

Sustainability

ENVIRONMENT • RESOURCES • CORPORATE SOCIAL RESPONSIBILITY

INDUSTRY LEADER
in the Dow Jones
Sustainability Index

NEW GOVERNANCE
for sustainability

Pilot mills translate
CSR PRINCIPLES
into action

Cutting
ENERGY USE

HAZARDOUS
waste can be useful

CELBI

Double certification for plantations

Environmental and social responsibility

policy

RESPONSIBLE BUSINESS

Stora Enso is committed to developing its business towards ecological, social and economic sustainability. These tasks are recognised as shared responsibilities within Stora Enso enabling a continuous improvement of our operations.

ECO-PERSPECTIVE

Stora Enso's objective is to supply customers with products and services that satisfy various needs related to printed communication, packaging and construction purposes. These products are mainly produced from renewable raw materials, and are recyclable and safe to use.

The concept of product life cycle guides our environmental activities and provides the framework for our efforts. We expect the same commitment from our suppliers and partners so that at every stage, from raw material to the end product, the impact on the environment will be minimised.

SOCIAL RESPECT

As an international company, Stora Enso acknowledges its role as a model company in the global, national and local society. Our attitude shall be characterised by respect for the cultures, customs and values of individuals and groups in countries where we operate. When developing our business to earn credibility, we will comply with and when necessary go beyond the requirements of national standards and legislation.

TRANSPARENT INTERACTION

In order to continuously strengthen our operations and develop environmental and social issues in a sustainable way, Stora Enso considers an open discussion and interaction with all stakeholders, both governmental and non-governmental, as fundamental.

INTRODUCTION

PROFILE & SCOPE ▶ 5

Getting a wider perspective

This report for the calendar year 2003 combines environmental and social issues for the first time into a comprehensive Sustainability Report, designed to illustrate the impacts of Stora Enso's activities on the environment and society, and to show how Stora Enso creates value for stakeholders.

OPENING WORDS ▶ 6

Taking a longer-term view

Working towards sustainability involves taking a longer-term view and integrating sustainability into all operations. DCEO Björn Häggglund stresses the importance of the restructuring of Stora Enso's sustainability governance during 2003: "This is to ensure that whenever we consider sustainability issues we really are looking at the whole picture."



STORA ENSO'S VALUE CHAIN ▶ 8

GOVERNANCE STRUCTURE ▶ 10

Governance mirrors commitment

Stora Enso aims to excel in sustainability and to be recognised for its achievements. This is also reflected in the Group's new corporate governance structure.

SUSTAINABILITY INDEXES & SOCIALLY RESPONSIBLE INVESTORS ▶ 10

ENVIRONMENT

ENVIRONMENTAL PRODUCT DESIGN ▶ 12

ECO-EFFICIENCY ▶ 14

Almost all residuals used beneficially

Stora Enso uses raw materials as efficiently as possible in production, and works hard to find beneficial uses for residuals. Even hazardous wastes can often be recovered or used to produce energy. All the hazardous wastes generated by Stora Enso are carefully handled by specialised licensed companies.

ENVIRONMENTAL MANAGEMENT SYSTEMS ▶ 14

All pulp, paper and board mills now certified

In March 2003, Stora Enso achieved a notable goal by ensuring that 100% of the Group's pulp, paper and board production capacity is covered by ISO 14001 and/or EMAS environmental management systems. The paper used for this report comes from Berghuizer Mill, one of Stora Enso's 53 units with EMAS registration.



PERFORMANCE ▶ 16

Current trends

Trends in key environmental parameters have generally followed production levels, which were higher in 2003 than in 2002. Occasional production curtailments also raised emission levels slightly.

COMPLIANCE & CORRECTIVE MEASURES ▶ 18

ENVIRONMENTAL INVESTMENTS & COSTS ▶ 19

WOOD PROCUREMENT ▶ 20



Stora Enso's Swedish forests, whose ownership is currently being restructured, have been FSC-certified and are currently in the process of getting PEFC certification.

Maximising wood flows from certified forests

In order to increase the share of certified wood, Stora Enso promotes forest certification everywhere the Group operates and advocates the mutual recognition of forest certification systems. Double certification is a good way to promote mutual recognition – as exemplified in Celbi's plantations in Portugal.

RECOVERED FIBRE & PULP ▶ 24

CONTENTS

| | | |
|-----------|---|----|
| TRANSPORT | ▶ | 24 |
| ENERGY | ▶ | 26 |

The challenge of climate change

The forest products industry can help to find practical ways to mitigate climate change, for instance by promoting energy efficiency. In 2003, Stora Enso made a new commitment to continuous and long-term reductions in specific energy consumption for all processes and product lines.

| | | |
|-------|---|----|
| WATER | ▶ | 29 |
|-------|---|----|

CORPORATE SOCIAL RESPONSIBILITY (CSR)

| | | |
|-----------|---|----|
| CSR TOOLS | ▶ | 30 |
|-----------|---|----|

Aiming for superior performance

In autumn 2003, Stora Enso's new Sustainability Committee approved the Group's long-term objectives for corporate social responsibility.

| | | |
|---------------------|---|----|
| UNIT IMPLEMENTATION | ▶ | 32 |
|---------------------|---|----|

Oulu and Varkaus mills show the way

In spring 2003, Oulu Mill became the first mill to start the implementation of Stora Enso's Corporate Social Responsibility Principles at mill level. Varkaus Mill followed suit in August 2003. During these projects, both mills tested a framework designed to identify key social aspects of operations, to shape related action plans and to establish indicators.

| | | |
|-----------------------|---|----|
| CSR PRINCIPLES REVIEW | ▶ | 34 |
|-----------------------|---|----|



Principles in action

Working conditions, business practices, diversity and responsible workforce reduction were priority areas in the implementation of Stora Enso's CSR principles in 2003.

| | | |
|--------------------------------|---|----|
| OCCUPATIONAL HEALTH AND SAFETY | ▶ | 39 |
| SOCIO-ECONOMIC IMPACTS | ▶ | 41 |

CASE STUDY

| | | |
|---------|---|----|
| VERACEL | ▶ | 42 |
|---------|---|----|



When the Veracel Pulp Mill is running in 2005, some 2 000 people will be employed by Veracel or Veracel's contractors.

The Veracel vision – a model of sustainability

In 2003, construction work started on a major new pulp mill in Brazil. The Veracel project is intended to set a benchmark for the competitive and sustainable production of pulp. Stora Enso supported Veracel in the creation of an ambitious sustainability agenda for the project.

APPENDIX

| | | |
|---|---|----|
| PRODUCTION, WASTE DISPOSAL AND EMISSIONS | ▶ | 46 |
| ASSURANCE STATEMENT | ▶ | 50 |
| CONTACTS | ▶ | 51 |
| GLOSSARY | ▶ | 54 |
| STORA ENSO'S PRINCIPLES FOR CORPORATE SOCIAL RESPONSIBILITY | ▶ | 55 |

Read more in the Web Report

www.storaenso.com/2003

Getting a wider perspective

Stora Enso is an integrated paper, packaging and forest products company producing publication and fine papers, packaging boards and wood products, areas in which the Group is a global market leader. Customers are large and small publishers, printing houses and merchants, as well as the packaging, joinery and construction industries worldwide. The main markets are Europe, North America and Asia.

Stora Enso sales totalled EUR 12.2 billion in 2003. The Group has some 44 000 employees in more than 40 countries in five continents and an annual production capacity of 15.7 million tonnes of paper and board, and 7.4 million m³ of sawn wood products, including 2.8 million m³ of value-added products. The Group has production facilities in Europe, North America and Asia. Stora Enso's shares are listed in Helsinki, Stockholm and New York.

Sustainability reporting in Stora Enso

Stora Enso has produced annual environmental reports since the merger of Stora and Enso in 1998, continuing the good track record of both Stora and Enso in environmental reporting. The first Corporate Social Responsibility Report was published for the reporting year 2002. This report for the calendar year 2003 combines environmental and social issues for the first time into an integrated sustainability report.

The first integrated sustainability report

The report follows the Global Reporting Initiative (GRI) as far as it is appropriate and applicable to Stora Enso. The GRI content index on Stora Enso's website (www.storaenso.com/2003) contains information on how Stora Enso has reported the various information and indicators specified in the GRI guidelines, also stating where in the reports this information can be found.

Stora Enso supports the nine principles of the UN Global Compact. For information about how Stora Enso has addressed these principles in 2003, please see the UN Global Compact page on Stora Enso's website www.storaenso.com/2003.

The scope of reporting

The scope of consolidated performance data on sustainability generally follows the principles of financial reporting. This means that the consolidated performance data includes the parent company, Stora Enso Oyj, and all companies in which it holds, directly or indirectly, over 50% of the voting rights.

The performance data of some companies controlled by Stora Enso through management agreements with majority shareholders, but in which Stora Enso holds less than 50% of the voting rights, is also included. Associated companies are not included in the consolidated performance data. These companies represent undertakings in which the Group has significant influence, but which it does not control (see Notes 1 and 13 in the Financials 2003 Report).

The following limitations relate to the principles described above:

- Consolidated environmental performance data covers all production units belonging to the core product areas. Sales offices, merchants and staff functions are excluded. Where wood procurement operations are concerned, only data on non-compliance is compiled.
- Consolidated Occupational Health and Safety (OH&S) performance data covers approximately 92% of the Group's total of 42 814 employees. Some of the smaller staff functions and sales offices are not yet included in the Group's OH&S statistics. Some smaller production units acquired during the year 2003 are similarly not yet included in the statistics. The objective is to progress towards 100% data coverage for all units and personnel.
- Human Resources data: HR data derived from financial accounting (average and total number of employees and employee distribution by country) covers all employees. HR data derived from separately collected HR statistics covers approximately 91% of the Group's employees and includes only the permanent employees. Some of the smaller units are not included in statistics for 2003.

Where sustainability impacts related to the operations of an associated company have attracted considerable attention among stakeholders, this information is

reported through case studies. This year's report includes a case study on the joint venture at Veracel in Brazil, of which Stora Enso owns 50%.

The acquisition of AS Sylvester affects the comparability of environmental performance data between 2002 and 2003 for non-integrated sawmills, as the number of sawmills owned by the group has increased. However, this acquisition has no material impact on the Group's total environmental performance figures.

The profile of this report

Environmental and social performance data is reported according to internal Group guidelines. The guidelines for reporting environmental liabilities, capital expenditures and operating expenses are based on IAS (International Accounting Standards) and EU recommendation on the recognition, measurement and disclosure of environmental issues in the annual accounts and annual reports of companies. Emission factors for reporting greenhouse gas emissions are coherent with WRI/WBCSD greenhouse gas protocol.

The reported environmental performance data is checked internally before data consolidation. Internal data checks of social performance data will start during 2004. The performance data and report texts have been verified by an independent third party (see page 50). As a part of the EMAS audit, a third party has additionally assessed the environmental data of the units producing EMAS statements. Economic performance data is mainly based on audited financial accounts.

This report is also available on Stora Enso's website (www.storaenso.com/2003). The Web Report contains more information than the printed version. Areas where more information is provided in the Web Report are marked in this printed report.

As the Sustainability Report primarily focuses on the reporting year 2003, readers requiring more background material about the Group's sustainability management and previous reports can visit www.storaenso.com. Stora Enso also publishes 53 production-unit-specific EMAS statements. •

Taking a longer-term ● view

Balancing the economic, environmental and social aspects of sustainability can be a very challenging task, but conflicts of interest become easier to resolve if the focus is shifted away from short-term thinking.

Working towards sustainability involves taking a longer-term view. The more you think in decades rather than in quarters, the more you realise that economic, ecological and social interests in a company are no longer in conflict. This is perhaps especially true in the forest products industry, where we are so dependent on both renewable natural resources and massive long-term investments. We must also attract talented new employees who will be proud to work for us in the long term.

Stora Enso will of course continue to meet the more immediate requirements of our customers and investors, but by also looking much further ahead we can make sure that we create value for all our stakeholders in the long run.

Getting the whole picture

At Stora Enso, we have restructured both our sustainability governance and reporting during 2003, to ensure that whenever we consider sustainability issues we really are looking at the whole picture.

The former Environmental Committee was replaced in autumn 2003 by a new Sustainability Committee, which includes the heads of all product areas. This will help to raise awareness of sustainability issues throughout Stora Enso, and ensure that they are more closely integrated into

all our activities. This is vital, since in today's business situation there is still a temptation to neglect the social and environmental aspects of sustainability – especially since short-term economic performance is often easier to measure than sustainability performance.

These changes are also reflected in our corporate reporting for 2003, where environmental and social issues are now covered in this comprehensive Sustainability Report.

Aiming high

Superior performance in terms of sustainability is one of the key success factors set out in Stora Enso's business strategy. Full compliance with legal requirements is only the absolute minimum target where Stora Enso's operations are concerned. Voluntary commitments and targets are often needed for aspects of our operations that are not yet regulated, in geographical regions where we believe local legislation is not demanding enough, or on issues where we have special ambitions.

In setting objectives for sustainability, it is important to consider which targets should be set at Group level or more locally, as well as to decide whether qualitative or quantitative targets are more suitable. Within the Group framework, sustainability work is in many cases best directed according to local conditions and the unique features of each unit.

Third-party-verified environmental management systems are an excellent way to make sure that each mill focuses on the most critical environmental aspects of its operations. I'm therefore very proud to report that an important objective was reached during 2003: all the Group's paper, board and pulp mills now have either an ISO 14001 certificate or EMAS registration – or in many cases both.

Many significant steps were also taken in our Corporate Social Responsibility (CSR) work during 2003. A special set of Group-level long-term CSR objectives has been approved, and we have now reached the stage where we are putting the established principles into practice. Several mills are keen to follow the pioneering work done in 2003 at Oulu Mill and Varkaus Mill, by establishing more pilot projects to express Stora Enso's CSR principles through concrete actions.

New strategic aims for forest certification and energy use

Stora Enso defined a new strategic aim in 2003: to get as much of the wood we use as possible from certified forests. In 2003 this share was 45%. Total certification coverage may not be achievable in the near future, since so few forests in Russia are certified as yet; but the well-established third-party-verified traceability systems operating in Russia already reliably document where the wood originates from.



Björn Häglund

We are currently putting the finishing touches to similar traceability systems in all areas where we operate. In 2003, 98% of the Group's wood supply was covered by such systems, including wood from certified forests.

During 2003 we committed ourselves to continuous and long-term reductions in specific energy consumption in all our processes and product lines. Recent major investments like the new paper machine at Langerbrugge and the decision to build a new power plant at Skoghall are important steps in this direction. By increasing our use of bio-fuels, such improvements also reduce our dependency on fossil fuels.

In spite of all the political uncertainties about globally co-ordinated action on climate change, at Stora Enso we feel we must continue to work pro-actively to reduce greenhouse gas emissions. Even though the Kyoto Protocol alone may not be forceful enough to provide the solution, it is still worth supporting, as the European Union and many other countries recognise. The problem of climate change is not going to disappear by itself.

Social responsibility challenges

The year 2003 was an exceptionally hard one in terms of redundancies, particularly in Stora Enso's US mills, where for the second year in row many jobs were lost.

A total of 526 employees were made redundant. These measures were necessary because the economic viability of Stora Enso's North American operations had to be restored.

Employee well-being continues to be a priority area in sustainability. Even though a lot of work is being done to prevent accidents and promote occupational health and safety, it is very difficult to absolutely eliminate the risk of accidents. Regrettably, one of our contractor's employees was killed during construction work in 2003.

Open and constructive dialogue with all kinds of stakeholders is becoming increasingly important for companies with interests around the world. I feel that we already have good dialogue with our more traditional stakeholders such as customers, investors and trade unions, but there is still work to be done in establishing trusting and mutually beneficial relationships with some other stakeholder groups.

Stora Enso's wood procurement practices in Upper Lapland in Finland and the major new pulp mill and plantation project of Veracel in Southern Bahia, Brazil, both came under close examination in 2003. Questions related to sustainability have been raised concerning issues such as land use, land ownership, indigenous peoples' rights, the conservation of biodiversity, and social and economic impacts on

local communities.

The goal in all such situations is to find a balance that will be economically viable while also promoting social stability and achieving environmental goals. This can be a difficult task. Companies do not and should not have the power to resolve regional land use planning issues, as these decisions should be made through democratic political processes. But what we can do is listen more closely to all our stakeholders, and be sensitive to their needs.

The special sustainability agenda set for the Veracel Project is one example of this kind of thinking. The goal is for Veracel to be the leading plantation and pulp mill project in the world in terms of sustainability (see pages 42–45). I'm convinced that this ambitious target can be reached, since the foundation for the project has been sound from the beginning.

Finally, I'm happy to say that Stora Enso has been listed for the fifth year in a row on the Dow Jones Sustainability Index – where for the second time we are now the leading forest products industry company. This is welcome recognition for our determined commitment to sustainability. ●

Björn Häglund
Deputy CEO

Creating value

Ensuring the environmental and social acceptability of raw materials

The most important raw material used by Stora Enso, wood, is renewable. This creates a sound basis for the Group's sustainability approach, although the acceptability of all fibre sources has to be guaranteed. The critical social and environmental issues here include nature conservation, illegal loggings, and impacts on local livelihoods. In order to guarantee the acceptability of these raw materials, Stora Enso is using and developing management tools such as third-party-verified wood procurement traceability systems and forest certification schemes.

Even though wood is by far the most important raw material to Stora Enso, it is also important to use sustainability criteria in screening the suppliers of other raw materials and services. The main raw materials and services purchased by Stora Enso in addition to wood include binders, pigments, chemicals, packaging and paper machine clothing, maintenance repair work, IT and transport. For more information see pages 14–16, 20–25, 30–33 and 42–45.

Being a good employer

Responsibility towards the Group's own employees is one of the cornerstones of Stora Enso's social responsibility. Stora Enso employs approximately 44 000 employees in more than 40 countries. Respect for core labour rights is an underlying element of the Group's CSR commitment, in both internal operations and dealings with suppliers and sub-contractors. Currently the Group is particularly concentrating on occupational health and safety work, on promoting diversity in the workplace, and on responsibility in workforce reductions. For more information see pages 30–33, 35–37 and 39–40.



Minimising the environmental impacts of transportation

Stora Enso is a large purchaser of transportation services. The Group aims to maximise the efficiency of transportation, and minimise the related emissions. Transportation by ship is dominant in terms of Stora Enso's total transportation flows, but rail and road transport are also vital. For more information see pages 24–25.

Minimising the environmental impacts of mill operations

Stora Enso aims to minimise the environmental impacts of the production processes used at every mill. The major environmental impacts are related to the Group's 44 pulp, paper and board mills, which are mostly located in Europe. Important tools in this area include the third-party-verified environmental management systems used to drive continuous improvement and to choose the best available technology. Stora Enso strives for efficient resource use, and promotes the use of bio-fuels, combined heat and power production, and recovered materials. The Group also aims to minimise emissions into the air, effluents released into water and the quantities of waste going to landfill. The most serious challenge related to energy use and air emissions concerns combating climate change. For more information see pages 14–19, 26–29 and 46–49.

Stora Enso's operations affect the environment and society in many ways. The Group's approach is based on understanding the impacts of these operations with regard to the various aspects of sustainability. These pages illustrate sustainability aspects in Stora Enso's value chain.

Attracting investors

Stora Enso's aim is to be a liquid and preferred investment for mainstream domestic and foreign investors as well as Socially Responsible Investors (SRI). Stora Enso Investor Relations provides accurate, consistent, timely and relevant information openly and pro-actively for the financial community and other stakeholders. Information with any material impact on share prices is circulated simultaneously to all parties. For more information see pages 10–11.



Responsibility in the market place

Stora Enso provides high-quality products for communications, packaging and construction. Stora Enso's products are based on renewable and recovered raw materials. Choosing to use such products can help to combat climate change and reduce waste.

Looking after the environmental aspects of sustainability has been a vital part of Stora Enso's customers' requirements for a long time. Many of the Group's customers are nowadays also increasingly interested in the social performance of their suppliers. In today's globalised world no customer wants to buy products that involve reputational risks. Stora Enso's objective is to gain competitive advantage by offering products that also meet customers' requirements on sustainability. Key issues related to responsibility in the market place also include responsible business conduct, supporting fair competition, treating business partners fairly, and refusing to engage in corruption or bribery. For more information see pages 12–13 and 30–34.



Being a responsible member of local and global society

Stora Enso aims to be a responsible member of all the communities where the Group operates. Stora Enso generates welfare within these societies by paying wages and taxes, by sourcing goods from local suppliers, and through voluntary contributions to the community. Other aspects of Stora Enso's responsibility towards local communities include minimising the environmental and social impacts of the Group's operations, complying with all laws, regulations and permits, and co-operating with local communities. Commitment to transparent reporting and dialogue is also an important element of responsibility towards society and all Stora Enso's stakeholders. For more information see pages 18–19, 37–38 and 41–45.

Governance

mirrors commitment

Sustainability has been identified as one of the key success factors in the Group's business strategy. Stora Enso aims to excel in sustainability, and to be recognised for its achievements. This is also reflected in the Group's corporate governance structure.

Stora Enso has strengthened its performance and structure regarding corporate sustainability governance, both of which mirror the Group's commitment to sustainability and form a vital part of sustainability work. During the reporting year 2003, the Group's governance structure was further improved and strengthened to better comply with the overall Stora Enso Sustainability Approach. The former Environmental Committee was replaced by a new Sustainability Committee in autumn 2003.

