America	Asia Pacific	Rest of the world
Geographical distribution (% of sales)	76	7	11	6
Market share %	15	6	2	

Biomaterials

	Europe	Asia Pacific	Rest of the world
Geographical distribution (% of sales)	70	24	6
General market share not applicable due to nature of the business.			

Building and Living

	Europe	Asia Pacific	North Africa	Middle East
Geographical distribution (% of sales)	60	23	8	9
Market share* %	4			

* worldwide 2%

Renewable Packaging

	Europe	Asia Pacific	Rest of the world
Geographical distribution (% of sales)	77	15	8
General market share not applicable due to nature of product portfolio.			

Message from the CEO

Dear reader,

Sustainability reporting is not just about facts and figures. It is about engaging with you. We did not write this report merely to comply with international standards, or to boast of our successes. We wrote it to tell you about our work, our successes and failures, and where we are going.

The global business environment in 2012 was not easy, and we do not count on it becoming easier anytime soon. I am not only thinking about the turbulent economy. We know that our planet is running out of natural resources, and that climate change is a reality that will shape our future. To succeed in this changing environment, Stora Enso is going through a transformation into a global company that will use

renewable materials to create value on a global scale. To do this we must make investments in growth markets, while ensuring that our existing businesses remain profitable.

To support this transformation we took two important steps in 2012 related to our global responsibility work.

Firstly, we defined a new purpose for the company, along with new values. We have done this to explain why we exist, and what we are here to do. Our new purpose is to “Do good for the people and the planet”. If this sounds somehow simple, that is a positive thing. We want our purpose to be simple, down to earth and inclusive. We want it to be something that each and every one of us at Stora Enso can understand, think and feel. Ultimately, this purpose explains how and why we can succeed in a turbulent world.

Our new values are “Lead” and “Do What’s Right”. Our value Lead does not only mean improving our leadership in a business sense. It also expresses our desire to make the world a better place for future generations. At Stora Enso, we want to change the world, and not wait for the world to change us. I think this is something that we can all contribute towards. Our personal choices count. It matters whether you use renewable or non-renewable materials; and it matters whether you recycle.

Our value Do What’s Right is rooted in our everyday work, and guides all our choices. To critical readers this may sound vague. But doing what’s right at Stora Enso is not a fuzzy concept: its meaning is clearly defined in our Code of Conduct and our other policies and guidelines, which we train our staff to follow. But doing the right thing involves more than just following the rules – it is about listening to our stakeholders and learning what they think is right. In practice it means that we may also have to reject business opportunities that would not match our values.

During 2012 we renewed our Code of Conduct. We did this not only to make sure we comply with rules and laws in all of the communities where we operate, but to make sure we have a single global standard that often goes beyond local rules and practices. It is vital to make it absolutely clear to everybody that we can only operate by following our own single value set everywhere – with no ifs, buts or exceptions. I firmly believe this is the only way we can effectively contribute to progress in the communities where we work, establishing a positive spiral that will create value in terms of both economic and human development.

The second step we took during 2012 was to renew our Global Responsibility strategy. In a changing global environment, we need a systematic, transparent and well-managed approach to sustainability. The expectations of our stakeholders around the world are increasing,



while at the same time our expanding involvement in growth markets entails unique challenges and risks related to sustainability. Our new strategy has not been defined just to address such risks, however, but to integrate sustainability into everything we do.

The strategy has three key elements – three areas of responsibility where Stora Enso wants to be a forerunner.

The first concerns resource efficiency and environmental performance. We see doing more with less as a necessity, since we do not want to exceed our planet's capacity to sustain us. Only companies who use resources efficiently and intelligently will survive. This will involve creating innovative, more sustainable products. We aim to find beneficial uses for wastes instead of sending them to landfill. At the same time we want to keep reducing our overall water use and our carbon footprint right along the value chain. In 2012 we landfilled 2.5% less waste than in 2007, our baseline year. We have made good progress on emissions of carbon dioxide (CO₂), reducing Group-level CO₂ intensity by 32% from 2006 levels.

The second area where we want to be a leader involves fostering responsible business and caring for people. This is related to our value Do What's Right, and it means setting the highest ethical and professional standards across our operations. I want to emphasise that in this context complying with laws is not always enough. This work is also about transforming Stora Enso into an employer of choice, respecting human rights everywhere we operate, and upholding ethical standards right along the value chain. In practice, this means that we will not do business with suppliers who do not respect human or labour rights.

The third area where Stora Enso is set to become a forerunner involves responsible forestry and land use. Due to the growing global population and shortages of natural resources, there is intense competition for land. As Stora Enso has tree plantations in densely populated areas in growth markets, this is a fundamental issue for us. We are actively looking into innovative ways to use land, improve the efficiency of forest use, and share value with local communities. In many cases this means working with local communities to find new land use solutions and create new local business opportunities. Most of all, this means maintaining constant dialogues with local stakeholders to find ways for everyone to benefit. At Stora Enso we must be truly open to new initiatives, and prepared to rethink our business.

One good early example of this thinking is the way our joint venture company Veracel is procuring significant amounts of wood from local tree farmers, and pioneering large-scale group forest certification together with them. So far 39 farmers have been granted both the Forest Stewardship Council (FSC®) and the Brazilian Cerlor (PEFC™) forest certifications for plantations with a total area of 7 343 hectares.

We can see another example in Uruguay, where we are building a state-of-the-art 1.3 million tonne eucalyptus pulp mill together with our joint venture partner Arauco. The mill is due to start up mid-year 2013. This Montes del Plata joint venture, which is one of the biggest landowners in Uruguay, also rents out some 160 000 hectares of land to local farmers for cattle grazing. Local honey, dairy and beef production cooperatives also use the company's lands in partnership with Montes del Plata.

In China, our tree plantations received certification from both the Forest Stewardship Council® and the Chinese Forest Certification Council during 2012, establishing a good starting point for new local initiatives. In China however, we have not been fast enough to find solutions to all outstanding land lease disputes. In the unresolved cases we have leased lands from local entrepreneurs, who have in turn rented them from local villagers, who consequently want their agreements to be amended. Correcting all of these land rental agreements is a slow process, as it requires the consent of all parties.

Though we are working hard to create and share value in growth markets, we still obtain the majority of our wood supply from Europe, where responsible sourcing remains one of our top priorities. Sustainable forestry is a growing concern for our stakeholders across Europe, and it is also very much in our own immediate and long-term interest.

Alongside our new Global Responsibility strategy, we remain committed to our other sustainability policies and guidelines, as well as the United Nations Global Compact and its CEO Water Mandate. Our purpose, values and Global Responsibility strategy directly support the Global Compact's principles on human rights, labour standards, the environment and anti-corruption.

The way I see it, Stora Enso is on the right road towards becoming a better, more inclusive company, equipping itself well for a successful future. Whether you agree, disagree or simply have an idea on something that we could do better, I welcome you to come to us and have your say by joining Stora Enso's External Advisory Panel, which meets online at www.storaenso.com/advisorypanel. This crowdsourcing panel is open to everybody, as we want to get a better picture of the ideas and concerns of our stakeholders. As a member of this panel, everything you say and suggest will be brought to the attention of our Group Executive Team, who represent Stora Enso's top-level management. Please get in touch with us and help us to rethink our work.

Jouko Karvinen
CEO of Stora Enso

Global Responsibility on the map

The focuses of our work vary according to local conditions and priorities. This map gives an overview of our main sustainability issues in different geographical locations.



Europe

Most of Stora Enso's production capacity is located in Europe. Minimising the environmental impacts of our mills is a top sustainability priority here. We have especially focused on minimising CO₂ emissions, and on responsible water use. Read more about our environmental work on pages 44–54.

Stora Enso sources most of its main raw material, wood, in northern Europe. Promoting forest certification and sustainable forestry is therefore a vital part of our sustainability work in this region. Read more about how we source our wood on pages 36–39.

All Stora Enso's papers, packages and wood products are safely recyclable. We actively promote and participate in recycling schemes, especially in densely populated parts of Europe. Read more about how we source our paper for recycling on pages 40–41.

Occupational health and safety (OHS) is another important focus of our work in Europe, where most of Stora Enso's employees are located. Read more about our OHS work on pages 27–28. Due to declines in the region's paper markets, we have closed some of our operations in Europe. We have continued to support the people and communities affected by these job losses. Read more on page 25.



Brazil

Stora Enso's joint venture Veracel operates a state-of-the-art pulp mill and large-scale eucalyptus plantations in Bahia in northeastern Brazil. Stora Enso also runs tree plantations in Rio Grande do Sul and a magazine paper mill at Arapoti, both in the south of Brazil.

To support socio-economic development and help local communities benefit from our presence in the region, Veracel runs tree-farming programmes and schemes to support other local livelihoods including agriculture and handicrafts. In the areas around Veracel's plantations we work to protect local biodiversity by restoring natural Atlantic Rainforest habitats, and by supporting related environmental education and academic research. Stora Enso and Veracel control large areas of land, and we engage with landless social movements in Brazil to find common ground for land use and cooperation. Read more on pages 22–23 and 36–39.



Russia

Our operations in Russia include wood sourcing and forestry operations, as well as three packaging mills and two sawmills. In Russia we particularly focus on promoting forest certification, and improving occupational

health and safety practices. Read more on pages 27–28 and 36–39.

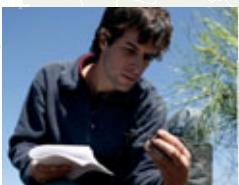


China

China has become Stora Enso's third largest country of operation in terms of the number of employees. In addition to our two paper mills and two core plants, Stora Enso owns production and distribution units in China through

the packaging company Inpac International. Our investment project in Guangxi, southern China, will further increase the number of Stora Enso employees in China. Read more about our human resources in our new growth markets on pages 24–27.

Stora Enso's operations in Guangxi consist of eucalyptus plantations and an investment plan to build an integrated board and pulp mill in the city of Beihai. We have been establishing and managing tree plantations in Guangxi since 2002. One important element of this work concerns respecting local people's land use rights and working to prevent land use disputes. We are currently revising the land lease contracts previously offered to local people, while continuously striving to improve the working and living conditions of our contract workers. Read more on pages 19–20 and 36–39.



Uruguay

Stora Enso's joint venture Montes del Plata will start running a state-of-the-art pulp mill in mid-year 2013. The mill construction has involved several schemes designed to mitigate harmful impacts and find innovative ways for local communities to benefit.

Montes del Plata's plantations have been established in lands previously used for cattle grazing. We own large land areas in Uruguay, and our tree plantations are also utilised as pastures by local farmers through land rental schemes. Our joint venture is actively engaged with local communities through various development programmes. Read more on pages 20–21 and 36–39.



India

Our joint venture, Stora Enso Inpac, runs a consumer packaging mill in Chennai, India. We also source various products and services, for instance chemicals and IT services, from India for our global operations.

Our Chennai Mill employs approximately 500 people and specialises in producing different kinds of paper-based consumer packaging. We apply the same values, business practices and ethical standards in India that we do elsewhere in our global operations. Read more about our approach to responsible sourcing of other inputs on pages 41–42, and business ethics on page 15.

Verified reporting in line with the Global Reporting Initiative (GRI)

This report follows the G3.1 sustainability reporting guidelines defined by the Global Reporting Initiative (GRI). Stora Enso has applied GRI guidelines in the Group's annual sustainability reporting since 2003. We believe that following these guidelines is the best way to offer transparent and reliable information about our efforts on all the vital aspects of sustainability.

This GRI report has been verified in detail by an independent third party assurance provider, in accordance with the voluntary external assurance practices of sustainability reporting. The assurance statement for the report appears on page 68.

Report scope

The report corresponds to the A+ level in the GRI's reporting standards. Level A means that our reporting covers all the core indicators of the GRI framework. The report also covers additional indicators that we have defined as relevant to our stakeholders and our operations. The + symbol indicates that an external third party has verified this report. The process we have applied to define material issues is described on page 13. The GRI index table appears on pages 60–64 together with the indicators and detailed reporting information.

The consolidated performance data in this report covers the parent company, Stora Enso Oyj, and all companies in which we hold over 50% of the voting rights directly or indirectly.


Our consolidated sustainability performance data does not cover equity accounted investments where Stora Enso's ownership is between 20% and 50%, or companies in which our ownership share is less than 20%. These are undertakings in which Stora Enso has significant influence, but which we do not control.

Reporting on our joint ventures

Data related to the sustainability performance of our joint ventures Veracel in Brazil and Montes del Plata in Uruguay, which are both 50%-owned by Stora Enso, is not consolidated into the sustainability performance data presented in this report.

This report does, however, describe issues directly relating to companies in which Stora Enso's ownership is 50% or below, wherever these issues have been identified as material to our stakeholders. Since our two joint ventures in South America have attracted considerable attention among our stakeholders, this report covers the issues concerned. For information about Veracel and Montes del Plata, see pages 19–23 and 36–39. Environmental and social responsibility issues related to our joint venture in Pakistan have also interested many stakeholders. For an introduction to this joint venture see page 18.

Guiding our operations

A

“Good stakeholder relations are important, as we must be capable of harvesting and transporting wood in good co-operation with the locals. But really, the most important thing is what the villagers want to accomplish with Stora Enso – or whether they want anything at all. Lately we have been testing two new projects: a microloan scheme for pig farmers and logistical support from Stora Enso’s trucks for local chicken farmers.”

Johnny Zhou, Stora Enso’s Sustainability Manager for Nanning District, Guangxi, China

Governance and management

For Stora Enso Global Responsibility means realising concrete actions to fulfill our corporate purpose – “Do good for the people and the planet”. This means that Global Responsibility entails responsibilities for everyone working within Stora Enso.

Global Responsibility involves facilitating the creation of shared value, driving changes that will make our operations more ethical and sustainable, and taking concrete steps to improve environmental and social responsibility along our value chain together with our stakeholders.

We use a wide range of tools to do this in practice, including:

- specific policies, guidelines and statements on Global Responsibility
- group-level Global Responsibility targets and key performance indicators
- management systems such as ISO and OHSAS
- forest certification schemes
- supply chain management
- social and environmental impact and risk assessments
- sustainability due diligence for investment decisions
- responsibility reporting and third party assurance

Global Responsibility governance

Our CEO and our Group Executive Team (GET) are responsible for Stora Enso's Global Responsibility strategy, key performance indicators and policies. They also monitor and assess their implementation.

During 2012 we reviewed our Global Responsibility strategy and defined three lead areas where we will particularly strive to enhance the sustainability of our operations and take leadership. These lead areas are:

- Resource Efficiency and Environmental Performance
- Responsible Business and People
- Forests and Land use

Our work on these lead areas is overseen by the Global Responsibility Council, headed by Stora Enso's Head of Global Responsibility and also including members from our business areas and other key functions. The Council plans activities within an annual time-frame and reports quarterly to the CEO and the GET.

Our Business Areas and all support functions are responsible for the operational management of sustainability issues. Our Global Responsibility corporate function provides guidance to everyone throughout the Group on key responsibility issues, and also coordinates and develops Stora Enso's responsibility work.

It is vital for us to listen to our stakeholders and identify emerging trends, so that we can adapt to the rapidly changing external environment and be more aware of our operational landscape. In addition to our stakeholder management systems we learn from our stakeholders through an online Advisory Panel. For more information see page 13.

Targets and key performance indicators

We set Group-level responsibility targets to help us efficiently manage our environmental and social performance across our operations. We report on our performance annually against our responsibility targets in this Global Responsibility Report. For more information about our responsibility targets and performance see page 14.

To supplement our existing targets we established a new set of key performance indicators on our new Global Responsibility strategy and lead areas during 2012. This work will continue during 2013.

In 2012 we also renewed our Code of Conduct and updated our other policies, guidelines and statements related to Global Responsibility. These documents spell out Stora Enso's approach to issues that are material to us, and guide all our employees in their everyday work. All of these documents and our Code of Conduct are available at www.storaenso.com/sustainabilitypolicies.

Listening to stakeholders

Feedback from our stakeholders helps us to understand which sustainability issues they are most concerned about. Stora Enso's Global Responsibility strategy and the related actions are based on stakeholders' feedback. We can then prioritise issues to reduce possible risks and take advantage of new business opportunities.

Stakeholder engagement in our everyday business

All our stakeholder relations are guided by Stora Enso's Code of Conduct, Business Practice Policy and the Stakeholder Guidelines. These policies and guidelines set out the principles that all Stora Enso employees are obliged to follow in their relations with stakeholders. They also help our stakeholders to understand what standards of behaviour they can expect from Stora Enso employees. More information about our Code of Conduct and Business Practice Policy is given on page 15. All of these documents can be read in full at www.storaenso.com/sustainabilitypolicies.

We obtain most stakeholder feedback through our everyday contacts with our stakeholders at meetings, fairs, community visits, public hearings, open house events or other events organised by or for our stakeholders. We also receive indirect stakeholder feedback through grievance channels, surveys, trade unions, customer satisfaction surveys and employee satisfaction ratings.

Stora Enso employs stakeholder engagement specialists in locations where our operations are relatively new or significantly affect local communities. Such locations include Guangxi, China and our joint venture companies Veracel in Brazil and Montes del Plata in Uruguay. These stakeholder engagement specialists are trained in stakeholder communications, and their work also involves channeling feedback from stakeholders to the relevant managers. For more information on this work see pages 19–23.

In 2012 Stora Enso invited more than 300 people representing our different stakeholder groups around the world to participate in extensive online brainstorming on the theme of our global responsibility. The outcomes of this brainstorming formed the basis for the materiality review in this report.

In addition to online stakeholder dialogues, social media are becoming an increasingly important channel for feedback. Stora Enso's social media sites are open for any discussions related to global responsibility issues. You can follow our feeds, participate in discussions and initiate new topics at www.facebook.com/storaenso and www.twitter.com/storaenso.

Major stakeholder concerns in 2012

In July Stora Enso was given a negative "greenwash" award "Svenska greenwashpriset 2012" by the Swedish Friends of the Earth, who criticised us for establishing monocultural tree plantations in Brazil, and accused us of environmental and social misconduct in China. The term "greenwashing" refers to actions taken by companies to create a green image rather than making genuine environmental improvements.

Who is a stakeholder?

We consider anyone interested in our work as a stakeholder. Significant stakeholder groups for Stora Enso include:

- Consumers
- Customers
- Employees
- Forest-owners
- Governments
- Investors
- Local communities
- Media
- NGOs
- Partners and suppliers

A documentary film "The Red Forest Hotel" (2011), which criticises Stora Enso's operations in Guangxi, China, was broadcasted on television in Finland and Sweden. The film claimed that Stora Enso and the local government in Guangxi have forced local villagers off their lands using violence and by misleadingly inducing them to sign disadvantageous land contracts. It also claims that eucalyptus plantations have caused environmental problems in Guangxi, including the drying up of local springs. The film caused plenty of concern among our stakeholders. Stora Enso has responded to stakeholders' questions using the social media, and also published a special stakeholder bulletin, which can be downloaded at www.storaenso.com/Documents/Guangxi_bulletin.pdf.

Stora Enso wishes to reaffirm the Group's commitment to responsible tree plantation operations. Our sustainability agenda in Guangxi specifically covers forest certification, a legal and ethical forest land acquisition system, continuous local stakeholder dialogue, a conflict resolution system, and a programme of social monitoring run together with a local university.

Key stakeholder projects in 2012

In Poland, Stora Enso promoted recycling and worked to increase environmental awareness. At the Przyszanek Woodstock festival, which attracted 500 000 young people in August, Stora Enso Poland organised the collection of waste paper together with a major customer. Ecological paper shopping bags produced by Stora Enso were used by the festival-goers. During this campaign Stora Enso Poland collected more than five tonnes of wastepaper. Promoting the recycling of paper in Poland is an important issue, as the national paper recycling rate is relatively low, at 43%, compared to the EU average of 70%.

In November, Stora Enso and Montes del Plata co-hosted a South American Regional Network Meeting and Study Tour in Uruguay about New Generation Plantations together with another forestry company and the WWF. The New Generation Plantations project is managed by WWF International to develop and promote the adoption of improved practices in plantation forestry. The project participants include forest companies and governments from around the world who are in dialogue with stakeholders to examine the social, environmental, economic and cultural role of plantations. The conference was attended by representatives of the Uruguayan government, companies and forestry experts from all over the world.

Memberships in associations

In 2012 Stora Enso continued to be a member of the following associations:

- World Business Council for Sustainable Development (WBCSD)
- UN Global Compact
- The Forest Dialogue (TFD)
- Water Footprint Network
- Confederation of European Paper Industries (CEPI)
- The European Confederation of woodworking industries (CEI-Bois)
- The Alliance for Beverage Cartons and the Environment (ACE)
- National industry federations
- Forest certification bodies
- ISO Environmental Committee (through national member committees)

Materiality review

Defining relevant issues for the report

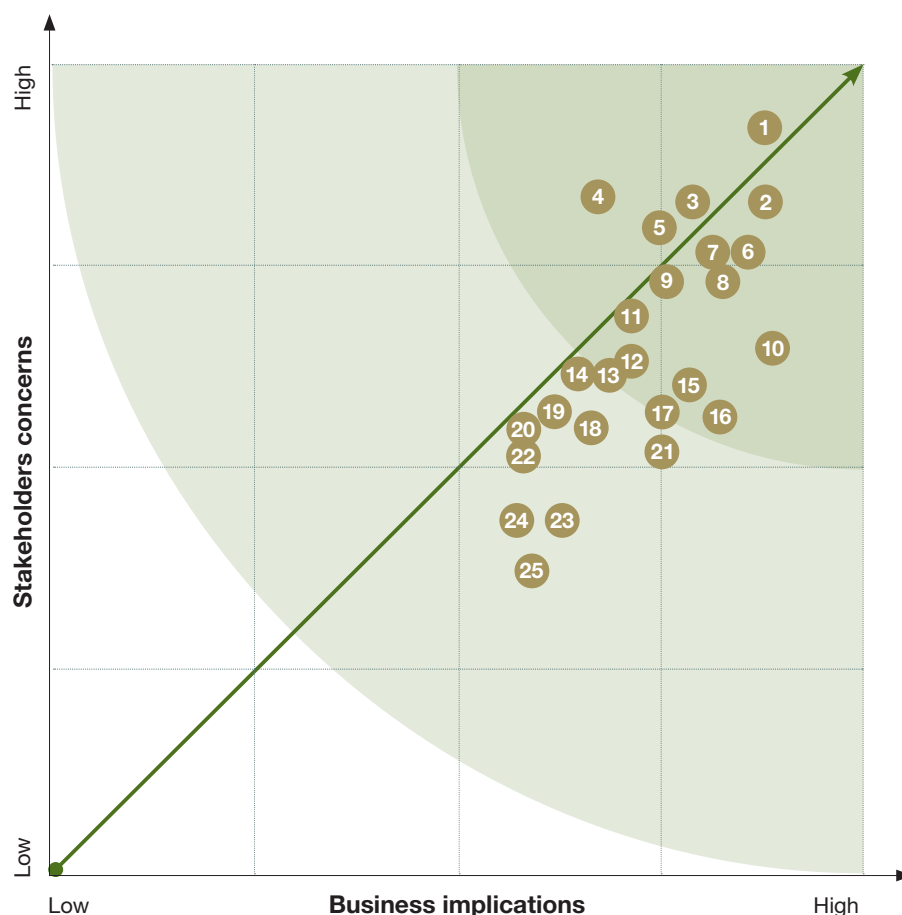
In 2012 we carried out our materiality review through an extensive stakeholder interview by inviting more than 300 stakeholders to participate in online brainstorming on Stora Enso's Global Responsibility. Through an online platform these stakeholders were invited to give their opinions, stating which sustainability issues Stora Enso should rethink or emphasise more, and then ranking these issues according to their relative importance. A total of 184 people from 20 countries representing different stakeholder groups participated in this brainstorming.

Our materiality review additionally included analyses of our investors' questions, customer feedback and global media coverage of Stora

Enso in the context of sustainability issues during 2012. These information sources were reviewed by an internal expert workshop, whose findings formed the basis for our prioritisation of sustainability topics in this report, as illustrated below.

If you wish to participate in a similar online panel during 2013 and influence the materiality review for our next Global Responsibility Report and Stora Enso's responsibility approach, please visit www.storaenso.com/advisorypanel.

1. Involvement and value sharing in local communities
2. Business ethics
3. Stakeholder engagement
4. Transparency
5. Human rights
6. Land use
7. Sustainability driven business approach
8. Responsibility along the supply chain
9. Sustainable forestry
10. Innovation and new solutions
11. Sustainable fibre sourcing
12. Sustainability performance of products
13. Product safety and hygiene
14. Biodiversity
15. Ethical leadership
16. Human capital
17. Health and safety
18. Climate actions
19. Labour rights and labour standards
20. Water issues
21. Energy
22. Emissions and waste
23. Security practices
24. Environmental impacts from logistics
25. Utilisation of residual materials



Targets and performance

We report annually on our Global Responsibility performance against our targets. We also continuously review these targets and proactively set new targets where necessary. All Stora Enso's Global Responsibility

targets and performance results for 2012 are listed in the table below, with references to the sections of this report where progress towards the respective targets is described in more detail.