The new Sustainability Committee is chaired by the Deputy CEO. The Committee's members – the heads of all product areas and relevant corporate staff units – are appointed by the CEO.

The tasks of the Sustainability Committee are:

- to formulate corporate policy and strategy on environmental and corporate social responsibility issues

- to ensure that these policies and strategies are well established and respected throughout the Group
- to co-ordinate and follow-up relations and communications with stakeholders such as governmental and non-governmental organisations
- to take initiatives for the development of relevant management procedures
- to produce the annual Sustainability Report.

The Sustainability Committee has four support teams whose role is to address sustainability issues throughout Stora Enso's value chain, and to monitor, assess and publicise emerging issues in order to promote the implementation of the Group's sustainability strategy:

- The Environmental Co-ordination Team
- The Customer Support Team
- The Corporate Social Responsibility Team
- The Forest Environmental Team



Stora Enso praised

on sustainability

Stora Enso has been included in the leading sustainability indexes Dow Jones and FTSE4Good. An especially notable achievement is the Group's ranking in the Dow Jones Sustainability Index as the leading company in the forest products and paper industry sector for the second year in a row. Stora Enso is also included in the recently launched Nordic Sustainability Index.

According to the Dow Jones Sustainability Index assessment 2003 the Group's strengths are:

- Comprehensive environmental and social reporting
- Good corporate governance structures
- Above average forest management and fibre and pulp sourcing strategies, taking into account environmental and social concerns
- Excellent performance in Human Capital Development.

Areas to be improved are:

- Codes of Conduct: no comprehensive publicly available document
- Climate Strategy: pro-active approach desirable to exploit carbon sequestration potential
- Corporate Citizenship/Philanthropy: more strategic approach needed to gain competitive advantage.

The FTSE4Good Index particularly focuses on human rights issues. For Stora Enso,

Organisation and responsibilities

Operational management is responsible for sustainability performance at each organisational level, in order to guarantee compliance with the Group's commitments. The corporate environmental and CSR units closely support all business operations and staff functions. The CEO and DCEO make decisions on strategic and policy issues.

Stora Enso Environment is headed by the Senior Vice President, Environment, who reports to the Senior Executive Vice President, Corporate Support. Stora Enso CSR is headed by the Vice President, Corporate Social Responsibility, who reports to the Executive Vice President, Human Resources and Total Quality Management.

Key sustainability tools

Stora Enso's sustainability policy is anchored to the Group's mission, vision and values, and forms the cornerstone of the Group's environmental and CSR work.

The Group's Environmental and Social Responsibility Policy addresses responsible business, eco-perspectives, social respect and transparent interaction. This policy document is supported by sets of environmental and CSR principles covering the whole Stora Enso value chain, including stakeholders as well as product life cycles. Stora Enso has formulated the following sets of environmental principles:

- Principles for Implementing Environmental Management Systems
- Wood Procurement Principles

- Forest Certification Principles
- Genetically Modified Organisms (GMO) Principle
- Transport Environmental Principle

Stora Enso has also defined its position regarding climate change.

The Group's CSR principles cover subjects related to business practices, community involvement, reductions in the workforce, communications and human rights. These principles support the United Nations' Universal Declaration of Human Rights and the core conventions of the International Labour Organisation.

Sustainability implementation through Total Quality Management

One tool to implement the Group's sustainability work is the Excellence 2005 process. The most significant element of this Total Quality Management (TQM) tool is self-assessment, which is carried out in each unit once a year. This encourages units to systematically assess their business situation, identify their organisational strengths, and define where improvements are needed in various business areas like leadership, strategic planning, customer and market focus and human resources. Sustainability is a common theme in all these areas. Areas identified for improvements are selected for the strategic planning inputs applied in annual improvement programmes. •

Excellence 2005

Stora Enso's own TQM model Excellence 2005 has been the primary management approach to business development since January 2000. In order to reflect Stora Enso's operational environment and strategic priorities more closely, Excellence 2005 was updated in 2003.

The main focus of Excellence 2005 is on business development and continuous improvements. The model includes a range of associated tools and programmes for developing various sub-areas, such as tools for measuring employee and customer satisfaction, productivity programmes and customer relations management. The self-assessment process is applied in every unit. The organisation annually evaluates its performance against business excellence criteria on leadership (including sustainability), strategic planning, customer and market focus, performance measurement, analysis and knowledge management, human resources and process management. The effectiveness of these approaches is additionally verified through assessments of trends in key business results. This ensures that improvement areas with the highest impact on business results and strategic success receive the highest priority.

recognition on this index is a clear indicator that the Group's work in this area is going in the right direction.

Targeting Socially Responsible Investors

An increasing number of investors are paying attention to companies' sustainability performance. Such investors can make use of various indexes designed with their specific needs in mind. Ratings for these indexes are based on questionnaires sent to potential investment targets by research companies and financial institutes. Candidates are then assessed according to various economic, environmental and social parameters. The various criteria are weighted in different ways to provide final scores for the different indexes.

In 2003 Stora Enso replied to 16 sustainability questionnaires. Stora Enso's units also regularly answer a wide range of enquiries from their various stakeholders, including customers, local residents, media representatives and NGOs.

In 2003 Stora Enso increased its activities with regard to attracting Socially Responsible Investors (SRI). Sustainability was an important topic at the Capital Markets Day in London, and was also addressed at numerous investor meetings during the year. The main issues of interest in this respect were the Group's policies on old-growth forests in Northern Finland and Lapland, the Veracel plantation and pulp mill project in Brazil, and forest certification. •



Building with wood Green by nature

Wood as a construction material has significant potential in mitigating climate change, since it stores carbon for its entire service life.

Stora Enso is Europe's largest producer of sawn soft wood. Most of this sawn timber is used in the construction industry. Wood is the only major building material that is renewable. The environmental impacts arising from the production of wooden construction materials are less significant than those of any competing building materials. Increased use of wood can help to curb climate change by binding carbon.

The manufacture of wood products uses very little energy, and most of the energy used consists of bio-energy, generated from the bark and sawdust produced as by-products during the sawing of logs. The production of sawn timber only uses



Packaging

– making more with less

Stora Enso aims to minimise the environmental impacts of its products. This work involves actively developing new cost-efficient and resource-efficient products.

half of the energy needed to produce a comparable amount of concrete, and a quarter of the energy needed to make enough bricks.

Building materials and construction methods have a significant impact on buildings' heating and cooling needs. Wood has excellent insulating value compared to other materials, so less energy is needed to heat or cool wood-frame buildings. Wood-frame walls can also be significantly thinner than walls made with other materials, reducing the amounts of raw materials needed.

The resource-efficiency of wood can be further enhanced with new manufacturing technologies. Today, every part of a log can be used, so that absolutely nothing is wasted. The use of x-rays in the sorting of logs allows knots, shakes and heartwood contents to be identified, enabling logs to be used more efficiently. With the right sorting and drying processes, finger-jointed and laminated wood products have high stability, and are even suitable in earthquake zones.

New technologies allow the optimal parts of logs to be identified for specialised end-uses, as illustrated in Stora Enso's WoodHeart brand. WoodHeart and heat treated ThermoWood are made for end-uses requiring extreme durability.

Various studies comparing the environmental impacts of different materials over their whole lifetime have indicated that wood-frame houses use less natural resources and have fewer environmental impacts than houses made of concrete, bricks or steel frames. Wood-frame houses have superior performance in terms of greenhouse gases and other emissions into the air, discharges into water, and landfill waste.

For wood to be further promoted as a major construction material, international wood construction and product standards still need harmonisation. Stora Enso is actively participating in this process, and emphasises the need for "open construction systems" enabling both economies of scale in the production of wood products and high flexibility in the design of buildings. ●

New packaging concepts may use much less material than traditional forms of packaging, even though the board might look thicker. Using micro-flute corrugated board instead of folding boxboard considerably reduces the total weight of mobile phone packages, for instance. This change also means that separate transportation boxes are no longer needed.

Beverage cartons are delivered to dairies or other filling stations either flattened or in rolls. This space-saving design reduces the environmental impact of transportation. A million flattened, empty cartons can be transported to a dairy by a single truck, whereas the corresponding amount of plastic bottles would need 25–30 trucks.

Stora Enso is also now manufacturing corrugated board trays that can be used to display products such as confectionery or dairy products, as well as in transportation. This means store personnel no longer need to deal with extra cumbersome transportation packages.

Paperboard packaging is a valuable resource in itself, and can have many uses during its life cycle. The recovered fibres from packaging materials can be recycled several times to make other products. Fibres cannot be recycled forever, however, as they become shorter and weaker after each recycling round. The weakest and shortest recovered fibres are screened out during the recovery process, and may then be incinerated to generate bio-energy, or even composted.

Stora Enso is actively developing new products made of renewable fibre to replace products based on non-renewable raw materials. The carton CD/DVD disc box sliders introduced by Stora Enso in 2002 have been widely appreciated, since their lightness also keeps customers' transportation costs down. A similar new candy cup concept was introduced in 2003. These cups are mostly made of board, with a thin special polymer coating to keep the candies fresh. Candies have typically been packed in disposable plastic films, but the new candy cups can be recycled, and are also suitable for energy recovery. ●



Product safety systems

The product safety system of Imatra Mills was certified in December 2003, following the examples set by Anjalankoski Mill in 2002, Baienfurt Mill in 2000 and Lahti Mill in 2000. Product safety systems cover the whole manufacturing process from the procurement of raw materials and the production of food packaging material to the delivery of the end products.

These third-party-verified systems are designed to guarantee compliance with the EU directive 89/109/EEC, which states that food packages have to be safe for their intended use, that no substance in the package that could change the composition of the packed food is allowed to migrate into the foodstuffs, and that the package must not have any influence on consumers' health. To be able to comply with the directive, mills have to apply good manufacturing practice (GMP), to guarantee the safe and clean processing of food packaging materials.

[Read more in the Web Report](#)

Almost all residuals used beneficially

Stora Enso uses raw materials as efficiently as possible in production, and finds beneficial uses for residuals.

Residuals mainly originate from pulp and paper processes, including effluent treatment, energy production and chemical recovery. Stora Enso has continued to implement projects designed to improve the efficiency of resource utilisation. The waste utilisation rate, expressed as the percentage of residuals being used for beneficial purposes, has increased to 96%, from 95% in 2002.

Only a minimal share of waste is hazardous. In 2003 Stora Enso generated 4 485 tonnes of hazardous waste, compared to 4 126 tonnes in 2002. This increase was largely due to the reclassification in Finland of certain types of waste as hazardous waste. All the hazardous wastes generated by Stora Enso are handled by suitably licensed companies, and waste oil can be burned to produce energy. Although Stora Enso does not monitor the proportion of hazardous waste channelled to beneficial usages at corporate level, several mills have started to make such calculations, including Varkaus, for instance.

Good uses for hazardous waste from Varkaus Mill

In 2003 Varkaus Mill generated 381 tonnes of hazardous waste, of which 316 tonnes was put to beneficial use. The in-

crease of 215 tonnes in the total amount of hazardous waste from the previous year is because impregnated wood was reclassified as hazardous waste in Finland at the beginning of 2003.

Some 80 tonnes of oil was recovered and reused by a company specialised in hazardous waste management. Additionally, 20 tonnes of oil absorbers were utilised at Varkaus Mill's own bark boiler. A total of 21 tonnes of electrical and electronics scrap was delivered for reuse. A total of 200 tonnes of impregnated timber, mainly consisting of used railway sleepers, was delivered to a municipal power plant to be burned. The remaining 60 tonnes of hazardous waste consists mainly of water-based oils, paints, solvents, laboratory waste and batteries. These materials were delivered to a licensed waste treatment installation, where hazardous waste is treated under the principle that all waste with organic substances is incinerated under special conditions to destroy any potentially harmful substances, and the energy created is sold to the grid.

Hazardous waste at Varkaus Mill

| Tonnes | 2001 | 2002 | 2003 |
|---------------------------------------|------|------|------|
| Hazardous waste | 181 | 166 | 381 |
| Hazardous waste put to beneficial use | 126 | 125 | 316 |

Amounts of hazardous waste have been calculated according to national legislation on wastes that must be sent to licensed companies to be handled.

Stora Enso utilises 96% of the residuals generated in production.

Sun-dried sludge

Following practices in use at Skoghall Mill, the Enocell Pulp Mill is experimenting with drying out sludge from effluent treatment with the help of the sun and wind on open land. The sludge is mixed with tree bark and spread in a layer about 70 cm thick over an area of about a hectare.

The surface is then harrowed, and the dried sludge-bark mix is sucked up into a suction truck. The mix is added to the bark fed into the bark boiler, and burned in the boiler to generate steam for electricity production. Earlier, the sludge was mixed into the bark straight from the sludge belt press without drying,

and the solid matter made up only about 20% of the sludge, whereas after drying solid matter accounts for about 50%. This increased proportion of solid matter improves the combustibility of the sludge and its energy output.

Imatra Mills turn methane into energy

An innovative new scheme was started at Imatra Mills' Laurinniemi landfill site. Methane gas is piped from the landfill to a microturbine power plant to generate electricity, which is then delivered to the grid. Landfill gas has only seldom been processed at forest industry landfills, and using methane to produce electricity for the grid in this way is unique.

Methane gas is collected for the microturbine power plant from an area of four hectares. The power plant can produce

All pulp, paper and board mills now certified

The next step – environmental management systems for all sawmills.

In March 2003, Stora Enso achieved its goal of 100% coverage of pulp, paper and board production capacity by third-party-verified ISO 14001 and/or EMAS environmental management systems. These systems are also integrated into the Group's total quality management approach, Excellence 2005. The next step is to increase the coverage of environmental management systems also at service units



Imatra Mill's Laurinniemi landfill site contains enough methane to meet the energy needs of 20 local homes for 15 years.

over 200 MWh of electricity a year. The landfill contains enough methane to meet the energy needs of 20 local homes for 15 years.

Another source of energy at the landfill is fibrous sludge, dried naturally on an area of eight hectares. The dried fibrous sludge is incinerated to generate energy for Imatra Mills. Bio-fuels account for 90% of the fuels used at Imatra Mills. ●

Chemicals

Many valuable chemicals, such as the sodium and sulphur compounds used in pulping, can be efficiently recovered and recycled. Any small amounts of non-recoverable chemicals remaining in waste water are treated at mills' waste water treatment plants. At each mill site, chemical safety is the responsibility of appointed and trained chemical contact persons.

The EU Commission has proposed a new system for Registration, Evaluation and Authorisation of Chemicals (REACH), where the responsibility for

data gathering and reporting on chemical substances is transferred to the manufacturers, importers, suppliers and downstream users of the chemical substances. The existing system for general industry chemicals, where the authorities are responsible for risk evaluations for chemicals, is far too slow. REACH will become effective at the earliest in 2006, with an 11-year transitional period.

Many of Stora Enso's mills already have computerised support regarding the management of chemical products and the substances they contain.

and production sites with more limited environmental impacts.

All of Stora Enso Timber's Nordic sawmills are both EMAS-registered and ISO 14001-certified. Implementation of environmental management systems with a view to EMAS registration is in progress in Central Europe. The Imavere Sawmill in Estonia is expected to obtain ISO 14001 certification soon, and it is planned that all the

Group's Baltic sawmills should be certified under ISO 14001 within the next few years.

Most of the Group's wood procurement organisations are already covered by formal environmental management systems, and the rest are preparing for certification (see page 23). Stora Enso Celbi Forest Department received EMAS registration in November 2003. The Group's joint venture forest plantations PT

Finnantara Intiga in Indonesia and Veracel Celulose in Brazil obtained ISO 14001 certification during 2003.

The focus of each mill's environmental work depends greatly on local conditions and the features of the mill concerned. Environmental management systems help all units to concentrate their efforts on the most critical aspects of their operations. ●

Current trends

Trends in key environmental parameters have generally followed production levels, which were higher in 2003 than in 2002. Although production rose overall, there were still occasional production curtailments, which gave rise to slightly higher emission levels than would have occurred if production had continued steadily at full capacity.

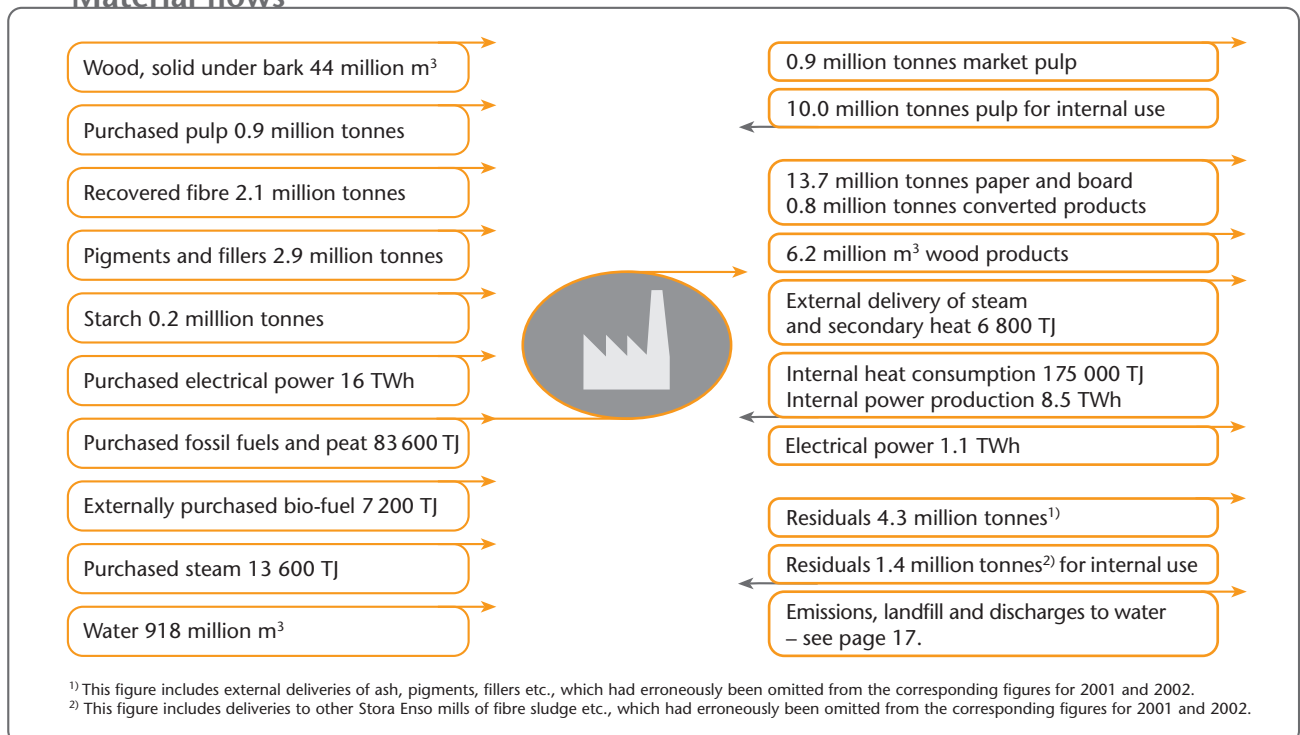
Emissions of SO₂, NO_x and fossil CO₂ have increased marginally more than production. In specific terms (tonnes of emissions per tonne of production of pulp, paper and board), emissions have risen by between 1.1% and 1.7%.

Discharges of COD and AOX have increased more, by 7.8% and 10.8% respectively in specific terms. The main reasons behind these increases have been operational problems with external effluent treatment plants. The single largest such case was at Imatra Mills (see Compliance and corrective measures, pages 18–19).

Landfilling of solid waste has increased by 8% in specific terms. The great improvements in this respect in recent years, including a 25% reduction in 2002, may have brought performance on landfill to a level where annual fluctuations influence overall results more than single

dramatic improvements. One of the main reasons for the increase in 2003 was sludge handling problems, which called for the temporary intermediate storage of sludge for later treatment. Another reason was the reduced need for ash for internal construction purposes. •

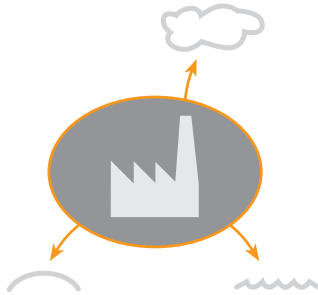
Material flows



Emissions, discharges and landfill

Emissions to air (tonnes)

| | |
|------------------------------------|------------|
| CO ₂ | |
| • non-renewable fuels | 6 031 000 |
| • renewable fuels | 16 374 000 |
| • total | 22 405 000 |
| SO ₂ | 20 000 |
| NO _x (NO ₂) | 20 000 |



Landfill (tonnes)

| | |
|--------------------|---------|
| Waste for landfill | 326 000 |
| Hazardous waste | 4 500 |

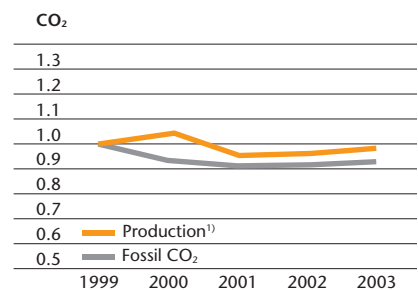
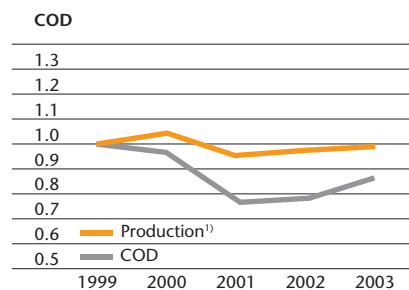
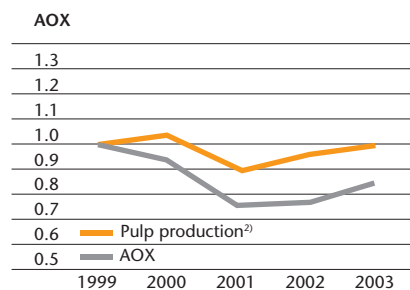
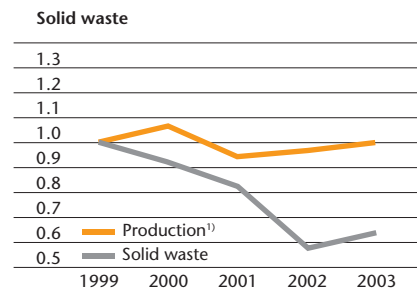
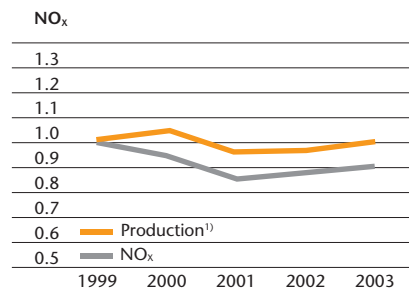
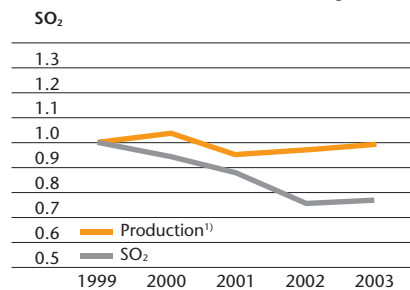
The following factors have been used in 2003 when calculating CO₂ emissions:

| | |
|-----------------------------|-----------|
| Black liquor | 126 kg/GJ |
| Bark 50% (dry state) | 125 kg/GJ |
| Wood waste | 125 kg/GJ |
| Sludge | 110 kg/GJ |
| Soap, tall oil | 100 kg/GJ |
| Pitch oil | 70 kg/GJ |
| Other bio-fuels (estimated) | 100 kg/GJ |
| Peat | 106 kg/GJ |
| Natural gas | 56 kg/GJ |
| Heavy oil | 77 kg/GJ |
| Light oil | 74 kg/GJ |
| Coal | 95 kg/GJ |

Discharges to water (tonnes)

| | |
|------------|---------|
| COD | 170 000 |
| AOX | 680 |
| Phosphorus | 340 |
| Nitrogen | 1 830 |

Emissions, waste and production^{*)}



^{*)} Former Consolidated Papers, Inc. figures are included in these graphs from 1999 onwards, even though the acquisition only took place in August 2000. Emissions from sawmills are excluded.

¹⁾ Sales production of market pulp, paper and board

²⁾ Bleached chemical pulp

Index 1999 = 1.0

Carbon dioxide is by far the most important greenhouse gas where Stora Enso's operations are concerned, so it is the only greenhouse gas monitored at Group level.

Working to guarantee compliance

In the vast majority of cases, the requirements of the environmental permits regulating operations at Stora Enso's units were fully met. As well as resolving the formal infractions listed below, Stora Enso units have registered any complaints, and initiated appropriate measures to resolve the problems. Complaints received during 2003 most commonly concerned noise and odour problems.

Air emissions

- **Biron Mill** received a Notice of Violation from the Wisconsin Department of Natural Resources stating that the mill had failed to meet particulate matter emission limits at its thermo-mechanical pulp mill. The mill has now achieved compliance with the permit limit and the case has been closed.

The thermo-mechanical pulp mill capacity limit specified in Biron Mill's air permit was exceeded on four occasions. The mill has carried out measures to prevent recurrence.

- **Kimberly Mill** received a letter of non-compliance from the Wisconsin Department of Natural Resources indicating that the mill exceeded its permit limit for Volatile Organic Compounds (VOC). The mill is co-operating with the authorities and working on a plan to demonstrate that its paper coatings are in compliance with their VOC permit limit. The mill was also cited for operating two power boilers on April 30 and May 1 in violation of its air permit. The mill has implemented corrective action to maintain compliance and prevent recurrence.

- **Niagara Mill** received a Notice of Violation and Finding of Violation from the federal Environmental Protection Agency in 2002, alleging that the mill had failed to obtain the required air permits for boiler and paper machine projects. The mill has provided the authorities with all the information requested, and continues to defend the allegations.

In 2003, Niagara Mill received a Notice of Violation from the Wisconsin Department of Natural Resources, alleging that the pulp mill had exceeded its VOC emission limit. The mill has since switched to all-aspens pulping, and has achieved compliance.

- The federal Environmental Protection Agency has alleged that violations of the Clean Air Act occurred at the **Wisconsin Rapids Pulp Mill** related to projects between 1983 and 1991. The mill is con-

tinuing to defend these allegations, since legal advice has indicated that proper permit procedures were followed.

- The permit limit values for hydrogen chloride and dust concentrations in flue gases released from a boiler at the Ecogas-plant at **Varkaus Mill** were exceeded throughout the year, in spite of improvements in the treatment of flue gases. These pollutants originate from plastic impurities in the fuel, which consists of polyethylene and aluminium recovered from used liquid cartons. These problems have been discussed in detail with the relevant authorities. The mill will apply for a new environmental permit by the end of 2004.

- The permit limits for malodorous sulphur compounds and chlorine compounds in air emissions from the **pulp mill at Varkaus** were exceeded for three months, due to a malfunction in the purification equipment. Corrective actions have been undertaken.

Effluents

- **Skutskär Mill** had problems with sludge discharges from the mill's waste water treatment plant during the first half of 2003. The guiding limit value for suspended solids was exceeded during January and May. The cause of these discharges has been investigated together with experts, and an action plan has been accepted by the authorities.

- **Niagara Mill** notified the Wisconsin Department of Natural Resources that it exceeded the limits of its waste water discharge permit on seven occasions in 2003. The mill has taken corrective actions to maintain compliance.

- During a power cut at **Kabel Mill**, a safety gate in a sewer was temporarily left ajar, allowing untreated waste water to enter a nearby river through a damaged pipe. The pipe was repaired immediately, an alert-system was installed, and additional checking by personnel was introduced. These measures have been accepted by the relevant authorities.

- The annual phosphorous permit limit at **Imatra Mill** was exceeded because of a shortage of oxygen in the treatment plant. This was in turn caused by the breakdown of one of the plant's compressors. The compressor was repaired as soon as possible.
- The monthly BOD limit was exceeded at **Kotka Mill** in April, due to a malfunction in the pre-treatment stage of the waste water treatment plant. The situation was corrected in April, and the authorities were duly informed.
- The COD permit limit was exceeded at **Kemijärvi Mill** between January and May, and the BOD permit limit was not met between January and July, due to heavy organic loads in the waste water treatment plant. As corrective measures, the mill will increase the aeration capacity of the plant, introduce a new de-icing conveyor in the debarking plant and increase the capacity of the cooling water sewer. Corrective measures have been taken and approved by the authorities.
- The COD permit limit at **Varkaus Mill** was slightly exceeded in February, due to freezing problems at the waste water treatment plant caused by exceptionally cold weather.
- **Planá Sawmill** exceeded its permit limit for the discharge volume of waste water from a holding reservoir. A financial penalty will have to be paid. As an immediate corrective measure, the flow rate has been reduced. The mill is now building a new holding reservoir, which should be in operation by the end of 2004.

Forestry and wood procurement

- An area of old-growth forest that had been voluntarily protected by **Wood Supply Sweden** was mistakenly felled near the village of Venjan in June. This area consisted of old-growth pine forest classified as a key biotope. Stora Enso immediately informed the public and the FSC-certifier about this mistake. Corrective actions have included the planning of restoration efforts in the felled area and its surroundings, the improvement of the procedures used to assess natural values, and additional training on the identification of natural values.
- **Wood Supply Finland** is currently involved in a case concerning an identified key biotope. This area had been recorded earlier in the information system, but was inadvertently felled due to a failure in the information chain. The forestry and environmental authorities and other relevant stakeholders have all been informed of this regrettable incident. Corrective actions will take place after the case has been analysed by Stora Enso and the authorities. •

Investing in environmental improvements

Kvarnsveden Mill is investing EUR 55 million in a new boiler, which will start operating during spring 2004. The new boiler will facilitate the increased use of bio-fuels.

During 2003, Stora Enso decided to invest EUR 211 million at Skoghall Mill in a new recovery boiler, a new evaporation plant and the conversion of an existing boiler to operate on bio-fuels instead of oil. This rebuilding will improve energy efficiency and reduce emissions of fossil carbon dioxide, sulphur dioxide and NO_x, as well as COD discharges.

Stora Enso has also decided to invest EUR 57 million in a new thermo-mechanical pulp (TMP) plant at Port Hawkesbury, where high-yield sulphite and groundwood pulp plants are to be closed down. The new plant, which is due to start operating in autumn 2004, will reduce water use, fossil fuel consumption and BOD discharges, and eliminate sulphur dioxide emissions altogether.

The Veitsiluoto Mill is currently investing EUR 11 million in the reconstruction of the mill's biological waste water treatment plant. The new plant will start up during spring 2004.

In 2003, Stora Enso's environmental investments and costs amounted to a total of approximately EUR 254 million, compared to EUR 250 million in 2002. This spending includes capital expenditure as well as operating and maintenance costs, but excludes interest and depreciation. Total environmental investments amount to EUR 80 million, while environmental costs total EUR 174 million.

Estimates indicate that a total of EUR 47 million will be required to cover future corporate environmental liabilities. This includes remediation projects such as decommissioning activities in Sweden at the Falun Mine, the clean up of mercury contamination at the former chloralkali plant

at Skoghall and the final safe disposal of mercury at Skutskär harbour. During 2003 in Finland, Stora Enso cleaned up contaminated soils in Rautjärvi and Kerava, and paid out compensation related to an earlier accidental release of contaminated waste water at Tervakoski. The area designated for clean-up activities on the site of the former Pateniemi Sawmill was increased in new clean-up project plans. Reclamation work will start when the project receives the required environmental permit.

The following Stora Enso units are due to update their environmental permits between 2004 and 2008: Wisconsin Rapids

Paper and Pulp Mills, Niagara, Kabel, Langerbrugge, Zdirec, Skoghall, Forshaga, Kimberly, Keräyskuitu, Whiting, Duluth, Water Renewal Center in Stevens Point, Water Quality Center in Wisconsin Rapids, Berghuizer,

Ybbs, Summa, Biron, Baienfurt, Fors, Ala, Bad St. Leonhard, Páty, Heinola Fluting, Imatra, Packaging Tallinn, Packaging Riga, Packaging Kaunas, Sollenau, Barcelona, Planá, Sachsen, Balabanovo, Stevens Point, Varkaus, Veitsiluoto, Grycksbo, Celbi, Oulu, Kvarnsveden, Pori Board Mill, Anjalankoski, Pankakoski, Maxau, Kemijärvi, Wolfsheck, Uimaharju, Veitsiluoto Sawmill, Hammarby, Skutskär, Enocell, Suzhou, Launkalne, Varkaus Sawmill, Imavere, Alytus, Paikuse, Sauga and Falun Red Paint.

There are currently no active or pending legal claims concerning environmental issues which could have a material adverse effect on Stora Enso's financial position. •

New bio-fuel boilers to replace oil-fired boilers

Maximising wood flows from certified forests

In order to increase the share of certified wood, Stora Enso promotes forest certification everywhere the Group operates and advocates the mutual recognition of forest certification systems.

Stora Enso's target is that all fibre sources should be fully acceptable in sustainability terms, and recognised as such by all stakeholders. Stora Enso aims to trace the origin of all the wood used at mills, in order to guarantee that the raw wood used in Stora Enso's products comes from sustainably managed sources. Environmental and quality management systems have, together with forest certification systems, a central role in this work.

In 2003 Stora Enso also decided to strengthen the role of forest certification to complement traceability systems. The target is to maximise the proportion of the wood supply originating from third-party-certified forests. Stora Enso's information systems show that in 2003 approximately 45% of all the wood used by the Group (excluding externally purchased chips) came from certified forests, while the traceability systems covered over 98% of the wood supply by the end of the year (including wood from certified forests).

Local conditions vary

Stora Enso promotes forest certification wherever the Group operates, and is active in various forest certification schemes in different parts of the world. Due to differing conditions, there is often a need for more than one system within certain re-

gions. In Europe, for instance, Stora Enso equally supports the schemes of the Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification schemes (PEFC).

Mutual recognition of forest certification systems would allow larger volumes of wood to be fully certified, and facilitate communications about the sustainability of raw materials. Full reciprocal acceptance by the different systems would allow wood flows to be combined and regarded as certified under either system.

Swedish forests owned by Stora Enso, whose ownership is currently being restructured, have been FSC-certified. In order to support mutual recognition, Stora Enso Wood Supply Sweden decided prior to the divestment decision to start up a certification process leading to PEFC certification. The new owner, Bergvik Skog, will maintain the former owner's approach to forest certification and sustainable forestry policies. Stora Enso Wood Supply Finland has also initiated discussions between the main national advocates of FSC and the Finnish Forest Certification System (FFCS) to promote mutual recognition.

In Russia, forest certification is only just getting started, with just about 1.5 million hectares of forests already FSC-certified and 3 million hectares currently being assessed for similar certification.

A separate national voluntary forest certification system is also being prepared, with the intention to bring it under PEFC. The Pskov Model Forest, where Nordic forestry practices are being tested, was certified to FSC in September 2003. This project involves many organisations including Stora Enso and WWF. For more information see page 38.

Traceability ensures that fibre comes from sustainably managed sources

Traceability guidelines have been adopted at all Stora Enso's wood supply units. These guidelines set out a framework for regional and national systems. Traceability systems ensure that wood comes from sustainable sources and provide one of the most effective ways to combat illegal logging. Traceability systems cover data on the origin and movement of wood all the way from the harvesting area until it first enters Stora Enso's possession, at a terminal, mill or transport point.

In spite of these systems, there have been cases of non-compliance with national legislation or corporate guidelines. See page 19 for further details. An efficiently operating wood traceability system improves awareness of the importance of environmental and social values amongst all stakeholders right along the wood supply chain.

Double certification at Celbi

Celbi is the forerunner in the adoption of third-party-verified certification systems in Portugal.

During 2002, Celbi conducted a pre-assessment of the forest management practices used in their eucalyptus plantations, in order to determine their performance level with regard to FSC criteria. The results were positive, although certain areas were identified for improvement, with suitable actions defined and initiated. FSC certification is expected to be granted in June 2004.

Celbi is also a pilot project for testing the emerging PEFC standard in Portugal. The Portuguese Forest Certification Stan-

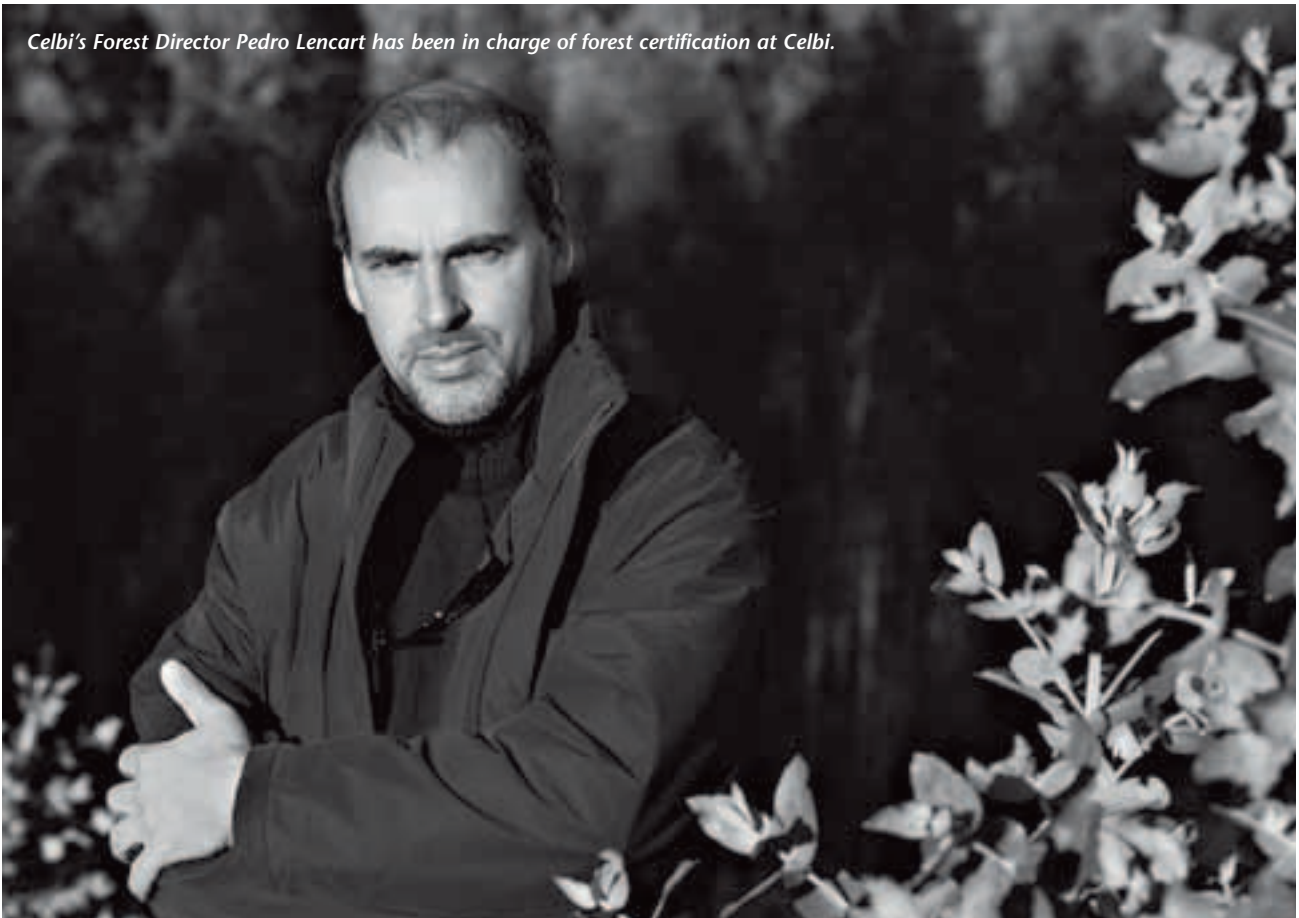
dard is being submitted to the PEFC Council, and it is expected that this process will be completed later in 2004. The final test area for implementing the national PEFC Portugal standard is owned by Celbi.

Celbi in brief

- Celbi's pulp mill has an annual production capacity of 295 000 tonnes of bleached eucalyptus kraft pulp.
- The mill uses 800 000 cubic metres of wood a year.

- Celbi owns 51 200 hectares of forest, of which 42 800 hectares consist of eucalyptus plantations.
- The plantations supply 450 000 cubic metres of wood every year.
- Celbi was the second company in Portugal to obtain EMAS registration for pulp production.
- Celbi is the only company in Portugal whose forestry activities are covered by the ISO 14001 standard.

Celbi's Forest Director Pedro Lencart has been in charge of forest certification at Celbi.



Stakeholder dialogue on old-growth forests in Finland

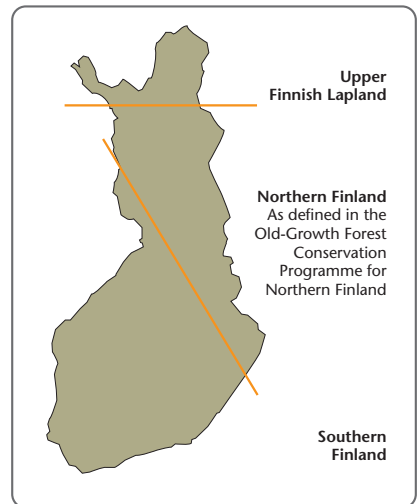
Stora Enso has been engaged in active dialogue with various stakeholders concerning different land uses in state-owned forests in Northern Finland and Upper Lapland.

Approximately 35% of all the forests in Upper Lapland have been protected, and their use is restricted in the remaining areas in order to allow reindeer herding to be continued as a traditional livelihood. Some environmental organisations have called for even more restrictions on the use of these forests. On the other hand, many local people consider that enough forests have been protected already, and they believe that any further decrease in logging volumes would lead to considerable reductions in employment and incomes in a region where unemployment rates are already high. The challenge here is to balance the various local land use interests, including livelihoods such as reindeer herding and forestry, with other aspects of sustainability, including nature conservation.

The state enterprise Metsähallitus and the environmental organisations WWF and Finnish Association for Nature Conservation (FANC) have been negotiating over the protection status of approximately 400 sites in Northern Finland.