	Performance in 2012	Target	Read more
Guiding our operations			
Code of Conduct	Code of Conduct renewed in 2012	At least 80% of employees to receive training on renewed Code of Conduct by the end of 2014	page 15
People			
Lost time accidents (LTA) per million hours worked	LTA rate 7.7	Zero lost-time accidents	pages 27–28
Attendance rate	96.9%	Attendance rate above 97%	pages 27–28
Responsible sourcing			
To increase the share of certified fibre to 70% of our total wood supply by 2012	74%	New forestry related Global Responsibility targets will be established during 2013	pages 36–37
Supplier sustainability auditing coverage of Group-level non-fibre material purchases	66% of material purchases from suppliers identified as high-risk covered by supplier sustainability audits	By 2015, at least 75% of non-fibre material purchases from suppliers identified as high-risk to be covered by supplier sustainability audits	pages 41–42
Environment			
Group-level CO ₂ emissions (Scope 1+2)	CO ₂ intensity 32% lower than 2006 benchmark level	Reduce Group-level CO ₂ intensity of pulp, paper and board mills by 35% from 2006 level by the end of 2025	pages 45–47
Waste to landfill	Waste to landfill 2.5% lower than 2007 benchmark level	Reduce waste to landfill by 5% from 2007 level by the end of 2013	pages 52, 55
Chemical Oxygen Demand (COD)	COD 4.5% lower than 2007 benchmark level	Reduce Chemical Oxygen Demand (COD) by 10% from 2007 level by the end of 2013	pages 52–53, 55
Process water discharges	Process water discharges 7.5% lower than 2005 benchmark level	Reduce process water discharges by 10% from 2005 level by the end of 2013	pages 50–51, 55

Business ethics

Stora Enso has a single set of values that are applied wherever we operate. Our Code of Conduct defines common rules for all our employees, and provides guidance on Stora Enso's approach to ethical business practices, environmental values, and human and labour rights.

During 2012 Stora Enso's Code of Conduct and related materials were reviewed and revised to reflect more closely the content of our Business Practice Policy, which was launched during 2011, and to further emphasise our views on environmental and human rights issues. Our revised Code of Conduct can be viewed publicly at www.storaenso.com/sustainabilitypolicies.

The Code of Conduct is divided into three different sections:

- Responsible business
- Caring for people
- Caring for the environment

Code of Conduct training

To ensure that our employees understand and follow the rules set out in our Code of Conduct, they receive related training through our established e-learning tool or face-to-face training. By the end of 2010, an estimated 81% of our employees had undergone such training. We are still continuing this training where employees have not yet been trained, and also working to ensure that all new employees are trained promptly. New e-learning and face-to-face training procedures based on our revised Code of Conduct will be launched in 2013.

Business Practice Policy

In 2011 Stora Enso launched a new Business Practice Policy to complement our Code of Conduct, aiming to further strengthen our stand on ethical business practices. The policy has given our employees more detailed guidance on topics such as anti-trust, corruption, gifts and entertainment, conflicts of interest and money laundering. During 2012 Stora Enso's Business Area (BA) organisations have conducted extensive activities designed to make all our employees aware of the content of our Business Practice Policy. These activities have particularly targeted BA management teams, mill management teams, employees with competitor contacts, employees working with purchasing, marketing and sales, and employees in China, India and South America. This work forms part of our routine efforts to analyse risks related to business practices throughout our organisation. More specific e-learning training on anti-trust and corruption issues has additionally been given to people in key positions.

Since 2011 all Stora Enso employees in managerial positions, members of BA or mill management teams, employees with competitor contacts, and employees working with purchasing, marketing and sales have had to make a commitment to our Business Practice Policy, and promise to train and inform employees within their respective organisations about the policy. During 2012 about 1 040 employees were asked to digitally undersign the policy, and the response rate was 100%.

An effective grievance mechanism

During 2012 several complaints were received through our Code of Conduct grievance channel, which enables employees to report breaches of the Code of Conduct anonymously and confidentially. All such complaints are received and reviewed by Stora Enso's Head of Internal Audit and reported to Stora Enso's Financial and Audit Committee. The cases reported in 2012 mainly related to suspected misuse of company assets, conflicts of interest or kickback schemes. A total of 78% of these cases were considered to involve possible policy violations, and consequently resulted in internal investigations. Of the cases investigated, 43% led to disciplinary or legal actions. None of these cases were related to child labour, forced labour, or discrimination.

In 2012 Stora Enso launched a new service through which our employees can confidentially and anonymously report on non-compliance issues, such as bribery and audit or accounting fraud, by phone, by mail, or using the internet. The service was launched in cooperation with an external service provider. It covers all of the company's units except those in Spain, due to restrictions related to data privacy legislation which will be resolved during 2013. We are currently considering ways to open up this service to our suppliers and other third parties.



People

B

“At our mill we are very focused on safety. We begin our meetings by going through safety issues, and we discuss safety practices daily. I appreciate the atmosphere at the mill, not just because of this emphasis on safety, but because of the different kinds of people we have here. I personally think it’s important to work with people from all age groups.”

Marcin Kamienski, Environmental Manager, Ostroleka Mill, Poland

A member of global society

Stora Enso is transforming itself from a European pulp and paper company into a value creating renewable materials company focusing on growth markets, with its newly defined purpose guiding the journey. For more information about Stora Enso's purpose and business strategy see pages 4–5 and Stora Enso Rethink 2012: www.storaenso.com/annualreports.

Stora Enso's renewed Global Responsibility strategy particularly addresses the need to create shared value in the communities where we operate. By creating shared value, we aim to increase Stora Enso's competitiveness, while at the same time promoting improvements on economic, environmental and social issues along our value chain. For more information on our Global Responsibility strategy see pages 4–5 and 10.

Our operations in Europe form an important part of local and regional industrial clusters. In Finland and Sweden, where our presence is very significant, we operate as part of a vibrant regional forest cluster. Procuring wood as raw material for our mills also creates shared value for everyone within such clusters, including forest owners, wood supply intermediaries, local entrepreneurs, and logistics providers. In Continental Europe, where paper for recycling is an important raw

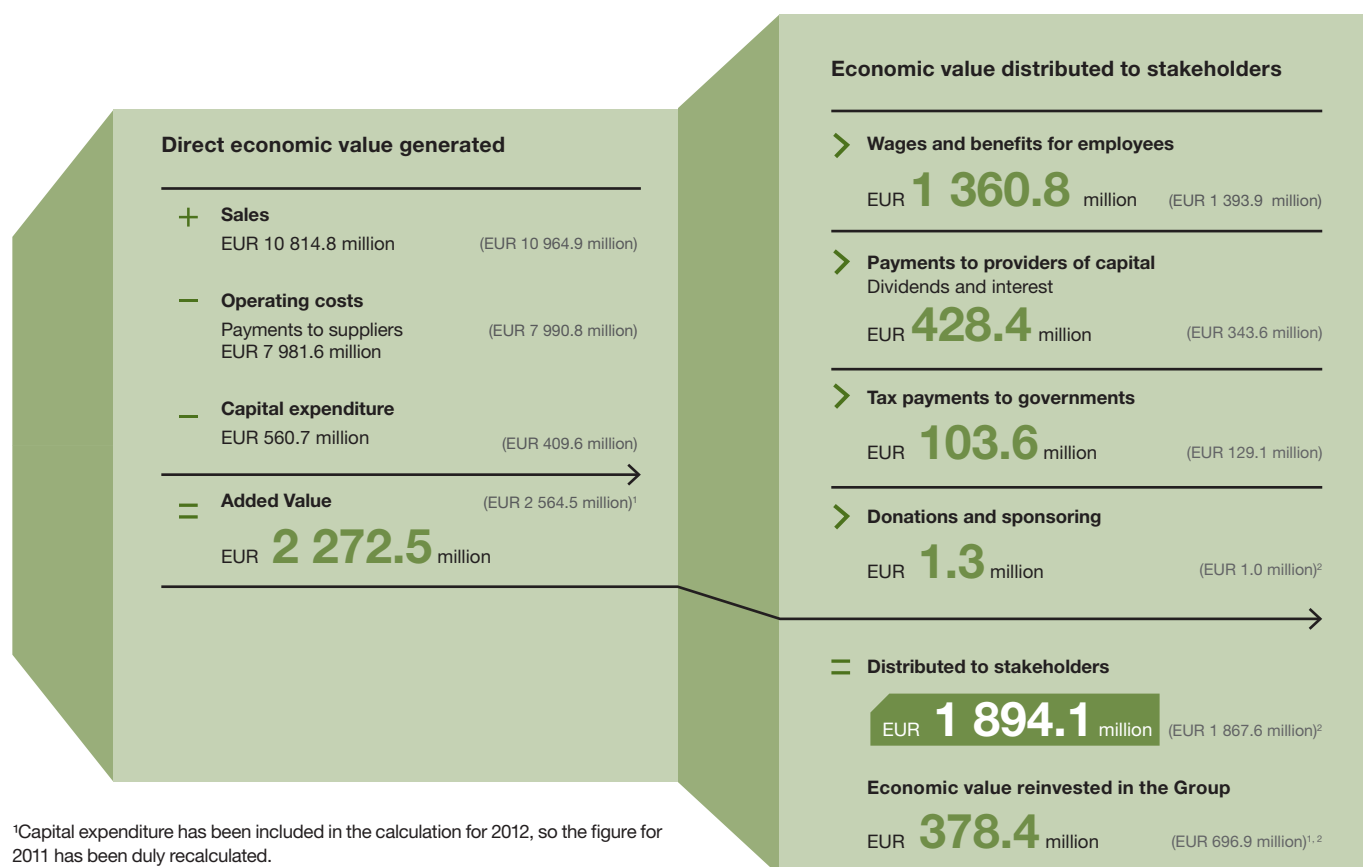
material for our mills, we strive to create value together with recycled paper suppliers, the public sector and non-governmental organisations who promote recycling. We additionally promote the local wood supply and the recycling of paper to minimise both our costs and the environmental impacts of transportation.

Our joint ventures in Brazil and Uruguay, and our operations in southern China, belong to developing local clusters around our mills and eucalyptus plantations. Our agro-forestry programmes, investments in local nature conservation, social investments in capacity building, and income generation projects in local communities all provide examples of ways we are creating shared value in regions where we have tree plantations. For more information on our tree plantations and local communities, see pages 19–23.

Mitigating adverse impacts

Our mills are often located in peripheral regions where they are major employers, tax-payers and partners for local entrepreneurs. All of our operations could potentially have negative impacts on local communities, if they are not well managed. Our mills, which are mainly located in Europe, consume large amounts of energy and raw materials, and generate emissions and wastes. Our tree plantations in China, Brazil

Economic value generated and distributed by Stora Enso in 2012



and Uruguay affect local communities due to their impacts on local land use, livelihoods and landscape.

In response to such issues, all of our operations have implemented precautionary actions to minimise any adverse impacts they may have on the local environment and local communities. All of our pulp, paper and board mills have certified environmental management systems in place.

Responsible restructuring

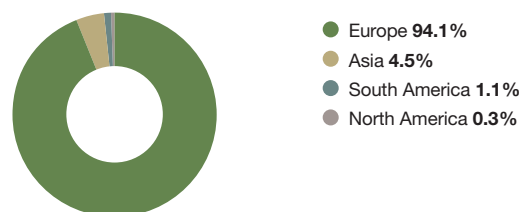
In 2012 we continued a restructuring process which has been driven by declining paper markets in Europe. This has meant that local communities in our traditional areas of operations have suffered due to the closures of production lines or entire production units. Discontinuing operations and closing mills creates problems not only for our employees, but also for the affected communities as a whole. We proactively help such communities to deal with regional structural changes and find alternative livelihoods for the people affected. Stora Enso also works to minimise the environmental impacts of mill closures. For more details see pages 25 and 53.

Establishing new operations

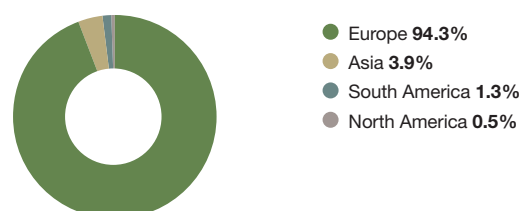
Whenever we establish operations in new areas, it is vital that we understand the consequent environmental and social impacts on local communities. We conduct Environmental and Social Impact Assessments (ESIA) for all new projects that could cause significant adverse impacts or other significant changes in local conditions. Such projects include all greenfield pulp, paper or board mills, large greenfield sawmills, industrial-scale plantation projects, and any large-scale expansions of existing facilities.

Stora Enso has developed common guidelines for conducting ESIA as an integral part of the Group's Investment Guidelines. One important element of any ESIA involves establishing dialogues with local residents, members of local organisations, expert researchers and other stakeholders through interviews, meetings, workshops and public hearings.

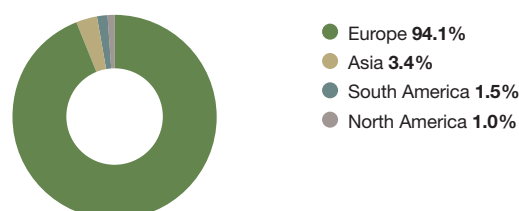
Purchases by region



Sales by region



Personnel expenses by region



The results of ESIA give Stora Enso valuable information on how local communities will be affected by changes in their socio-economic structure, impacts on cultural heritage, and developments in community health, safety and security.

A new joint venture in Pakistan

Stora Enso has signed an agreement to establish a joint venture in Pakistan. Bulleh Shah Packaging Ltd will be run by Stora Enso together with the locally based company Packages Ltd. This joint venture will largely provide packaging products to key local and international customers in the fast-growing Pakistani market. Stora Enso's initial shareholding will be 35% with a commitment to subsequently increase this share to 50%. The joint venture will

include operations in Kasur and Karachi with about 950 employees. Bulleh Shah Packaging Ltd will fully comply with Stora Enso's Global Responsibility approach, and a local organisation for handling sustainability issues will be formed. Packages Ltd has a long tradition of environmental and social responsibility, as well as a special agenda for community involvement issues, which the joint venture can build on.

Tree plantations and local communities

Stora Enso has commercial-scale plantations in Brazil, Uruguay and China, as well as trial plantations in Laos and Thailand. The environmental and operational aspects of these tree plantations are covered in the report's Sustainable forestry section on pages 36–39. In this section of the report we concentrate on our work on social responsibility and sharing value with local communities in the regions where we have tree plantations.

Sustainably managed tree plantations have an increasing strategic importance for Stora Enso. At the moment tree plantations still account for less than 10% of our total fibre use, but this share will grow in coming years due to our joint venture pulp mill project in Uruguay and our future integrated eucalyptus pulp and paper board mill in Guangxi, China.

Our joint ventures in Latin America form part of Stora Enso's Biomaterials Business Area. Veracel is a 50/50 joint venture with the Brazilian company Fibria, and Montes del Plata is a similarly structured joint venture with the Chilean company Arauco. Both of these joint ventures are governed by boards of directors where each partner is equally represented. These boards oversee management and make all important decisions related to the operations of these joint ventures, including issues related to sustainability. The sustainability approaches of both of these joint ventures are in line with Stora Enso's Global Responsibility approach. For more information on how sustainability issues at our joint ventures are included in Stora Enso's sustainability reporting see page 8.

We are aware that different stakeholders may have varied land use interests due to local history and traditional practices. Our engagement with local stakeholders is based on shared planning, clearly defined models for cooperation, and mutual learning and development.

We work according to the same standards everywhere in the world, guided by our Code of Conduct and key policies including our Wood and Fibre Sourcing, and Land Management Policy, which are available at www.storaenso.com/sustainability/policies. Our mills are designed and constructed using Best Available Technologies, and the strictest standards are set for their impacts on the surrounding environment.

Guangxi, China

Stora Enso's operations in southern parts of Guangxi Province, China, consist of eucalyptus plantations and a projected integrated board and pulp mill in the city of Beihai. The investment decision on this integrated mill was announced in March 2012. This was followed by a thorough review of our local sustainability agenda.

An integrated environmental and social analysis report on our operations in Guangxi was published in 2012. This report summarises earlier studies, assessments and specialist reports carried out with regard to our operations in Guangxi. The report was commissioned by United Nations Development Program China (UNDP) on behalf of Stora Enso to obtain third party consolidation of the findings of past studies and an independent review of our operations in Guangxi.

The report concludes that our project has a wide range of potential positive impacts, but also some potentially negative impacts on the natural and social environment. Key benefits particularly relate to local employment and the potential to improve industrial practices and employees' skills in forestry operations. The report also confirms our views that we must continue to engage with local communities, address land contract issues, and ensure that we meet our environmental responsibilities regarding the impacts of large-scale forestry operations. The full report can be downloaded on our website at www.storaenso.com/responsibility.

Correction of land leasing contracts

Stora Enso first started to establish eucalyptus plantations in Guangxi in 2002. Over the last 10 years the local economy has developed rapidly. The demand for wood and land has increased, as has the value of the land.

During this period local lands have often been sub-leased, sometimes repeatedly, resulting in chains of sub-leases, usually at progressively higher rents. In many cases local communities have not benefited from the increases in land values and rents, and are no longer satisfied with rental decisions and agreements they may have made a considerable time ago, when land values were significantly lower.

Stora Enso is involved in more than 1 500 land lease contracts related to collectively owned land in Guangxi.

Land use rights related to agricultural and forest lands in China have changed several times since the 1950s. Problems related to the mapping and documentation of land rights have also led to confusion in many areas. Some current land lease contracts signed by Stora Enso have been affected by such factors. In addition, various contractual practices related to collectively owned lands in Guangxi have been criticized by our stakeholder groups.

Stora Enso first noticed irregularities in the complex chains of local land lease contracts in 2009. We responded by starting a legal screening and correction process covering all contracts for collective lands. During 2012 Stora Enso continued to work with village committees and villagers to correct these contracts.

In order to avoid long contract chains Stora Enso will wherever possible sign agreements directly with the owners of collective lands. To enable this, Stora Enso must negotiate with the other parties currently involved in the contract chains about fair compensation levels they would receive for leaving the chain. This approach to new land leases will also be applied retroactively to the existing contracts. To carry out these tasks, Stora Enso has now appointed dedicated teams, consisting of experienced line managers supported by lawyers, who will focus exclusively on land leases and improvements to existing contracts.

By the end of 2012 all land contracts for collective lands had been reviewed, and contracts with identified defects will continue to be

improved until all such contracts have been corrected. In cases where no agreement can be reached between the parties, Stora Enso has an option to terminate the contract and return the land.

Community development fund

As in previous years we provided support for villages close to our plantation operations in Guangxi through a community development fund (CDF). Between 2004 and 2012 we financed 264 community development projects including infrastructure development, supporting schools, and sanitation and health. Based on the outcome of a socioeconomic baseline study conducted by Guangxi University, four pilot villages have now been selected to demonstrate participatory community development. Participatory Rural Appraisals were completed for the four selected pilot cases by the end of 2012. This process involved listening to local communities' opinions on social development issues, encouraging local people to participate into local development, and capacity building. The development plans for the four villages will be drawn up and implemented during 2013.

Monitoring work conducted with Guangxi University

Stora Enso has been involved in a water and soil monitoring programme launched in cooperation with Guangxi University in February 2011. Baseline data was compiled in August 2011, and two more rounds of measurements were carried out during 2012. The results so far obtained at measurement points for our plantation operations indicate that the water meets local quality standards for drinking water.

Dialogues with relocated local residents

The land acquisition for the mill site in Guangxi resulted in the resettlement of about 1 500 villagers to a new location approximately 2 km away. The resettlement process was managed by the City Government of Beihai together with similar processes related to other developments in the same

industrial zone. This process has involved the payment of both one-off compensation and monthly living subsidies for affected people who have no regular income, in accordance with local government policy.

Even though we are not directly involved in this process, Stora Enso has maintained regular contact with the people affected, enabling them to communicate their concerns openly, helping them find solutions, and supporting some of their collective activities. Community surveys conducted by Guangxi University indicate that the relocated people feel their housing conditions have improved, but issues related to the inadequacy of compensation and a lack of new employment opportunities have been identified. After engaging with the people affected and local government officials, Stora Enso has developed a Resettlement Action Plan that aims to help resettled people improve their livelihood. This plan will be implemented with the participation of local people, local NGOs, the governmental authorities and local institutes.

Open and transparent communications

Since late 2011 Stora Enso has been implementing a stakeholder engagement plan in Guangxi which systematically defines stakeholder groups and assigns responsibility for maintaining contacts with them to specific people at all levels of the company's organisation. We have also been operating a 24/7 telephone hotline since 2005, and cards publicising this service are distributed during regular visits to villages made by our social engagement officers and technical staff. We also publish a bi-monthly newsletter for distribution in the villages.

Uruguay

Together with our joint venture partner Arauco we are building a state-of-the-art, 1.3 million tonne eucalyptus pulp mill at Punta Pereira in southwestern Uruguay. The project includes the pulp mill, a port with

A land of opportunity



What just may be the largest industrial investment in Nordic corporate history will soon take shape in Guangxi, on the shores of the South China Sea. Some 120 000 hectares of tree plantations will be grown here to provide pulp that will be used to produce 450 000 tonnes of liquid packaging board annually, to meet increasing demand from Chinese consumers. Stora Enso's colossal undertaking has not been without its teething problems.

Read about this investment and find out what the locals think about Stora Enso's tree plantations in our Rethink magazine 2012: www.storaenso.com/annualreports.

A dream job close to home



Recent industrial developments in the country have made engineering an increasingly appealing choice for Uruguayan students. Female students are also increasingly signing up for engineering programmes.

To read the stories of two female engineers working for Montes del Plata and find out about economic development in Uruguay see our Rethink magazine 2012: www.storaenso.com/annualreports.

a deep sea wharf and a river barge wharf, bioenergy production, eucalyptus plantations and a state-of-the-art tree nursery. Total investments amount to approximately EUR 1.4 billion. The mill is estimated to start up mid-year 2013.

Montes del Plata's sustainability approach is based on the company's own management policy and values, which are in line with Stora Enso's Global Responsibility approach, as well as international standards and principles including the UN Global Compact, which our joint venture signed in 2010.

Montes del Plata in numbers

	31 Dec 2012
Employment	
Montes del Plata own employees	585
Contractors' employees	1 107
Construction workers at the mill site	5 603
Number of local suppliers¹	1 493
Agroforestry activities	
Partner farmers in Forest Producer Programme	149
Honey producers on the company's land	30
Number of cattle farmers on the company's land	239
Hectares of company's land in cattle grazing	167 279
Roads, construction or maintenance	
Extension of Route 55 (km)	12
Smaller local roads near the mill site (km)	18
Forestry roads (km)	150
Total investment in roads during the year (EUR million) ²	1.4
Social programmes	
Investment in social programmes (EUR million) ²	0.6
Number of beneficiary projects	16

¹ local suppliers in the Department of Colonia where Montes del Plata Mill is situated.

² converted from USD using the exchange rate EUR/USD 1.3194.

Better integration

Montes del Plata is one of the biggest landowners in Uruguay. Our Production Integration Programme aims to get local farmers involved in our tree plantations. Some 160 000 hectares of land are rented out to local farmers for cattle grazing. Honey, dairy and beef production cooperatives also use the land in partnership with Montes del Plata. According to a study conducted in 2012, approximately 47% of these 274 farmers run small-scale family farms or cooperatives. The company's Good Neighbour Programme promotes open stakeholder dialogue and keeps local inhabitants informed about the company's operations, such as planting and harvesting.

During 2012 Montes del Plata recruited 26 young people aged 18–25 for the company's Young Talents programme. More than 120 applicants were interviewed. The programme aims to give local young people training and opportunities. Montes del Plata also works with local suppliers, provides training on forming small enterprises, and runs a forum for local development initiatives involving many local stakeholders.

Addressing stakeholder concerns

With as many as 6 000 workers employed in the pulp mill construction project during peak periods, potential negative impacts are understandably a concern to local inhabitants. Montes del Plata is working together with the local community, the authorities and various organisations to mitigate such impacts by running programmes to improve traffic safety, promote healthy living habits, and combat alcohol and drug abuse, domestic violence, prostitution and sexually transmitted diseases.

Special camps have been built in the town of Carmelo and at the mill site to accommodate almost 2 600 workers. Free-time activities are organised for workers, and social workers are also employed to further mitigate any possible negative impacts. Some 150 new houses for construction workers have been built in the nearby town of Colonia. After the building work finishes in 2013, these houses will be donated to local communities for social housing needs. All workers coming from areas within 100 kilometres are transported to the site every day, so they can keep on living with their families.

One major concern at the Montes del Plata construction site has been strikes. During 2012 there were altogether 87 days of strikes at the site involving some or all of the construction workers. Some of these strikes were not related to Montes del Plata, but to accidents that had taken place on other construction sites in Uruguay, since whenever a serious accident happens at any site, the construction workers' union calls out workers at all sites across Uruguay for one day. Montes del Plata has from the very beginning of the project maintained an open and transparent dialogue with local union representatives, and problematic issues have been resolved through mutual negotiations. Montes del Plata has now agreed to train more Uruguayan workers to enable them to complete more demanding tasks at the construction site.

In order to mitigate the impacts of traffic on the local population, Montes del Plata will transport 50% of the pulpwood coming to the mill along the Uruguay River from Fray Bentos using four barges. Three of these barges will be built in Uruguay, helping the local shipbuilding industry, and promoting river transport in general. This will also greatly reduce the risk of road accidents and benefit the environment by substantially reducing fuel consumption and emissions.

Montes del Plata is meanwhile working together with local authorities to build an extension of Route 55 to redirect heavy traffic away from communities near the mill. In 2012 Montes del Plata also agreed to start a programme that will provide road safety training for more than 600 truck drivers in cooperation with the Ministry of Transport.

Intensified communications

Montes del Plata conducted an opinion survey in 2012 to find out how well Uruguayans know the company and what major concerns they might have. The positive impacts of the project mentioned by interviewees particularly included benefits related to national employment and economic development. The stakeholders' main concerns include the possible deterioration of roads because of heavy traffic, impacts on tourism in the area, and possible contamination from the mill.

Based on these results, the company has intensified its communications and now uses several different channels to reach local stakeholders around the mill site and the related plantations. These channels include local radio and TV broadcasts (programmes produced for this purpose by the company can also be watched at www.montesdelplata.com.uy), the Good Neighbour programme, and a local forum for development created together with the Latin American Centre of Human Studies.

Brazil

In Brazil, Stora Enso owns a state-of-the-art pulp mill and eucalyptus plantations in southern Bahia through the joint venture company Veracel, and a magazine paper mill at Arapoti in Paraná, as well as eucalyptus plantations in Rio Grande do Sul.

Veracel's large-scale land ownership and the consequent elevation of land prices have been a major concern among some of our stakeholders in southern Bahia. The Veracel joint venture, which Stora Enso owns together with Fibria, has continued to engage with local stakeholders, for instance by supporting small-scale agriculture in the region.

Veracel's own sustainability report can be downloaded at www.veracel.com.br.

Veracel in numbers

	2011	2012
Employment		
Own employees	745	705
Permanent partners' employees	2 898	2 652
Remuneration, own employees (million EUR)¹	18.8	19.3
Tax payments (million EUR)^{1 2}	28.9	30.9
Local sourcing, total (million EUR)¹		
- Sourcing in ten local municipalities	76.6	255.8
- Sourcing in the State of Bahia	190.4	310.9
Agroforestry activities		
Partner farmers in the Forest Producer Programme	104	102
Forest certified partner farmers	16	39
Honey producers on the company's land	105	108
Roads in the operational area		
Km of road constructed during the year	217	330
Total investment in roads during the year (million EUR) ¹	5.7	7.2

¹ converted from Brazilian Reais using the exchange rate EUR/BRL 2.7036.

² including federal, state and municipal taxes and pension and social security payment.

One of Veracel's major new initiatives launched in 2012 was an agreement with the state government known as the Pact for the Development of the Discovery Coast. Under this agreement the government has committed to return to Veracel ICMS tax credits paid by the company between 2011 and 2015 to Veracel, in return for a commitment by

Veracel to invest 25% of this sum in local development programmes. A fund was set up in October 2012 with an initial capital of 1.1 million Brazilian Reais (approximately 0.4 million EUR). This fund is to be managed by representatives from the state government and Veracel. In 2012, six local entities were pre-selected through a public process to receive grants from the fund to finance the planting, processing and commercialisation of fruit and vegetable products.

Veracel also enables local beekeepers to keep their beehives on the company's land. In 2012 a total of 108 honey producers participated in this scheme.

Veracel's Atlantic Rainforest Conservation Station conducts scientific research, conserves native ecosystems and endangered species, and provides environmental education. In 2012 the Veracel Station won the Federação das Indústrias do Estado de Bahia (FIEB) Environmental Prize for its work on environmental education.

In 2012 Stora Enso concluded an agreement with the Brazilian NGO Childhood, aiming to combat child abuse and exploitation. A related training programme will be started in 2013 together with the local authorities, teachers and other actors in the municipalities of Porto Seguro, Eunapolis and Santa Cruz Cabralia. Problems related to tourism significantly affect Porto Seguro and Santa Cruz Cabralia, while problems in Eunapolis are more related to poverty and vulnerability.

Negotiations with social movements

In 2012 Veracel continued to negotiate with Brazilian social landless movements and the state government. The social movements in the region intensified their occupation acts in 2011 to put pressure on the local government to settle more families, and many occupations also occurred in Veracel's lands. These negotiations aim to find solutions acceptable to the six social movements in the area and the state government, through which more families can be sustainably settled and given enough land to make a decent living. Some agreements have already been achieved in relation to occupied sites, and an action plan for 2013 has been drawn up. No new occupations of Veracel's lands have been organised by the social movements since the initiation of these negotiations.

Water worries

Significant watercourses within Veracel's lands are located in permanent preservation areas, and no plantations may be established in their vicinity, as stated by Brazilian law. Veracel has been running a hydrological monitoring programme in cooperation with the University of São Paulo since 2005, focusing on two catchment areas: one in a preservation area (near Veracel Station); and the other in an area with eucalyptus plantations. Data obtained during 2012 is available on Veracel's website in Portuguese. The monitoring data has shown that water consumption levels in the planted areas are very similar to those in the areas with natural vegetation.

Active stakeholder engagement

In August 2012, to celebrate the company's 21st anniversary, Veracel organised a stakeholder seminar under the theme of Integrated Territory Management. Panels focused on the environment, social development and wealth generation programmes based on small-scale agriculture. Veracel supports initiatives in all these areas in partnership with various stakeholders.

Veracel additionally supports educational schemes and other initiatives designed to strengthen the cultural identity of local indigenous communities. In 2012 several new actors joined the related indigenous communities network Território de Proteção, including Serviço Social da Indústria (SESI) who is offering training and qualifications to some 50 local young people to prepare them for their first jobs.

During the year 23 new farmers received the Forest Stewardship Council (FSC®) and the Brazilian Cerflor (the Programme for the Endorsement of Forest Certification, PEFC™) forest certifications under a scheme run by Veracel. For more information see also page 37.

Laos

In Stora Enso's trial plantations in Laos we have continued developing a plantation concept that combines trees with food production. In this agroforestry model farmers cultivate crops between rows of trees. This area was heavily bombed during the Vietnam War, so before establishing plantations Stora Enso must ensure that any unexploded ordinance is cleared from large areas of land. This also helps local villagers by creating safe farming land. During 2012 a total of 186 families participated in the agroforestry scheme, planting rice between tree rows. Peanuts, pineapples, cassava and bananas have also been cultivated. A film about our innovative agroforestry scheme in Laos can be viewed at www.youtube.com/storaenso.

In 2012 several excursions were also organised to take villagers, district officials and company staff to visit farms. Many farmers can best learn about new ways to improve their efficiency and commercial viability by visiting other farmers. By arranging such farmer-to-farmer excursions annually Stora Enso aims to create a forum for farmers to exchange their ideas, experiences and techniques, especially in relation to the agroforestry scheme. This will consequently promote sustainable agriculture and reduce poverty, and also enable Stora Enso to build up closer relationships with farmers and hear their concerns about the company's local operations.

In 2012 we also started a programme to train local villagers in silviculture operations so as to give local people access to job opportunities in our plantations.

Working with schools in Arapoti, Brazil



Stora Enso's Arapoti Mill produces magazine paper. In 2009 the mill launched a literacy campaign "Sei Ler" together with its customer Editora Globo to support reading skills in schools by

distributing surplus magazines for use as learning materials. During 2012 the programme expanded, and it now covers seven municipalities close to Arapoti Mill and altogether 45 schools – including all of the elementary public schools and public colleges in the area. More than 1 000 teachers have been trained on how to use magazines in class, and the scheme now reaches 25 000 pupils every year. In 2012 preparations for the expansion of the programme to São Paulo began, and a pilot school near Stora Enso's office was selected for the local launch of the programme in 2013.

In 2012 our Arapoti Mill also started a development programme with local suppliers and a local workforce as part of a joint effort by six companies working in the region. This "Valor Compartilhado" (Shared Value) programme aims to promote social and economic development in Arapoti and Jaguaraiava through cooperation between agriculture and forestry companies on the training and development of local labour and suppliers.

One significant achievement during the programme's first year was the approval of legislation providing a framework for training programmes targeting young people in the participating companies. Two entrepreneurship workshops were also held for students, attracting over 700 participants. An additional entrepreneurship training scheme with 52 students also started in 2012. In this scheme employees from Stora Enso and other companies work as voluntary teachers in training hosted by local universities.

Stora Enso Oyj's FSC® trademark license number is FSC-N001919.

Human resources

During 2012 we continued to promote our Group People Agenda throughout Stora Enso. Leadership is a priority because we believe it is the single most important driver of performance and culture. Workforce planning and employer branding are also our priorities because we face demographic challenges including an ageing workforce in our mature markets in Western Europe, and a young and growing workforce in our new markets in China and South America.

Our total workforce decreased during the year, mainly due to continued efficiency improvements and restructuring.

We need to strengthen our brand as an employer of choice in order to recruit new employees who can help us succeed in challenging markets. Our employer branding work during 2012 included the launch of a new career website (www.storaenso.com/careers), and communications activities publicising our employer brand – “You are the Opportunity”.

The age structure of our staff remains similar to previous years. 26% of our employees are over 50 years old (25% in 2011). A larger proportion of our employees in Western Europe are over 50 years old than in Latin America and China.

Leadership and employee development

We continued our efforts to make our five leadership themes – Customer Focus, Business Acumen, Do What’s Right, Inspire & Motivate, and People Management – matter across the Group. All Stora Enso employees were invited to participate in our new employee survey – Your Voice – and 76% of our personnel responded. The survey aimed to assess progress in relation to our leadership themes. Its findings showed that our leaders generally meet expectations when it comes to Customer Focus and Business Acumen, but that there is scope for improvement especially in the area of People Management.

One of our targets is that all employees should have at least one annual performance review meeting with their manager. Some 75% of survey respondents stated that they had participated in such meeting over the past 12 months, with no significant difference by gender in this figure.

In the beginning of 2012 we initiated a form of leadership rotation, especially in Business Area Management teams, aiming to increase the numbers of managers with prior experience from other business

areas or functions. All Business Area Management teams now include representatives of at least three nationalities. But we still need to continue our efforts to promote diversity.

One important tool for developing and tracking talents within our organisation is our annual management audits, which are run in management teams throughout the Group. These meetings aim to identify talents, create succession plans for key positions, and find ways to enhance our employees’ skills to meet our business needs.

Most of our employee development and training initiatives are run within our business areas, with varying focuses depending on local needs and regulations. At the Group level we have launched a new training programme for recently appointed managers. This will be further rolled out in 2013. Across all of our units that report on the extent of training the average number of training hours per employee was 25 (20 hours for female employees; 26 hours for male employees; and 26 hours for production workers).

Labour relations

Employee relations, including collective bargaining agreements, are mainly managed on a national level. Some 73% of Stora Enso’s employees are covered by collective bargaining agreements. This figure is only approximate due to differences in national legislations, which in some cases prevent us from collecting information about union membership.

In China, the right to freedom of association and collective bargaining is expressly stipulated by law. Most of our Chinese operations have formed unions that form part of the state-authorised China Labour Union. We have also formed worker councils at most of our units in China to serve as channels for direct feedback and dialogues between employees and management.

Our annual Group European Works Council meeting was held in Helsinki in May, with 30 employee representatives delegated from the 10 European countries where Stora Enso has operations qualifying for such representation. One employee delegate from Latin America was also present as a guest observer. Similar meetings were also held for each of our four business areas. This year these meetings examined the current business situation and market outlook, updates on our major investments, progress on the implementation of our People

Key human resources indicators

	2012	2011	2010
Number of employees at year-end	28 203	29 505	26 379
Share of women among all employees (%)	23	24	20
Women in the Group Executive Team	0 out of 9	0 out of 9	0 out of 8
Women in the Board of Directors	1 out of 7	1 out of 7	2 out of 8

Strategy, and a report about the implementation of our new external grievance channel (see page 15).

Human resources in our new markets

During 2012 a lot of focused efforts went into our investment project in Guangxi, China. By the time the mill is operational we plan to recruit around 1 300 new employees for the new mill and related operations. In preparation for this recruitment drive we have been running campaigns at local universities to present Stora Enso and attract graduate students. We have also developed a comprehensive employment offer, and initiated the staffing of the local organisation, focusing on key positions. We also tell about our recruiting in China in our Rethink magazine 2012: www.storaenso.com/annualreports.

We believe it is very important that our new investment projects are staffed with managers and employees who are well-grounded in the local culture. Initially there is often a need for expatriate employees, but our goal is to use locally hired people wherever feasible, particularly in management teams. Our current management team for our investment project in Guangxi includes three managers of Chinese origin and eight expatriates. Our forest operations management team at Guangxi, which has been established for a longer period, currently has six Chinese and three non-Chinese members. Half of the eight-member strong management team at our joint venture in Montes del Plata, Uruguay, are Uruguayans, and the others are Chilean, Brazilian and Canadian.

Restructuring in Europe

The general decline in the paper market has continued, necessitating the further restructuring of our operations. Stora Enso actively supports those affected, primarily by helping them to find new opportunities within or outside the Group in close cooperation with the local community. Job openings in other Stora Enso units are made available to those affected wherever possible. Support actions are handled on an individual basis. Examples include support in finding new employment through outplacement, coaching, retraining, moves to other locations, or support in retirement planning. Employee organisations and other stakeholders are fully involved in such processes in line with all applicable regulations.

Our aim is to be proactive and involve key stakeholders as early as possible when there is a need for major organisational changes. Depending on the type of change, country legislation and union agreements, we normally inform employees and/or union representatives between 2 weeks to 2 months prior to the planned implementation.

Our Printing and Reading Business Area restructured operations at Veitsiluoto Mill in Finland, Kabel Mill in Germany, Corbehem Mill in France, and Kvarnsveden and Hylte mills in Sweden. The restructuring measures will affect approximately 275 employees in total. In October 2012, plans to permanently shut down the paper machine (PM) 1 at Hylte Mill in Sweden were announced. The planned closure would affect approximately 140 employees.

New careers website



Stora Enso launched a new career website in 2012. Find out what our CEO **Jouko Karvinen** and employees all around the world think about Stora Enso and the company's future. www.storaenso.com/careers

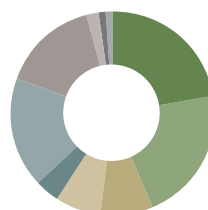
Rethinking leadership development



In 2011 Stora Enso launched a leadership development programme in cooperation with IMD Business School, called the Pathfinder programme. This initiative is now being followed by the new Pathbuilder programme, launched in 2012, whose 14 participants were selected to work with real business challenges within the learning environment of IMD. During 2012 we also introduced a New Manager Programme aimed at recently promoted leaders within our organisation.

To find out more about these programmes see our Rethink magazine 2012: www.storaenso.com/annualreports

Employee distribution by country



- Finland **22%**
- Sweden **21%**
- Germany **8%**
- Poland **7%**
- Russia **4%**
- Other Europe **17%**
- China **15%**
- India **2%**
- Latin America **1%**
- Other countries **1%**

Employee distribution by age, gender and region

Age Group	Americas		Asia		Europe		Total
	Female	Male	Female	Male	Female	Male	
<30	24%	76%	43%	57%	20%	80%	21%
31–50	16%	84%	33%	67%	21%	79%	53%
>50	9%	91%	14%	86%	17%	83%	26%
Total	17%	83%	38%	62%	20%	80%	100%

Employee hires and leavings by age, gender and region

Hires*

Age Group	Americas		Asia		Europe		Total
	Female	Male	Female	Male	Female	Male	
<30	6	18	511	777	82	303	1 697
31–50	9	11	176	212	104	292	804
>50		3		15	22	63	103
Total	15	32	687	1 004	208	658	2 604

Leavings**

Age Group	Americas		Asia		Europe		Total
	Female	Male	Female	Male	Female	Male	
<30	2	10	758	786	55	167	1 778
31–50	9	35	257	237	141	451	1 130
>50	4	9	5	22	118	554	712
Total	15	54	1 020	1 045	314	1 172	3 620

* Hires: number of permanent employees joining the company.

** Leavings: number of permanent employees leaving, voluntary or due to restructuring, retirement or death in service.

Personnel turnover (%) by region*

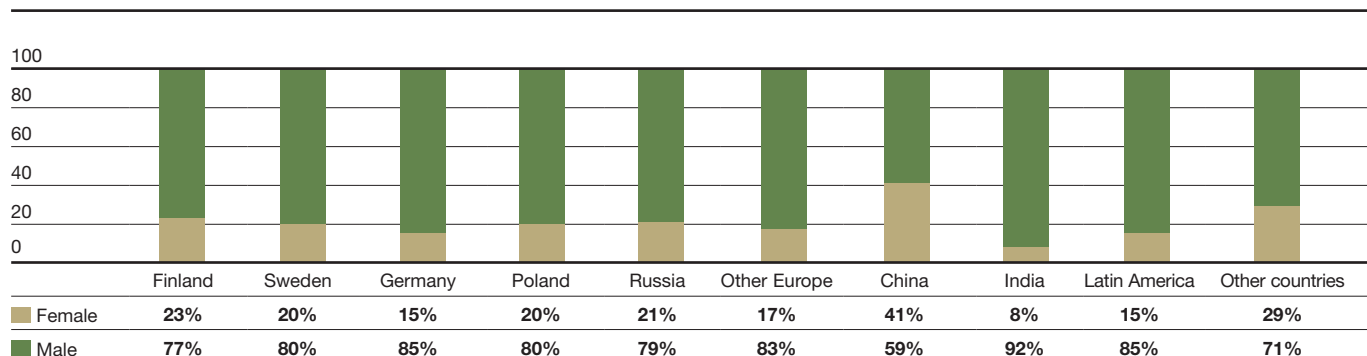
Region	Turnover
Americas	12.1%
Asia	43.0%
Europe	6.5%
Group	12.8%

Employees by gender and contract type

	Male	Female
Permanent, full-time employees	20 577	5 739
Permanent, part-time employees	245	318
Temporary employees	1 006	318
All employees	21 828	6 375

* % of permanent employees leaving, calculated against all employees at year-end.

Gender distribution by country



Our Renewable Packaging Business Area also restructured various operations during 2012. Efficiency measures at several mills in Europe affected approximately 370 employees in total. Páty Mill in Hungary was permanently closed, affecting 78 employees. Efficiency measures and the permanent closure of board machine 2 at Ostrołęka Mill in Poland affected approximately 135 employees. The corrugated packaging plant at Ruovesi in Finland will be permanently shut down affecting approximately 60 employees.

Our Biomaterials Business Area announced a plan to improve efficiency at Skutskär Pulp Mill in Sweden, affecting approximately 60 employees.

Our Building and Living Business Area reduced costs and improved flexibility at the Ala and Gruvön sawmills in Sweden and Varkaus Sawmill in Finland. These actions will affect approximately 25 employees.

Global approach to safety

In the beginning of 2012 Stora Enso decided to take new actions to accelerate the company's progress on safety performance, which has been slow in recent years. A new safety toolbox was introduced to be applied in all Stora Enso units. This toolbox includes practical, hands-on tools that directly address individuals' behaviour. Units are responsible for implementing each tool and programme under the leadership of mill managers or unit managers, supported by local safety staff and the Group's health and safety organisation. Of all our units 90 had appointed joint safety committees by the end of 2012, representing more than 75% of our work force. These committees support safety work at the mills by sharing best practices and examples of successful initiatives through workshops and a database that compiles ideas from all units.

Procedures for reporting safety performance were also changed. Performance data must now be reported monthly instead of quarterly, and selected indicators are followed over a 12-month rolling average. Every month units are also required to report on their progress in

implementing the measures in the new safety toolbox. For each tool a standard has been described, as well as clear steps for implementation and quantitative criteria, against which units must assess their own progress on a monthly basis. Over the coming years units will also be audited with regard to these criteria, in order to identify areas for improvement and help share best practices and good initiatives across the organisation.

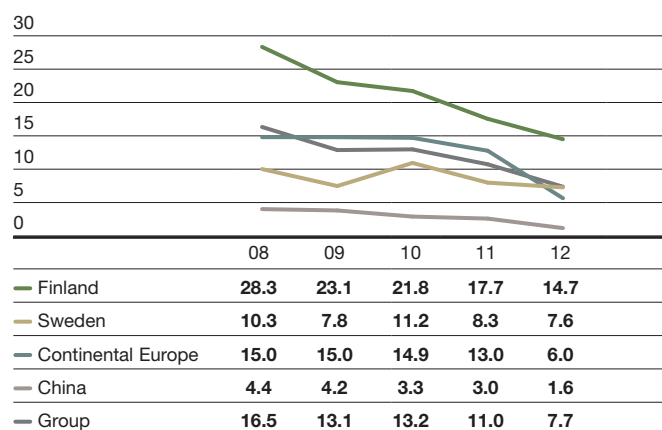
Our Health and Safety Policy is available at www.storaenso.com/sustainabilitypolicies.

Health and safety performance

Good progress was made during 2012 towards our ultimate goal of zero accidents. The total Group figures were significantly better than in 2011, with the lost time accident (LTA) rate falling to 7.7 (11.0 in 2011) and the total recordable incident (TRI) rate declining to 16.7 (24.3). In terms of the impacts of safety performance on efficiency, the improvement in the LTA rate meant a total of 2 247 lost working days fewer than

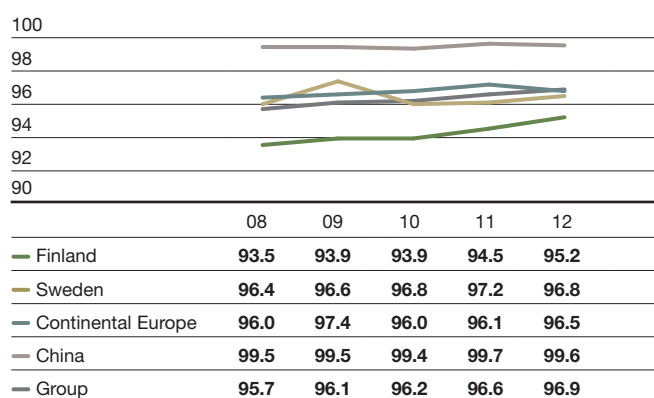
Lost-time accident rates (LTA)

as number of accidents per one million hour worked



Attendance rates

in % of theoretical working hours



in 2011. In future we will also increasingly be focusing on the TRI rate, particularly since the rates of uptake of sick leave following accidents vary considerably from country to country.

The Group-wide attendance rate almost reached our target level of 97%, after increasing to 96.9% for 2012. While health management issues are still largely the responsibility of individual units, work has continued on the harmonisation of health management practices and the implementation of health management systems, especially in Finland.

Serious illnesses are addressed by units in line with their local occupational health service models. Diseases are screened in regular health checks. The health impacts of large projects causing significant movements of labour and significant changes in local communities are also assessed and mitigated. In such cases mitigation plans are made in order to control any serious or contagious disease outbreaks.

The projected construction of our new integrated board and pulp mill in Guangxi, China, for example, will entail significant movements and the presence of workers from other regions in the local community. Existing and potential health risks, such as transmittable diseases, or issues related to waste treatment and hygiene, are being assessed from viewpoints of both the workforce and local communities. Mitigating actions, such as publicity campaigns and preventive medication, are being defined in partnership with the local authorities so as to minimise any negative health impacts.

Fatal accidents and serious accidents

In our Global Responsibility Report 2011 we reported a fatal incident at Kabel Mill on 19 December, whose investigation was still on-going. The outcome of a police investigation into the causes of the accident was inconclusive, and the real cause remains unknown. The incident was classified as an occupational accident under German legislation.

On 4 January a serious accident occurred at Ostrołęka Mill in Poland, when a cleaning employee was bruised by bales of waste paper which were transported by a fork lift truck.

On 9 September a serious accident occurred at Nebolchi Sawmill in Russia, when an employee fell from a height of 5.2 metres while fixing chains on a turning table.

Main activities for 2013

Our main health and safety focus in 2013 will remain on the implementation and follow-up of our new safety toolbox. Practical support will be offered to units in the form of workshops, training sessions and the sharing of good examples. A new audit programme will also be launched in 2013 to verify implementation assessments and support the implementation of safety tools. Line management will take the main responsibility for this auditing, with safety organisations providing support as needed.

A specially designed safety toolbox for our units

- Safety observations
- Daily safety dialogues
- One-on-ones on safety issues
- Rules and risk assessments reviews
- Workplace inspections
- Safety audits
- Management safety rounds
- Key safety rules and procedures
- Quality criteria for risk assessments
- Quality criteria for incident investigations
- Training programmes
- Programmes for contractors, suppliers and visitors
- Communication programmes
- Motivational programmes

Human rights

At Stora Enso, we are committed to respect and support human rights in all our operations. This also involves complying with human and labour rights in our relationships with our business partners and surrounding communities. We have expressly committed ourselves to the United Nation's International Bill of Human Rights, which encompasses the Universal Declaration of Human Rights. We also fully observe the core conventions of the International Labour Organization (ILO). These frameworks shape our policies on human and labor rights issues and serve as minimum standards for our operations in regions where related local regulations are weak or non-existent.

Stora Enso's commitment to human rights

Stora Enso has actively followed developments and discussions surrounding the United Nations 'Protect, Respect and Remedy' Framework for Business and Human Rights ever since its launch in 2011. In 2012 Stora Enso worked with a group of international human rights experts to consolidate our position on various human rights conventions and frameworks. This process involved discussions between the experts and key personnel from around our global operations. One significant outcome of this process is a new public statement setting out Stora Enso's position and approach to human rights. We have also developed a comprehensive human rights action plan together with these external experts, and we aim to start implementing the proposed actions during 2013.

Our strong commitment to human rights is already an integral part of our Code of Conduct and our Social Responsibility Guidelines, which are available publicly together with the new Human Rights Statement at www.storaenso.com/sustainabilitypolicies.

Training and assessment on human rights

We carefully consider challenges related to human rights issues whenever we set up new operations or commit to new investments, particularly in locations far from our roots in northern Europe, and we always perform human rights assessments as part of our due-diligence processes. Human rights issues were included in the Environmental and Social Impact Assessment (ESIA) performed by the United Nations Development Programme (UNDP) for our operations in Guangxi in southern China in 2006. For more information about our operations in Guangxi see pages 19–20 and 36–39.

During 2012 Stora Enso was not involved in any instances of child labour, forced labour, violations of the rights of indigenous peoples, or discrimination.

Our employees receive training on human rights issues in the context of our Code of Conduct, and they are encouraged to report any instances where they feel that human rights may have been violated. For more details see page 15.