These sites were originally not considered to fulfil the criteria for the Old-Growth Forest Conservation Programme for Northern Finland. According to a decision made by the Finnish Parliament, biodiversity values would have to be safeguarded through other means, such as Metsähallitus's landscape ecological planning system. Metsähallitus has agreed not to log the disputed forest areas until they have been discussed and conclusions have been drawn. Greenpeace has adopted the role of a critical bystander in this process.

Stora Enso has been greatly involved in initiating negotiation processes, in line with the Group's Environmental and Social Responsibility Policy. Stora Enso is constantly monitoring the negotiations through close contacts with Metsähallitus and various stakeholder groups, in order to be able to keep customers informed of developments. Stora Enso supports all efforts to find a balance between its stakeholders' various social, ecological and economical interests concerning the use of forest resources. In addition to fully observing national laws, Stora Enso has set internal guidelines for wood supply operations. •



In Southern Finland, where natural conditions for forestry are more favourable, most forest holdings are small-scale and privately owned. In Upper Lapland, more forests are owned by the State, and larger areas are protected. Conservation issues are addressed through different processes in the north and the south.

[Read more in the Web Report](#)

Wood supply organisation

- Forest Products is one of Stora Enso's three core product areas.
- The Forest Products product area co-ordinates sawmilling, pulping and European wood supply operations.
- Wood Supply Europe is responsible for environmental issues related to forests in Europe, and also co-ordinates these issues globally.
- Wood Supply Europe's five business areas are responsible for local procurement and supply:
 - Wood Supply Baltic
 - Wood Supply Continental Europe
 - Wood Supply Finland
 - Wood Supply Russia
 - Wood Supply Sweden
- Stora Enso North America's Forest Resources Unit is responsible for wood procurement for US operations, and the management of company land in Canada.
- Stora Enso Port Hawkesbury's Woodlands Unit is responsible for wood procurement and the management of company land and licensed Crown lands in Canada.
- In Latin America, Veracel will supply wood from its own plantations and procure wood from long-term contract tree-farmers for the new pulp mill, which is due to start operating in 2005.
- Stora Enso Asia Pacific is currently creating a forest resource base in China, Indonesia and Thailand for industrial use.

Key figures

- The Group used a total of 44 million cubic metres (solid wood under bark) of wood in 2003. Most of the wood procured from Europe and North America came from small private forest holdings and larger state-owned holdings.
- Stora Enso is currently transferring 1.9 million hectares of its Swedish forests to Bergvik Skog AB, a new company established by Stora Enso and Korsnäs. There are additionally plans for 146 000 hectares of forest land in Ontario, Canada to be sold.
- Stora Enso's forests in Finland and the United States were divested in 2002.
- After these divestments are completed, Stora Enso will continue to own forest plantations in Brazil, China, Indonesia, Portugal and Thailand, and minority shareholdings in companies that own and manage forests in Finland and Sweden.

Environmental management systems

| Stora Enso Wood Supply | | |
|--|-------------------|--|
| Stora Enso Wood Supply Sweden | EMAS ISO 14001 | Registration granted in 2001. Certification granted in 2001. Ludvika Management Region certified in 1999. |
| Stora Enso Wood Supply Finland | EMAS ISO 14001 | Registration granted in 1999. Updated EMAS statement published in 2002. Certification granted in 1998. |
| Stora Enso Wood Supply Russia | EMAS ISO 14001 | Registration granted in 1999 as part of Wood Supply Finland. Certification granted in 1998 as part of Wood Supply Finland. |
| Stora Enso Wood Supply Continental Europe | EMAS | Environmental management systems are being implemented with a view to eventual EMAS registration in 2004. |
| Stora Enso Wood Supply Baltic | | Environmental management system under preparation. |
| Stora Enso North America | | |
| Stora Enso North America Forest Resources, USA | ISO 14001 | Certification granted in 2002. |
| Stora Enso Port Hawkesbury Limited, Woodlands Unit, Canada | ISO 14001 | Certification granted in 1998 covers planning, harvesting, silviculture, road construction on company-controlled lands and all wood transportation. Certification also includes a programme designed to encourage major wood suppliers to adopt good stewardship practices. |
| Plantations | | |
| Stora Enso Celbi, Portugal | EMAS ISO 14001 | Registration granted in November 2003. Certification granted in 2001 covering Forest Research & Development, Forest Management and the wood supply of Celbi Pulp Mill including externally purchased wood. |
| PT Finnantara Intiga, Indonesia | ISO 14001 | The final audit was conducted in June 2003 and certification was granted in October 2003 to cover all forest management activities and plantation establishment, maintenance and harvesting, as well as community development and other supporting processes. |
| Veracel, Brazil | ISO 14001 | Certification granted in June 2003 covering forest management activities and planting, plantation maintenance, harvesting and wood transportation by truck and barge. |

Forest certification systems

| Stora Enso Wood Supply | | |
|---|-------------------------------|--|
| Stora Enso Wood Supply Sweden | FSC | All Stora Enso's forest holdings in Sweden are FSC-certified. A PEFC certification process has also been started. The Ludvika Management Region was the first area in Sweden to be granted FSC certification, in 1996. All the transportation of wood from Stora Enso's forests to measuring stations at mills is chain-of-custody certified. |
| Stora Enso Wood Supply Finland | FFCS PEFC | Stora Enso Wood Supply Finland participates in the Finnish Forest Certification System (FFCS), which is endorsed by PEFC. 95% of Finland is covered by PEFC. The chain-of-custody system covers all fibre sources from the forests to the mills. |
| Stora Enso Wood Supply Russia | FSC | FSC certification was granted to the lease area in Pskov in September 2003. |
| Stora Enso Wood Supply Baltic | FSC PEFC | Forest owners in the Baltic Countries are certified to FSC or PEFC. |
| Stora Enso Wood Supply Continental Europe | | All legal entities belonging to Wood Supply Continental Europe except those in France and Slovakia are PEFC chain-of-custody certified and some are FSC chain-of-custody certified. Chain-of-custody audits will be carried out in France and Slovakia in 2004. |
| Stora Enso Timber | | |
| | PEFC FFCS FSC | In 2003, Zdírec Sawmill in the Czech Republic and Sollenau Sawmill in Austria received PEFC chain-of-custody certification. In Austria, Bad St. Leonhard and Ybbs Sawmills are PEFC-certified. All sawmills in Finland are PEFC-certified. All sawmills in Sweden are FSC-certified. |
| Stora Enso North America | | |
| Stora Enso North America Forest Resources, USA | SFI SM | The Sustainable Forestry Initiative SM (SFI) certification of Stora Enso North America Forest Resources, USA, covers wood procurement practices and procedures. A Public Audit Summary of Sustainable Forestry Initiative SM (SFI) certification findings is available to stakeholders. |
| Stora Enso Port Hawkesbury Limited, Woodlands Unit, Canada | SFI SM CSA Z809 | Sustainable Forest Management (SFM) certification of Stora Enso Port Hawkesbury Limited, Woodlands Unit, Canada was completed in December 2001, meeting both CSA and SFI standards. The CSA standard is applied to company-controlled lands, and the SFI standard is applied to all land management and wood procurement activities. Port Hawkesbury is the first forestry operation in North America to be approved for both CSA and American Forest & Paper Association (AF&PA) environmental certification. |
| Plantations | | |
| Stora Enso Celbi, Portugal | FSC PEFC | The Celbi Forest Department is preparing for FSC certification and it is due to be granted in June 2004. Celbi is also certified to the Portuguese Forest Certification Standard, which is under consideration for PEFC endorsement. |
| <p>PEFC – Programme for the Endorsement of Forest Certification schemes, which endorses the FFCS. The SFISM and CSA Z809 are also PEFC members. FFCS – The Finnish Forest Certification System. FSC – Forest Stewardship Council. SFISM – The Sustainable Forestry Initiative[®] program of the American Forest & Paper Association. CSA Z809 – Canada's National Standard on Sustainable Forest Management.</p> | | |

Recovered fibre used at ten mills

A total of 2.1 million tonnes of recovered fibre was used by ten of Stora Enso's 39 paper and board mills during 2003.

The recovered fibre utilisation rate for the Group was 15%, expressed in terms of recovered paper consumption in relation to total paper production. These figures are approximately the same as in 2002.

Stora Enso's new newsprint machine at Langerbrugge Mill started up according to plan in May 2003, with an annual capacity of 400 000 tonnes. The machine runs exclusively on recovered paper. The mill is successfully meeting 10% of its energy needs by burning sludge from the waste water treatment and de-inking plants.

Maxau Mill is to rebuild its paper machine no. 6, which produces magazine paper using recovered fibre. The new machine will have an annual capacity of



Langerbrugge Mill uses paper collected within 300 kilometres of the mill. This area is home to almost 80 million people. Stora Enso aims to recycle fibre close to both fibre sources and customers.

260 000 tonnes by 2005, meaning that the mill's annual consumption of recovered paper will rise by 60 000 tonnes by 2005.

The paper cycle needs fresh fibre

The environmental impacts of recovered fibre must be assessed through the whole fibre cycle, and comparisons of the advan-

tages and drawbacks of different fibre sources can be complicated. All fibre is originally obtained from wood, and the greatest environmental impacts occur when the wood is first processed. Using more recovered fibre helps to reduce these impacts.

Paper grades made from recovered fibre are not as strong as paper processed

TRANSPORT

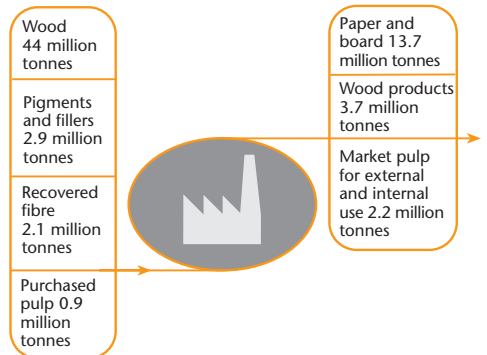
More progress with Base Port

In 2003, 1.4 million tonnes of goods were transported from Sweden to Central Europe through the Base Port ship-rail system. Two new Base Port projects were completed in Sweden in 2003.

In April, Fors Mill inaugurated its new loading facilities and warehouse. Folding boxboard products can now be directly loaded into containers at the mill, eliminating an intermediate transport and re-

loading link. This will save time, and reduce the likelihood of product damage as well as costs.

The reconstructed rail track at Grycksbo Mill was reopened in September 2003. Products destined for Continental Europe and the UK will be put on rail directly at the mill, instead of first being transported 40 km by trucks. This change will reduce emissions of carbon dioxide by 70% (300 tonnes per year) and other harmful gases by 70–85%, while also limiting product damage and cutting transport costs.



The total flows of raw materials and products transported by Stora Enso during 2003 amounted to 69.5 million tonnes. All external transportation is handled by contractors.

from fresh fibre, however. Repeated recycling gradually results in shorter and weaker fibres that must eventually be screened out during the recovery process, and then preferably incinerated to produce energy. Since fibre can only be recycled a few times, some fresh fibre will always be needed for most types of paper production. Newsprint makes an excellent recovered fibre product, however, because of its short lifespan.

Only about 80% of any recycled fibre can be recovered in the de-inking process. The rest remains in the de-inking sludge, which contains substances such as printing ink, as well as organic material. At Langerbrugge, for example, de-inking sludge is incinerated to generate energy.

Promoting recycling in North America

In 2003, Stora Enso North America set out its position on recycling. This involves continued support for practical and effective measures to expand paper recycling and develop markets for recycled products, as well as looking for new opportunities to improve environmental performance. ●

Increased rail usage

In 2003, Wisconsin Rapids Pulp Mill took steps to maximise the use of rail for deliveries to Kimberly Mill. It is estimated that pulp transportation by rail increased 50% from 2002. The mill is also constructing an additional rail spur so transportation by rail will continue to increase in the future.

Meanwhile, Nymölla Mill installed a new railway for trains bringing pulpwood, thus reducing the need for truck transportation.

Taking the new machine into use at Langerbrugge Mill has put pressure on local roads, due to increased transportation

Pulp

production and deliveries

Stora Enso has 15 pulp mills, all but one of which use the Elemental Chlorine-Free (ECF) process. Nymölla Sulphite Pulp Mill uses a Totally Chlorine-Free (TCF) process, which is also used for part of Kemijärvi

Pulp Mill's production. No elemental chlorine is used in Stora Enso's mills. The choice of bleaching process is made by each mill to optimise quality, production and environmental impacts.

Chemical pulp balance 2003^{*)}

| 1 000 tonnes | Short-fibre | Long-fibre | Fluff | Total |
|-----------------------------------|-------------|------------|-------|-------|
| Production | 2 295 | 2 363 | 201 | 4 859 |
| Sunila ^{**)} (50%) | 0 | 165 | 0 | 165 |
| Total production | 2 295 | 2 528 | 201 | 5 024 |
| Deliveries to own mills | 2 008 | 2 165 | 0 | 4 173 |
| External deliveries | 287 | 363 | 201 | 851 |
| External purchases | 222 | 451 | 0 | 673 |
| Pulp balance (net external sales) | 65 | -88 | 201 | 178 |

*) Figures are based on production and deliveries during 2003. **) Associated company

by trucks. But in 2004, a new internal rail system in the mill area will come into use, and rail transport should soon account for 20% of all transportation. A special traffic study will also be undertaken in the area around the mill during 2004 to help assess local impacts. The transportation of recovered paper to Langerbrugge by waterways (5% of all transportation) is expected to start by 2006. ●

NETSS

North European Transport Supply System

During 2003 Stora Enso prepared a plan for a joint Transport Supply System, aiming to enhance cost-efficiency and improve deliveries from the Group's Nordic mills. The current shipping services from southern Finland to the UK and Belgium will be replaced by a next-generation system based on the "hub and spoke" principle.

Cargo flows from southern Finland will be channelled through the port of Kotka. The new system is due to start operating in July 2005.

The challenge of climate change

Stora Enso's approach to climate change is based on two important issues. Firstly, in all of the countries where the Group operates, attempts are being made to reduce the use of fossil fuels. Secondly, the forest products industry has considerable potential in terms of finding practical ways to mitigate climate change.

Bio-fuels continue to be the most significant energy source where energy produced within Stora Enso is concerned. In absolute terms, bio-fuel usage increased by 358 TJ, but its overall share decreased slightly – from 62% in 2002 to 61% in 2003. Due to high electricity prices in the Nordic Countries, the mills themselves produced a greater share of the electricity they consumed than in 2002.

Electricity generation in internal combined heat and power (CHP) units increased by 0.4 TWh. The usage of fossil fuels for a considerable part of this increased internal electricity generation led to an overall reduction in the share of bio-fuels. Stora Enso nevertheless intends to reduce fossil fuel consumption through a systematic approach, which involves:

- increasing the share of bio-fuels
- promoting energy-efficiency
- making full use of internal know-how
- realising the remaining potential for combined heat and power (CHP) production using bio-fuels.

It is as yet unclear how future regulations designed to curb climate change will affect the Group's operations. Stora Enso is preparing to participate in the coming EU emissions trading scheme, which is scheduled to start in the beginning of 2005. Stora Enso is also one of the founding members of the voluntary trading scheme the Chicago Climate Exchange (CCX)*, and is actively participating in capacity building related to flexible, market-based solutions.

*) The Chicago Climate Exchange (CCX) is a self-regulatory exchange that administers a voluntary, pilot greenhouse gas emission reduction and trading programme in North America and Brazil.

Targets

- To continually reduce specific energy consumption*) for all processes and product lines.
- To utilise bio-fuel know-how better in markets with potential, such as Germany and the USA.
- To improve wood procurement through full-assortment buying, and by increasingly providing bio-fuels also for external users.
- To further prepare for emissions trading in both the EU and the USA.

*) Specific energy consumption: energy consumption per produced unit.

Through the Group's own operations, it is possible to control the direct impacts of energy and climate policies, but indirect impacts are even more important – and more difficult – to control. These indirect impacts mainly relate to externally purchased electricity and other supplies. On such issues Stora Enso expects the primary objectives of emerging steering mechanisms to be related to transparent pricing of electricity and related costs.

Green markets becoming established

Thanks to the combined heat and power production at many mills, Stora Enso is not only a buyer of fuels and market electricity but also a large producer of electricity and heat generated from internally supplied bio-fuels. This is the basis for Stora Enso's participation in several na-

tional schemes promoting renewable electricity production, for example through green electricity certificates.

In 2003 the Group continued to sell green electricity and green electricity certificates. During 2003, Swedish mills with bio-fuel-based CHP, including Fors, Hylte, Kvarnsveden, Norrsundet, Nymölla, Skoghall and Skutskär, all joined a national green electricity scheme, as did Celbi in Portugal and Langerbrugge in Belgium. The Stora Enso mills currently engaged in the sales of green electricity certificates to the Netherlands are: Enocell, Imatra, Kemijärvi, Kotka, Oulu, Summa, Sunila, Varkaus, and Veitsiluoto.

First auction in Chicago

Stora Enso North America has gained valuable experience from participation in the Chicago Climate Exchange (CCX), which aims to create an active marketplace to reduce the cost of carbon dioxide emission reductions.

The most important development during 2003 was the first auction in October, where credits sold at an average price of USD 0.98 per tonne. The trading market known as CCX started in December 2003.

Stora Enso North America is actively involved in the governance of the CCX, as well as trading. Stora Enso purchased 14 400 tonnes of CO₂ on the CCX in 2003.

Using less energy for more production

Stora Enso aims to reduce energy consumption per unit of production in all processes and product lines. The target is to be achieved through regional action



The most important bio-fuels used by Stora Enso are black liquor from chemical pulp production, logging residues and bark.

plans formulated in 2004 and will also be supported by energy savings commitments signed by mills and national governments in Finland and Netherlands.

Stora Enso joined the Finnish voluntary energy savings programme in 1997, and now has altogether 22 sites included in the agreement. Savings on electricity consumption in Stora Enso's Finnish mills in 2003 amounted to 1.8% and totalled 145 700 MWh/a, while savings on heat consumption in 2003 were 4.1%, totalling 850 000 MWh/a. These savings also add value to these mills' products.

In North America, a division-wide energy task force has been formed to achieve reduction goals. In 2003 the goal was for a 2% reduction in specific energy consumption, and in 2004 the goal is for a 5% reduction.

Notable achievements

Stora Enso has worked pro-actively when it comes to improving energy-efficiency and balancing the energy-mix by using bio-fuels more widely. The historical roots of this approach partly lie in the oil crisis of the 1970s, but other important factors include increases in the size of units, and technological innovations. Veitsiluoto Mill, which consists of a sawmill, a pulp mill and a paper mill all on the same site, provides an excellent example of how integrated mills can be highly energy-efficient.

Stora Enso's units are continuously looking for new and more efficient ways to utilise residues and by-products, and enhance energy efficiency. The following list exemplifies significant improvements made or initiated during the reporting year 2003:

- At **Kabel Mill**, construction of a bio-fuel boiler was started through a joint venture with the energy company Mark E. This investment will eventually provide 25 t/h of steam for Kabel Mill, and 20 MW of electricity from renewable sources for the local grid. Start-up is planned for the end of 2004.

- At **Kvarnsveden Mill**, investment in a new multi-fuel boiler, to replace an old boiler, will increase the use of bio-fuel, and improve energy-efficiency.

- At **Enocell Mill**, trials have been conducted on drying out sludge with the help of the sun and the wind, prior to the burning of the sludge in the mill's bark boiler (similar technology has also been used at the **Norrundet, Nymölla, Skutskär, Celbi, Imatra and Skoghall mills**).

- At **Hylte Mill**, a new flue gas condenser has been installed on a boiler. The mill now saves natural gas corresponding to more than 8 000 m³ of heavy fuel oil per year, as the heat from the flue gases can be used instead of steam to heat the water.

- Nymölla Mill's** rebuilt secondary heat system will start up in January 2004.

- At **Hylte Mill**, a wet flue gas fan is being installed on the bark boiler, to save electricity.

- At **Imatra Mills**, methane from the landfill site is being used to generate electricity.

- Langerbrugge Mill's** bio-energy power plant has been adapted to use sludge from the de-inking process.

- At **Sachsen Mill**, motor drives have been changed to operate with frequency converters in order to cut electricity consumption.

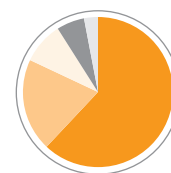
- At **Summa Mill**, a new natural-gas-fuelled reserve boiler is replacing an older coal/oil-fuelled boiler and an electrical boiler.

- At **Kitee Sawmill**, heat recovery from flue gases was improved, resulting in heat savings of 2 MW.

- At **Varkaus Sawmill**, storage of logs on land instead of in the water has led to considerable energy savings during the drying of sawn goods.

Read more in the Web Report

Total consumption of fuel in energy production in 2003, TJ



| | | | |
|-------------|-----|------------------|----|
| ● Bio-fuels | 61% | ● Oil | 6% |
| ● Gas | 20% | ● Peat | 4% |
| ● Coal | 9% | Total 214 500 TJ | |

Bio-fuels already account for some 61% of Stora Enso's total annual fuel consumption of 214 500 TJ. Combined heat and power production covers 35% of the Group's total electricity consumption of 23.0 TWh.

Utilising branches and bark efficiently

Stora Enso aims to become a major actor in bio-energy markets. The best ways to achieve this goal are to increasingly buy all assortments of wood, and to raise the already high share of bio-fuels (61%) in the Group's own fuel supply.