Human rights along our supply chain

In business relationships with suppliers Stora Enso insists on strict compliance with international human and labour rights conventions. Our supplier requirements cover fundamental workers' rights including freedom of association and collective bargaining, minimum age, free choice of employment, non-discrimination, occupational health and safety, as well as requirements on wages and working hours. We continuously evaluate our suppliers' adherence to these requirements through self-assessment questionnaires, on-site supplier audits and business visits. None of the non-compliances found during supplier audits conducted in 2012 were related to child labor, forced or bonded labor, freedom of association or dangerous work environments. For more details about our responsible sourcing see pages 35–42.

Land rights of local communities

In our tree plantation projects, where our land use is intensive, we have to ensure that the land use rights of local people are fully respected. In 2012 some stakeholders were particularly critical of our approach in Guangxi, China. We have responded throughout the year by providing clarifications regarding the land leasing process and reiterating our commitment to respect the land use rights of local communities. For more information see page 11 and 19–20.

We recognise the unique economic and cultural needs of indigenous peoples, their traditional uses of forests, and their legitimate rights to their traditional lands. We strive to ensure that our operations do not violate the rights of indigenous peoples who live near our operations. During 2012 we were not involved in any instances of violation of indigenous peoples' rights. In Brazil, our joint venture Veracel maintains good relations with the area's 17 Pataxó and Tupinambás communities, and supports programmes designed to strengthen their cultural identity. For further information on Veracel see pages 22–23 and 36–39.

Products and innovation



“A package has to tell the story of its contents, reflecting what’s inside. Packaging also has to be easy to use and show personality through its look and feel. With carton board you can create many different shapes and surfaces. It’s the designer who sets the limits. I always work with environmentally friendly materials. Carton board protects the goods, looks good after transportation, and is lightweight, easy to store and easy to handle. And when you are done with it, you just fold it up and put it in the recycling bin.”

Sofia Blomberg, an art director and graphic designer working with packaging design, Sweden

Innovation and product development

Renewable materials play a powerful role in creating sustainable development. Stora Enso's product development and innovation are being actively encouraged through a change process known as "Rethink" launched in 2011. In the context of new products, the idea behind this is that we must challenge ourselves and the outside world to rethink the ways we work and live – and utilise our expertise on renewable materials and material efficiency to promote sustainable living.

We measure the sustainability performance of our products using environmental, social and economic performance indicators and related targets. For more information on our sustainability targets see page 14. To identify, minimise and inform our stakeholders about the environmental impacts of our products, we also work with product life cycle inventories (LCIs), Paper Profiles, eco-labels, forest certification labels, and environmental footprints, in addition to our own mill-specific certificates. For more information on our products and their performance see www.storaenso.com/products and www.storaenso.com/responsibility.

Developing products together with our stakeholders

In 2012 0.7% of our revenue (amounting to EUR 81 million) was reinvested in R&D activities. Stora Enso develops products, services and production processes in collaboration with our customers and other stakeholders in key areas including wood- and fibre-based products and services. Systematically collected customer feedback plays an essential role in this development work. Most of our customer feed-

back relates to expectations concerning our products, prices, delivery and service, but issues related to environmental and social responsibility are also mentioned frequently.

Stora Enso's Group function R&D and Technology particularly works in areas which are not yet covered by our existing product offerings. The R&D personnel within our Business Areas focus on improving our existing business and products. Our own experts also work with leading external experts on various technical and scientific issues, and participate widely in global research networks.

Material efficiency and recyclability

In addition to products and services, Stora Enso's development work focuses on innovations in industrial process that can improve the efficiency of our use of materials, energy, water and other resources. Our certified traceability and chain-of-custody systems are designed to ensure that our main raw material, wood, is sustainably sourced. The share of bioenergy in our energy supply is already higher than European paper industry average. Nearly all water we use comes from surface water bodies, and it is returned to the natural cycle after careful purification.

All Stora Enso's papers, packages and solid wood products are safely recyclable. They are based on renewable raw material and do not contain harmful heavy metals or other dangerous ingredients. Stora Enso actively promotes and participates in recycling schemes, and is one of Europe's largest users of Paper for Recycling (PfR).

New products and market segments

To add to the existing products and solutions in our pulp, paper, paper-board and wood product businesses, we are actively entering into new market segments with product applications based on renewable materials. Examples include our material efficient renewable packaging solutions that provide alternatives to plastic or aluminum packaging, and our innovative wood-based construction solutions.

In 2012 our Enocell Mill in Finland started to produce dissolving birch pulp for the textile industry. After successful trial runs, commercial production started in June 2012 with an annual capacity of 150 000 tonnes. Dissolving pulp is particularly used in the textile industry today, but different kinds of cellulose derivatives can also be applied for many end-uses, from home furnishings to clothes, tyres, paints, cosmetics or even food and medicine.

Imatra Mills in Finland have started to manufacture microcellulose (MC) in a pilot plant. MC can enable the development of lighter and stronger renewable packaging materials. In future MC could also replace some of the barrier materials currently used in liquid boards, as well as fossil-based materials such as plastics.

Stora Enso's Printing and Reading Business Area develops lightweight paper grades that achieve greater material efficiency and lower environmental impacts without compromising on printing quality. Our

Design studios with packaging customers



The idea of integrating a design studio into a packaging mill was pioneered at Lahti Mill in Finland. Having the studio right on the mill site enables Stora Enso to design, prototype and produce

new packaging solutions together with brand-owners much more effectively. There are now five such studios in our mills around the world, where designers can work closely with our packaging customers.

To read about this close collaboration between packaging designers and brand-owners see our Rethink magazine 2012: www.storaenso.com/annualreports.

PrimaPress lightweight uncoated paper helps to improve the environmental performance of magazines, journals and catalogues, while our lightweight uncoated paper Berga Lite has particularly been designed to achieve similar benefits for product information leaflets and inserts.

Competitive wood-based urban construction solutions produced on a large industrial scale can significantly reduce carbon emissions. In 2012 Stora Enso's Building and Living Business Area improved production capacity for wood-based construction solutions at the Hartola and Pälkäne units in Finland. These two units are pioneering roof and hall constructions, as well as large-scale quick-to-install building solutions which can be utilised in residential, commercial and industrial multi-storey buildings instead of concrete and steel elements.

During 2012 Stora Enso Building and Living was also involved in the re-launch of the BoKlok concept in Finland. This concept for moderately priced housing is developed by Skanska and Ikea. The construction of 36 BoKlok apartments will start in the city of Vantaa in 2013, using wooden modules supplied by Stora Enso's Hartola production unit.

In August 2012 Stora Enso and Neste Oil decided not to progress with plans to build a biodiesel plant. The two companies had applied for funding under the EU's NER 300 renewable energy initiative, but our joint project was not listed by the European Commission for funding. NSE Biofuels Oy Ltd, a joint venture of Stora Enso and Neste Oil, has been developing biofuel manufacturing technologies and the company carried out several trials at a pilot plant in Varkaus between 2009 and 2011. NSE Biofuels Oy Ltd continues as a joint vehicle of Stora Enso and Neste Oil to develop innovations in the field of gasification and ultra clean gas.

Training on product sustainability

We frequently organise training on environmental and social responsibility issues for our customers. Our sales people also regularly receive comprehensive training on sustainability issues. Our business areas Printing and Reading and Renewable Packaging additionally utilise a sustainability e-learning course and a self-study intranet tool with animations, videos and exercises that give practical guidance on the relevance of sustainability related topics to all of our daily work.

Product labeling and sustainability performance

Experts on life cycle analyses (LCA) based at Stora Enso's Imatra Research Centre compile life cycle inventory (LCI) data on our products and help our mills to collect the necessary data. We conduct LCI surveys on all of our main products, using calculations that are updated annually. LCIs are used to share information on products' environmental performance and impacts.

We provide product-specific information on the environmental performance of our paper products through Paper Profiles and Paper-by-Nature declarations. These voluntary environmental product declaration schemes have been jointly developed by leading paper producers.

Several of Stora Enso's paper products also bear recognised eco-labels such as the EU Flower, the Nordic Swan and the Blue Angel (Blauer Engel). We are currently participating in an initiative with the European Commission aiming to develop another EU Ecolabel to cover envelopes, filing products and paper carrier bags.

Many Stora Enso products are also covered by forest certification labels, showing that they have been produced using wood from certi-

fied forests and controlled sources, and that the whole journey of the raw materials they contain from the forest to the store shelf has been documented and verified by an external party.

Environmental footprints

All of Stora Enso's business areas have calculated carbon footprints for their main products, and this information is freely available to our customers. To read more about Stora Enso's carbon emissions and carbon footprint see pages 45–47.

We are also actively looking into possible ways to define water footprints for our products (see pages 50–51). Stora Enso is participating in several water footprint initiatives, and also working with the International Organization for Standardization (ISO) on the development of standards for carbon and water footprints. We are additionally working with the Confederation of European Paper Industries (CEPI) and the European Commission on rules for a wider product footprint for paper products, which would cover all the relevant environmental impacts along the product life cycle.

Product safety and hygiene

Stora Enso uses high-quality raw materials to manufacture pulp, paper, paperboard, and wood products for various purposes. Our in-house control systems cover our processes from the product development stage through raw material sourcing to the delivery of the finished products. They also cover the eventual recycling and reuse of products as raw materials for new products or for energy production. We also require our suppliers and partners to comply with Stora Enso's sustainability requirements, including safety aspects. For more information on our responsible sourcing practices see pages 35–43.

Chemical safety

Safety issues are foremost whenever we purchase chemicals, and we work with our suppliers to ensure that we only use chemicals that are registered in accordance with the European Union's REACH registration system, and that no chemicals listed by REACH as substances of very high concern are present in our products.

Stora Enso has registered all of the substances that we manufacture in our production processes in accordance with the EU's wide-ranging REACH legislation. These regulations have been designed to protect health and the environment by comprehensively identifying the safety properties of chemical substances.


Packaging for consumer products

To guarantee that consumer demands and food safety regulations are fully met, all Stora Enso units producing food contact materials and other sensitive packaging materials follow Good Manufacturing Practice (GMP). This set of internationally recognised guidelines, which is also incorporated into EU regulations, aims to ensure safety and product quality in foods and pharmaceutical products.

All of our mills producing direct food contact materials and materials for other hygiene-sensitive purposes are certified according to ISO 22000 or other recognised hygiene management standards. All of our consumer board mills additionally have certified hygiene management systems, as do our corrugated board mills in Finland, the Baltic Countries and Russia, and our Heinola fluting mill.

We provide our customers with information on products' hygiene and safety aspects through compliance declarations, and we have effective processes in place for testing product safety, dealing with complaints, and organising product recalls if necessary. For a full list of our mills' certifications see pages 56–57.

Responsible sourcing

D

"I own some ninety hectares of forest in Lahti, Southern Finland. Me and my brother inherited the forest from our father, so it has a lot of personal value for us. The way I see it, responsible forestry is about operating on nature's terms. Forests are also important socially; my forest is an important part of the local community. People like to enjoy nature and take outdoor exercise there."

Tomi Konkonen, a private forest owner who sells wood to Stora Enso

Our sourcing network

Ensuring responsibility along our supply chain is an integral part of our global approach to responsibility. Our total commitment to responsible sourcing avoids potential negative impacts of suppliers' actions, and helps us to maintain good stakeholder relations. We work closely with our various suppliers around the world to ensure that they meet our requirements on responsibility, and to build up our mutual understanding of sustainability issues.

Stora Enso depends on external suppliers for a wide range of products, materials and services. These include our principal fibre sources – wood, pulp and paper for recycling – as well as other direct and indirect inputs such as chemicals, fuels, spare parts, and services from IT and logistics to energy and maintenance services (see pages 41–42). Our supply network includes suppliers ranging from small-scale forest-owners and local companies to large global corporations.

Wood is our most important raw material. Sustainable forest management is in our immediate and long-term interest. For more information about our approach to sustainable forestry, see pages 36–39.

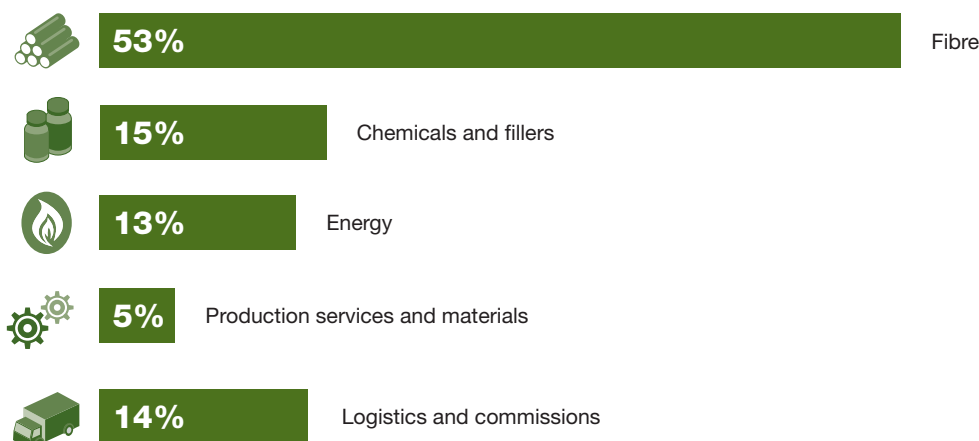
Our mills also use considerable quantities of recovered paper, amounting to 26% of the all fibre used in our paper and board production in 2012. We aim to further increase the already high recovery rate for paper and paperboard across Europe, and we are also focusing on the local availability of this valuable raw material for our mills. For more information see pages 40–41.

We bought 5% (6%) of the pulp used in our mills from external sources to complement or supplement our own pulp production (see page 43).

Our policy on wood and fibre sourcing and our sustainability requirements for suppliers are publicly available at www.storaenso.com/sustainabilitypolicies.

Breakdown of raw material and service costs

% of our total variable costs



Videos on YouTube

To find out how we source fibre in different parts of the world, please see our videos at YouTube.com/storaenso.



Stora Enso Wood Supply Finland

In a video from Finland forest-owners consider how their wood will be used in the future.



There is no such thing as waste

A video featuring Langerbrugge Mill in Belgium looks at what happens to recycled paper.



Reaching new heights

Another video from Uruguay features our joint venture Montes del Plata, where a new state-of-the-art pulp mill will start up in mid-year 2013.

Sustainable forestry

Wood is our most important raw material. Sustainable forest management is in our immediate and long-term interest, as it keeps the forests healthy and productive, and thus helps to secure the availability of this renewable resource.

In 2012, the total amount of wood (including roundwood, chips and sawdust) delivered to our mills was 33.5 million cubic metres (solid under bark) (35.7 million cubic metres in 2011).

Stora Enso mainly procures wood from private forest-owners, state-owned forests and associated companies in Finland, Sweden, the Baltic Countries, Western and Eastern Europe and Russia. Some 7% (6%) of our wood is sourced from tree plantations, including pulp produced by our joint venture Veracel in Brazil. Stora Enso has large-scale plantation operations – both our own and through joint ventures – in Brazil, Uruguay and China, as well as pilot projects in Laos and Thailand.

Our wood procurement is organised regionally. Stora Enso's wood supply units in Finland, Sweden, the Baltic Countries and Western and Eastern Europe are each responsible for the sourcing of wood for Stora Enso mills in their respective regions. Each tree plantation operates under the mill which it supplies wood for. Our Biomaterials Business Area currently manages those new plantation projects which are not yet associated with a mill. Our forestry operations in Guangxi, China, which include local eucalyptus plantations and an investment plan to build integrated board and pulp mills, are the responsibility of our Renewable Packaging Business Area.

Sustainable forestry and tree plantation operations

We practice economically, socially and environmentally sustainable forest and tree plantation management.

- Economical sustainability involves ensuring that forest operations remain viable.
- Social sustainability highlights human and labour rights, health and safety issues, the fair distribution of economic benefits, the multiple use of forests, and the protection of sites with historical, social or cultural importance. For more information about our social responsibility work in relation to our tree plantations see pages 19–23.
- Our key environmental priorities in sustainable forestry include the conservation of biodiversity, soil protection, and preserving the quality and quantity of water resources. The right balance between these different aspects varies by region.

To promote our goals concerning sustainable forestry, we also actively network with other parties. In 2012 we continued to participate in the Global Forest & Trade Network (GFTN), which is an initiative of the World Wide Fund for Nature (WWF) to eliminate illegal logging and drive improvements in forest management. We also fine-tuned our approach to the new European Union Timber Regulation, which will be applied from 3rd March 2013. For more information see www.gftn.panda.org and http://ec.europa.eu/environment/forests/timber_regulation.htm.

Our work to promote sustainable forestry was recognised by the Forest Footprint Disclosure Review in February 2012, when Stora Enso was awarded as a leader in the basic materials sector. This recognition rewards the company for managing and transparently reporting its forest footprint. For more information see www.forestdisclosure.com.

Wood from sustainable sources

All roundwood, chips, sawdust and externally purchased pulp supplied to our mills comes from sustainable sources. We use forest certification and traceability systems to check that wood has been harvested in compliance with the relevant national legislation and according to our own policy on Wood and Fibre Sourcing, and Land Management, which is available at our policy webpage www.storaenso.com/sustainabilitypolicies.

The traceability systems we use for all purchased wood and pulp, such as ISO 14001, chain-of-custody and Controlled Wood, are all 100% verified by third parties. We also conduct regular internal audits. In Russia, for instance, one third of our wood trading partners are audited annually.

Towards better plantations

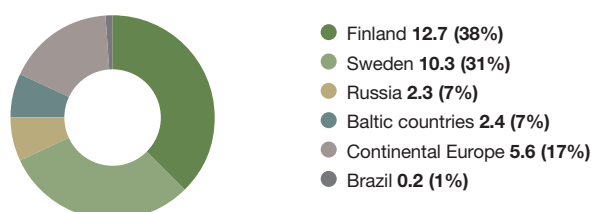
Stora Enso works according to internationally approved principles and forest management practices, and applies established planning procedures when setting up sustainable plantations. This is also important from a business perspective, as plantations are always intended to be long-term investments. We apply our principles to both our own plantations and those run through joint ventures. They apply in both large and small-scale operations.

Stora Enso never converts natural forests or protected areas into plantations. We always conduct environmental and social impact assessments for any greenfield plantation projects.

During 2012 Stora Enso has taken further steps to enhance sustainable plantation forestry globally in dialogue with other companies, governmental organisations and the WWF. We are participating in the current third phase of WWF's New Generation Plantations project (www.newgenerationplantations.com), which focuses on the institutional and technological aspects of responsible plantation management.

Wood procurement by region*

million m³



* Total amounts of wood (roundwood, chips and sawdust) procured within these areas for delivery to our own mills (million m³, solid under bark).

Stora Enso has been involved in developing the New Generation Plantation concept since its launch in 2007. Participation in the project has given us an opportunity to rethink and improve our operations by learning from our stakeholders. In November 2012, Stora Enso and Montes del Plata co-hosted a South American Regional Network Meeting and Study Tour in Uruguay about New Generation Plantations together with another forestry company and the WWF.

Regional developments in forest certification

In China, we have significantly expanded forest certification during 2012 by obtaining the FSC®'s Forest Management certificate and the Chinese Forest Certification Council certificate for our plantation operations in Guangxi. These certificates verify that our plantation operations meet recognised standards for sustainable plantation management. We also maintained and consolidated certificates for our environmental management and occupational health and safety systems. As part of our systematic sustainability approach we also worked with local communities, trained our contractors, and developed and implemented new plantation planning methods. For more information see pages 19–20 and 23.

In Finland, most forests consist of PEFC™-certified smallholdings. Stora Enso additionally offers Finnish forest-owners the opportunity to join an FSC® group certification scheme administered by the company.

In Sweden, more than half of the total forest area, including nearly all large forest holdings, is certified under PEFC™, FSC®, or both schemes. Stora Enso offers forest-owners in Sweden the opportunity to obtain group certification under both schemes.

In Russia we have made significant progress on certification. Together with WWF Russia and local logging companies we have continued to expand our own FSC® certification group for wood suppliers who wish to certify their forest lease areas under FSC®. Stora Enso established this group in order to make certification more accessible and cost-efficient for small and medium-sized logging companies. The group supports its members in the preparation of the necessary documentation, and organises training and centralised contracting with the auditors.

The forests certified by Stora Enso are located in different regions of Northwest Russia: in Karelia, Novgorod, Kirov, Kostroma and Yaroslavl. Group certifications now cover forest lease areas totalling over 202 000 hectares, after three new members with holdings totalling 120 189 hectares in Kirov and Novgorod joined the scheme in 2012. Stora Enso's own Russian subsidiary companies have been FSC®-certified since 2006.

In Brazil, Stora Enso's joint venture Veracel and its partner farmers are pioneering the concept of group forest certification. So far, FSC® and CERFLOR (PEFC™) forest certification has been achieved by 39 farmers for plantations with a total area of 7 343 hectares. Veracel's forestry partners enjoy concrete benefits from the forest certification process since it helps to streamline farm management, enhances

Promoting forest certification globally

We promote credible forest certification as a tool to enhance sustainable forest management practices. The two most significant forest certification systems recognised by Stora Enso are run by the Programme for the Endorsement of Forest Certification (PEFC™) and the Forest Stewardship Council (FSC®).

The proportion of all forests worldwide certified for sustainable management is still under 10%, with most of the certified forests located in North America and Europe. In 2012 the share of certified wood in our total wood supply was 74% (66%).

working conditions, and facilitates the establishment of conservation areas. Veracel's FSC® certificate for the company's own plantations was transferred to another certification body, Immaflora, in 2012.

In Uruguay, our joint venture Montes del Plata maintained FSC® certifications previously obtained for its tree plantations.

For more information on certified plantations and lands owned, leased and managed by Stora Enso, see the table on page 39.

Conserving biodiversity

Ecological landscape plans and biodiversity assessments conducted to identify valuable habitats form the basis for management planning in tree plantations and in our associate forest companies. Our employees and forestry contractors receive on-the-job training on ecological management.

We only establish tree plantations on lands with low biodiversity value, such as former pasturelands. All ecologically important areas are identified and duly protected. We also continuously monitor the impacts of our operations on biodiversity, soil and water resources.

In 2012, we continued our efforts to support biodiversity in various countries:

In Brazil, our joint venture company Veracel continued to actively restore Atlantic rainforest habitats in its lands. In addition to overseeing the natural regeneration of native forest in former pasturelands set aside for preservation by Veracel, which now total 105 368 hectares, the company also sources native tree seedlings from local nurseries and plants them in former pasturelands in sites where natural regeneration is not possible. This voluntary work is part of a government initia-

tive designed to restore Atlantic rainforest ecosystems and connect the remaining areas with ecological forest corridors, enabling birds and animals to move from one area to another. By the end of 2012 Veracel had planted more than 4 700 hectares of rainforest through partnerships with local cooperatives and companies in sites where natural regeneration has not been possible.

In Sweden, we are working with Bergvik Skog in several projects that aim to conserve biodiversity and minimise the negative impacts of logging. One such project has been specifically designed to save an endangered local beetle species, *Tragosoma depsarium*, from extinction.

In Finland, we actively promote the voluntary METSO forest biodiversity protection programme for Southern Finland, run by the Finnish government. This programme particularly targets private forest-owners, who can obtain compensation for protecting ecologically valuable forest areas accepted for the programme. We are also a member of the committee of the Perintömetsä (Heritage Forest) programme organised by WWF Finland. This programme encourages forest-owners in Finland to save forests that have a personal meaning for them, and pass them on to the future generations intact.

We have adopted nationwide a new harvesting planning procedure that has been developed in cooperation with various authorities and stakeholders to safeguard endangered forest species. The procedure involves the use of geographical database that included the occurrences of 501 endangered species. Stora Enso has provided training related to this new procedure for all wood procurement areas and teams in Finland.

In Uruguay, our joint venture company Montes del Plata is currently rolling out an Ecoregion Planning scheme by integrating ecoregion landscape criteria into an improved forest planning tool. This involves mapping and classifying different types of environments to facilitate optimal forest management, environmental management, soil uses and site-specific practices.

During the first phase of this integration, a total area of 184 000 hectares was mapped and classified according to sites' specific conservation values. The second phase of the Ecoregion Planning scheme is already under way. We aim to have full ecoregion planning coverage for all of the company's lands by the end of 2013.

Monitoring environmental performance

We monitor the environmental impacts of our forestry operations in order to continuously improve our environmental management practices.

In Finland, the environmental performance of our harvesting and forest management operations is monitored annually by an independent third party (either a regional forestry centre or the Forestry Development Centre Tapio). This monitoring provides us with the information we need to take any necessary corrective actions. In 2012 we improved our know-how regarding water protection by training our contractors. All findings are systematically discussed within our organisation and with our forestry contractors to increase everyone's understanding of our strengths and areas for improvement.

In Sweden, Stora Enso has developed extensive self-assessment procedures for monitoring the environmental performance of harvesting and forest management. The new scheme was taken into full use in the beginning of 2012. More than a hundred sites will now be inspected annually together with approximately 50 harvesting teams, in order to measure the environmental quality of the assessed operations. Findings are discussed with the teams responsible for the site. We have also new harvesting practices which have been designed to increase productivity, reduce soil damage, increase the utilisation of logging residues, and improve working environments.

In Guangxi, China, we have continued to run a water monitoring programme in our plantations together with Guangxi University. We are also cooperating with the local office of Fauna & Flora International on studies of plantation vegetation and ways to use the number of birds as indicators of the ecological health of plantations.