The restructuring of the Group's European wood procurement operations has facilitated the development and management of bio-fuel sources. Logging residues and sawmill by-products are particularly important in this respect.

For instance, any oversupply of bark in one mill can either be channeled to other Stora Enso mills that use bio-energy, or sold off to other companies. A special Bio-Energy Team was established in 2003 including representatives from all Wood Supply Europe's regional units and the relevant corporate functions.

Bio-energy activities in different regions in 2003

- To meet the steadily rising demand for bio-fuels in Sweden, Stora Enso Wood Supply Sweden has increased the harvesting of forest residues (tops and branches). The volumes of forest residues collected will increase even more during 2004.
- In Finland, wood fuel flows are to be better managed by a new co-ordination team. This will create a common platform for representatives from energy services, sawmills and wood supply organisations. The aim is to ensure optimum fuel flows. The procurement and production of bio-fuels based on forest residues will be further developed in order to support wood procurement for mills in Finland.
- Bio-energy Continental Europe has started a private-public partnership with the Forest University of Freiburg, in order to develop harvesting systems for the Continental European bio-energy market. Most of the Stora Enso mills in Continental Europe use bark as a bio-fuel.

- Considerable volumes of bio-fuels have been supplied from the Baltic Countries mainly to Sweden, but also to Denmark and Germany in recent years. These assortments have included low quality roundwood and chips, as well as refined material such as pellets.
- In North America, Wisconsin Rapids Pulp Mill now consumes all the bark and other wood residues generated in its own operations, thanks to improvements in the mill's solid fuel handling system.

Stora Enso aims to optimise internal bio-energy production, and to increasingly mobilise bio-fuels both within mills and for other users. One reason behind this is the possibility that a future increase in the use of wood-based fuels as part of European action to combat climate change could push up the costs of the forest industry's raw materials.

Electricity procurement and consumption in 2003

| TWh | Finland | Sweden | Europe ¹⁾ | North America | Asia | Total |
|-------------------------------|---------|--------|----------------------|---------------|------|-------|
| Group resources ²⁾ | | | | | | |
| CHP | 4.0 | 1.2 | 1.8 | 1.1 | 0.03 | 8.1 |
| Hydropower | 0.3 | 0 | 0 | 0.1 | 0 | 0.4 |
| Nuclear power | 1.3 | 0 | 0 | 0 | 0 | 1.3 |
| Other sources | 0.9 | 0 | 0 | 0 | 0 | 0.9 |
| Subtotal | 6.5 | 1.2 | 1.8 | 1.2 | 0.03 | 10.7 |
| External purchasing | 1.5 | 4.9 | 3.4 | 3.8 | 0.08 | 13.6 |
| Total procurement | 8.0 | 6.0 | 5.2 | 4.9 | 0.12 | 24.3 |
| Stora Enso mill consumption | 7.7 | 5.9 | 4.5 | 4.8 | 0.12 | 23.0 |
| External sales | 0.3 | 0.03 | 0.7 | 0 | 0 | 1.0 |

¹⁾ Excluding Finland and Sweden

²⁾ Group resources = resources owned directly or indirectly by Stora Enso

Externally purchased electricity is obtained through various contracts with different durations, and through spot procurement with price risk management achieved through financial hedging. In line with the Kyoto Protocol, CO₂ emissions related to purchased electricity are not included in the Group's aggregate emission figures.

Nuclear power remains an option in Finland

Stora Enso's interest in the recently approved new Finnish nuclear power plant project is to ensure that a sufficient supply of electricity is guaranteed in the long term at stable and competitive prices. Finland's fifth commercial nuclear reactor will be built and financed by Teollisuuden Voima Oy (TVO), a major energy company owned by several Finnish power companies. Stora Enso currently owns nuclear power generation capacity in Finland through part-ownership of the power company Pohjolan Voima Oy, which is one of the owners of TVO.

[Read more in the Web Report](#)

District heating in 2003

Eleven Stora Enso mills are integrated into local district heating systems, which is beneficial for both the mills and local communities. In 2003, Stora Enso's total external heat deliveries increased by 7% compared to 2002, and amounted to 798 GWh. This was due to energy-efficiency improvements at mills, high electricity prices, the cold winter in the Nordic Countries, and the expansion of certain local district heating networks. Local district heating networks are supplied by the following mills: Ala Sawmill, Heinola, Hylte, Kotka, Kvarnsveden, Nymölla, Oulu, Skoghall, Skutskär, Varkaus and Veitsiluoto.



More efficient use of water

In 2003 Stora Enso's mills used less water per unit of production than in 2002. Several major projects have been completed to promote eco-efficiency in Stora Enso's use of water.

Water is among the most important resources used in paper manufacturing. Water is needed for purification, cooling, lubrication and the bonding of fibres in paper. High water quality is vital to ensure high product quality. Before fresh water can be used it has to be treated to remove contaminants. Treating waste water carefully before it is returned to the water system is particularly vital, and there have been major improvements in this respect at several Stora Enso mills during 2003.

The capacity of Veitsiluoto Mill's biological treatment plant was increased, due to the completion of a second aeration basin and primary clarifier. Sludge handling and the existing aeration basin were also improved, and the whole waste water control system was renewed. These measures followed investment in another secondary clarifier in 2002.

These expansions have doubled aeration capacity at Veitsiluoto, and increased daily waste water handling capacity from 39 000 m³ to 60 000 m³.

Paper production at Veitsiluoto Mill will rise considerably, now that fine paper machine no. 3 has been rebuilt. The introduction of a new hydrogen peroxide bleaching process at the groundwood mill will increase the COD_{Cr} loads reaching the mill's biological treatment plant, but thanks to the improvements at the treatment plant, waste water discharges will still be reduced despite the increase in paper production.

Using every drop

A new de-icing conveyor was introduced at **Kemijärvi Mill's** debarking plant to reduce flow rates and organic loads in waste water from the debarking plant. The capacity of the cooling water sewer was also increased. Cooling water is led into the mill's second aeration basin to increase the efficiency of organic matter removal, which has also been improved due to the raised aeration capacity of the waste water treatment plant.

At **Kotka Mill's** waste water treatment plant modernisation was completed, and an activated sludge plant was made more effective by adding aeration capacity and by building a thickener for sludge. Two new cooling towers were also built for waste water.

At **Langerbrugge Mill**, new fresh water treatment and waste water treatment plants were built. The total cost of these investments was EUR 13.8 million.

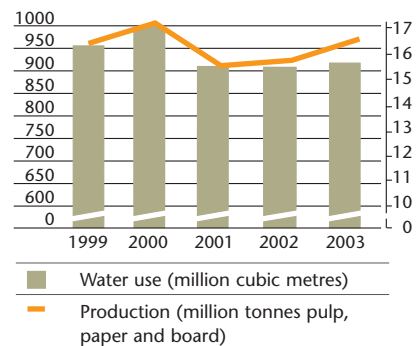
The effluent treatment plant at **Maxau Mill** was rebuilt in order to meet targets for reductions in the COD loads entering the River Rhine. Major additions to the effluent treatment plant included an aerated buffer tank to increase the storage volume for effluents, a turbo circulator to increase clarifying capacity, a cooling tower, two moving bed reactors and a new sludge press. This whole project was finalised in 2003, and has already achieved the targeted 20% reduction in COD loading. The total cost of the project was EUR 5 million.

Suzhou Mill has started to reuse treated waste water as process cleaning water, in order to reduce water discharges. The total cost of this investment was EUR 9.6 million.

Varkaus Sawmill's log sorting process was renewed. All storing and handling now takes place on land, so only insignificant loads of organic material enter the water.

[Read more in the Web Report](#)

Water consumption 1999–2003



The local availability of water should be taken into account whenever water consumption is analysed. Stora Enso operates in countries where fresh water is plentiful, as well as in areas where it is a scarce resource. Surface water accounts for 96% of the Group's water use.

Aiming for superior performance

In autumn 2003 Stora Enso's new Sustainability Committee approved the Group's long-term objectives for corporate social responsibility.

These long-term objectives set the framework for future action on corporate social responsibility (CSR). The high levels of ambition in the objectives reflect the Group's overall strategy, which is to aim for operational excellence and superior performance and image in the field of sustainability.

Long-term objectives were defined for governance structure, strategic planning, annual planning and performance reviews, training, unit implementation, quality assurance, value chain management and performance measurement. Objectives were also defined for each CSR principle. In order to proceed towards these long-term objectives the following targets were agreed for 2004.

Targets for 2004

| Area | Target |
|-----------------------------------|---|
| Strategic planning | <ul style="list-style-type: none"> • Continue country-specific risk assessments. • Finalise sustainability due diligence guidelines. |
| Training | <ul style="list-style-type: none"> • Start a CSR facilitator training programme. |
| Unit implementation ¹⁾ | <ul style="list-style-type: none"> • Continue pilot projects in different geographical locations. • Set division-specific targets for unit implementation. |
| Quality assurance | <ul style="list-style-type: none"> • Define concept for CSR audit²⁾. • Start internal CSR data checks. |
| Value chain management | <ul style="list-style-type: none"> • Conduct first pilot supplier CSR audits. |
| CSR principles | <ul style="list-style-type: none"> • Review and update CSR principles. |
| Reduction in workforce | <ul style="list-style-type: none"> • Finalise corporate guidelines on reductions in the workforce. |
| Diversity | <ul style="list-style-type: none"> • Continue the WISE-project according to the action plan. |
| Working conditions | <ul style="list-style-type: none"> • Define procedure for handling harassment cases. • Lost-time accidents <ul style="list-style-type: none"> • Objective: Zero accidents • Intermediate targets: Lost-time accident rates in each unit in the top 25% within the forest industry in the respective country. If this target is reached, the unit should also aim to be in the top quartile within the forest industry worldwide. • Absenteeism: <ul style="list-style-type: none"> • Absenteeism in each unit lower than the national forest industry average. • Stora Enso Safety, Health and Security Management System <ul style="list-style-type: none"> • The system should be adopted in all units when assessing activities and management systems related to these areas, as a part of the Stora Enso Excellence approach. |
| Business practice | <ul style="list-style-type: none"> • Continue to increase awareness of the Stora Enso Competition Law Compliance Programme. • Audits: see quality assurance and value chain targets. |
| Communications | <ul style="list-style-type: none"> • Develop a more systematic approach in stakeholder engagement. |

¹⁾ Units here refer to Stora Enso's production units, sales & services organisations, and staff functions. Unit implementation refers to a process where Stora Enso's CSR principles are integrated into the operations of each Stora Enso unit.

²⁾ CSR audit will be a tool to assess how different units have integrated Stora Enso's CSR principles into their operations.



The Executive Management Group approved an action plan to promote women's careers in Stora Enso (WISE).

Total Quality Management tool updated

One of the year's key projects was to update the Group's total quality management (TQM) tool "Excellence 2005", in order to reflect Stora Enso's operational environment and strategic priorities more closely. The CSR part of this tool was completely revised. Current CSR management requirements and priorities were added to Excellence 2005, as well as concrete examples from different units.

Addressing CSR risks

The first country-specific risk assessment was completed during 2003 for Brazil. These assessments provide background information on the general human rights situation and the level of corruption. They can also be referred to in investment decisions, during audits, and when suppliers are selected.

A new project was started to update the Group's due diligence guidelines. One major change is the comprehensive integration of CSR issues into the due dili-

gence process. The guidelines will be applied in acquisitions, greenfield investments, joint ventures and divestments.

Raising internal awareness

The Stora Enso Executive Programme included a CSR module for the first time this year. The participants in the executive programme represent Stora Enso's future top management potential. The programme's CSR module included training on the Group's CSR policy, principles, strategy, objectives, priorities and activities. The expectations of the investor community, competition and anti-trust issues, and the importance of stakeholder dialogue were also addressed. A similar module will form part of future executive programmes.

CSR is also an important element in various other Group-level competence development programmes. Programmes such as the Introducing Stora Enso, Stora Enso World, Stora Enso Trainee and Stora Enso Manager programmes all include CSR modules.

Stora Enso's intranet pages were updated during 2003 to reflect developments in the Group's sustainability agenda. The environmental and CSR pages were combined under a common sustainability umbrella, and the CSR pages were also completely revised.

Measuring performance

Stora Enso introduced a new information system for collecting data for human resources indicators. Previously this data was collected through an Excel-based questionnaire. The new web-based solution facilitates data collection, and reduces the potential for human error, as data collation is now done automatically. The web-based facility allows designated persons to enter and fill in the questionnaire via their personal username and password. After filling in the information, the questionnaire is submitted and automatically processed into the reporting. ●

Oulu & Varkaus

mills show the way

Stora Enso set objectives and schedules for the implementation of CSR principles by individual units in autumn 2003. Each unit is to identify the significant social aspects of its operations, and develop related action plans and define key performance indicators by 2006.

This work will start in 2004, with each division defining targets on how to proceed towards the Group objectives.

The challenge for a global company such as Stora Enso is to ensure that at least the same minimum standards are applied in all the locations where the Group operates. Units play a key role in integrating corporate social responsibility principles throughout the Group's operations. Local issues and priorities always have to be carefully considered in order to make the implementation process meaningful.

The great variety of operations and locations involved in Stora Enso's work means that each unit has to go through the corporate principles and define the significant social aspects related to each

principle in their operations. For sales units, for example, ethical business conduct and compliance with competition laws are of vital importance, while

mills should emphasise issues such as occupational health and safety and community involvement. The viability of each unit's definitions will be tested through corporate monitoring tools

Global and local perspective required

Examples of the CSR aspects at the pilot mills

Personnel

- Employee well-being
- Training and development
- Discrimination, harassment, inappropriate treatment
- Occupational health and safety
- Diversity
- Reduction in workforce
- Working hours
- Industrial relations

Communication

- Openness and pro-activeness
- Awareness
- Stakeholder engagement



Community involvement

- Regional welfare generation
- Health & safety of local community
- Partnerships, co-operation, support for non-profit organisations

Business Practice

- Suppliers and sub-contractors
 - Selection criteria: social aspects
 - Local suppliers
 - Equality
 - Sub-contractor health & safety on the mill site
- Interpretation and implementation of corporate guidelines at mill level
- Customer "acceptability"



Marjaana Luttinen chairs a CSR workshop at Oulu Mill.

such as Excellence 2005, and ultimately by local stakeholders.

In order to create a suitable unit implementation framework, taking into account both global and local perspectives, Stora Enso started pilot projects in two mills during 2003.

Pilot projects in Oulu and Varkaus

In the spring of 2003, Oulu Mill became the first mill to start the implementation of Stora Enso's Corporate Social Responsibility Principles at mill level. Varkaus Mill followed suit in August 2003.

During these projects, both mills tested a framework designed to identify key

social aspects of their operations, to shape related action plans and to establish indicators. The first stage included internal workshops involving both mill management and employees' representatives.

These workshops showed that social responsibility, as identified by Stora Enso's principles, is clearly an issue at both Varkaus and Oulu. Issues that were identified as important included employee health and safety, well-being and diversity, the role of the mill in promoting the welfare of the local communities, dialogue with the local community and supply chain management in co-operation with corporate purchasing. It also became evi-

dent that effective stakeholder dialogue is a vital part of social responsibility in terms of increasing mutual understanding and choosing the best practicable courses of action.

Experiences gained through these first two pilot projects will be utilised in other mills. Next year more pilot schemes will be run at other Stora Enso units to test these concepts in different cultural settings. Also CSR facilitator training will begin in 2004, with the emphasis on getting to know Stora Enso's approach to corporate social responsibility and the necessary tools for unit implementation. ●

Details matter

Sustainability is one of the cornerstones of the Stora Enso brand. Even the business gifts provided by the Stora Enso Shop must communicate this commitment.

The Stora Enso Shop was created to ensure that the Stora Enso brand is applied consistently, and that business gifts are always of high quality. An important part of this quality standard is the social and environmental acceptability of products purchased and sold by the shop.

Since 2002 the Shop has evaluated the social and environmental performance of its suppliers. Each supplier receives a questionnaire assessing the compliance of their operations with Stora Enso's social and environmental policies and princi-

ples. Unsatisfactory answers are discussed with suppliers, and if necessary the supplier relationship will be terminated or rejected. During 2003 the Shop sent out 15 questionnaires and received 15 replies. In one case, the Shop decided not to enter into a business relationship with a respondent on the basis of their unsatisfactory reply. The supplier evaluation process is to be further improved, with the selection criteria made stricter as suppliers become more aware of Stora Enso's requirements. ●



Principles in action

During 2003 Stora Enso faced challenges, but also made progress on the implementation of the Group Corporate Social Responsibility Principles in several fields. The priority areas at this stage have continued to be Business Practice, Diversity, Workforce Reduction and Working Conditions.

Business Practice

The Business Practice Principle stresses fair and equal co-operation with all stakeholders. The principle also prohibits corruption, bribery and price-fixing, and states that conflicts of interests must be avoided. Company accounts must accurately reflect all business transactions.

Compliance Programme addresses competition law

Free and fair competition is a cornerstone of the market economy. At Stora Enso, compliance with the basic principles of free and fair competition goes beyond merely fulfilling legal obligations, and is

also an important element of corporate social responsibility.

In autumn 2002 Stora Enso launched a Compliance Programme designed to promote the understanding of competition law, and to prevent incidents of non-compliance. This programme is based on the former programmes of Stora, Enso and Consolidated Papers. The programme covers Stora Enso's business operations all around the world. During 2003, special efforts were made to raise the awareness of this programme through internal training programmes and other measures.

Anti-Fraud Policy formulated

During spring 2003, Stora Enso published an Anti-Fraud Policy to support the implementation of the Group's busi-

ness practice principles, and to ensure that the corporate culture and environment promote responsibility, honesty and ethical behaviour. The policy defines the concept of fraud, and how suspected frauds should be brought to notice. It also sets out investigation and reporting responsibilities, as well as measures to prevent frauds.

The Anti-Fraud Policy addresses the following issues:

- Misuse of resources (e.g. theft of materials)
- Systems or processes that are prone to abuse
- Financial fraud
- Inappropriate use of company equipment
- Other actions taken by personnel which may be unlawful, contrary to Stora Enso's policies, or otherwise amount to improper or unethical conduct.

Each unit must comply with this policy and establish and maintain sufficient internal controls to provide a reasonable assurance that fraud-related risks are properly identified, monitored, controlled and mitigated. These controls must also be well communicated to all the personnel in each unit.

Stora Enso's Internal Auditing department has been advising units on the design and establishment of fraud prevention units and a self-assessment tool for the evaluation and benchmarking of internal control levels. The Internal Auditing department applies appropriate auditing procedures to review internal controls and other measures applied to safeguard assets from various types of losses. •



Workforce Reductions

The Reduction in Workforce Principle states that any reductions necessary in the workforce must be carried out with respect for the individuals concerned, and proper sensitivity to all employees' needs.

Occasional restructuring is unavoidable in most industries. Organisations must change in order to compete and survive in a rapidly changing, competitive world. How restructuring is carried out becomes even more important when a company is a major employer and buyer of services and commodities in a relatively small community, as is often the case in the forest industry.

How job losses are communicated and perceived, and how restructuring is conducted, will have a major effect on both employees and external stakeholders and will thus significantly influence the performance and well-being of employees throughout the entire organisation, as well as in the units directly involved.

Measures frequently taken in connection with redundancies include:

- Identifying internal employment opportunities
- Providing outplacement and career transition services
- Providing retirement plans
- Providing further education.

One of the CSR objectives for the year 2004 includes the preparation of Stora Enso guidelines on how redundancies should be carried out in a socially responsible way. This is one way to make sure that Stora Enso will live up to its values by guaranteeing respect for all its employees. The groundwork for these guidelines has already been done during 2003. ●

Reductions in 2003

The year 2003 was exceptionally hard in terms of redundancies. The most drastic redundancies were in North America.

● **Stora Enso North America** – During 2003 workforce reductions continued to affect employees at Stora Enso's facilities in North America for the second year in row. A total of 526 employees were made redundant in 2003, representing approximately 9% of the division's workforce. Employees were offered severance payments and various services including consultation, workshops and office facilities, in order to help them find new career opportunities. The US Federal Government has also provided benefits and training. Placement rates have been high, with many employees finding comparable positions or moving to suitable alternative careers.

● **Anjalankoski Mill** – The number of permanent staff will be cut by 70 during 2003 and 2004, meaning that approximately 6% of all permanent employees at the mill will be made redundant. Nearly all of these employees have been offered retirement plans, and one person received outplacement service.

● **Berghuizer Mill** – 17 employees were made redundant in 2003, representing approximately 4% of the mill's workforce. The job reductions were mostly achieved through early retirement.

● **Celbi Mill** – Due to a reorganisation programme introduced in 2003, 50 employees were made redundant, representing approximately 12% of the workforce.

● **Corbehem Mill** – As part of a restructuring programme announced in September, the number of permanent employees is expected to decrease by 206 by the end of 2006, representing 17% of all employees. The majority of the redundancies will take place by the end of 2004. Retirement plans, further education and outplacement services have been offered.

● **Gruvön Sawmill** – 14 employees were made redundant, representing approximately 10% of all employees. Some employees were offered early retirement pensions.

● **Skoghall Mill** – Cleaning work was outsourced during 2003, but the mill was able to offer internal employment for all 11 employees involved.

● **Uetersen Mill** – 60 employees will be made redundant by the end of 2004, representing approximately 10% of the mill's workforce. These job reductions were achieved through voluntary agreements, and employees were offered early retirement packages when applicable.