Forests, plantations and lands owned by Stora Enso*

As of 31 December 2012

Unit**	Area	Certification coverage	Details of local landscapes and protected areas
Montes del Plata plantations and lands, Uruguay (joint venture with Arauco)	246 272 ha, of which 137 863 ha planted	FSC® for 190 479 ha, of which 109 129 ha planted	Mainly pasturelands and agricultural fields. Remnants of native ecosystems, such as grasslands and riparian forests, have been protected within the company's lands.
Veracel plantations and lands, Bahia, Brazil (joint venture with Fibria)	211 489 ha, of which 90 498 ha planted	CERFLOR (PEFC™) for 195 746 ha; FSC® for 195 746 ha	Dominated by pasturelands cleared from Atlantic rainforest between the 1950s and 1980s. 105 389 ha of Veracel's lands are protected, including a 6 069 ha Private Natural Heritage Reserve. These protected areas mostly consist of native forest remnants at different stages of regeneration (see page 37).
Plantations and lands, Rio Grande do Sul, Brazil	45 161 ha, of which 20 850 ha planted		Mainly pasturelands and agricultural fields. 14 000 ha of the total area is protected, including native grasslands, riparian forests and other habitats.
Trial plantations, Thailand	908 ha, not planted		The areas are located within an agricultural landscape with no adjacent protected areas.
Wood Supply Baltic, Lithuania	453 ha		70 ha of nature reserves, e.g. buffer zones, and part of a national park.
Wood Supply Baltic, Estonia	137 ha, including 124 ha of forest.		No protected areas within this area

* In addition to the forest and plantation areas listed above, Stora Enso owns: 43% of Bergvik Skog, who own 2.3 million hectares of land in Sweden and 103 000 hectares in Latvia; and 41% of Tornator, who own 0.6 million hectares of forestland in Finland, 20 000 hectares in Estonia, and 12 000 hectares in Romania.

** Including units where Stora Enso's shareholding is at least 50%.

Forests and plantations leased and managed by Stora Enso

As of 31 December 2012

Unit*	Area	Certification coverage	Details of local landscapes and protected areas
Olonetsles, Russia	222 500 ha	FSC® group certificate	In Russia protected areas are generally excluded from lease agreements. Areas amounting to 2 362 ha are protected as natural monuments (mainly marshlands).
Ladenso, Russia	153 900 ha	FSC® group certificate	409 ha protected as natural monuments, including genetic pine reserves and watercourses.
Plantations and lands, Guangxi, China	90 286 ha, of which 73 034 ha planted with eucalyptus and 10 374 ha with other species	Chinese Forest Certification Council certificate for 85 254 ha; FSC® for 90 286 ha	Mosaic landscape including agricultural crop fields, forest plantations and settlements. No native ecosystems are found in the leased lands. Areas totalling around 1300 ha are protected (including 184 ha of public benefit forest), consisting of steep slopes, buffer zones and other important areas for watershed protection.
Terminal, Russia	42 307 ha	FSC® group certificate	No protected areas within this area.
Wood Supply Eastern Europe, Czech Republic	111 374 ha	PEFC™	37 286 ha within a landscape protection area, including a 1 895 ha bird reserve within the Natura 2000 programme. Other small-scale nature reserves totalling 892 ha.
Montes del Plata plantations and lands, Uruguay (joint venture with Arauco)	23 752 ha, of which 18 613 ha planted	FSC® for 15 908 ha, of which 15 460 ha planted	Mainly pasturelands and agricultural fields. Protected and sensitive areas are excluded from lease agreements.
Trial plantations, Laos	1 200 ha, of which 1 187 ha planted		The plantations are located within a mosaic of intensive shifting cultivation lands and traditionally protected remnants of native forests. One plantation area is located close to a National Biodiversity Conservation Area. The majority of the total area is covered by agroforestry production schemes.

* Including units where Stora Enso's shareholding is at least 50%.

Paper for recycling

Stora Enso used 2.7 million tonnes of Paper for Recycling (PfR) in 2012 which makes us one of the biggest single consumers within the European market for PfR of 56 million tonnes. In 2012 PfR accounted for 26% (26% in 2011) of our total fibre use.

Our Printing and Reading and Renewable Packaging Business Areas define strategies and actions and coordinate their mills' sourcing of recovered packaging and paper. We particularly strive to use Paper for Recycling in densely populated areas with high collection rates such as Germany and the Benelux countries.

Eleven of Stora Enso's mills currently use PfR as raw material. Old newspapers and magazines are used at Langerbrugge (where they account for 100% of sourced fibre), Sachsen (100%), Maxau (>60%), Hylte (50%) and Dawang (100%). Recovered packaging paper is used at Ostrołęka (>60%), Barcelona (100%), Soustre (100%), Pori (100%), Heinola (partly) and Wisconsin Rapids (100%). These mills are mainly located in densely populated areas where high paper recovery rates are possible.

Langerbrugge Mill in Belgium, Sachsen Mill and Maxau Mill in Germany, and Hylte Mill in Sweden are currently Stora Enso's four biggest users of Paper for Recycling.

The efficiency of the recycling of paper and packaging depends on the local infrastructure within national collection schemes and recovery systems. Consumers play a key role by recycling used packages, magazines and newspapers. Municipalities play a crucial part by setting up the necessary infrastructure. To promote the recycling of used beverage cartons we cooperate with our key customers and the public sector. Stora Enso is the only European liquid packaging producer who has also invested in the recovery and recycling of used beverage cartons.

Due to major expansions at new paper mills in China, steadily increasing volumes of Paper for Recycling are finding their way from Europe to China. Almost 20% of the paper recovered around Europe during 2012 ended up in China. This trend threatens the future PfR supply for our

mills in Europe. We are therefore focusing on increasing our suppliers' awareness of the local availability of PfR. By focusing on local supply, we aim to minimise the financial costs and environmental impacts of PfR transportation and ensure the availability of this vital raw material for our mills in the longer term.

Developments by country

In the beginning of 2013 our new board machine will start up at Ostrołęka Mill in Poland, running totally on Paper for Recycling. We have gradually established 20 paper recycling depots spread around the country to ensure that collectors always have a depot nearby for PfR deliveries. Through our logistical network we have been able to double our paper collection rate in Poland in just two and half years, and ensure that PfR will be available locally for our mill in Ostrołęka.

In Belgium, through an agreement with the government supporting local paper collection and use so as to minimise environmental impacts, we have been able to procure 70% of the paper recycled by Belgian households. This recovered paper is mainly sorted at our own sorting plants and then used at our Langerbrugge Mill. Trucks are used to transport the paper the short distances from collection points directly to the mill.

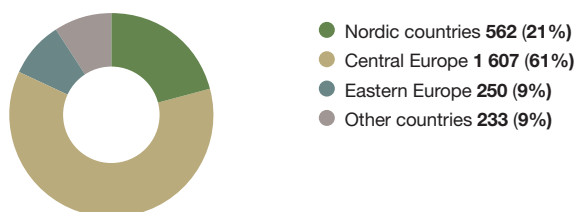
In Germany, Stora Enso's Sachsen Mill and various industrial partners have jointly the Initiative Zukunft Papier Rohstoffe e.V (IZP), aiming to boost the supply of high quality Paper for Recycling from local collectors directly to the paper mill.

In Sweden and Finland national producer responsibility systems ensure that all used graphical papers are collected nationwide – even in the smallest rural villages – for recycling in the local paper industry.

Increasing collection

We are striving to further increase the already high European PfR collection rate, and help reach the Confederation of European Paper Industries (CEPI) target recycling rate of 71% by 2015. The rate was 70% in 2011, and to achieve this one percentage point increase more than 500 000 extra tonnes of paper will need to be recycled annually.

Paper for recycling: procurement by region
million tonnes



Stora Enso actively increased awareness of recycling by organising open days at Langerbrugge Mill in Belgium and at Sachsen Mill in Germany in collaboration with local communities and the authorities. At such open days, we share information about the importance and advantages of obtaining a local supply of PFR, inform our stakeholders about the recycling process, and provide advice about collecting paper. These open days have attracted thousands of people to our mills.

In Poland, where the collection rate currently is only 43%, we are working to change attitudes to favour more recycling. In 2012 we organised the collection of used paper at the major Przysanek Woodstock festival together with a major customer. During this campaign Stora Enso Poland collected over five tonnes of used paper.

Rubbish revolution



In Poland, nearly two million tonnes of valuable recyclable raw material goes to waste every year. The country's recycling rate is among the lowest in Europe, as no effective waste processing chains are in place. But this will all change in 2013. To read more about recycling in Poland, and the pride of Stora Enso's Ostrołęka Mill – a new, lightweight containerboard paper machine that runs exclusively on recovered fibre, see our Rethink magazine 2012: www.storaenso.com/annualreports.

Responsible sourcing of other inputs

In addition to wood, pulp and paper for recycling, Stora Enso sources many other kinds of products and services around the world. Examples include chemicals and fillers used in pulp and paper production processes, spare parts for machinery, maintenance services, IT services, travel services, energy, fuels and logistics services. In 2012 these direct and indirect inputs other than wood, pulp and paper for recycling accounted for 47% of our total variable costs. In these purchases our responsible sourcing approach involves:

- Setting clear responsibility requirements for our suppliers
- Training our own purchasers to integrate responsibility issues into purchasing processes
- Continuous evaluations of suppliers' performance through risk assessments, audits and follow-up
- Building up the capacity of suppliers along our supply chain to act responsibly

Clear requirements for our suppliers

When sourcing direct and indirect inputs other than wood, pulp and paper for recycling, our responsibility requirements for suppliers cover environmental performance and management, business practices, and workers' human and labour rights including health and safety issues, wages and working hours. We also require our suppliers to monitor their own suppliers and contractors against similar requirements.

A document setting out our requirements in more detail is publicly available at www.storaenso.com/sustainabilitypolicies.

Our goal is to include these requirements as part of all purchase contracts. In 2012 99% of Group-level purchase contracts included these requirements. As in previous years, we also continued to train and instruct our local purchasers based in our units around the world to include these requirements in contracts with local suppliers. In 2013 we will be working further with our local purchasers to make sure that our requirements are routinely included in local purchase contracts. Our internal audit procedure also includes checks designed to ensure that our sustainability requirements are integrated into such contracts.

Training of purchasing personnel

All Stora Enso personnel dealing with suppliers must be trained in supply chain responsibility issues. To increase awareness of environmental and social responsibility issues purchasing personnel are briefed on a one-to-one basis or in group training sessions. This kind of training was initiated in 2011 when 153 purchasing personnel were given special training on these issues. During 2011 and 2012 45 purchasers located in China, Brazil, Finland, Sweden, and Continental Europe were trained in small groups on ways to integrate responsibility issues into purchasing processes. Our goal is to continue such training in 2013 and expand it to cover purchasing personnel in other regions.

Supplier assessments

In recent years we have increasingly been evaluating and monitoring our suppliers' performance against our requirements. This is largely realised through supplier self-assessments and supplier audits. In 2012 we revised our supplier self-assessment procedures to enable their more effective integration into purchasing processes. The revised self-assessment process will be rolled out in early 2013, initially covering Group-wide suppliers of certain products and services, before being expanded to cover all our suppliers.

We also perform in-person audits on suppliers' premises. These audits help to ensure that our requirements are being met, and they also clearly show suppliers how much we prioritise a genuine commitment to responsibility issues.

We select suppliers to be audited considering the country where they are based, the nature of their operations, the information we receive from their self-assessments, and the reported impressions of purchasers who have visited them. Seven supplier sites belonging to five suppliers were audited in 2012. These suppliers in China, the Czech Republic, Lithuania and Taiwan provide Stora Enso with chemicals and other direct production inputs. These audits complemented eleven audits performed during 2010 and 2011. Lists of non-conformances to our requirements are drawn up after each audit, together with corrective action plans with specific timeframes. Progress on the scheduled implementation of these actions plans is then monitored, and further audits may be performed if suppliers' corrective actions do not prove satisfactory.

Supplier audits conducted during 2011 and 2012 covered 60% by value of purchases from suppliers that we have identified as risky. Observed non-conformances have been related to the handling of materials, the frequency of safety training, wages, and working hours. None of the non-conformances have involved child labour, forced or bonded labor, restrictions of freedom of association, or dangerous work environments. During follow-up visits, we have been pleased to notice either full compliance or significant reductions in non-conformances. We reserve the right to terminate contracts with suppliers who do not meet our requirements or are found to be inadequately committed to fulfilling our requirements.

We are continuously building up our internal auditing capacity by offering training to enable more of our personnel to become qualified sustainability auditors. Depending on the type and location of the supplier, we use of a combination of internal sustainability auditors and/or external organisations to perform sustainability audits in suppliers' premises. Our suppliers usually welcome such audits as the process gives them an opportunity to identify their shortcomings and improve their environmental and social performance, benefitting their own employees and stakeholders.

Building up our suppliers' capacity for responsible sourcing

In addition to setting out clear requirements, training our own purchasing personnel, and monitoring our suppliers through audits, our approach also involves enhancing our suppliers' awareness and commitment concerning responsible sourcing. While some of our major suppliers already have an excellent understanding of these issues, and the necessary processes in place, many of our smaller and more local suppliers can benefit from external initiatives designed to improve their capacity to address these issues.

During 2013 we will therefore be exploring opportunities to enhance our suppliers' awareness of environmental issues, social responsibility and ethical business practices. We believe that our four-pronged approach as described above will help us to source products and services more responsibly, and make a real difference to our suppliers' attitudes and commitments to sustainability.

The article on page 23 describes how Stora Enso is cooperating with other companies to build up a local supplier base in Brazil.

Pulp procurement

Although most of the pulp used in our mills is produced within Stora Enso, for reasons related to quality and logistics we also purchase small amounts of chemical pulp from external suppliers. In 2012, externally purchased chemical pulp accounted for 5% (6% in 2011) of all the chemical pulp used within the company. Pulp deliveries from our joint venture Veracel to Stora Enso totalled 0.54 million tonnes in 2012, and were mainly shipped to mills within our Printing and Reading Business Area.

Our purchased pulp meets the same sustainability criteria as our purchased wood. Pulp from external suppliers is included in our traceability system, so the origins of the fibre it contains are known and appropriately documented. Our minimum requirement for all purchased pulp is an approved chain-of-custody certificate (PEFC™, FSC® or FSC®

Controlled Wood). Our pulp procurement guidelines are set out in an e-learning tool provided for all purchasers buying externally produced pulp. Purchased pulp is also covered by Stora Enso's participation in WWF's Global Forest & Trade Network (see page 36).

To find out more about our external pulp suppliers' sustainability performance, we sent them specially designed sustainability questionnaire during 2012. Based on the questionnaire results, certain suppliers will be selected for more extensive sustainability audits during 2013, to further ensure their compliance with our sustainability requirements and enhance their awareness of key sustainability issues.

Environment



“Water is a precious resource, so we must minimise its use and always take great care of emissions into water bodies. I work every day with our water and effluent treatment plant, selecting the chemicals to be used and looking after our environmental permits. At this stage we are treating effluent generated during the construction of the mill, and constantly monitoring groundwater and river water levels.”

Paola Pedemonte, Environmental Engineer, Montes del Plata Mill, Uruguay

Climate actions

We are working to reduce carbon dioxide (CO₂) emissions all along our value chain. This involves promoting sustainable forestry and tree plantation management practices, creating innovative products based on renewable raw materials, and developing cleaner and more efficient production processes. At the same time, we are helping to build a less carbon-intensive global economy by further improving our energy efficiency, by increasing the share of bioenergy in our total energy use, and through our products, which are recyclable and based on renewable raw materials.

Our management approach and strategic actions to curb climate change are also described in our Climate Change Statement, available at www.storaenso.com/sustainabilitypolicies.

Business risks and opportunities related to climate change

We recognise a strategic opportunity in the fact that our products such as fibre-based packaging or wooden construction elements are based on renewable materials with comparatively low carbon footprints. Our products also store carbon throughout their useful lives, after which they can be either recycled or incinerated to produce energy. For more information about our products and product development see pages 31–33.

As an energy-intensive company our operations include risks related to climate change and costs related to energy and climate regulations. The EU's Emission Trading Scheme (ETS) affects us both directly and through energy prices in Europe. The ETS can be expected to further intensify the competition for biomass, which may lead to higher wood prices. The ETS will also increase energy generation costs for our electricity suppliers when emission allowances have to be completely purchased from 2013 onwards. Changes in the EU regulations related to climate change may affect the competitiveness of our European mills within the global pulp and paper industry. Stora Enso has not released or purchased any project-based carbon credits during 2012.

The energy production system at Montes del Plata, our joint venture in Uruguay, is officially registered as a Clean Development Mechanism (CDM) project, and was audited as such in 2012. Montes del Plata will supply surplus electricity (amounting to some 80 MW) produced from biomass to the Uruguayan electricity grid, and apply for Certified Emission Reduction units eligible for emission trading schemes.

Climate change is widely expected to increase the frequency of extreme weather events such as storms, flooding and droughts in many regions. Storms can result in serious wind damage to forests, often resulting in a short-term oversupply of timber, but reduced supply in the medium term. Changes in precipitation patterns and milder winters with more rain and less snow, and reduced periods of frozen soils, can also make forest soils and roads softer. This would particularly affect the harvesting and transportation of wood in Finland and Sweden.

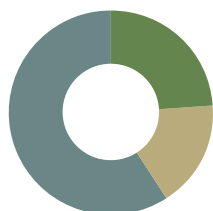
To meet these challenges, Stora Enso Wood Supply in Sweden has initiated and actively participated in the development of new harvesting methods and machines. A new kind of harvesting machine, known as Lightlog C, has been introduced to minimise damage to soft ground during forest thinning. Competitive methods have also been established to reduce damage during forest operations while also improving yields of all assortments of wood, and enabling more treetops and branches to be harvested for energy use. This project was initiated during 2012 together with an extensive training scheme for 500 personnel and contractors. This work will continue during 2013.

Forests and the climate

Wood is our most important raw material. Growing trees absorb carbon dioxide from the atmosphere and store the carbon it contains. As long as forests and plantations are managed sustainably, new generations of trees will grow back after mature trees are logged, absorbing CO₂ from the atmosphere once again. Sustainable forest and plantation management thus plays a vital role in mitigating global warming.

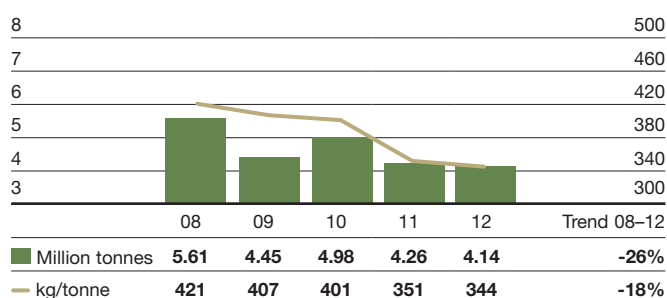
Total carbon footprint 2012

11.26 million tonnes of CO₂ equivalent



- **Scope 1:** Direct emissions from production **24%**
- **Scope 2:** Indirect emissions related to production (purchased electricity and heat) **17%**
- **Scope 3:** Other indirect emissions along our value chain **59%**

Our CO₂ emissions*



* Covering direct and indirect fossil CO₂ emissions (Scope 1 and 2) from pulp paper and board production facilities. Normalised figures are reported per unit sales production. Some of the figures have been recalculated from previous years due to changes in baseline and reporting errors.

We promote third party forest certification and chain-of-custody certification schemes to guarantee that all our wood originates from sustainably managed forests and tree plantations. We also actively combat illegal logging, which is a major cause of global deforestation. Our tree plantations sequester more carbon than the previous land uses, especially in Latin America, where they have almost entirely been planted on unnatural grasslands or degraded pasture lands. We are also actively restoring and conserving areas of Atlantic rainforest in and around the tree plantations we own through our joint venture Veracel in Brazil. For more details see page 37.

Carbon footprint

Most of our direct greenhouse gas emissions come from the energy we purchase and produce to operate our mills and manufacturing processes. To reduce costs and reach our environmental goals, we are continuously working to improve the energy efficiency of our production and our energy self-sufficiency. We are also promoting the use of low-carbon energy alternatives, both in our own power generation and in our external energy purchases. We also aim to continue our long-standing work supplying district heating for local communities, utilising excess heat generated in our processes wherever this is technically and economically feasible.

Since 2007 we have estimated our Group-wide carbon footprint on an annual basis, with the aim of identifying the main sources of CO₂ emissions across our operations.

We base our carbon footprint accounting on guidelines provided by the Greenhouse Gas Protocol of the World Resource Institute (WRI) and the World Business Council for Sustainable Development (WBCSD). In 2012 we expanded the coverage of our Scope 3 calculations in accordance with new methodology set out in the Greenhouse Gas Protocol Value Chain reporting standard of WBCSD.

Our accounting concentrates on CO₂, which is the dominant greenhouse gas in our carbon footprint, but emissions of other greenhouse gases are also included where data is available.

Reducing impacts and improving resource efficiency

Stora Enso's environmental work has two main focuses. Firstly, we strive to minimise the environmental impacts of our operations. Secondly, we strive to use raw materials and energy as efficiently as possible to ensure that we do not waste valuable natural resources or financial resources.

In this report section we particularly focus on environmental issues related to our mills and their logistics.

Stora Enso is committed to make continuous improvements in environmental protection. We have set targets for emissions to air, process water discharges and waste. We monitor our progress towards these targets on a quarterly basis, and report our consolidated results transparently every year in this Global Responsibility Report.

All of our units have operational responsibility for their environmental management. Stora Enso has management systems in place to ensure that all our units adapt the relevant best environmental practices. All Stora Enso's pulp, paper and board production units are certified according to the ISO 14001 management system standard. For a full list of our mills and their certifications see pages 56–58 or www.storaenso.com/certificates.

Stora Enso has environmental specialists at national and business area levels to coordinate environmental issues, to manage environmental liabilities, and to cooperate with the respective environmental authorities, federations and lobbying organisations. National level specialists particularly play an important role in Finland and Sweden where most of our production capacity is located.

Our mills regularly provide training on environmental issues for their employees. Stora Enso's revised Code of Conduct also reminds our employees of their environmental responsibilities in their everyday work. For more information on our Code of Conduct see page 15. We also frequently organise broader sustainability training sessions for our employees and our customers.

We report on greenhouse gases in three areas:

- Scope 1: Emissions from sources we directly own or control, including on-site energy generation and processes, power boilers, lime kilns, paper-drying processes, vehicles, engines and harvesting equipment.
- Scope 2: Emissions related to the purchased electricity and heat consumed in our operations.
- Scope 3: Emissions from other indirect sources along our value chain, including CO₂ equivalent estimates for:
 - the transportation and harvesting of wood by our contractors
 - the manufacturing and transportation of other raw materials we use
 - business travel and employee commuting
 - the transportation of our products to customers
 - the further processing of our products by customers

The application of the new Scope 3 standard and the inclusion of new emission sources in our estimates led to a significant increase in our Scope 3 emissions compared with our previous estimates in 2009. As a consequence, all earlier Scope 3 figures have been readjusted accordingly to make them comparable. This work will be further refined as new information about emissions along our value chain becomes available.

For details of our initiatives designed to reduce CO₂ emissions from transportation see page 50.

Progress towards our CO₂ emission reduction target

In 2011 we set a target to reduce our fossil CO₂ emissions per saleable tonne of pulp, paper and board by 35% from 2006 levels by the end of 2025. This target covers both emissions generated directly by our own facilities (Scope 1), and indirect emissions produced during the generation of the electricity and heat we purchase (Scope 2).

Reductions in previous years have mainly been achieved through investments in biomass boilers that have reduced our use of fossil fuels, and through increases in our internal production of power and heat. Other contributing factors have included improved productivity, the use of more efficient equipment, and streamlined processes. This positive trend continued during 2012, and improvements at many

mills have contributed towards a total reduction in our CO₂ emissions during the past year.

We continued to reduce our direct fossil CO₂ emissions during 2012 both in absolute terms and per unit of sales production. Since 2008 we have reduced our direct CO₂ emissions from stationary combustion sources at our pulp, paper and board mills by 18% per unit of sales production.

Our indirect CO₂ emissions are significantly influenced by the energy mixes used in the national grids of the countries where we operate. The fossil CO₂ emissions resulting from the generation of the energy we purchased for electricity and heat during 2012 were 36% lower than in 2008.

Total carbon footprint 2008–2012¹⁾

Emission source		Fossil CO ₂ equivalent (million tonnes)				
		2012	2011	2010	2009	2008
Stationary and mobile combustion sources (direct)	Scope 1	2.65	2.90*	3.19*	2.55*	3.19*
Purchased electricity and heat (indirect)	Scope 2	1.96	1.85	2.26	2.27	2.83
Other sources (indirect)	Scope 3	6.65	6.71*	6.86*	6.12*	7.40*
		11.26	11.46	12.31	10.94	13.42

¹⁾ Covers all Stora Enso's production units.

* Figures have been recalculated due to changes in baseline and reporting errors.

Energy

Stora Enso generates steam and electricity internally for use at our production facilities, and purchases fuel, electricity and heat from external suppliers. Our energy procurement and generation strategy focuses on our long-term needs.

Our approach to energy procurement and energy generation is described in detail in our Energy Guidelines, which are available at www.storaenso.com/sustainabilitypolicies.

Existing contracts and our internal electricity generation are estimated to cover around 87% (88% in 2011) of our electricity needs for the next 5 years. In 2012 our total energy self-sufficiency figure increased to 59% (57%).

Stora Enso's own energy generation

In 2012 the share of biomass in our internal energy production increased to 78% (76%). Pulp and paper production results in by-products such as black liquor, bark, de-inking sludge and bio-sludge. Stora Enso utilises all of these materials to produce bioenergy. Harvesting residues and recovered wood are also important biomass sources for our internal energy generation.