● **Wood Supply Baltic** – As a result of the Sylvester integration process, 362 employees and contractors were transferred to the Estonian subsidiary Stora Enso Mets, but then 129 of these employees were made redundant, representing 36% of the total workforce. This process also resulted in two redundancies in Latvia. Various procedures were used, such as severance packages and individual negotiations.

● **Wood Supply Russia** – A small sawmill in the Leningrad Region was closed in 2003, with 12 employees consequently made redundant and one offered internal re-employment. The 12 employees represent approximately 3% of the total permanent staff of Wood Supply Russia.

● **Wood Supply Sweden** – Five employees will be made redundant by October 2004, representing nearly 1% of all workers at Wood Supply Sweden. The employees are receiving individual support from the security council and being helped to find internal employment opportunities.

● **Koski Timber** – 76 employees were made redundant during 2003, due to the destruction by fire of the unit's sawmill in 2002. Eight of these employees have found internal employment opportunities within Stora Enso.

● **Papyrus** – A cost-cutting programme was initiated in September. As a result, 125 employees were made redundant, representing approximately 10% of all employees. Redundancy procedures were tailored to local conditions in different countries. Many units offered outplacement services or courses. ●



Diversity

The Diversity Principle states that discrimination against employees due to their race, ethnic background, gender, disability, sexual orientation, religion, political opinion, maternity, social origin or similar characteristics is prohibited.

Diversity has been addressed as a priority area in Stora Enso's corporate social responsibility work. Diversity is seen as critical to achieving the Group's mission and vision, and to living up to the Group's values. Diversity will:

Diversity indicators

| | 2002 | 2003 | |
|--|-------|-------------|---------------|
| Age distribution | | | |
| <20 | 0.6% | 0.6% | |
| 21–30 | 11.4% | 12.9% | |
| 31–40 | 27.8% | 27.1% | |
| 41–50 | 32.4% | 31.8% | |
| 51–60 | 25.5% | 24.8% | |
| >60 | 2.4% | 2.8% | |
| Gender distribution | | | |
| Female | 19.0% | 18.5% | |
| Male | 81.0% | 81.5% | |
| Representation of women in management | | | |
| Board | 0% | 9% | (1 person) |
| Management Group | 0% | 4% | (1 person) |
| Product area management teams | 0% | 9% | (2 persons) |
| Divisional management teams | 5% | 7% | (7 persons) |
| Staff unit management teams | 0% | 14% | (11 persons) |
| Unit management teams | 14% | 16% | (183 persons) |
| Women in recruitment | | 2003 | |
| Permanent hires | | 25% | |
| Permanent hires, bachelor's or higher degree | | 33% | |
| Temporary contracts | | 32% | |

- Improve Stora Enso's talent and expertise pool.
- Secure access to wider and more varied customer, supplier, and investor bases.
- Foster innovation, creativity, and flexibility.
- Enhance the Group's ability to change and challenge the status quo.

Gender is currently a focus area in promoting diversity within Stora Enso. In 2002, the research project Women in Stora Enso (WISE) was carried out to identify factors that either support or hinder women's careers within Stora Enso. The core message from this study showed that although women generally do enjoy their work at Stora Enso, they feel that attitudes must change to create truly equal opportunities for female managers.

Based on this study, the Executive Management Group in 2003 approved an action plan, which now forms the basis for the continuation of the WISE project. The objectives are to promote women's careers in Stora Enso by giving special attention to women in management audits, to focus on career planning, to create better opportunities for internal networking, to screen recruitment procedures for discrimination patterns, and to monitor and analyse any salary differences. The action plan also aims to help employees balance their work and personal lives by creating new benefits such as childcare, and to integrate diversity into management training. •

Employee distribution by country

| | 2002 | 2003 | % |
|-----------------|--------|--------|------|
| Finland | 14 676 | 14 479 | 32.7 |
| Sweden | 9 187 | 9 068 | 20.5 |
| USA | 5 731 | 5 182 | 11.7 |
| Germany | 4 761 | 4 785 | 10.8 |
| France | 1 333 | 1 312 | 3.0 |
| Austria | 1 189 | 1 226 | 2.8 |
| Estonia | 132 | 1 140 | 2.6 |
| Canada | 850 | 849 | 1.9 |
| Netherlands | 858 | 829 | 1.9 |
| China | 816 | 811 | 1.8 |
| Russia | 581 | 741 | 1.7 |
| Belgium | 645 | 623 | 1.4 |
| Other countries | 3 094 | 3 219 | 7.3 |
| Total, average | 43 853 | 44 264 | 100 |
| Total, year-end | 42 461 | 42 814 | |

Personnel turnover*) 2.8% 2.2%

*) Based on the number of outgoing permanent employees who have left Stora Enso voluntarily.

Community Involvement

The Community Involvement Principle states that Stora Enso must be a responsible member of all the communities where the Group operates.

In many locations, Stora Enso's mills are major employers and taxpayers, and this position entails a considerable responsibility. Whenever the Group establishes operations in new areas, new challenges arise. In some areas, basic infrastructure development and support for local health care facilities are priorities. Elsewhere, local communities may be more concerned about odour problems, or preserving jobs.

Due to these different conditions, the measures taken must also be unit-specific. Many of Stora Enso's mills have long traditions of working closely together with their local communities. Activities have included open house events, shared infrastructure, regular meetings with unions, or providing district heating to the community.

Kvarnsveden Mill participates in the local Youth at Risk project, and employees can use their working hours to do voluntary work as mentors for young people with problems.

The staff of Stora Enso's Hong Kong sales office formed a special clean-up squad and spent an afternoon cleaning up a local beach. This initiative has subsequently been adopted by several Swedish companies in the city.

Co-operation with schools and universities

Nearly all of Stora Enso's mills and many sales offices co-operate with local schools and universities. Mills have designed various projects to increase the interest towards technical professions, especially where girls are concerned.

- **Kvarnsveden Mill** participates in curriculum planning for technical subjects at Dalarna University. Next year the university will offer a new study programme that better complements the recruiting needs of local companies.
- **Imatra Mills** have signed an extensive co-operation agreement with the Lappeenranta University of Technology regarding study support and research and development.
- **Stora Enso Transport and Distribution UK** has donated computers to college projects in Ghana, Kenya, Nigeria, Uganda, Zimbabwe and other African countries.

Promoting education and culture



Stora Enso Argentina sales office now donates schoolbooks and supplies to schools in underprivileged areas, instead of sending Christmas presents to clients. The feedback from schoolchil-

dren, teachers and Stora Enso's clients has been positive.

The Cochino Mission School was selected for this project in spring 2003. Cochino lies in the remote northeastern corner of Argentina, at an altitude of 3 800 metres in the Andes. Stora Enso's Christmas card for 2003 was painted by one of the school's pupils, and proceeds from sales of the card will be donated to the school.

In July, Stora Enso Australia's sales office produced a catalogue for Sotheby's annual auction of Aboriginal art in Melbourne, which helped to raise money for the Aboriginal Communities in remote regions of Australia.

Community involvement and WWF co-operation

Testing Nordic forestry practices in Russia

The Pskov Model Forest Project – co-sponsored by Stora Enso and managed by WWF Russia – aims to balance the economical, ecological and social sustainability of forestry in the Pskov Region of northwestern Russia.

The first three-year phase of the project was completed in November 2003, and the second phase is now being planned. This second phase involves the dissemination of results to other companies, the authorities and non-govern-

mental organisations. Institutions including the World Bank are already utilising and circulating findings from Pskov in their own projects.

The project has been positively received by both local people and the authorities. Stakeholder involvement has been a strong component throughout the project, with local people able to participate in forest management planning, for instance. The new ecological trails provided as part of the project are well used by schoolchildren on field trips and other local people.

After the first phase of the project, the Pskov Model Forest received FSC certification. The Pskov Model Forest Project has been accepted as the Stora Enso case for the UN Global Compact.

Stora Enso supports the WWF Heritage Forest programme

Stora Enso Wood Supply Finland helps to promote voluntary forest conservation by supporting WWF Finland's Heritage Forest programme. This project has been designed to support the government programme for biodiversity conservation (METSU), and highlights the importance of finding and testing new means of voluntary forest conservation in Southern Finland.

Stora Enso Wood Supply Finland maintains regular contacts throughout the year with private forest owners, and also offers forest-counselling services. The Heritage Forest programme is particularly aimed at forest owners who appreciate voluntary means to combine wood production with the preservation of ecologically or culturally valuable forests.

Working together to promote sustainability

Most Heritage Forests are located within privately owned forests. Many forest owners consider such sites worth preserving for various reasons such as their own childhood memories, or beautiful natural features. Heritage Forest sites can be designated according to their scenic, recreational, cultural or natural values.

Heritage Forest sites are established through individual agreements between forest owners and the WWF. The protection of a Heritage Forest site is voluntary, and may later be discontinued at the wishes of the forest owner.

Other co-operation between Stora Enso and WWF

- **Finland:** Stora Enso supports WWF Finland's Mermaid Campaign to improve ecological conditions in the Baltic Sea.
- **Sweden:** The Forest Fund Stora supports scientific research into forest landscapes in Sweden and the Living Forest Waters project, which promotes good water management practices in forestry.
- **Latvia:** Stora Enso has supported the publication of WWF Latvia's educational CD "Forest Evolution: Landscape, Components, Processes", as well as the Forest Days 2003 event, which promoted the reforestation of clear-cut areas in compliance with sustainable forest management principles and criteria.

The Kuitunen family have protected some parts of their own forest under the Heritage Forest programme.





Progress on employee well-being

Special emphasis was given during 2003 to workplace safety throughout the Group.

The focus has particularly been on improving workplace safety, since there are still marked differences in safety performance between different units and geographical areas. The average accident rates have been dropping both across the Group as a whole, and in all the countries where Stora Enso operates on a large scale. The corporate average absenteeism rate was also somewhat lower than in 2002.

From the beginning of 2003, all units were expected to follow up and report on all accidents on Stora Enso's premises, including those involving contractors' and suppliers' personnel.

Implementation of the new web-based survey system has continued, and employee satisfaction surveys have been used to assess management practices, work atmosphere and employee well-being.

New challenges

As employee well-being and occupational health and safety (OH&S) are seen as top

priorities by Stora Enso, it is essential to establish adequate practices in these areas in newly established or recently acquired units right from the start. This is always done in co-operation with the local health and safety authorities and institutions.

Considering local conditions

Stora Enso's largest current investment project, the Veracel Pulp Mill and plantation project in Brazil – a joint venture with Aracruz Celulose S.A. – represents a significant new challenge in terms of employee well-being and occupational health & safety, particularly concerning the health and safety of the many contractors' employees working on the large pulp mill construction site.

In addition to ensuring that national rules and regulations are fully complied with, OH&S activities throughout the Veracel Project will follow principles and practices that have become well-established and increased employee well-being elsewhere in Stora Enso's operations.

A well-equipped clinic run by trained health professionals is being built at the site with special emphasis placed on first-aid and ambulance services. Safety training is also given to contractors' employees, all of whom are required to meticulously follow safety regulations on issues such as working methods and safety equipment. Compliance with safety rules is closely monitored through regular inspection rounds.

Arrangements for OH&S procedures have also already been finalised for the new Impilahti and Nebolchi Sawmills in Russia. Stora Enso's health and safety principles are also to be followed in the Group's Chinese operations, including the forest plantation near Beihai in Guangxi Province.

Stora Enso is committed to applying the same organisational health and safety practices everywhere the Group operates, as well as fully complying with all national health and safety regulations.



Learning from best practices

Many Stora Enso units followed excellent OH&S practices during 2003, which should serve as good examples for the whole Group.

Stora Enso North America has a well-established system of safety audits. Comprehensive and detailed audits can be very valuable tools for measuring safety and health results. Safety audits at Stora Enso North America cover issues such as organisational leadership, training, inspection, job task analysis and observations, incident investigations, emergency preparedness, organisational rules, protective equipment, health and industrial hygiene controls, contractor safety, and reports and records.

In Finland, good use has been made of modern information technology in OH&S. A new web-based data processing system has been taken into use in all Stora Enso's occupational health units. The Sinet® (Safety Information Intranet) system is used by all Stora Enso's Finnish production units to process and report accident data, and to collect and maintain chemical data sheets.

Skutskär Mill in Sweden has completed a comprehensive employee well-being project, focusing on work environment, health and lifestyle issues. This research was conducted together with e.g. the Karolinska Institutet, and involved careful analysis of the initial situation, tailor-made intervention activities, and follow-up measures. The project led directly to improvements in several indicators of employee well-being, and valuable experience was gained of practical ways to influence these factors in the workplace setting.

The long-term health project for employees of all Stora Enso's Swedish units is continuing, following the example set by Fors Mill, who started their pilot project in 1992. The target is that 40% of employees will come into the category of "long-term healthy", meaning that they have not been away from work because of ill health for at least two years.

OH & S quality systems

By the end of 2003, 13 Stora Enso units had their health and safety systems certified by accredited certification bodies. The Stora Enso Safety, Health and Security Management System has also been utilised to improve performance in these areas. In Finland, the occupational health services had their common quality system re-certified according to the revised ISO 9001:2000 standard.

Measuring performance

The indicators used to measure safety performance among Stora Enso's own personnel and contractors' employees, where

reported, include fatal accidents, lost-time accidents, accidents causing no lost time, and near misses. Sickness-related and accident-related absenteeism are also monitored to assess the health status of Stora Enso's employees. All these figures are monitored continuously by the units, and reported quarterly at corporate level.

Fatal accidents

One fatal accident occurred on Stora Enso premises in 2003. At the Corbehem Paper Mill in France, a contractor's employee was killed on December 5th by a high-voltage electric shock during construction work on the new power plant. Following this incident, action to prevent further such accidents was taken by the contractor at the request of the mill, focusing on the provision of proper safety instructions and rules. •

[Read more in the Web Report](#)

Accident rates and absenteeism*)

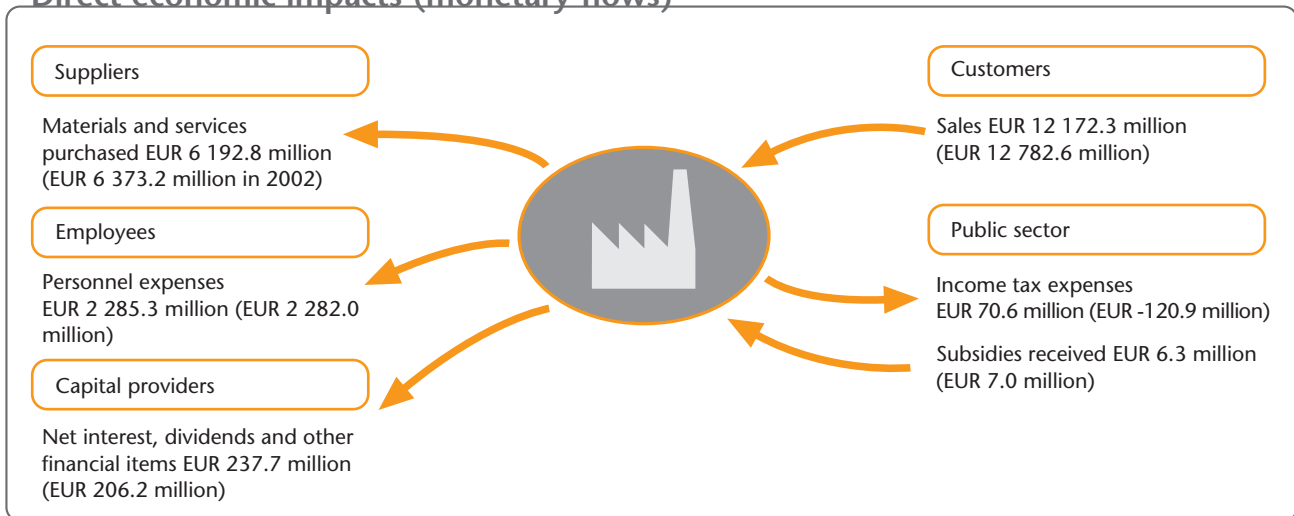
| | 2001 | 2002 | 2003 |
|--|------|------|------|
| Accident rates | | | |
| Lost-time accidents | | | |
| – number of accidents per million worked hours | 26.5 | 24.0 | 19.9 |
| – number of accidents per 100 employees | 4.5 | 4.0 | 3.4 |
| All accidents in the workplace | | | |
| – number of accidents per million worked hours | 53.6 | 52.5 | 45.1 |
| – number of accidents per 100 employees | 9.1 | 8.7 | 7.6 |
| Absenteeism | | | |
| Absenteeism due to sickness and accidents (% of total theoretical working hours) | 5.0% | 4.9% | 4.8% |

*) Covers only Stora Enso's employees.

Economic aspects of sustainability

reflect more than financial performance

Direct economic impacts (monetary flows)



Meeting shareholders' expectations is vital for the continuity of any company's operations. From a sustainability point of view, however, economic performance is also about the company's wider contributions to the well-being of the communities and societies where it operates.

Reporting on economic performance is still very much an evolving field, and this is also true within Stora Enso. This year, Stora Enso's reporting concentrates on the direct economic impacts of the Group's operations. Over the coming years, Stora Enso also aims to develop reporting on indirect economic impacts, too.

Stora Enso represents an industry that has traditionally played and still plays a major role in its home countries' economic development. Stora Enso's mills are often located in small communities, where they are major employers, taxpayers and significant business partners for

many local enterprises. Understanding the relevance of the economic aspects of sustainability involves looking at local issues, and considering local realities. However, Group-level summaries of direct economic impacts can also give important information on how Stora Enso affects different stakeholders economically, and how the monetary flows behind its business operations are formed.

Stora Enso's total sales in 2003 amounted to EUR 12 172.3 million (EUR 12 782.6 million in 2002). Major markets include Europe, which accounts for 70% (70%) of the Group's sales, North America with 17% (19%) and Asia Pacific with 9% (8%).

The total value of materials and services purchased in 2003 was EUR 6 192.8 (EUR 6 373.2) million. From the total value of materials and services purchased, Europe accounts for 79%, North America for

17% and Asia Pacific 1%.

In 2003 total expenses on personnel amounted to EUR 2 285.3 (EUR 2 282) million, of which 79% was paid in Europe and 20% in North America. Stora Enso also paid out a net EUR 237.7 (EUR 206.2) million in dividends and interest on borrowed capital. Retained earnings totalled EUR 5 717.5 (EUR 5 299.2) million.

Income tax expenses¹⁾ paid in 2003 totalled EUR 70.6 (EUR -120.9²⁾) million. The Group received EUR 6.3 (EUR 7.0) million of subsidies, of which all were received in Europe.

¹⁾ See Note 8 in the Financials 2003 Report for country specific information on income tax expenses.

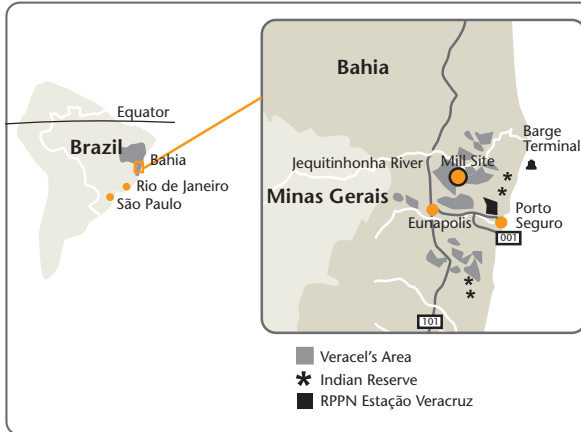
²⁾ In 2002 Stora Enso wrote down the surplus acquisition value of its North American assets and a related write-down was made in the books of Stora Enso Oyj in respect of the reduced value of its investment in Stora Enso North America Corp. The significant write-down resulted in the granting of tax relief, which made net income tax expenses negative in 2002.

The Veracel vision

– a model of sustainability

The Veracel Project in Brazil illustrates many challenges related to balancing the different aspects of sustainability. During 2003, construction work started on the pulp mill and a detailed sustainability agenda was approved for the whole project.





The history of Veracel

- 1991 The Veracruz plantation project established; first lands acquired.
- 1992 Planting begins.
- 1997 Stora acquires a stake in the project.
- 1998 Merger between Stora and Enso.
- 1999 Veracruz becomes Veracel.
- 2000 Aracruz acquires a stake in the project.
- 2001 First harvests cut in the plantations; barge terminal construction begins.
- 2002 Barge operations begin; decision made to build the Veracel pulp mill.
- 2003 Ownership of Veracel finalised with Stora Enso owning 50% and Aracruz owning 50%. Pulp mill construction announced and commenced.
- 2005 Pulp production due to start. The annual capacity of the mill will be 900 000 tonnes of bleached eucalyptus kraft pulp.

Veracel also exemplifies the emerging role of plantations in Stora Enso's fibre strategy. The project is intended to set a benchmark for the competitive and sustainable production of pulp.

Nevertheless, the Veracel Project attracted criticism during 2003. While many people and organisations welcomed Veracel as improving economic and general well-being in the state of Bahia, some non-governmental organisations (NGOs) questioned whether the project should take place at all. Interest in Veracel increased considerably when the decision to start building the pulp mill was publicly announced in May 2003.