In 2012 our electricity self-sufficiency level was 36% (40%). One of the main reasons for this decline was a prolonged stoppage at our gas turbine power plant at Anjala Mill.

Following the completion in 2010 and 2011 of new multi-fuel power plants at Langerbrugge Mill in Belgium, Maxau Mill in Germany and Ostrołęka Mill in Poland, only a few of our large production units have no power generation facilities of their own, most notably Kabel Mill in Germany and Corbehem Mill in France. These three new multi-fuel power plants reduced our total annual CO₂ emissions by 470 000

tonnes. In 2012, Langerbrugge and Maxau Mills continued to leverage their investments to further reduce their CO₂ emissions by an additional 110 000 tonnes compared with 2011. Due to a reduction in the use of externally procured biofuels, Ostrołęka Mill's CO₂ emissions increased by 43 000 tonnes in 2012.

Procurement, partnerships and wind power

Stora Enso strives to secure and enhance access to cleaner energy through strategic partnerships with external energy suppliers. In 2012 some 81% (81%) of our purchased electricity was generated from low-carbon sources including nuclear energy and renewable energy.

At Skutskär Mill in Sweden, a wind park consisting of five wind turbines built by VindIn AB, of which Stora Enso owns about 18%, generated 30 600 MWh during 2012 (32 900 MWh). Stora Enso is also participating in VindIn's second wind farm project in Sweden, which was completed in late 2012. This wind park has a capacity of 69 MW and an expected annual production of 210 000 MWh. Plans and environmental impact assessments for more VindIn wind park projects in Sweden and Finland are currently ongoing.

Energy efficiency

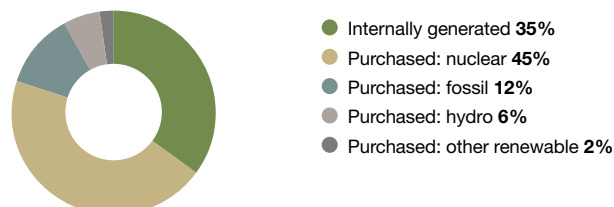
The best way to cut energy costs and work towards our environmental and business goals is to reduce our energy use. In 2012, however, our overall energy efficiency (accounting for electricity and heat consumption) remained at the same level as in 2011. To achieve the improvements we are seeking in energy efficiency we have established a new energy saving target for our three most energy-intensive business areas: Biomaterials, Printing and Reading, and Renewable Packaging. Our target is to reduce the specific electricity and heat consumption per tonne of product in these areas by 15% by 2020 compared with the baseline year 2010.

Fuels



Our total annual fuel consumption was 153 922 (156 331) terajoules (TJ) in 2012. 1 TJ = 10¹² joules

Electricity



We generated and purchased 15.9 terawatt hours (TWh) of electricity in 2012 and consumed 15.4 TWh. 0.5 TWh was sold. TWh (terawatt hour) = 10⁹ kilowatt hours.

Better use of the combined heat and power (CHP) potential of our mills can increase the power-to-heat ratio of our internal energy production. This means that for each MWh of heat that we produce, we should aim to maximise the amount of electricity generated. The Group's overall power-to-heat ratio decreased from 23% in 2011 to 20% in 2012 mainly due to a prolonged stoppage at our gas turbine power plant at Anjala Mill.

In 2012 we started to apply a new approach to energy efficiency management by initiating the implementation of a new software tool for energy savings at our mills. The tool primarily covers electricity, steam and the efficiency of heat exchangers, and it may also be expanded to cover water use. During 2012 the new software has been piloted at our Sachsen Mill in Germany. If it proves useful it will also be subsequently installed at other mills.

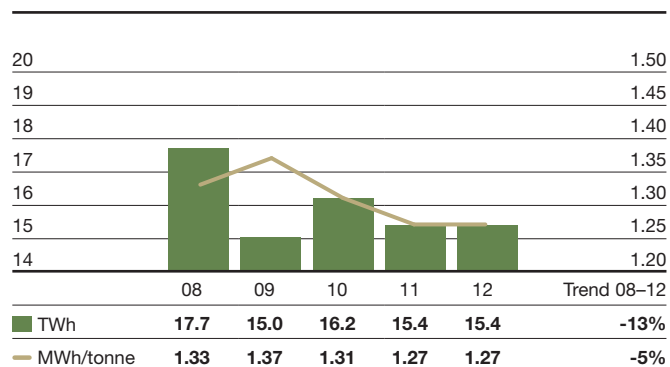
Our centralised energy efficiency fund contains a total of 10 million euros that can be allocated for energy saving investments. The fund was set up in 2008 to support our mills' energy efficiency projects, and it supported 37 projects during 2012. These projects should generate total energy savings amounting to at least 310 000 MWh per year when in full effect.

To coordinate and steer our energy efficiency work and promote the spread of related information, we created the new position of Energy Efficiency Manager in 2011. In 2012 we took the next step by making our "energy hunters", who have been assigned to find energy saving opportunities at our mills, into a permanent team.

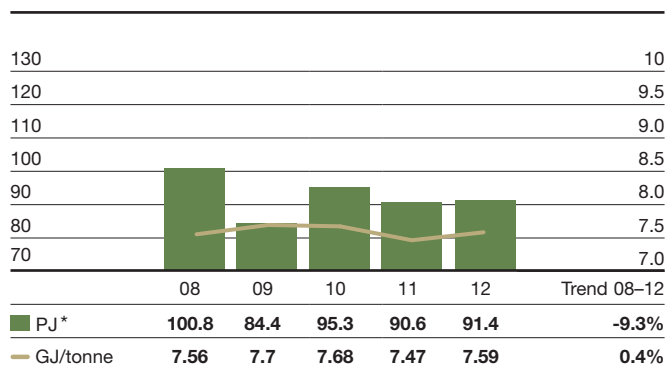
To further improve our energy use we have created a network of three forums for our Nordic and Continental European paper and board mills. These forums involve mill personnel with responsibility for energy

issues, who work together systematically to find ways to improve the efficiency of energy use, referring to the targets set for each business area. During 2012 we conducted basic energy audits at nine mills. In 2013 the focus will switch to follow-up audits, and Group-wide special topic campaigns will be introduced. We will also further intensify our assessments of investment proposals with potential to improve our mills' energy efficiency, as well as the sharing of best practices on energy use.

Electricity consumption ¹⁾



Heat consumption ^{1) 2)}



1) From pulp, paper and board production facilities. Normalised figures are reported per unit sales production.

2) Excluding heat for electricity generation.

* 1 PJ = 10¹⁵ joules.

Environmental impacts from logistics

The environmental impacts of logistical operations are an important factor when we evaluate different transport and supply chain solutions. Stora Enso actively promotes transport solutions with good environmental performance. Our transport chains are planned in line with our environmental policies and always analysed for their environmental footprint.

The carbon dioxide emissions created by our logistical operations are incorporated in the Group's carbon footprint and CO₂ emissions target. The transportation of our products accounted for 16% of our total carbon footprint in 2012. Other environmental impacts from our logistics include emissions of sulphur compounds and nitrogen oxides, and noise.

In 2012 Stora Enso transported 38 million tonnes of raw materials and finished products. About 45% of this was wood. The logistics of wood transportation are managed independently by our Wood Supply units.

Our products are transported by sea, land and rail. Taking into account the weight of product shipments and transportation distances, transportation by sea accounted for 71% of all product transportation in 2012, while land and rail transportation constituted 25% and 4%, respectively.

In 2012 Stora Enso was actively involved in projects designed to promote sustainable logistics solutions. One such scheme is ELVIS, a Swedish pilot project examining how rail transportation can be made

more energy efficient by using longer or heavier cargo trains. The project measures electricity consumption and applies cost-benefit analyses.

Another initiative, called Green Corridors, is being led by the European Commission to improve the competitiveness and sustainability of logistics solutions. This project aims to enhance infrastructural and regulatory frameworks to enable large-scale and long-term sustainable logistics solutions that can achieve documented reductions in environmental and climate impacts, while also rating highly on safety, quality and efficiency.

In 2013 we will continue to actively participate in such projects. We also plan to initiate a project testing alternative fuels in high capacity vehicles. Stora Enso Logistics is a member of various environmental networks including KNEG (Climate Neutral Cargo Transportation), the Network for Transport and Environment (NTM) and the Clean Shipping Project.

Our logistics suppliers are covered by strict requirements when it comes to sustainability performance, like all of our other suppliers. In 2012 around 90% of Group-level logistics contracts included these requirements. In 2013 we will continue to shift greater volumes of goods to more efficient and environmentally friendly intermodal transport solutions. For more information on how we ensure sustainability along our supply chain see pages 35–42.

Water

In 2012 we continued to participate actively in various international initiatives related to water, including the CEO Water Mandate of the UN Global Compact and the work of the World Business Council for Sustainable Development on water risk assessment tools. Stora Enso is also involved in the Water Footprint Network and in the development of an international ISO standard for water accounting.

Stora Enso was among the endorsers of a special water communiqué issued by the CEO Water Mandate during the Rio+20 Earth Summit in June 2012. This communiqué underscored the importance of water sustainability to politicians at the Earth Summit, and highlighted positive practical examples of companies' work related to sustainable water use.

An assessment of water-related risks in our operations and our supply chain conducted in 2011 indicated that almost all of Stora Enso's production units are located in regions where water is a relatively abundant resource. In 2012 in collaboration with the Alliance for Beverage Cartons and the Environment (ACE) we started testing a related tool

developed by WWF, called Water Risk Filter. For more information, see www.waterriskfilter.panda.org.

Water discharges

Our environmental performance targets include targets for process water discharges. We monitor our progress towards these targets on a quarterly basis, and report our results annually (see pages 14 and 55–57). All our wastewater streams are carefully purified in our treatment plants before being released back into the natural environment. This is essential, since impurities in water discharges can harm ecosystems in lakes, rivers and other natural water bodies. Stora Enso uses state-of-the-art wastewater treatment systems to ensure that the water we release is purified, ecologically safe, and meets all regulatory requirements. Our water treatment systems also recycle water within mills where feasible, reducing the need for water intake.

During 2012 our mills' normalised discharges of Chemical Oxygen Demand (COD) declined slightly. Since 2008 we have reduced our COD

discharges by 1%. In 2012 our normalised discharges of nitrogen and phosphorus increased slightly. Over the past five years our normalised discharges of phosphorus have decreased by 6%, and discharges of nitrogen have increased by 12%.

In 2012 we continued to reduce our normalised discharges of Adsorbable Organic Halogen Compounds (AOX). The collective term AOX describes the amounts of chlorine or other halogens bound to organic matter released in wastewater. In recent years our discharges of AOX have fluctuated within a range that represents good performance (see page 55). This is because Stora Enso has not used elemental chlorine in its bleaching processes for over 20 years.

Using water efficiently

Stora Enso Pulp Competence Centre ran a project focusing on water use in kraft pulp mills during 2012, aiming to identify the main consumers of water within two integrated mills, and find ways to reduce their water consumption by altering the mills' processes. The results indicated that there are large differences in water consumption rates between mills. Several specific ways to save water were proposed for each mill. Some of these actions have already been initiated, while others still need additional verification.

At the moment there is no globally standardised methodology for calculating total water consumption levels for companies or specific products. However, the International Organization for Standardization (ISO) has started to develop such a standard, focusing on a life cycle approach. The forest industry is involved in this development work through the Confederation of European Paper Industries (CEPI) and

Water use at our mills

Water plays a central role in our pulp, paper and board production processes. The structure of paper is dependent on water, as hydrogen bonds are needed to keep the wood fibres together. Stora Enso also uses water for cooling, for cleaning, and as a carrier of energy in the form of steam. Water is also needed as a medium to carry fibres through production processes.

Almost all of our water withdrawal comes from lakes and rivers, and around 97% of this water is recycled back into the environment. This recycling occurs either after appropriate treatment (for process water), or without treatment where this is not necessary (for cooling water). Stora Enso's approach to water and its use is described in our Water Use Statement, available at www.storaenso.com/sustainabilitypolicies.

national forest industry federations. Stora Enso also collaborates with national standardisation bodies. A wide-ranging water footprint report prepared by Stora Enso's Skoghall Mill in 2011 can be downloaded from the website of the Alliance for Beverage Cartons and the Environment: www.beveragecarton.eu.

Water withdrawal and consumption*

	2010	2011	2012	Trend 10-12
Total water withdrawal (million m³)				
Process water	320	309	306	-4%
Cooling water	358	364	322	-10%
Total	678	673	628	-7%
Process water withdrawal efficiency				
m ³ /tonne	25.8	25.5	25.4	-2%
Total water consumption				
million m ³	28.1	27.3	25.1	-11%
m ³ /tonne	2.3	2.2	2.1	-8%

* Including water withdrawals and consumption of our pulp, paper and board production units. Normalised figures are reported per unit of saleable product.

Emissions to air

The atmospheric emissions of our mills mainly result from the combustion of fuels used in electricity and heat generation. These emissions include carbon dioxide (CO₂), sulphur dioxide (SO₂) and nitrogen oxides (NO_x). For details of our progress in reducing these emissions see pages 14 and 55.

We are working to reduce our emissions to air by using more renewable energy and by increasing our energy efficiency (see pages 48–49). SO₂ and NO_x emissions, which affect air quality and cause acid rain and soil acidification, are also controlled through advanced technologies such as scrubbers and boiler process control systems.

Waste management

Stora Enso's production processes generate various wastes, the vast majority of which are beneficially reused as residuals. Such materials include biomass fibres, ash from energy production, lime solids from pulping processes, and wastewater treatment sludge. Many of these materials can be used for bioenergy production, for agricultural purposes, or for brick manufacturing and road construction. We are constantly looking for new and innovative ways to reuse materials that would otherwise end up as wastes. In 2012 across the Group we had a waste reuse rate of 97% (97% in 2011).

Waste to landfill

We have started work on a wide-ranging evaluation of our current approaches and activities related to resource and materials efficiency. Its findings will be used during 2013 to set a new target replacing our current waste to landfill target. During 2012 we generated 141 764 tonnes of waste to landfill, amounting to 3% of all our residuals. One

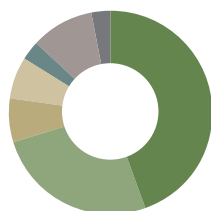
major contributing factor is our use of biomass fuels, which generate more ash than other fuels. Another factor is a reduction in the demand for residual ash for beneficial uses.

Hazardous wastes

Hazardous wastes from our production include used oils, solvents, paints, laboratory chemicals and batteries. In 2012 Stora Enso's production units created a total of 4 444 tonnes of hazardous waste, down from 7 777 tonnes in 2011.

We dispose of hazardous wastes by ensuring that they are safely processed at hazardous waste facilities or incinerators. We report on our disposal of hazardous wastes in line with definitions set out in respective national regulations. No significant spills, releases or leakages of hazardous wastes occurred in 2012.

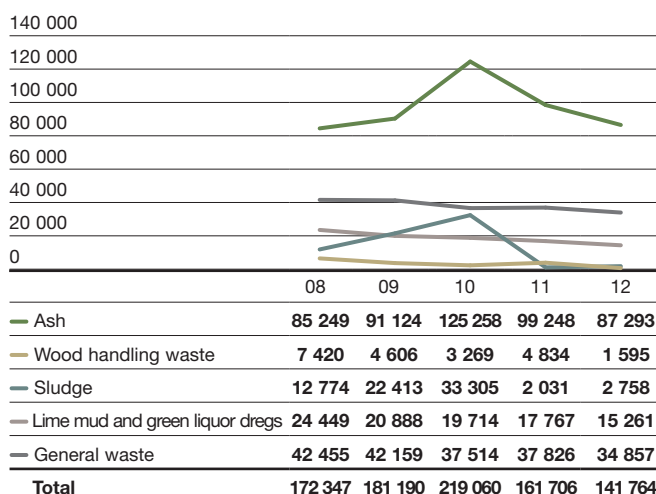
Utilisation of residual materials



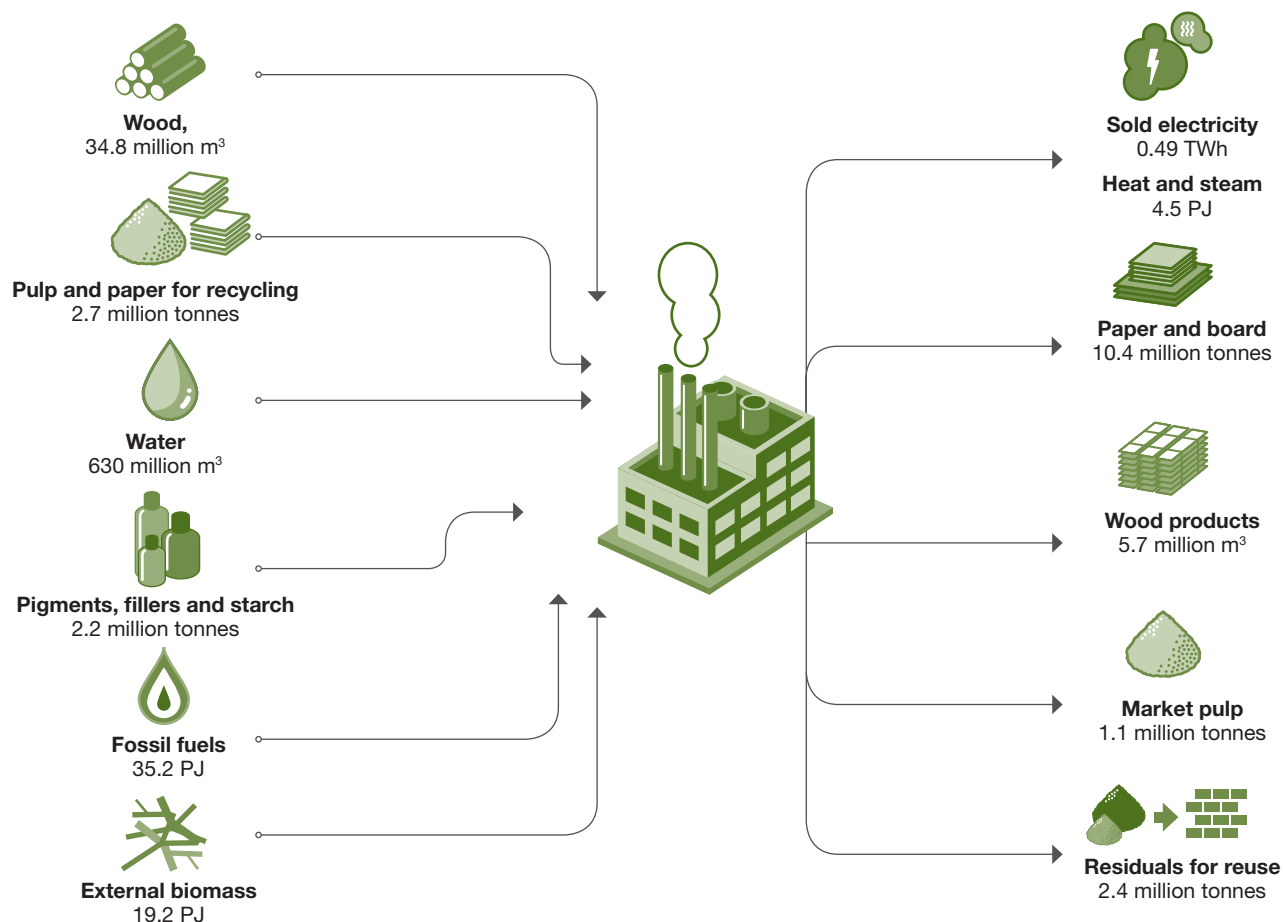
- Energy generation **45%**
- Pulp manufacturing **26%**
- Pellet and chipboard manufacturing **7%**
- Landscaping, landfill and road construction **7%**
- Agricultural use **3%**
- Other **10%**
- Waste to landfill **3%**

Group-level waste to landfill

tonnes, by category



Material use in 2012



Environmental costs, permits and incidents

We plan our environmental investments to increasingly apply the best available technologies for mitigating emissions to air and water, to enhance our resource efficiency, and to minimise the risk of accidental spills. In 2012, Stora Enso's environmental investments amounted to EUR 23 million (EUR 22 million in 2011).

Our environmental costs are related to administrative and operational costs. Environmental operational costs relate to issues including waste water treatment, air emission abatement measures, and waste management. Administrative costs relate to issues including environmental management, taxes, fees and permits. Stora Enso's net environmental costs in 2012, excluding interest but including depreciation, amounted to EUR 175 million (EUR 200 million). During 2012, the Group procedures for reporting environmental costs and provisions were harmonised across all reporting companies. As a result, the reported costs now also include payments related to provisions for remediation activities.

Figures for environmental provisions estimate the total sum of EUR 114 million (EUR 126 million) is needed to cover the Group's future environmental liabilities, such as removing mercury and other con-

taminants from closed mill sites. Whenever a mill is closed down, Stora Enso ensures that the mill site and surrounding area is properly cleaned and restored in accordance with local laws, regulations, and environmental permits. In 2012 we spent EUR 10 million on such remediation activities.

There are currently no active or pending legal claims concerning environmental issues that could have a material adverse effect on Stora Enso's financial position. For more information on our environmental liabilities see our Financial Report 2012 (Note 23): www.storaenso.com/annualreports.

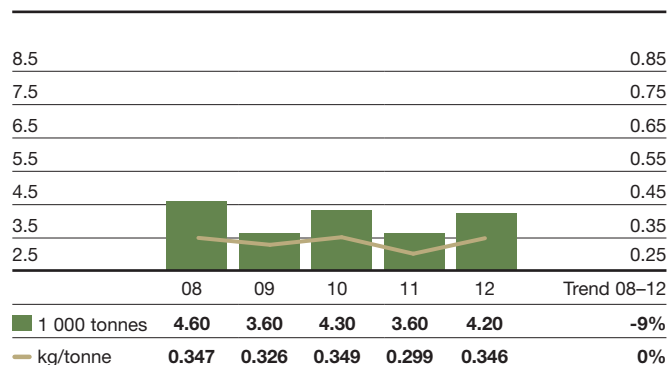
Complying with environmental permits

Each of our mills is regulated by environmental permits based on the applicable national, regional and local legislation. Our mills continuously monitor their own compliance with these permits, as do the appropriate environmental authorities. All of the environmental incidents at Stora Enso mills in 2012 that resulted in major permit violations, claims, compensations or significant media coverage are detailed on the following page.

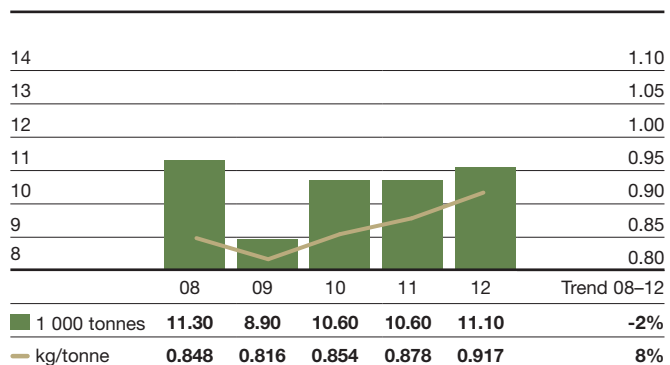
Environmental incidents 2012

Unit	Incident	Corrective actions
Falu Rödfärg, Sweden	Falu Rödfärg's permit for handling dangerous substances issued by the County Administrative Board was not renewed during 2011 in time for the deadline stipulated in the permit conditions. This issue was reported on 21 December 2011 by the Swedish Chemicals Agency to the Office of the Prosecutor-General.	The company paid a fine during 2012 and the case is now closed. The mill has obtained a new permit valid from 5 December 2011 to 31 December 2016.
Hylte Mill, Sweden	In August 2012 Hylte Mill informed the local authorities and media about discharges of plastic pollution into a recipient water body. The discharges occurred due to insufficient removal in the mill's de-inking and effluent treatment plants.	An action plan with measures to mitigate similar problems in future has been sent to the County Administrative Board (CAB). The mill is currently awaiting a response from the CAB.
Skutskär Mill, Sweden	The County Administrative Board in Uppsala issued a notification of a suspicion that the conditions of Skutskär Mill's noise permit were being exceeded, in conjunction with routine measurements carried out in December 2010. The notification was sent to the prosecution authorities in May 2012, and the mill is still waiting for further communications from the prosecution authorities on this matter.	Any necessary actions will be duly prepared when the mill obtains a response from the prosecution authorities.
Wood Supply Sweden	During felling work carried out in the Frykens district by Stora Enso Skog a vehicle damaged an ancient monument in an archaeological site. This accident occurred due to poor weather and soil conditions after a period of heavy rain and ground thaw.	Stora Enso Skog has taken measures to prevent similar damage in the future, including improved procedures related to felling carried out near archaeological sites, and enhanced training and information for planners and operators. Stora Enso Skog has also paid a fine to the local county administration, and this case is now closed.
Nymölla Mill, Sweden	Annual noise measurements revealed that a permit guideline value on noise levels was being exceeded at one of five measurement points in the vicinity of Nymölla Mill.	The mill has taken measures to reduce noise at one point source, and has also submitted a related action plan to the County Administrative Board.
Nebolchi Sawmill, Russia	The mill's sawdust and bark storage yard was not asphalted as had been required by the authorities.	Nebolchi Sawmill paid a fine of 1 495 EUR for storing sawdust and bark on a non-asphalted area. Suitable storage sites have now been taken into use.
Ostrołęka Mill, Poland	Temperature limits in wastewater were exceeded during the summer due to unusually high temperatures in Narew river water caused by warm weather conditions and cooling water discharged by an energy company located upstream.	The authorities did not issue any claim for compensation in this case.
Veitsiluoto Mill, Finland	Chemical Oxygen Demand (COD) and phosphorus levels in the mill's discharges exceeded limit values in February because of a fault in the power supply to the delignification stage of the pulp mill. Phosphorus discharges again exceeded the limit value in June and August because of problems in brown stock washing and the evaporation of black liquor at the pulp mill. In December the motor of one air compressor broke down, increasing the need for oxygen in the aeration stage of the wastewater treatment plant, and the limit value for phosphorus discharges was again exceeded.	The black liquor evaporation plant was cleaned during a maintenance stoppage in September and the operation of the mill's biological wastewater treatment plant was improved by optimising process conditions. The authorities have approved the actions taken.
Corenso Pori Coreboard Mill, Finland	Biological Oxygen Demand (BOD) levels in cooling water exceeded the permit limit on two occasions during 2012 due to malfunctions of water separators in a vacuum system.	The water pumps in question will be replaced during 2013. In the mean time, sealing waters from vacuum pumps will be channelled into process water. Opportunities to enhance starch retention will also be studied with the chemical supplier.
Anjalankoski Mill, Finland	The yearly average limit values for dioxins and furans for one of the mill's boilers were exceeded in 2012.	An action plan with the necessary corrective and preventive measures was duly prepared and accepted by the authorities.