To address the concerns of various stakeholders, Stora Enso has supported Veracel in the creation of an ambitious sustainability agenda for the project. The board of Veracel approved this "Veracel Vision" in December 2003.

Aiming to lead the way in sustainability

The Veracel sustainability vision is highly ambitious: the aim is for the project to become the leading pulp mill and plantation concept in the world. This can be achieved in the following ways:

- by adopting best environmental practices in plantations
- by adopting best environmental practices in the pulp mill
- by showing strong social commitment
- by maintaining active dialogue with stakeholders
- by making sure the project has a positive economic impact in the region
- by maintaining the competitiveness of operations.

During 2004, Veracel will elaborate and begin to implement an action plan based on these objectives. Special emphasis will be put on complementing and systematising the existing policies and management tools. The performance of the company will be made more transparent by introducing third-party-verified sustainability reporting and systematic stakeholder dialogue.

Actions planned

The Veracel sustainability agenda addresses a very wide range of issues, including:

Local welfare generation

- Prioritising local employees and suppliers.
- Training 5 500 people for various jobs related to the construction of the mill, plus 280 people (45% of whom are women) to operate the mill.

Employee welfare

- Addressing core labour rights in contractors' and suppliers' operations as well as internally.

Support for education and health care

- Investments totalling USD 8 million in social infrastructure programmes during the period 2003–2005.

Commitment to global models for sustainable plantations

- Plantations already ISO 14001 certified and preparing for forest certification: initially CERFLOR.
- Fostering the Atlantic Rainforest Program and accelerating the active regeneration of natural rainforest (400 hectares in 2004).

Minimising the environmental impacts of the mill

- Utilising best available technologies in planning and construction.
- Commitment to certified environmental management system.

Stora Enso recognises that worries and criticisms related to Veracel cannot only be addressed through information provided by the company. Stora Enso has therefore initiated moves to bring in an independent third party to evaluate the work done so far at Veracel.

Veracel's land use

| | | |
|--|-------------------|-------------|
| Plantations | 67 267 ha | 45% |
| To be planted | 3 358 ha | 2% |
| Legal reserve & preservation areas | 66 308 ha | 44% |
| Estação Veracruz Ecological Reserve (included in UNESCO's World Heritage List) | 6 026 ha | 4% |
| Infrastructure | 6 848 ha | 5% |
| Total area (end 2003) | 149 807 ha | 100% |

Stakeholders' concerns and questions

During 2003, some stakeholders expressed concerns regarding the sustainability of the Veracel Project. Their worries have been related to such issues as the proper updating of the Environmental Impact Assessment; whether Veracel has destroyed or will destroy natural rainforests; and whether the project will cause the loss of more job opportunities than it will create. The following questions and answers deal with some of these critics' concerns:

Is the Environmental Impact Assessment (EIA) adequate?

The Environmental Impact Assessment concerning the eucalyptus plantations and the pulp mill project was carried out in 1994.

Veracel's EIA was approved by the State Committee for the Environment of Bahia (CEPRAM) in 1995. CEPRAM comprises of a President and 14 members: 4 representing the Government, 5 from different groups within civil society (e.g. employees' and employers' organisations), and 5 NGO representatives.

The EIA included:

- Forest surveys and studies
- Industrial and operational surveys and studies

- Physical environmental surveys and studies (geology, geomorphology, meteorology, hydrology, etc.)
- Biotic environmental surveys and studies (fauna and flora)
- Regional socio-economic surveys and studies
- Project impact evaluation and mitigatory measures
- Hydrological and aerial dispersion studies.

The EIA also involved two public hearings in 1995, attended by a total of over 1 000 participants, including politicians, civil servants, and representatives of NGOs, trade unions and local indigenous people.

In 1998, a separate EIA was carried out on the barge port. Further studies have been carried out during the development of the project to reflect changes in the mill concept, and as a part of the permit process during the period 1993–2003. These studies have included for example a follow-up study on the development of ECF and TCF technologies, surveys of regional terrestrial and aquatic macro-fauna, socio-economic studies and surveys of indigenous people's reserves in the vicinity of the licensed areas, and detailed envi-

ronmental studies of the effluent discharge area and its surroundings.

Have the impacts of the new dams along the River Jequitinhonha been taken into account?

Since the EIA was carried out, a new dam and hydroelectric power plant have been built (by a company not related to Veracel) along the River Jequitinhonha, approximately 20 km upstream from the mill's water intake. Another dam is planned several hundred kilometres upstream, in the state of Minas Gerais.

Veracel has conducted studies of the impacts of these dams together with São Paulo University and Jaakko Pöyry. The effects of both dams were considered in the technical planning of Veracel's pulp mill.

The flow of the river at Veracel will vary according to power production levels at the hydroelectric power plants, as well as the overall water balance in the river basin. To cope with this, and to improve dispersion, Veracel is building a reservoir for treated effluent in order to adjust discharges into the river so that they are always compatible with the river's current flow rate.

Veracel is also building a reservoir at the mill in order to deal with any possible



Veracel plants on land previously degraded by intensive cattle ranching.

reduction in water supply without stopping the operation of mill. This reservoir will also allow for an orderly shutdown, should severe disturbances occur in the water flow.

Does Veracel convert rainforest into plantations?

Veracel does not log either primary or regenerated rainforest to establish plantations. Veracel only plants on lands that have previously been seriously degraded, in most cases due to several years of intensive cattle ranching.

In 1993, however, Veracruz – the predecessor of Veracel – clear-cut remnants of Atlantic rainforest. As a result, the federal environmental authorities organised a task-force, including representatives of the local and federal environmental authorities, NGO representatives and other experts. After the inspections, the task-force considered that a total of 64 hectares of Atlantic rainforest, at different stages of recovery, had been cut down – including 12 hectares of primary rainforest. Regeneration work on these sites was carried out in 1994.

Does Veracel plant all the land it owns?

By planting eucalyptus only in flat areas, Veracel uses an average of around 47% of its land for plantations, leaving around 48% for the conservation and regeneration of remnants of Atlantic rainforest. The area reserved for rainforest has already been partly planted or naturally regenerated with native Atlantic rainforest species, and reforestation work is due to continue with a target for 2004 of 400 hectares of planting.

Does Veracel jeopardise land reform in South Bahia?

Veracel supports efforts to find solutions to land reform problems. In the region where Veracel has its land holdings, three settlements are currently occupied by the local landless people's movements. There have been no permanent invasions of Veracel's property by landless people's movements.

Veracel's land holdings currently amount to 2.44% of the total area of South Bahia and 0.26% of the whole State of Bahia. Veracel's plantations cover 1.31% of South Bahia and 0.14% of the whole state.

Veracel is allowed to cover a maximum of 20% of any inland municipality and 15% of any coastal municipality with plantations. No new plantations may be established within 10 kilometres of the coast.

Will the Veracel Project create or destroy jobs?

By the end of 2003, Veracel employed about 400 people directly, and about 3 000 people through contractors (working in the plantations and on the construction of the mill). The mill project will create around 8 000 jobs in all during the construction phase. When the mill is running, some 2 000 people will be employed by Veracel or Veracel's contractors. These jobs will in turn create other economic activity in the region, and it has been estimated that the Veracel Project will ultimately create around 8 000 new jobs in the region indirectly.

It is estimated that about 300 people were previously employed in the areas converted to plantations, mostly in cattle ranching. Although fewer people now live and work in the area's farms, the number of workers employed in the areas as a whole has increased significantly.

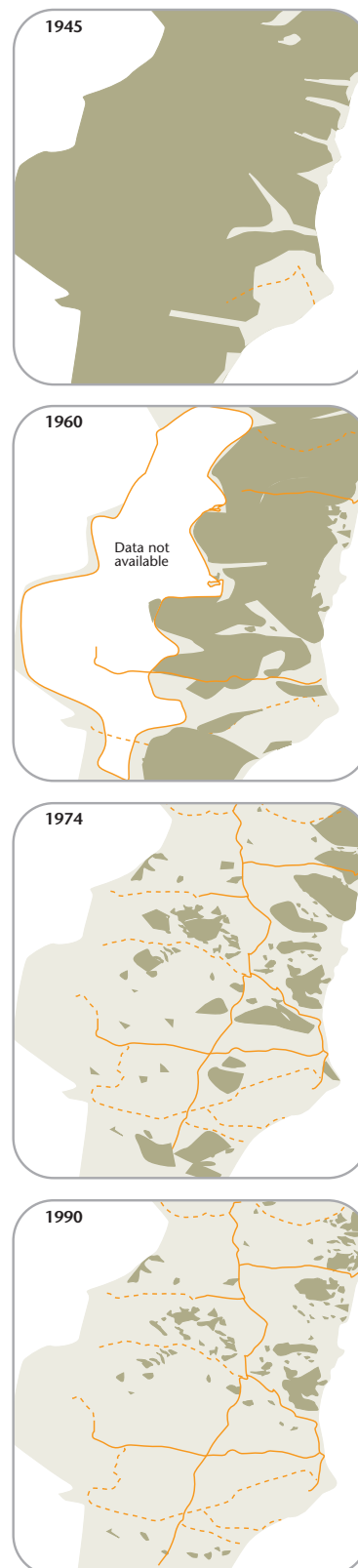
How many people have been resettled because of the Veracel Project?

No villages have been depopulated to make way for plantations. In connection with the construction of the mill, the village of Marília (pop. 180; area: 8 ha) was acquired by Veracel in 1998 to prevent the possible growth of an urban area just 1 500 metres from the mill. All the properties in the village were purchased by Veracel for a total of BRL 177 000, following negotiations with each landowner. Most of Marília's former residents moved to other villages nearby. Veracel additionally purchased the public areas in the village, including streets and a school, from the local municipality of Belmonte for a sum of BRL 150 000. Veracel has subsequently built a new school for the municipality of Belmonte, in Barrolândia, the nearest village to the mill site.

Do Veracel's plantations deplete the soil?

The modern forestry management techniques used by Veracel favour the permanent covering of the soil with undergrowth, which improves several soil properties such as structure, water storage capacity, drainage and aeration. The bark, leaves and branches of the harvested trees will be left at the cutting site. This helps to limit erosion, and also means that around 70% of the nutrients locked up in the trees will eventually be recycled into the soil. ●

The history of the Atlantic rainforest in South Bahia



Veracel's plantations were set up in 1992, when 95% of the Atlantic rainforest had already been destroyed.

Source: SOS Mata Atlântica.

■ Atlantic rainforest

[Read more in the Web Report](#)

| Site | Product | Production ^{a)} | | Landfill ^{b)} | | SO _x ^{c)} | | NO _x ^{d)} | |
|---|---------|--------------------------|-----------|------------------------|--------|-------------------------------|-------|-------------------------------|--------|
| | | 2003 | 2002 | 2003 | 2002 | 2003 | 2002 | 2003 | 2002 |
| The Baltic Countries | | | | | | | | | |
| Latvia, Lithuania, Estonia (Packaging Baltic) | ⑤ | 40 000 | 37 000 | 0 | 420 | 0 | 0 | – | – |
| Belgium | | | | | | | | | |
| Langerbrugge | ①⑨ | 274 000 | 215 000 | 0 | 0 | 6 | i) | 75 | i) |
| Canada | | | | | | | | | |
| Port Hawkesbury | ④①⑨ | 515 000 | 454 000 | 176 | 843 | 614 | 323 | 426 | 388 |
| China | | | | | | | | | |
| Suzhou | ② | 169 000 | 152 000 | 5 490 | 5 156 | 767 | 529 | 272 i) | 132 i) |
| Finland | | | | | | | | | |
| Anjalankoski | ③①⑨ | 633 000 | 609 000 | 10 219 | 11 522 | 122 | 132 | 371 | 351 |
| Enocell | ④ | 619 000 | 608 000 | 6 490 | 5 677 | 330 | 253 | 1 019 | 1 020 |
| Heinola (Fluting) | ③⑨ | 256 000 | 264 000 | 6 555 | 6 194 | 1 275 | 1 300 | 630 | 630 |
| Imatra | ③②⑥⑨ | 1 113 000 | 1 103 000 | 13 324 | 10 102 | 282 | 296 | 1 774 | 1 607 |
| Kemijärvi | ④ | 223 000 | 194 000 | 4 326 | 4 681 | 241 | 236 | 293 | 329 |
| Kotka | ①⑥⑤⑨ | 270 000 | 266 000 | 3 828 | 1 646 | 77 | 83 | 266 | 273 |
| Kotka (Keräyskuitu) | ④ | 56 000 | 66 000 | 523 | 527 | 0 | 2 | 5 | 6 |
| Lahti, Heinola, Ruovesi, Tiukka (Packaging Finland) | ⑤ | 71 000 | 74 000 | 255 | 226 | 31 | 31 | 22 | 22 |
| Oulu | ②④⑨ | 799 000 | 724 000 | 24 887 | 36 136 | 614 | 678 | 1 022 | 1 041 |
| Pankakoski | ③⑨ | 57 000 | 64 000 | 45 | 85 | 12 | 11 | 60 | 62 |
| Summa | ①⑨ | 308 000 | 343 000 | 137 | 3 550 | 50 | 45 | 157 | 175 |
| Varkaus | ②①⑥⑤⑨ | 636 000 | 596 000 | 12 835 | 13 483 | 352 | 372 | 977 | 880 |
| Veitsiluoto | ②①⑨ | 770 000 | 759 000 | 3 740 | 3 609 | 776 | 583 | 1 190 | 1 214 |
| France | | | | | | | | | |
| Corbehem | ①⑨ | 439 000 | 430 000 | 18 890 | 12 522 | 1 276 | 1 294 | 930 | 907 |
| Germany | | | | | | | | | |
| Baienfurt | ③ | 174 000 | 179 000 | 6 187 | 1 | 0 | 0 | 16 | 15 |
| Kabel | ①⑨ | 514 000 | 509 000 | 0 | 0 | 0 | 0 | – | – |
| Maxau | ①⑨ | 582 000 | 563 000 | 2 749 | 1 333 | 10 | 7 | 184 | 173 |
| Reisholz | ①⑨ | 208 000 | 213 000 | 2 | 7 | i) | i) | i) | i) |
| Sachsen | ④①⑨ | 350 000 | 347 000 | 4 110 | 4 461 | 3 | 0 | 321 | 305 |
| Uetersen | ② | 221 000 | 201 000 | 0 | 0 | 0 | 0 | 60 | 58 |
| Wolfsheck | ①⑨ | 137 000 | 131 000 | 141 | 186 | i) | i) | i) | i) |
| Hungary | | | | | | | | | |
| Páty (Packaging Hungary) | ⑤ | 7 000 | 5 000 | 10 | 8 | 0 | 0 | 1 | 1 |
| Netherlands | | | | | | | | | |
| Berghuizer | ② | 405 000 | 399 000 | 16 | 1 | 0 | 0 | 150 | 146 |
| Portugal | | | | | | | | | |
| Celbi | ④ | 294 000 | 287 000 | 9 524 | 10 343 | 60 | 102 | 432 | 416 |
| Russia | | | | | | | | | |
| Balabanovo | ③ | 56 000 | 47 000 | 165 | 154 | 1 | 1 | 38 | 32 |

Footnotes

- a) Reported production refers exclusively to end products. Production of sawn timber is reported in m³, other products in tonnes. Figures refer to saleable net production excluding inventory changes.
- b) Waste is reported in its dry state. Original dry content and volume-to-weight conversion are in some cases estimates.
- c) SO_x is calculated as SO₂ (sulphur dioxide) and includes all sulphurous compounds.
- d) NO_x is calculated as NO₂ (nitrogen dioxide).
- e) WQC serves Biron Mill, Wisconsin Rapids Paper Mill and Wisconsin Rapids Pulp Mill.
- f) WRC serves Stevens Point Mill and Whiting Mill.
- g) Process water is treated in the external treatment facility.
- h) Relatively high SO₂ and NO_x values are due to the relatively high share of coal in the energy mix for U.S. facilities and the design of coal-fired boilers.
- i) No energy production on site.
- j) Estimate based on fuel mixture and boiler design.
- k) Including Corenso North America figures (previously listed under the name of Wisconsin Rapids Paperboard).
- l) Former Sylvester sawmills are included in the figures for 2003.
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- n) CO₂ emissions from renewable fuels
- o) Due to improvements in data management, some figures do not correspond exactly to those reported on pages 24–29 of the Environment and Resources 2002 report.
- not analysed

| CO ₂ ^{m)} | | CO ₂ ⁿ⁾ | | COD | | AOX | | Phosphorus | | Nitrogen | |
|-------------------------------|---------|-------------------------------|-----------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 2003 | 2002 | 2003 | 2002 | 2003 | 2002 | 2003 | 2002 | 2003 | 2002 | 2003 | 2002 |
| 2 | 2 | 0 | 0 | 25 | 25 | - | - | - | - | - | - |
| 19 033 | i) | 31 964 | i) | 1 058 | 715 | - | - | 7.2 | 0 | 15 | 0 |
| 99 971 | 72 904 | 217 119 | 221 464 | 14 352 | 11 771 | - | - | 72.4 | 61.6 | 15.5 | 30.3 |
| 165 531 | 166 058 | 0 | 0 | 160 | 144 | - | - | 0.9 | 0.9 | 19.4 | 19.2 |
| 374 195 | 347 525 | 150 493 | 164 122 | 2 092 | 1 301 | - | - | 3.1 | 2.4 | 93.1 | 68.8 |
| 111 079 | 98 856 | 1 686 264 | 1 648 293 | 8 255 | 6 911 | 98.7 | 81.2 | 2.6 | 2.6 | 55.8 | 57.5 |
| 201 389 | 192 855 | 210 345 | 184 000 | 1 199 | 1 942 | - | - | 2.3 | 8.1 | 16.6 | 45 |
| 185 561 | 197 248 | 2 539 385 | 2 617 795 | 28 593 | 21 999 | 212 | 158 | 25 | 9 | 312 | 179 |
| 36 775 | 35 470 | 714 649 | 647 554 | 9 298 | 8 104 | 18.5 | 16.9 | 8.9 | 10.1 | 103.8 | 101.6 |
| 274 647 | 265 856 | 287 880 | 314 764 | 2 439 | 1 937 | 0 | 0 | 6 | 7 | 53 | 52 |
| 9 563 | 11 227 | 0 | 0 | 297 | 410 | - | - | 0.4 | 0.3 | 1.2 | 1.3 |
| 9 718 | 9 745 | 0 | 0 | | | | | | | | |
| 334 396 | 343 698 | 1 298 968 | 1 276 365 | 10 094 | 9 498 | 88 | 86 | 10.3 | 15.6 | 89 | 92.7 |
| 2 868 | 2 494 | 65 165 | 68 210 | 204 | 254 | - | - | 0.2 | 0.2 | 3.3 | 4.5 |
| 33 377 | 22 927 | 171 853 | 186 398 | 1 523 | 681 | - | - | 4 | 1.6 | 45.4 | 37.6 |
| 182 181 | 158 769 | 779 319 | 792 846 | 6 178 | 6 189 | 24.2 | 26 | 5.1 | 6.8 | 57 | 64 |
| 337 716 | 341 541 | 1 303 278 | 1 377 329 | 10 490 | 11 776 | 48.8 | 50.1 | 11.7 | 10.6 | 83.3 | 86.8 |
| 402 664 | 377 697 | 0 | 0 | 1 486 | 1 174 | 2.9 | 0.2 | 14 | 28.9 | 0 | 0 |
| 5 945 | 5 973 | 0 | - | 309 | 363 | 0.3 | 0.3 | 1.5 | 1.2 | 12.2 | 9.5 |
| 22 572 | 22 792 | 0 | 0 | 1 236 | 1 057 | 0.2 | 0.2 | 3.3 | 4.4 | 16.9 | 13.8 |
| 230 693 | 215 484 | 54 497 | 56 824 | 2 278 | 2 135 | 0.7 | 0.6 | 11.3 | 8 | 30 | 24.9 |
| 87 | 762 | 0 | 0 | 89 ^{g)} | 90 ^{g)} | 0.1 ^{g)} | 0.1 ^{g)} | ^{g)} | ^{g)} | ^{g)} | ^{g)} |
| 151 663 | 150 304 | 62 297 | 57 641 | 675 | 665 | 0.7 | 0.7 | 1.8 | 1.8 | 12.9 | 8.7 |
| 71 740 | 75 499 | 0 | 0 | 110 ^{g)} | 124 ^{g)} | 0.4 ^{g)} | 0.6 ^{g)} | 0.1 ^{g)} | 0.1 ^{g)} | 1.8 ^{g)} | 4.1 ^{g)} |
| i) | i) | i) | i) | 170 | 123 | 0.1 | 0.1 | 1 | 1 | 4 | 2.7 |
| 460 | 509 | 0 | 0 | - | - | - | - | - | - | - | - |
| 266 120 | 250 556 | 0 | 0 | 69 | 84 | 0.2 | 0.1 | 2.2 | 2.3 | 22.4 | 19 |
| 53 124 | 66 280 | 586 463 | 588 115 | 5 713 | 5 335 | 29 | 23 | 53 | 51 | 47 | 45 |
| 3 894 | 3 209 | 0 | 0 | - | - | - | - | - | - | - | - |

Products

① = newsprint and magazine paper

② = fine paper

③ = board and packaging paper

④ = market pulp

⑤ = converted products (e.g. cores, impregnated laminating paper, corrugated board)