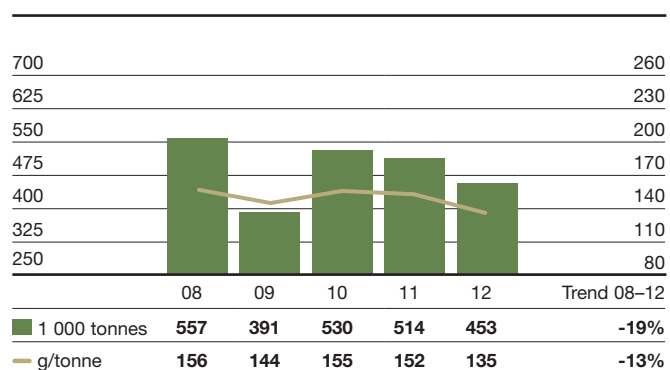
Total sulphur as SO₂¹⁾



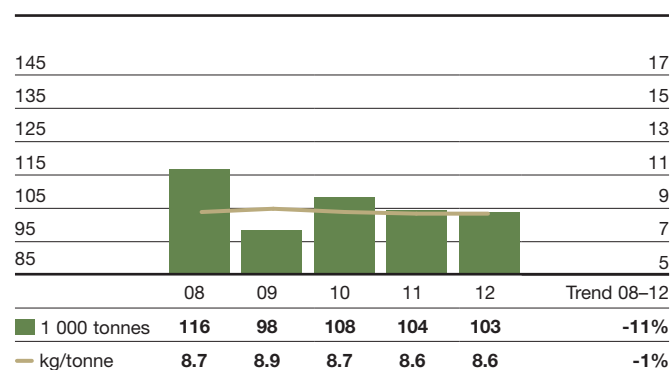
NO_x¹⁾



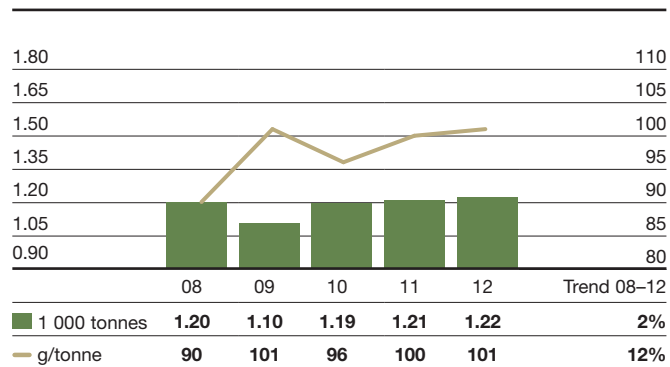
AOX²⁾



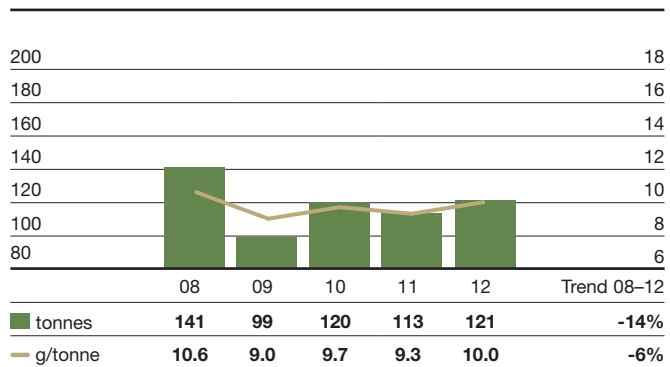
COD¹⁾



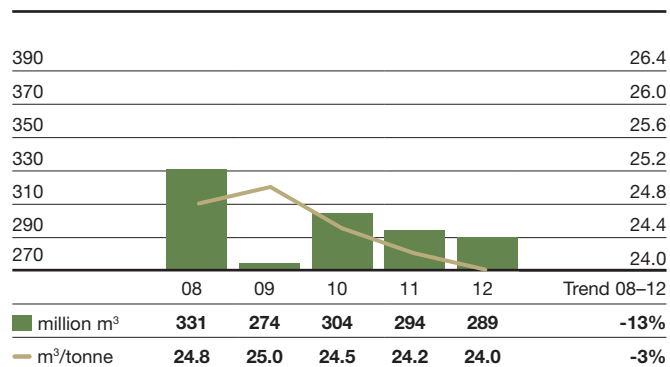
Nitrogen¹⁾



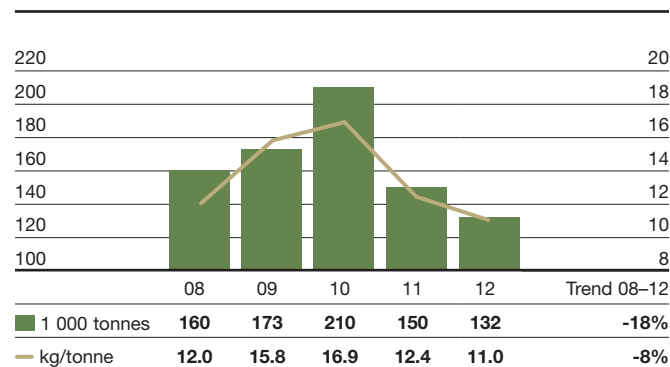
Phosphorus¹⁾



Process water discharge¹⁾



Waste to landfill¹⁾



Data by unit

Unit	Number of employees ^{a)}	Production ^{b)}	Products	Recovered fibre ^{c)}	Certificates [*]							Waste to Landfill [*]
					ISO 14001	ISO 9001	OHSAS 18001	ISO 22000	BRC/IOF/FDA	FSC® C-o-C	PEFC™ C-o-C	
Belgium												
Langerbrugge Mill	393	515 291	① ②	x	x	x	x			x	x	16 725
Brazil												
Arapoti Mill	336	166 298	②		x	x	x			x	x	2 400
China												
Dawang Mill	223	128 030	②	x	x	x	x			x	x	270
Dongguan Mill	363	6 644	④		x	x	x					45
Qianan Mill	1 595	31 190	④		x	x	x					466
Suzhou Mill	541	231 362	③		x	x	x			x	x	0
Estonia												
Tallinn Mill	36	4 458	⑥			x		x				17
Finland												
Anjalankoski Mill	366 ^{h)}	561 492	① ④		x	x	x	x ^{g)}		x	x	11 963
Enocell Mill	177 ^{h)}	418 892	⑤		x	x	x			x	x	98
Heinola Fluting Mill	196 ^{h)}	256 300	④		x	x	x	x		x	x	1 234
Heinola Mill	143	40 406	⑥		x	x	x	x				22
Imatra Mills	1226 ^{h)}	1 035 942	④ ⑤ ⑥		x	x	x	x	x	x	x	5 718
Kristiinankaupunki Mill	55	6 028	⑥		x	x	x	x				20
Lahti Mill	225	19 825	⑥		x	x	x	x				21
Oulu Mill	663 ^{h)}	1 161 047	③ ⑤		x	x	x			x	x	80
Ruovesi Mill	61	2 606	⑥		x	x	x	x				8
Sunila Mill	176	349 661	⑤		x	x	x			x	x	3 491
Varkaus Mill	274 ^{h)}	276 456	③ ⑤		x	x	x			x	x	1 142
Veitsiluoto Mill	791 ^{h)}	844 058	② ③ ⑤		x	x	x			x	x	2 981
France												
Corbehem Mill	346	263 377	②		x	x	x			x	x	1 606
Germany												
Kabel Mill	590	418 781	②		x	x	x			x	x	102
Maxau Mill	467	481 419	②	x	x	x	x			x	x	4 266
Sachsen Mill	302	285 975	①	x	x	x	x			x	x	164
Uetersen Mill	417	176 134	③		x	x	x			x	x	
Hungary												
Páty Mill ^{m)}	49	9 652	⑥		m)	m)	m)					34
India												
Chennai Mill	503	17 753	⑥			x						45
Latvia												
Riga Mill	133	44 907	⑥			x		x				49
Lithuania												
Kaunas Mill	45	6 151	⑥			x		x				10
Poland												
Łódź Mill	235	55 103	⑥		x	x	x			x	x	109
Mosina Mill	99	7 940	⑥		x	x	x			x	x	61
Ostrołęka Mill	271	326 585	④ ⑥	x	x	x	x			x ^{l)}	x	6 555
Tychy Mill	148	49 868	⑥		x	x	x			x	x	25
Russia												
Arzamas Mill	196	42 093	⑥			x		x				254
Balabanovo Mill	361	49 627	⑥			x		x				367
Lukhovitsy Mill	136	28 460	⑥			x		x				198
Spain												
Barcelona Mill	260	164 565	④	x	x	x	x	x		x		14 344
Sweden												
Falu Rödfärg	j)	520	⑧		x	x						
Fors Mill	693	355 634	④		x	x	x	x		x	x	69
Hylte Mill	792	800 651	①	x	x	x	x			x	x	47 382
Jönköping Mill	212	23 426	⑥		x	x						3
Kvarnsveden Mill	831	881 576	① ②		x	x	x			x	x	118
Nymölla Mill	672	464 497	③ ⑤		x	x	x			x	x	49
Skene Mill	166	39 243	⑥		x	x						30
Skoghall Mill	823	751 270	④		x	x	x	x		x	x	3 994
Skoghall Mill Forshaga	102	107 561	⑥		x	x	x	x	x	x	x	2
Skutskär Mill	379	523 429	⑤		x	x	x			x	x	353
Vikingsstad Mill	64	18 482	⑥		x	x						9
Corenso												
Corenso Finland (Pori) Coreboard Mill	103	114 668	⑥	x	x	x	x					44
Corenso France (Saint Seurin sur l'Isle) Coreboard Mill	87	80 393	⑥	x	x	x	x					3 479
Corenso North America (Wisconsin Rapids) Coreboard Mill	64	77 983	⑥	x	x	x	x					3 663
Corenso, core factories	721	192 004	⑥		k)	k)	k)	k)	k)	k)	k)	204
Stora Enso Building & Living												
Sawmills ^{l)}	4 005	5 685 516	⑦		n)	n)	n)	n)	n)	n)	n)	7 477
Total pulp, paper, board and converted product		12 915 193										134 289
Grand Total												141 766

a) Yearly average. Source: financial accounting database.

b) Sales production. Sawn timber is reported in m³, other products in metric tonnes.

c) Mills using recovered fibre as raw material (fully or partly).

d) Reported on the basis of country-specific definitions applied in national regulations.

e) Total sulphur is reported as sulphur dioxide (SO₂) equivalent, but includes all sulphurous compounds.

f) All CO₂ figures are calculated using the WRI/WBCSD Greenhouse Gas Protocol. Direct emissions from internal transport are excluded.

g) Indirect emissions from purchased heat and electricity.

h) This figure does not include service company personnel.

i) Covers kraft paper production.

j) Does not have its own personnel, but hires personnel from Stora Enso AB.

k) See www.storaenso.com/certificates.

l) Includes all Building and Living units, also Hartola and Pälkäne units.

m) Unit closed Q3 /2012.

n) See the separate table for Building and Living Units.

o) Covers consumer board production at Ingeröis Mill.

	Hazardous Waste ^{d) *}	SO ₂ *	NO _x as NO ₂ *	Direct CO ₂ fossil ^{f) *}	Indirect CO ₂ ^{g) *}	Direct CO ₂ biomass ^{f) *}	COD *	AOX *	Phosphorous *	Nitrogen *	Process water discharge **
	47	15	254	77 011	64 515	472 569	949	0.8	5.8	11.5	6 456
		0	124	16 313	25 462	90 938	396				2 720
	2	0		0	119 261		89	16.7	0.7	1.4	1 320
	73	62	554	145	2 487		0	0.0	0.0	0.0	0
	5				26 159						13
	180	413	402	143 148	91 273		64		0.4	5.6	1 489
					728						2
	85	13	353	172 411	154 624	123 221	2 293		2.7	143.1	9 543
	61	147	803	59 182	24 312	1 293 612	8 125	64.3	2.4	44.5	23 263
	106	428	415	181 090	10 993	183 705	1 223		1.9	9.6	3 669
	8	0	0	0	1 696						251
	353	191	1 927	162 477	88 619	2 445 848	17 883	175.0	10.7	173.7	59 602
				136	110						1
	108				2 855						15
	127	360	1 260	267 607	55 136	1 296 389	8 875	56.0	9.5	78.5	17 481
	12	3	1	423	225						2
	64	55	677	46 025		779 116	6 326	56.4	8.5	31.0	15 346
	757	206	729	61 935	14 747	678 313	2 431	13.5	6.0	58.3	11 695
	22	777	1 183	344 773	70 032	1 135 588	15 427	37.3	16.9	177.0	10 801
	67	1	36	51 895	20 010		923	0.6	2.9		5 780
	230		15	16 588	353 350		842	0.2	2.6	14.0	5 532
	649	10	311	107 243	190 285	327 490	1 583	0.6	1.9	7.2	5 594
	93	3	155	164 295	3 423	52 612	634	0.5	1.1	6.5	3 519
	31		26	76 204	46 111		46	0.8	0.0	0.0	1 114
				1 288	1 764						3
	10	316	6	1 354	774	4 961	1				0
				1.98	4 091						10
					1 582						3
	3	0	3	5 518	6 003						18
	11			409	1 856						3
	16	63	8	168 600	112 118	283 528	790		1.4	16.1	5 672
	4			2 366	3 552						9
		1	3	3 461	13 100						24
		1	3	4 593	20 342						33
		0	3	2 281	11 843						18
	52		103	195 685	32 019		214				844
	10	0		561	8						
	84	1	109	2 301	14 908	243 946	1 726	1.5	1.3	26.1	4 060
	124	1	182	17 985	43 914	301 497	1 543	0.3	3.6	33.0	8 095
	18	1		793	125						
	307	43	146	27 756	36 654	322 062	3 203	2.2	2.1	83.5	12 677
	63	586	606	-20 636	13 345	752 579	10 901	0.7	7.7	65.9	27 723
	2	0		19	62						
	166	141	450	65 126	28 072	903 602	8 665		7.2	90.8	23 652
	12			29	102						
	8	709	778	9 712	245	1 624 313	6 940	49.3	23.2	125.1	19 191
		2		1 178	14						
	41	1	1	489	27 220		343		0.1	14.1	627
	3			17 823	1 327		215				492
					41 826		419				892
	10			3 119	15 492						8
	421	30	407	8 369	166 023	322 016	157		5.0		230
	4 024	4 550	11 626	2 460 713	1 798 771	13 315 889	103 069	477	121	1 217	289 262
	4 445	4 580	12 033	2 469 082	1 964 794	13 637 905	103 226	477	126	1 217	289 492

Products ① newsprint ② magazine paper ③ fine paper ④ board and packaging paper ⑤ market pulp
 ⑥ converted products (e.g. cores, corrugated board) ⑦ wood products ⑧ red paint pigment

* tonnes ** 1 000m³ * Some of the certificates follow the old BA structure.

The figure 0 (zero) in the table signifies that such discharges, emissions or wastes do not occur or only occur below detection limits.
 Where cells are left blank this signifies that the parameter is considered as not relevant for that unit.

Unit	Capacities 2012					Certificates						Waste to Landfill*	Hazardous Waste ^{c)} *	SO ₂ ^{d)} *	NO _x as NO ₂	CO ₂ direct fossil ^{e)} *	CO ₂ , indirect fossil ^{f)} *	CO ₂ biomass*
	Number of employees ^{a)}	Sawn Timber Production**	Further Processing**	CLT ^{b)} **	Pellets*	ISO 14001	ISO 9001	OHSAS	AUVA	FSC® C-o-C	PEFC™ C-o-C							
Austria																		
Bad St. Leonhard Sawmill	248 ^{g)}	390	290	60		x		x	x	x	22	42		3		0		
Brand Sawmill	226	470	290			x		x	x	x	24	31		6		0		
Sollenau Sawmill	172	300	270			x	x	x	x	x	11	37		5		0		
Ybbs Sawmill	333 ^{g)}	590	420	60		x		x	x	x	47	62		7		0		
Czech Republic																		
Plana Sawmill	232	340	270			x	x			x	254	47	1	72		7 730	20 545	
Zdirec Sawmill	303	550	270			x	x	x		x	699	26	0	43		12 047	27 236	
Estonia																		
Imavere Sawmill	333	400	182		100	x	x	x		x	2 085	42	5	47		49 478	59 693	
Näpi Sawmill	124	75	130			x	x	x		x	137	2	0	11		10 953	10 474	
Finland																		
Honkalahti Sawmill	152	310	90			x	x	x		x	1 199	1		10	1 198	5 790	51 471	
Kitee Sawmill	92	260	120			x	x	x		x	346	14		33		3 698	44 566	
Uimaharju Sawmill	92	280	35			x	x	x		x	57			2	2 307	2 235	935	
Varkaus Sawmill	68	260	100			x	x	x		x	7	2	2	17		2 199		
Germany																		
Pfarrkirchen Unit	110	0	160			x	x	x		x	43	2	2	16		0	7 463	
Latvia																		
Launkalne Sawmill	108	215	0			x	x	x		x	133	4	1	10		9 798	16 093	
Lithuania																		
Alytus Sawmill	188	165	90			x	x	x		x	1 364	19	0	12		11 195	17	
The Netherlands																		
Amsterdam Planing Mill	51	0	110			x	x	x		x	18	1				1 131		
Poland																		
Murow Sawmill	180	70	20							x	42	5	1	6		2 916	2 908	
Russia																		
Impilahti Sawmill	123	120	0		25	x	x	x		x	156		0	8		11 480	7 011	
Nebolchi Sawmill	173	220	30		25			x		x	814	0	0	44	187	27 398	21 490	
Sweden																		
Ala Sawmill	185	405	40			x		x		x		50		39		167	52 114	
Gruvön Sawmill	98	420	150		100	x		x	x	x		18	2		4 677	5 273		
Grand Total																		
		5 840	3 067	120	250						7 458	405	14	391	8 369	163 488	322 016	
Veitsiluoto Sawmill ^{h)}	20		0			x	x	x		x	19	0	16	16		2 535		
Hartola Unit ⁱ⁾	28																	
Pälkäne Unit ⁱ⁾	41									x	x							

a) Yearly average. Source: financial accounting database.

b) Cross-laminated timber.

c) Reported on the basis of country-specific definitions applied in national regulations.

d) Total sulphur is reported as sulphur dioxide (SO₂) equivalent, but includes all sulphurous compounds.

e) All CO₂ figures are calculated using the WRI/WBCSD Greenhouse Gas Protocol. Direct emissions from internal transport are excluded.

f) Indirect emissions from purchased heat and electricity.

g) Including Cross-laminated timber (CLT)

h) Also includes Veitsiluoto Sawmill, Finland with its sawing capacity of 200 000 m³, are reported in data for the Printing and Reading Business Area.

i) Elementing capacity at Pälkäne (120 000 m²) and module construction capacity at Hartola (1 000 modules) are not included in the total figures.

* tonnes ** 1 000m³

The figure 0 (zero) in the table signifies that such discharges, emissions or wastes do not occur or only occur below detection limits. Where cells are left blank this signifies that the parameter is considered as not relevant for that unit.

External recognition

Carbon Disclosure Leadership Index

CARBON DISCLOSURE PROJECT

In 2012 Stora Enso was included in the Carbon Disclosure Project's (CDP) Nordic Carbon Disclosure Leadership Index (CDLI) for our reporting on carbon emissions. The Carbon Disclosure Project (CDP) is an independent non-profit organisation backed by over 655 institutional investors with a combined USD 78 trillion of assets under management. It gathers information on corporations' greenhouse gas emissions, and the risks and opportunities they face in relation to climate change. It also sets standards for carbon disclosure methodology and processes.

World's Most Ethical Companies



Stora Enso was named by the Ethisphere Institute as one of the World's Most Ethical Companies for 2012. This institute is dedicated to the study, creation and sharing of best practices in ethics, compliance, and corporate governance.

FTSE4Good Index



Stora Enso was again included in the FTSE4Good Index Series, where we have been listed since 2001. The FTSE4Good Index Series has been designed to measure the performance of companies that meet globally recognised corporate responsibility standards, and to help investors identify such companies. The index focuses on environmental management, human and labour rights, supply chain labour standards and efforts to counter bribery.

ECPI Ethical Indices



In 2012 Stora Enso was included as a constituent of the ECPI Ethical index. ECPI is dedicated to sustainability research, rating and indices. ECPI has been integrating non-traditional risk factor research (environmental, social and governance) with mainstream quantitative financial analysis since 1997.

Supporting the UN Global Compact



Stora Enso supports the ten principles of the UN Global Compact, a United Nations initiative to encourage businesses worldwide to embed responsibility into business operations. We respect and promote these principles throughout our operations. The table on right lists the ten principles of the UN Global Compact and specifies where information on how we address these issues can be found in this report.

The CEO Water Mandate

Stora Enso is a signatory to the UN Global Compact's CEO Water Mandate, a public-private initiative designed to assist companies in the development, implementation and disclosure of water sustainability policies and practices. The table below lists the six core elements of the CEO Water Mandate and specifies where information on how we address these issues can be found in this report.

Element	Read more
Direct Operations	20–23, 36, 50–51
Supply Chain and Watershed Management	36, 41–42, 50–51
Collective Action	50–51
Public Policy	50–51
Community Engagement	20–23, 50–51
Transparency	50–51, 55

UN Global Compact principles

Human Rights	Read more
Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights.	15 and 29
Principle 2: Businesses should make sure that they are not complicit in human rights abuses.	15 and 29
Labour Standards	
Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.	15, 24–27 and 29
Principle 4: Businesses should uphold the elimination of all forms of forced and compulsory labour.	18 and 29
Principle 5: Businesses should uphold the effective abolition of child labour.	15 and 29
Principle 6: Businesses should uphold the elimination of discrimination in respect of employment and occupation.	15, 24–27 and 29
Environment	
Principle 7: Businesses should support a precautionary approach to environmental challenges.	45–53
Principle 8: Businesses should undertake initiatives to promote greater environmental responsibility.	31–32, 36–41 and 45–54
Principle 9: Businesses should encourage the development and diffusion of environmentally friendly technologies.	31–32 and 45–53
Anti-corruption	
Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.	15

GRI index

This report follows the Global Reporting Initiative's (GRI) G3.1 guidelines and corresponds to the A+ level in the GRI's reporting standards. The index below shows our management approach with reference to responsibility aspects and where the GRI indicators are addressed.

GR – Stora Enso Global Responsibility Report 2012
FR – Stora Enso Financial Report 2012

- Fully reported
- Partially reported

Profile	Location	Level
1. STRATEGY AND ANALYSIS		
1.1 Statement from the CEO	GR 4–5	●
1.2 Description of key impacts, risks and opportunities	GR 4–7, 14, 17–18, FR Report of the Board of Directors	●
2. ORGANISATIONAL PROFILE		
2.1 Name of the organisation	GR 2	●
2.2 Primary brands, products and/or services	GR 2–3	●
2.3 Operational structure of the organisation	GR 2, FR Notes 3 and 31	●
2.4 Location of headquarters	GR back cover	●
2.5 Countries in which the organisation's operations are located	GR 2–3, 6–7	●
2.6 Nature of ownership and legal form	GR 2	●
2.7 Markets served	GR 2–3, 18, 31–32, FR Report of the Board of Directors	●
2.8 Scale of the reporting organisation	GR 2–3, 17, 56–58	●
2.9 Significant changes during the reporting period	GR 24–27, FR Note 4	●
2.10 Awards received during the reporting period	GR 59	●
3. REPORT PARAMETERS		
Report profile		
3.1 Reporting period	1 January 2012 – 31 December 2012	●
3.2 Date of most recent previous report	20 February 2012	●
3.3 Reporting cycle	Annual	●
3.4 Contact point for questions	GR back cover	●
Report scope and boundary		
3.5 Process for defining report content	GR 8, 11–13	●
3.6 Boundary of the report	GR 8	●
3.7 Specific limitations on the scope or boundary	GR 8. Consolidated environmental performance data covers all production units, unless otherwise is stated in connection to the respective environmental indicator. Sales offices and staff functions are excluded from environmental performance data. In the OHS data, some smaller staff functions and sales offices are not included. Numbers of employees are derived from financial accounting, and cover all employees on the payroll during the year. Other Human Resources (HR) data is derived from separately collected HR statistics, and covers permanent and temporary employees as of 31 December 2012.	●
3.8 Basis for reporting on joint ventures, subsidiaries etc.	GR 8, FR Note 32	●
3.9 Data measurement techniques	A description of our data measurement techniques is available at www.storaenso.com/annualreports .	●
3.10 Explanation of the effect of any re-statements of information	No major re-statements. Some minor re-statements due to corrections made in calculations, of which the most significant are for the Group-level carbon footprint, due to the extended coverage of Scope 3 GHG emissions. All re-statements are reported with their respective indicators.	●
3.11 Significant changes in the scope, boundary, or measurement methods applied	GR 24–27, 45–47, FR Note 4	●
3.12 Table identifying the location of the Standard Disclosures in the report.	GR 60–65	●
3.13 Policy and current practice regarding external assurance for this report	GR 8, 68	●

Profile	Location	Level
4. GOVERNANCE, COMMITMENTS AND ENGAGEMENT		
Governance		
4.1 Governance structure	FR Corporate Governance in Stora Enso	●
4.2 Position of the chair of the board of directors	FR Board of Directors	●
4.3 Independent, non-executive directors on the board of directors	FR Corporate Governance in Stora Enso	●
4.4 Mechanisms for shareholders and employees to provide recommendations to the board of directors	FR Information for Shareholders. All shareholders have the right to make proposals to the shareholder meeting agenda within authority of the Annual General Meeting (AGM). All shareholders also have the right to present questions to the Board of Directors (BOD) and executive management at the AGM. There is no employee representation at board-level. However, the employee representatives meet the chairman and the vice chairman of the BOD and the CEO in connection with board meetings on a regular basis.	●
4.5 Executive compensation	FR Note 7	●
4.6 Avoiding conflicts of interest	FR Corporate Governance in Stora Enso	●
4.7 Determining the qualifications and expertise of board members	FR Corporate Governance in Stora Enso. The company has a nomination board assigned to propose new board members. When preparing proposals the nomination board evaluates the specific needs of the Board of Directors, including also possible needs for sustainability related competencies, and takes those specific qualifications into account in their proposals.	●
4.8 Mission or values statements, codes of conduct, sustainability principles	GR 4–5, 10, 15	●
4.9 Board-level procedures overseeing sustainability performance	GR 10, FR Corporate Governance in Stora Enso	●
4.10 Evaluating board performance with respect to sustainability performance	GR 10, FR Corporate Governance in Stora Enso. The evaluation of the board's performance is generic in its nature and focuses mostly on working methods and not on any specific area in particular. However, if concerns relating to sustainability issues arise, the evaluation helps the board to identify those issues and bring them to the agenda.	●
Commitments to external initiatives		
4.11 Addressing the precautionary approach or principle	GR 11–12, 17–18, 19–23, FR Report of the Board of Directors	●
4.12 External charters, principles or initiatives endorsed	GR 12, 31–32, 36–39, 40–41	●
4.13 Memberships in associations	GR 11–12	●
4.14 List of stakeholder groups engaged	GR 11–12	●
4.15 Identification and selection of stakeholders	GR 11–12	●
4.16 Approaches to stakeholder engagement	GR 11–12, 19–23	●
4.17 Responding to key topics resulting from stakeholder engagements	GR 10, 11–13	●
5. MANAGEMENT APPROACH AND PERFORMANCE INDICATORS		
ECONOMIC		
Management approach to economic responsibility		
Economic performance; Market presence; indirect economic impacts	GR 4–5, 17–23. A summary of the factors driving Stora Enso's strategic management approach to economic performance and key responsibility issues is given in the article "On a journey into the future" of Stora Enso Rethink 2012, available at www.storaenso.com/annualreports .	
Goals, performance and contextual information	Detailed information on Stora Enso's financial performance and its context can be found in Report of the Board of Directors, which is part of Stora Enso's Financial Report 2012. Stora Enso's key financial targets can be found on our website.	
Policies and links		
Stora Enso Rethink 2012, Stora Enso Financial Report 2012	www.storaenso.com/annualreports	
Key financial targets	www.storaenso.com/about-us/strategy/financial_targets	
Economic performance		
EC1 Direct economic value generated and distributed	GR 17–18	●
EC2 Risks and opportunities due to climate change	GR 45, FR Report of the Board of Directors (Climate change risks)	○
EC3 Coverage of defined benefit plan obligations	FR Note 21	●
EC4 Significant financial assistance from government	FR Stora Enso in Capital Markets, Note 5, Note 9	●
Market presence		
EC5 Entry level wage compared to minimum wage	Not material	
EC6 Spending on locally-based suppliers	GR 17–23	●
EC7 Local hiring	GR 24–27	●
Indirect economic impacts		
EC8 Infrastructure investments provided for public benefit	GR 19–23	●
EC9 Significant indirect economic impacts	GR 17–23	○

Profile	Location	Level
ENVIRONMENT		
Management approach to environmental responsibility		
Materials; Energy; Water; Biodiversity; Emissions, Effluents and Waste; Products and Services; Compliance; Transport; Overall	Our management approach to environmental issues related to our mills and their logistics is described on pages 45–53 of this report. Details of sustainability issues related to our innovation and product development work are presented on pages 31–33. For information about our work with Paper for Recycling, see page 40; and for our approach on forestry and biodiversity, see pages 36–39.	
Goals, performance and contextual information	GR 14, 17–18, 36–41, 45–58	
Organisational responsibility	GR 10. The Heads of Business Areas and Country Managers are responsible for environmental and energy issues in the Group Executive Team.	
Training and awareness	GR 32, 46	
Monitoring and follow-up	GR 56–58 (certifications). Environmental performance is reported quarterly to the Group Executive Team.	
Policies and links		
Stora Enso's Climate Change Statement, Energy Guidelines, Water use Statement, Wood and Fibre Sourcing, and Land Management Policy, Stora Enso Code of Conduct	www.storaenso.com/sustainabilitypolicies	
Environmental management systems	www.storaenso.com/certificates	
Materials		
EN1 Materials used by weight or volume	GR 53	●
EN2 Recycled materials used	GR 40–41, 53	●
Energy		
EN3 Direct energy consumption	GR 48–49	●
EN4 Indirect energy consumption	GR 48–49	●
EN5 Energy saved through conservation and efficiency improvements	GR 48–49	●
EN6 Initiatives to provide energy-efficient or renewable energy based products	GR 48–49	●
EN7 Initiatives to reduce indirect energy consumption	GR 45–50	●
Water		
EN8 Total water withdrawal	GR 51	●
EN9 Water sources significantly affected by withdrawal of water	GR 66	●
EN10 Total recycling and reuse of water	GR 51	○
Biodiversity		
EN11 Location and size of land holdings in biodiversity-rich habitats	GR 37–38	●
EN12 Significant impacts on biodiversity	GR 19–23, 36–39	●
EN13 Habitats protected or restored	GR 36–39	○
EN14 Managing impacts on biodiversity	GR 36–39	●
EN15 Number of vulnerable species affected by operations	GR 36–39	○
Emissions, effluents and waste		
EN16 Total direct and indirect greenhouse gas emissions	GR 45–47	●
EN17 Other relevant indirect greenhouse gas emissions	GR 45–47	●
EN18 Initiatives to reduce greenhouse gas emissions	GR 45–47, 50	●
EN19 Emissions of ozone-depleting substances by weight	According to the EU Parliament Regulation 2037/2000 and Council Directive 1994/60 (the Montreal Protocol) the production and marketing of a number of ozone-depleting substances are prohibited or strictly restricted. None of these substances are used in Stora Enso's manufacturing process.	●
EN20 NO _x , SO _x and other significant air emissions	GR 52–53, 55	●
EN21 Total water discharge	GR 50–51, 55–58	●
EN22 Total amount of waste	GR 52–53, 55–58	●
EN23 Significant spills	GR 54	●
EN24 Transported, imported, exported or treated hazardous waste	GR 52–53	○
EN25 Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff	GR 66	●
Products and services		
EN26 Mitigating environmental impacts of products and services	GR 31–32	●
EN27 Percentage of products sold and their packaging materials that are reclaimed by category	GR 31–32, 40–41. The packaging materials we use to protect our pulp, paper and paper board deliveries during their transportation are mainly of our own fibre-based products, and are fully recyclable. For our solid wood products we also use plastic wrapping. In 2012, we conducted a small-scale project aiming to minimise the use of packaging materials for our solid wood products. This project will continue in 2013 with the aim to reduce the usage of plastic packaging and avoid material waste whenever possible. At the moment no quantitative data is available on these packaging materials.	●

Profile	Location	Level
Compliance		
EN28 Fines and sanctions for non-compliance with environmental regulations	GR 53–54	●
Transport		
EN29 Environmental impacts of transportation	GR 45–47, 50	○
Overall		
EN30 Environmental expenditures	GR 53	●
LABOUR PRACTICES AND DECENT WORK		
Management approach to labour practices		
Employment; Labor/management relations; Occupational health and safety; Training and education; Diversity and equal opportunity; Equal remuneration for women and men	Our management approach to labour practices and decent work, including human resources, and health and safety, is described on pages 17–29 of this report. Our management approach to Employee Variable Compensation can be found in Stora Enso's Financial Report 2012 (Note 22).	
Goals, performance and contextual information	GR 14 and 24–28	
Organisational responsibility	GR 10. The Head of Human Resources and Country Managers are the Group Executive Team members responsible for labour practices.	
Training and awareness	GR 15, 24–28. Labour practices including health and safety, diversity and equal opportunity as well as labour rights are part of the Code of Conduct training.	
Monitoring and follow-up	GR 24–28, 56–58 (certifications). Employment figures, labour and management relations, training, diversity and equal opportunity are all monitored on an annual basis. Health and safety performance is reported on a monthly basis to mill management and the Group Executive Team.	
Policies and links		
Stora Enso's Social Responsibility Guidelines, Health and Safety Policy, Human Rights Statement, Supplier Sustainability Requirements, Stora Enso Code of Conduct	www.storaenso.com/sustainabilitypolicies	
Certifications by unit	www.storaenso.com/certificates	
Employment		
LA1 Breakdown of workforce	GR 23–24	●
LA2 Breakdown of employee turnover	GR 24–26	○
LA3 Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations.	Not material	
LA15 Return to work and retention rates after parental leave, by gender.	Not material	
Labour/management relations		
LA4 Coverage of collective bargaining agreements	GR 24–27	●
LA5 Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements.	GR 24–27	●
Occupational health and safety		
LA6 Percentage of total workforce represented in formal joint management–worker health and safety committees that help monitor and advise on occupational health and safety programs	GR 27–28	●
LA7 Injuries, lost days, absentee rates and fatalities	GR 27–28	●
LA8 Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases	GR 27–28	●
LA9 Health and safety topics covered in formal agreements with trade unions	Not material	
Training and education		
LA10 Average hours of training per year per employee by gender, and by employee category	GR 24–27	●
LA11 Programmes for skills management and lifelong learning to support continued employability and manage career endings	GR 24–27	○
LA12 Employees receiving performance and career development reviews	GR 24–27	●
Diversity and equal opportunity		
LA13 Composition of governance bodies and employee breakdown	GR 24–27, FR Report of of the Board of Directors. The collection of information on minority group membership not applicable.	
Equal remuneration for women and men		
LA14 Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation	Not material	

Profile	Location	Level
HUMAN RIGHTS		
Management approach to human rights		
Investment and procurement practices; Non-discrimination; Freedom of association and collective bargaining; Child labor; Prevention of forced and compulsory labor; Security practices; Indigenous rights; Assessment; Remediation	Our management approach concerning respect and support for human rights is described in this report on page 29. Our approach to these issues within our supply network is featured on pages 36 and 41–42.	
Goals, performance and contextual information	GR 14, 15, 24–27, 29, 36, 41–42	
Organisational responsibility	GR 10. The CEO has responsibility within the Group Executive Team for all human rights issues.	
Training and awareness	GR 15, 29. Human Rights issues form part of our Code of Conduct training.	
Monitoring and follow-up	GR 15, 29, 36, 41–42	
Policies and links		
Stora Enso's Human Rights Statement, Supplier Sustainability Requirements, Social Responsibility Guidelines, Wood and Fibre Sourcing, and Land Management Policy, Stora Enso Code of Conduct	www.storaenso.com/sustainabilitypolicies	
Investment and procurement practices		
HR1 Human rights screening or clauses included in significant investment agreements	GR 29	●
HR2 Screening suppliers and contractors on human rights and actions taken	GR 35, 41–42	●
HR3 Employee training on human rights	GR 15, 29. Our Code of Conduct training takes approximately 45 minutes to complete.	●
Non-discrimination		
HR4 Actions taken in incidents of discrimination	GR 15, 29	●
Freedom of association and collective bargaining		
HR5 Supporting right to freedom of association and collective bargaining in risk areas	GR 24–27, 41–42	●
Child labour		
HR6 Measures taken to eliminate child labour in risk areas	GR 15, 29	●
Forced and compulsory labour		
HR7 Measures taken to eliminate forced and compulsory labour in risk areas	GR 15, 29	●
Security practices		
HR8 Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations	Data not available	
Indigenous rights		
HR9 Violations of indigenous people's rights and actions taken	GR 29	●
Assessment		
HR10 Operations subject to human rights reviews and/or assessments	GR 29	●
Remediation		
HR11 Human rights related grievances	GR 15	●
SOCIETY		
Management approach to society		
Local communities; Corruption; Public policy; Anti-competitive behavior; Compliance	GR 15, 17–18, 19–23	
Goals, performance and contextual information	GR 14, 15, 17–18, 19–23	
Organisational responsibility	GR 10. Within the Group Executive Team the CEO is responsible for community related issues and the Head of Global Ethics and Compliance is responsible for all other social issues.	
Training and awareness	GR 15, 19–23	
Monitoring and follow-up	GR 15, 19–23	
Policies and links		
Stora Enso's Business Practice Policy, Wood and Fibre Sourcing, and Land Management Policy, Social Responsibility Guidelines, Stora Enso Code of Conduct	www.storaenso.com/sustainabilitypolicies	

Profile	Location	Level
Community		
SO1 Management of impacts on communities in areas affected by activities	GR 17–18	●
SO9 Operations with significant negative impacts on local communities	GR 17–23	●
SO10 Prevention and mitigation measures for negative impacts on local communities	GR 17–23	●
Corruption		
SO2 Percentage and total number of business units analyzed for risks related to corruption.	GR 15. Our risk assessment related to corruption covers all our units.	●
SO3 Anti-corruption training	GR 15	●
SO4 Actions taken in response to corruption incidents	GR 15	●
Public policy		
SO5 Public policy and lobbying	GR 31–32, 40–41, 45–47, 50	●
SO6 Contributions to political parties, politicians and institutions	Stora Enso has not paid any political contributions since 2006.	●
Anti-competitive behaviour		
SO7 Anti-trust and monopoly court cases	FR Report of the Board of Directors, Note 30	●
Compliance		
SO8 Fines and sanctions for non-compliance with laws and regulations	Stora Enso has not been subject to any significant fines or significant monetary sanctions due to non-compliance with business practice related laws and regulation during 2012.	●
PRODUCT RESPONSIBILITY		
Management approach to product responsibility		
Customer health and safety; Product and service labelling; Marketing communications; Customer privacy; Compliance	GR 15, 31–33	
Goals, performance and contextual information	GR 15, 31–33	
Organisational responsibility	GR 10, 32–33. The Heads of Business Areas are responsible for customer health and safety and product labelling issues related to their respective products. The Head of Global Identity has responsibility within the Group Executive Team for issues related to marketing communications.	
Training and awareness	GR 15, 32–33	
Monitoring and follow-up	GR 15, 33, 56–58 (certifications)	
Policies and links		
Stora Enso's Business Practice Policy, Stora Enso Code of Conduct	www.storaenso.com/sustainabilitypolicies	
Information on our products and their sustainability performance	www.storaenso.com/products , www.storaenso.com/responsibility	
Certifications by unit	www.storaenso.com/certificates	
Customer health and safety		
PR1 Assessment of health and safety impacts of products	GR 33	●
PR2 Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes	No incidents of non-compliance during 2012	●
Product and service labelling		
PR3 Product information required by procedures	GR 31–33	●
PR4 Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes	No incidents of non-compliance during 2012	●
PR5 Practices related to customer satisfaction	GR 31–33	○
Marketing communications		
PR6 Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship	GR 15. Our Code of Conduct and Business Practice Policy guide our employees in relevant positions with regard to ethical standards on marketing communications.	●
PR7 Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes	No incidents of non-compliance during 2012	●
Non-discrimination		
PR8 Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	Not material	
Compliance		
PR9 Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	No incidents of non-compliance during 2012	●

Water sources significantly affected (EN9)

Mill	Water source	Average annual withdrawals amount to 5% or more of the annual average volume	Recognised by the authorities as a sensitive area	Volume of water source (thousand cubic metres)	Biodiversity value and protection status	Value / Importance to local communities
Nymölla Mill, Sweden	Lake Ivö	Yes	Yes	200 340	Natura 2000 site, due to rare fish species.	Low / The mill regulates water levels in the lake in accordance with legal obligations. No other measures required by the local authorities.
Corbehem Mill, France	River Scarpe	Yes	No	96 500	No special protection status granted or specific biodiversity values identified.	Low / No significant pressure from local communities. Corbehem Mill is the only mill on this section of the river.
Sachsen Mill, Germany	River Mulde	No	Yes	1 984 900	Natura 2000 site, due to alluvial landscapes which provide habitat for many bird species.	Medium / The initial level of water pollution upstream from the mill is relatively high.
Soustre Mill, France	River Isle	No	Yes	220 700	Classified as sensitive by the national authorities due to the risk of eutrophication.	Medium / Recreational value and value to other users including fish farms, agriculture and industry.
Pori Mill, Finland	River Kokemäenjoki	No	Yes	11 037 600	Natura 2000 site, due to valuable bird habitats.	Medium / Recreational value and value to other users including fish farming, agriculture and industry.

Statement GRI Application Level Check

GRI hereby states that **Stora Enso Oyj** has presented its report “Global Responsibility Report 2012” to GRI’s Report Services which have concluded that the report fulfills the requirement of Application Level A+.

GRI Application Levels communicate the extent to which the content of the G3.1 Guidelines has been used in the submitted sustainability reporting. The Check confirms that the required set and number of disclosures for that Application Level have been addressed in the reporting and that the GRI Content Index demonstrates a valid representation of the required disclosures, as described in the GRI G3.1 Guidelines. For methodology, see www.globalreporting.org/SiteCollectionDocuments/ALC-Methodology.pdf

Application Levels do not provide an opinion on the sustainability performance of the reporter nor the quality of the information in the report.

Amsterdam, 11 February 2013



Nelmara Arbex
Deputy Chief Executive
Global Reporting Initiative



The “+” has been added to this Application Level because Stora Enso Oyj has submitted (part of) this report for external assurance. GRI accepts the reporter’s own criteria for choosing the relevant assurance provider.

The Global Reporting Initiative (GRI) is a network-based organization that has pioneered the development of the world’s most widely used sustainability reporting framework and is committed to its continuous improvement and application worldwide. The GRI Guidelines set out the principles and indicators that organizations can use to measure and report their economic, environmental, and social performance. www.globalreporting.org

Disclaimer: Where the relevant sustainability reporting includes external links, including to audio visual material, this statement only concerns material submitted to GRI at the time of the Check on 4 February 2013. GRI explicitly excludes the statement being applied to any later changes to such material.

Independent Assurance Statement Tofuture

To the Management and Stakeholders of Stora Enso

Scope and Objectives

The Management of Stora Enso commissioned us to perform a limited assurance engagement on the Global Responsibility Report 2012 ("the Report"). The assurance engagement was conducted in accordance with the AA1000 Assurance Standard (2008) and as a type 2 engagement.

We have duly performed a limited assurance engagement, the objective of which was to evaluate:

- Stora Enso's adherence to the AA1000 Accountability Principles of inclusivity, materiality and responsiveness;
- the reliability of performance information presented in the Report according to the Quality of Information Principles defined in the Global Reporting Initiative Guidelines; and
- the GRI application level of the Report.

Responsibilities of the Management of Stora Enso and the Assurance Providers

Stora Enso's Management is responsible for the preparation of the Report and the performance data and statements presented therein, which the company management has approved. Our responsibility as assurance providers is to express a conclusion based on our work performed. The criteria used for our assessment include the Global Reporting Initiative Guidelines and Stora Enso's own internal reporting guidelines.

Assurance Provider's Independence and Competence

An assurance provider is required to be independent and impartial from the reporting organisation. During 2012 we were not committed to any assignments for Stora Enso that would conflict with our independence, nor were we involved in the preparation of the Report. Our assurance team consists of competent and experienced responsibility reporting and assurance experts, who have the necessary skills to perform an assurance process. Further information, including a statement of competencies related to the team can be found at: www.tofuture.eu.

Basis of Our Opinion and Limitations

Assurance providers are obliged to plan and perform the assurance process so as to ensure that they collect adequate evidence for the necessary conclusions to be drawn. The procedures selected depend on the assurance provider's judgement, including their assessment of the risk of material misstatement adhering to the reporting criteria.

We have performed the following procedures:

- Assessment of the procedures Stora Enso has in place to ensure adherence to principles of stakeholder inclusivity, materiality and responsiveness.
- Interviews with three members of the Group Executive Team and two senior management representatives to gain an understanding of the major impacts, risks and opportunities related to Stora Enso's Global Responsibility agenda.
- Interviews with managers responsible for performance data collection at Group-level and in selected sites.
- Review of Group-level systems and procedures to generate, collect and report performance data for the Report.
- Evaluations of Group-level calculations and data consolidation procedures and internal controls to ensure the accuracy of data.
- Review of data sources, data generation and reporting processes at Anjalankoski mills in Finland, Qian'an and Suzhou mills in China.

Conclusions

Adherence to AA1000 Accountability Principles

- Inclusivity: Stora Enso was found to have procedures in place for stakeholder involvement, and the company has made a strong commitment to stakeholder dialogue
- Materiality: Stora Enso has determined material reporting issues as a part of the company's Global Responsibility governance and management
- Responsiveness: Stora Enso has adequate policies, guidelines and procedures in place to respond to stakeholders' expectations and the company has established a governance structure and action plans to further address these expectations.

Reliability of Performance Information

We have reviewed the basis of the Global Responsibility information provided in the Report. Based on our review, nothing has come to our attention that would suggest that the Report would not give a fair and balanced view of Stora Enso's Global Responsibility performance on all material issues, or that the information presented in respect to all material issues would not be reliable with regard to the reporting criteria.

GRI Application Level

The Report corresponds to the GRI application level A+

Observations and Recommendations

Based on our limited level assurance engagement, we present the following observations and recommendations, which do not affect the conclusions presented above.

- Stora Enso has developed the Global Responsibility approach to manage the company's sustainability impacts, risks and opportunities with a special focus on stakeholders. We recommend that Stora Enso continues intensifying the work with global and local stakeholder engagement to address the material responsibility impacts related to major stakeholder concerns.
- Stora Enso has systems and controls in place to collect and consolidate Group-level responsibility data from different sources. During 2012 the company has further developed these processes. However, we continue to recommend that the integration of Global Responsibility data gathering procedures into a single streamlined process would make the process even more efficient.
- Global Responsibility governance and management procedures are firmly established at Stora Enso. During 2012 the company has reviewed the Global Responsibility strategy and governance model. We recommend that Stora Enso's new strategic action plans, targets and key performance indicators for Global Responsibility will be deployed extensively in order to ensure both financial and stakeholder value creation.

Espoo, Finland, 7th February 2013

Tofuture Oy | Sustainability Assurance



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Concept and design: Miltton Oy

Photography: Lasse Arvidson, Bersa, Jouni Harala, Kaapo Kamu, Henrik Kettunen, Tuukka Koski, Aleksi Koskinen, Vesa Laitinen, Eduardo Moody, Jenni-Justiina Niemi, Kai Skyttä, Paulina Terendy

Printing: Erweko Oy

Cover stock: Ensocoat 2S 240 g/m², Stora Enso, Imatra Mills (ISO 14001 certified)

Text stock: LumiSilk 100 g/m², Stora Enso, Oulu Mill (ISO 14001 certified)

It should be noted that certain statements herein which are not historical facts, including, without limitation those regarding expectations for market growth and developments; expectations for growth and profitability; and statements preceded by "believes", "expects", "anticipates", "foresees", or similar expressions, are forward-looking statements within the meaning of the United States Private Securities Litigation Reform Act of 1995. Since these statements are based on current plans, estimates and projections, they involve risks and uncertainties, which may cause actual results to materially differ from those expressed in such forward-looking statements. Such factors include, but are not limited to: (1) operating factors such as continued success of manufacturing activities and the achievement of efficiencies therein, continued success of product development, acceptance of new products or services by the Group's targeted customers, success of the existing and future collaboration arrangements, changes in business strategy or development plans or targets, changes in the degree of protection created by the Group's patents and other intellectual property rights, the availability of capital on acceptable terms; (2) industry conditions, such as strength of product demand, intensity of competition, prevailing and future global market prices for the Group's products and the pricing pressures thereto, price fluctuations in raw materials, financial condition of the customers and the competitors of the Group, the potential introduction of competing products and technologies by competitors; and (3) general economic conditions, such as rates of economic growth in the Group's principal geographic markets or fluctuations in exchange and interest rates.



Stora Enso Rethink 2012

Stora Enso is transforming itself into a value-driven company focused on growth markets, with its newly defined purpose guiding the journey. Rethink magazine plots this progress, including the company's major investments in China, and provides insight into the people around the globe.



Stora Enso Financial Report 2012

Contains detailed information on Stora Enso's financial performance and corporate governance, as well as the capital markets. This includes consolidated financial statements and notes, and the report of the Board of Directors.

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