⑥ = laminating paper

⑦ = wood products

⑧ = red paint pigment

⑨ = excluding internally consumed pulp

| Site | Product | Production ^{a)} | | Landfill ^{b)} | | SO _x ^{c)} | | NO _x ^{d)} | |
|---|---------|--------------------------|------------|------------------------|---------|-------------------------------|--------|-------------------------------|--------|
| | | 2003 | 2002 | 2003 | 2002 | 2003 | 2002 | 2003 | 2002 |
| Spain | | | | | | | | | |
| Barcelona | ⑧ | 161 000 | 158 000 | 3 754 | 3 715 | 0 | 0 | 56 | 21 |
| Sweden | | | | | | | | | |
| Falun (Red Paint) | ⑧ | 1 000 | 1 000 | 1 | 0 | 6 | 5 | – | – |
| Fors | ③⑨ | 347 000 | 304 000 | 213 | 1 135 | 50 | 27 | 111 | 81 |
| Fors, Hammarby | ⑤ | 26 000 | 21 000 | 9 | 98 | 0 | 0 | – | – |
| Grycksbo | ② | 232 000 | 232 000 | 2 590 | 3 843 | 173 | 111 | 52 | 37 |
| Hylte | ①⑨ | 775 000 | 751 000 | 47 258 | 36 372 | 17 | 20 | 245 | 222 |
| Kvarnsveden | ①⑨ | 670 000 | 634 000 | 5 210 | 4 591 | 192 | 160 | 266 | 265 |
| Norrundet | ④ | 290 000 | 255 000 | 4 021 | 3 683 | 530 | 427 | 422 | 429 |
| Nymölla | ④②⑨ | 401 000 | 415 000 | 563 | 643 | 577 | 501 | 569 | 591 |
| Jönköping, Vikingstad, Skene (Packaging Sweden) | ⑤ | 77 000 | 87 000 | 342 | 770 | 4 | 4 | – | – |
| Skoghall | ③⑨ | 643 000 | 595 000 | 3 192 | 2 952 | 294 | 294 | 489 | 476 |
| Skoghall, Forshaga | ⑤ | 90 000 | 86 000 | 11 | 0 | 0 | 0 | – | – |
| Skutskär | ④ | 512 000 | 497 000 | 11 404 | 13 243 | 538 | 661 | 772 | 809 |
| USA^{h)} | | | | | | | | | |
| Biron | ①⑨ | 308 000 | 320 000 | 12 539 | 1 616 | 5 226 | 5 050 | 1 952 | 1 997 |
| Duluth | ①④⑨ | 286 000 | 269 000 | 7 612 | 2 544 | i) | i) | i) | i) |
| Kimberly | ①②⑨ | 494 000 | 473 000 | 20 917 | 26 921 | 1 819 | 1 719 | 674 | 595 |
| Niagara | ①⑨ | 215 000 | 191 000 | 9 411 | 8 896 | 2 031 | 2 049 | 751 | 694 |
| Stevens Point | ② | 128 000 | 138 000 | 515 | 484 | 0 | 1 | 45 | 52 |
| Whiting | ①⑨ | 200 000 | 185 000 | 176 | 252 | 224 | 212 | 481 | 456 |
| Wisconsin Rapids Paper | ②③ | 421 000 | 432 000 | 1 528 | 1 877 | 0 | 0 | 5 | 4 |
| Wisconsin Rapids Pulp | ④ | 377 000 | 370 000 | 34 322 | 20 846 | 1 531 | 1 682 | 1 665 | 1 694 |
| Water Quality Center ^{e)} | | | | 638 | 2 361 | 0 | 0 | – | – |
| Water Renewal Center ^{f)} | | | | 3 595 | 6 739 | 0 | 0 | – | – |
| Corenso | | | | | | | | | |
| Corenso, core factories ^{k)} | ⑤ | 156 000 | 152 000 | 3 422 | 1 982 | – | – | – | – |
| Pori | ③ | 101 000 | 100 000 | 101 | 61 | 3 | 2 | 2 | 2 |
| St. Seurin-sur-l'Isle | ③ | 71 000 | 75 000 | 4 498 | 4 946 | | – | | – |
| Stora Enso Timber | | | | | | | | | |
| Non-integrated sawmills ^{l)} | ⑦ | 5 176 000 | 4 039 000 | 13 374 | 7 851 | 6 | 0 | 898 | 562 |
| Integrated sawmills | ⑦ | 1 059 000 | 1 153 000 | | | | | | |
| Total pulp, paper and board, tonnes | | | | | | | | | |
| | | 17 171 000 | 16 579 000 | 312 462 | 283 444 | 20 112 | 19 204 | 19 247 | 18 604 |
| Total wood products, m³ | | | | | | | | | |
| | | 6 235 000 | 5 191 000 | 13 374 | 7 851 | 6 | 0 | 898 | 562 |
| Grand total | | | | | | | | | |
| | | | | 325 836 | 291 295 | 20 118 | 19 204 | 20 145 | 19 166 |

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| CO ₂ ^{m)} | | CO ₂ ⁿ⁾ | | COD | | AOX | | Phosphorus | | Nitrogen | |
|-------------------------------|-----------|-------------------------------|------------|---------|---------|-------|-------|------------|-------|----------|---------|
| 2003 | 2002 | 2003 | 2002 | 2003 | 2002 | 2003 | 2002 | 2003 | 2002 | 2003 | 2002 |
| 200 808 | 187 027 | 0 | 0 | 2 180 | 1 921 | - | - | - | - | - | - |
| 738 | 730 | 0 | 0 | | | | | | | | |
| 41 293 | 26 554 | 221 888 | 191 443 | 1 647 | 1 138 | 0.4 | 0.3 | 1.1 | 1.1 | 31 | 35 |
| 410 | 378 | 0 | 0 | | | | | | | | |
| 90 676 | 54 692 | 0 | 0 | 112 | 125 | - | 0.3 | 0.1 | 0.1 | 9.6 | 10 |
| 93 756 | 83 158 | 77 314 | 175 306 | 1 998 | 2 444 | 0.7 | 1.1 | 3.5 | 2.7 | 31 | 28.2 |
| 66 870 | 61 606 | 230 708 | 215 706 | 1 560 | 1 397 | 1.1 | 1.2 | 2.4 | 2.2 | 41.2 | 41 |
| 42 485 | 46 696 | 915 142 | 818 023 | 4 110 | 3 500 | 29 | 23 | 11 | 10 | 47 | 35 |
| 47 881 | 32 063 | 811 084 | 718 504 | 14 353 | 13 939 | 1.5 | 2.1 | 15.1 | 18.9 | 153.7 | 187 |
| 4 223 | 4 836 | 0 | 0 | | | | | | | | |
| 229 269 | 189 587 | 714 069 | 731 414 | 11 758 | 11 689 | 14.8 | 17.4 | 9.1 | 12.8 | 126.3 | 128.9 |
| 33 | 31 | 0 | 0 | | | | | | | | |
| 59 951 | 57 105 | 1 553 890 | 1 513 188 | 9 286 | 7 277 | 57.7 | 57.3 | 11.3 | 7.5 | 124.8 | 95.2 |
| 406 581 | 403 879 | 22 672 | 19 796 | g) | g) | g) | g) | g) | g) | g) | g) |
| 513 | 511 | 0 | 0 | g) | g) | g) | g) | g) | g) | g) | g) |
| 350 527 | 333 030 | 0 | 0 | 418 | 629 | 3.7 | 3.5 | 8.7 | 10.4 | 30.4 | 35.2 |
| 218 553 | 193 728 | 25 722 | 32 786 | 1 056 | 953 | 1 | 0.8 | 10.2 | 7.3 | 4.7 | 19.9 |
| 80 095 | 83 713 | 0 | 0 | g) | g) | g) | g) | g) | g) | g) | g) |
| 118 982 | 112 112 | 20 768 | 22 090 | g) | g) | g) | g) | g) | g) | g) | g) |
| 13 217 | 11 958 | 0 | - | g) | g) | g) | g) | g) | g) | g) | g) |
| 331 518 | 364 520 | 1 257 979 | 1 274 081 | g) | g) | g) | g) | g) | g) | g) | g) |
| 132 | 145 | 0 | 0 | 11 229 | 11 152 | 40.7 | 37.9 | 9.6 | 12.4 | 76.2 | 90.2 |
| 163 | 115 | 0 | 0 | 542 | 486 | 0.5 | 0.4 | 5.1 | 4.4 | 28.3 | 27.7 |
| 6 565 | 4 988 | 0 | 0 | | | | | | | | |
| 1 622 | 1 455 | 0 | 0 | 929 | 559 | - | - | 0.3 | 0.1 | 8.5 | 9.8 |
| 23 851 | 23 095 | 0 | 0 | 181 | 140 | - | - | - | - | - | - |
| 13 528 | 12 288 | 363 041 | 315 069 | 473 | 321 | | | 5.3 | 3.9 | 1.3 | 1 |
| 6 017 670 | 5 713 953 | 16 011 173 | 15 914 057 | 169 747 | 152 153 | 675.9 | 589.4 | 335.8 | 325.4 | 1 823.3 | 1 711.1 |
| 13 528 | 12 288 | 363 041 | 315 069 | 473 | 321 | | | 5.3 | 3.9 | 1.3 | 1 |
| 6 031 198 | 5 726 240 | 16 374 214 | 16 229 125 | 170 220 | 152 474 | 675.9 | 589.4 | 341.1 | 329.3 | 1 824.6 | 1 712.1 |

Products

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- ❷ = fine paper
- ❸ = board and packaging paper
- ❹ = market pulp

- ❺ = converted products (e.g. cores, impregnated laminating paper, corrugated board)
- ❻ = laminating paper

- ❼ = wood products
- ❽ = red paint pigment
- ❾ = excluding internally consumed pulp

SCOPE AND OBJECTIVES

Stora Enso commissioned csrnetwork to provide independent assurance on the sustainability information within the Stora Enso Sustainability Report 2003. The objective of the assurance process was to check claims and review the arrangements for the management of social and environmental issues and the systems for collection of data. csrnetwork took account of the principles underlying the new AA1000 Assurance Standard in designing the assurance process. Case studies and information presented on the company's internet site are excluded from the scope of this assurance process. Financial performance information contained within the report is also excluded, with the exception of the process for gathering environmental investment and cost data. No independent assessment of environmentally-related financial liabilities has been made.

RESPONSIBILITIES OF THE MANAGEMENT OF STORA ENSO AND THE ASSURANCE PROVIDERS

The management of Stora Enso have sole responsibility for preparation of the Report. This statement represents our independent opinion. We were not involved in the preparation of any part of the Report although we commented on emerging best practice in social and environmental reporting. We have no other contract with Stora Enso and this is the first year that we have acted as their independent assurance providers. A Statement of Impartiality relating to our contract with Stora Enso will be made available on request. The opinion expressed in this assurance statement should not be relied upon as the basis for any financial or investment decisions. The independent assurance team for this contract comprised Mark Line, Richard Hughes, Richard Dalley, Todd Cort and Katy Anderson. Further information, including a statement of competencies relating to the team can be found at: www.csrnetwork.com.

METHOD

The independent assurance process was conducted through meetings at Stora Enso corporate offices in Finland, Sweden and United Kingdom and at operational sites in Germany, USA and Finland. The English language version of the report was used as the basis for the assurance. Meetings were conducted with managers at Corporate and Division level responsible for areas of management and stakeholder relationships covered by the report, and for collating the data and information on which the report text and data was based. During these meetings, claims were discussed and a review was undertaken of the systems and processes for data collection and analysis. We visited Reisholz Mill (Germany), Whiting Mill (U.S.A.) and Wood Supply Finland (Finland). During the visits to operational sites we discussed local management arrangements and checked selected performance data with local management representatives. We have not contacted Stora Enso's stakeholders directly, although we have carried out limited web-based research of the views of stakeholder groups to identify issues of relevance to Stora Enso. This research was carried out by Professor Aleg Cherp of the Central European University, Hungary.

OPINION

Accuracy

On the basis of the method and scope of work undertaken and the information provided to us by Stora Enso, we found that the systems for collection of environmental performance, environmental cost data and Occupational Health & Safety (OH&S) performance data are generally robust. Furthermore, nothing came to our attention to suggest that reported data is not a true and fair representation of performance trends. The consistency of environmental performance data has improved as a result of increased internal checking. In 2003 a new web-based HR system was established. Despite the absence of a developed internal assurance process for this new system, the data are likely to give a reasonable indication of the diversity of the workforce. Information on total employee numbers is reported from the financial system, which has been separately verified.

Completeness

The report provides a comprehensive overview of the company's governance and management systems and a balanced view of its performance. It addresses the main issues that appear to be of concern to stakeholders, as identified in our limited stakeholder research.

Future reports would benefit from greater commentary on Group performance trends in all areas and particularly for OH&S data.

Recommendations for future reporting

Overall the report is a step forward from last year, integrating the previous environmental and social reports. The development and adoption of the Group-wide Corporate Social Responsibility strategy and associated objectives is particularly significant. This achievement has been built on the formation of the new Sustainability Committee. In addition, substantial steps have been taken towards integration of sustainability into the Excellence 2005 business process. We recommend that future reports should provide more detail of the existing internal process for setting strategic targets for environmental issues and should set further group targets to drive environmental performance improvement. We recommend that, where these are quantitative, targets should be normalized for production.

The quality of consolidated data could be further improved by developing protocols to overcome national differences in reporting practices in some environmental and OH&S data. For HR data, the introduction of formal internal checking processes would improve consistency.

Although case studies are beyond the scope of our assurance activity, we note these have been used to address specific issues of stakeholder concern, such as the Veracel plantation and mill project in Brazil and the old growth forests issue in Upper Lapland. We recommend that Stora Enso should seek feedback on the requirements of stakeholders to guide the development of future reports and provide a platform for more comprehensive reporting of performance trends, particularly on social issues.

Future reports should develop towards a more comprehensive account of the greenhouse gas inventory for the business, including the contributions being made by Stora Enso's value chain from purchase of electricity and pulp and from provision of carbon sinks.

Recommendations for future management

Stora Enso is making progress in response to stakeholder concerns about the sourcing of fibre and is approaching a leadership position in its commitment to disclosure of progress. In particular, substantial effort has been made in the development of traceability systems and supporting mutual recognition of forest certification systems. Further confidence could be achieved by promoting a common understanding of what is meant by 'traceability' and progressively extending the scope of the current programme to the whole fibre supply chain.

There is a strong reliance on management systems combined with external certification to deliver sustainability performance. Whilst this is supported by internal auditing programmes, we note the commitment to develop more comprehensive auditing of social principles in 2004 and we recommend that internal audit of corporate sustainability objectives be increased. This will support consistent implementation and enable effective feedback of issues at corporate, regional and local level in the future.

We also recommend that Stora Enso should build on their current reporting of socio-economic impacts to a broader consideration of direct and indirect impacts in order to better understand its role in the local and global economy.

csr network ltd
U.K. February 2004

Mark Line, Director
Katy Anderson, Project Manager

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| | |
|--------------------------|---|
| AOX | Adsorbable organic halogen compounds – A collective term for the amount of chlorine or other halogens bound to organic matter, in waste water, for example. |
| Bio-fuels | Fuels derived from renewable raw materials, such as bark, black liquor or logging residues. |
| Biotope | An area of habitat that is naturally distinct as a result of its local climate, soil conditions, flora and fauna. |
| BOD | Biological Oxygen Demand – A measure of the amount of oxygen consumed by micro-organisms as they break down organic matter in effluent during a certain period. |
| CO₂ | Carbon dioxide – Carbon dioxide is formed during combustion and certain natural processes. Trees utilise carbon dioxide as they grow, through photosynthesis. Increasing amounts of carbon dioxide in the atmosphere are widely believed to contribute to climate change. |
| COD | Chemical Oxygen Demand – A measure of the amount of oxygen required for the total chemical breakdown of organic substances in water by chemical oxygen-consuming substances. |
| CSA Z809 | Canada's National Standard on Sustainable Forest Management |
| CSR | Corporate Social Responsibility – Stora Enso's CSR principles cover issues including human rights, ethical business practices, communications, community involvement and reductions in the workforce. |
| De-inking | Chemical and mechanical processes used to separate inks from fibres when pulp is made from recovered paper. |
| ECF | Elemental Chlorine-Free – Pulp bleached without the use of any elemental chlorine, although chlorine compounds like chlorine dioxide may be used. |
| EMAS | Eco-Management and Audit Scheme – A voluntary environmental management system applicable in Europe, based on the EU Regulation. |
| FFCS | Finnish Forest Certification System |
| FSC | Forest Stewardship Council |
| FTSE4Good Index | The FTSE4Good Index series includes socially responsible companies. FTSE is jointly owned by the London Stock Exchange and The Financial Times. |
| ISO 14001 | A global standard created for corporate environmental management systems by the International Organisation for Standardisation. |
| m³ sub | Cubic metre of wood, solid under bark. |
| Nitrogen | An element common as a gas in the atmosphere. Excessive concentrations of nitrogen compounds in water, together with phosphorus compounds and organic substances, can lead to increased biological activity in water, through eutrophication. |
| NO_x | A collective term for the nitrogen oxides formed during combustion, which can contribute to the acidification of soil and water. |
| PEFC | Programme for the Endorsement of Forest Certification schemes |
| Phosphorus | An element. Excessive concentrations of phosphorus compounds in water, together with nitrogen compounds and organic substances, can lead to increased biological activity in water, through eutrophication. |
| Recovered fibre | Used paper and board separately collected for re-use as fibre raw material in paper and board manufacture. |
| Recovered paper | See recovered fibre. |
| Recycled paper | Paper that has been produced from recovered fibre. |
| SFISM | Sustainable Forestry Initiative of the American Forest & Paper Association |
| SFM | Canadian Standards Association Program for Sustainable Forest Management |
| SO₂ | Sulphur dioxide – A gas formed when fuels that contain sulphur, such as oil and coal, are burned. Sulphur dioxide contributes to the acidification of soil and water. |
| TCF | Totally Chlorine-Free – Pulp bleached without the use of any chlorine or chlorine compounds. |

Abbreviations and conversion table for units of measurement

| | | | |
|------|--|---|-------------------------------|
| TJ: | Terajoule (1 000 billion joules) | 1 cubic metre = | 264.1 gallons |
| GWh: | Gigawatt-hours (1 billion watt-hours) | 1 metric tonne = | 1.1025 short tons |
| TWh: | Terawatt-hours (1 000 billion watt-hours) | 1 GJ = | 0.9473644 million BTU |
| ha: | Hectare (10 000 m ² or 100x100 m) | 1 cubic metre of solid wood under bark = | 0.429 Great Lakes rough cords |

principles

for corporate social responsibility

Business Practice

- Cooperation between Stora Enso and our stakeholders shall be open-minded, fair and based on equal terms.
- Practices defined as bribes, kickbacks, price-fixing and similar behaviour are prohibited.
- Employees must avoid conflicts of interest between their private financial activities and the conduct of company business.
- All business transactions on behalf of Stora Enso must be reflected accurately and fairly in the accounts of the company.

Communication

Communication is based on credibility, responsibility, pro-activity and interaction. These apply equally to all stakeholders. We advocate an open dialogue.

Community Involvement

We shall be a responsible member of the communities in which we operate through focused partnerships at local, national and global levels. We encourage our employees to take part in the local community work.

Reduction in Workforce

Any reduction necessary in the workforce shall be carried out with respect for the individual and proper sensitivity to employees' needs.

We support the UN's Universal Declaration on Human Rights and the core conventions of the International Labour Organization (ILO), from which Stora Enso has derived the following principles:

Working conditions

Our employees are entitled to safe and healthy workplaces. No employee shall be subject to any physical, psychological or sexual harassment, punishment or abuse.

Diversity

We recognize diversity as a strength. Discrimination against any employee in respect of race, ethnic background, gender, disability, sexual orientation, religion, political opinion, maternity, social origin or similar characteristic is prohibited.

Freedom of association

Employees have the right to organise, join associations and bargain collectively, if they wish to.

Free choice of employment

Any form of involuntary labour is prohibited.

Child labour

Use of child labour is not permissible. The minimum age for employment shall be in accordance with the ILO convention (14 or 15 years) or the age specified by local legislation if higher. The employment of young persons shall not jeopardise their education or their development.

Remuneration

Wages shall be paid direct to the employees. Employees shall be paid at least the minimum legal wage or the wage specified in an applicable collective labour agreement.

Working hours

Working hours shall not exceed 48 hours and overtime 12 hours per week on average over a year, unless other conditions are specified in local laws or an applicable collective labour agreement.

Key stakeholders

Customers

All current and potential companies and individuals that choose our company to provide goods or services to them.

Employees

All employees of the company and employees in operations controlled by the company.

Investors

All current and potential owners of our company's equity and debt.

Partners

- Suppliers
- Co-investors and those who join us in other mutually beneficial activities.
- Trade and business associations of which we are members.

Society – Civil

The individuals in our neighbouring communities. Organisations engaged in civic and charitable work as well as non-governmental organisations.

Society – Governmental bodies and administrators

Local and national governmental bodies, administrators, politicians/elected officials and transnational bodies such as the UN.

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Stora Enso's Annual Report 2003 comprises three separate booklets



Printed copies of the report may be ordered through our website at www.storaenso.com/order or by contacting any of the corporate offices above.

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