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NORSKE SKOG  
sustainability report

06

Steady  
improvement

*Future on Paper*



Norske Skog

TO ACHIEVE RECOGNITION AS A **WORLD**  
**LEADER** IN OUR INDUSTRY, WE MUST  
BE RESPECTED FOR OUR **CONDUCT**  
BY **CUSTOMERS, SUPPLIERS** AND THE  
**GENERAL PUBLIC**

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# Steady improvement

Being able to document sustainable business practices based on our values, policies and guidelines is important for a global company like Norske Skog.

○ Our sustainability report shows that we not only comply with legal requirements and statutory regulations, but also give weight to high ethical

standards. To achieve recognition as a world leader in our industry, we must be respected for our conduct by customers, suppliers and the general public.

We are concerned to ensure living and viable forests. All wood used in our production must come from sustainable forestry. The standards for sustainable forest management in Norway were revised in 2006. These standards have been developed jointly by leading environmental and recreational organisations, forest owner associations and representatives of the paper industry. This shows that development is sustainable. We also now rank as the world's largest user of recovered fibre for newsprint production.

Our mills work continuously to reduce emissions and discharges. Construction of new effluent treatment plants began in 2006 at Norske Skog Follum, Norske Skog Bio Bio and Norske Skog Boyer. These facilities will contribute to a further reduction in our discharges.

Research reports on climate change have given fresh impetus to the environmental debate. Industry must accept its responsibility for reducing greenhouse gas emissions. We believe that this has to be accomplished through international cooperation, and have accordingly participated in the launch of a global industrial initiative on cutting greenhouse emissions. Called Combating Climate Change

(3C), this effort is currently supported by 16 international companies.

Our attitude is that industry must participate actively in this process. The goal is to achieve market-based and international solutions.

We have invested substantial sums in recent years and made production modifications to reduce our own energy consumption. A pilot project with the aim of using biomass to provide electricity was carried out at Norske Skog Golbey in 2006, with generation set to start in 2007. A geothermal power station under construction at Norske Skog Tasman in New Zealand is due to become operational in 2008. This will meet a large proportion of the mill's electricity needs while also supplying the local community.

In addition, we are engaged in a study with Hydro on the possible construction of a plant to produce biodiesel from wood.

We give high priority to creating a good collaboration with our workforce and a safe working environment. All our mills focus attention on activities which will yield even better health and safety results. Injury statistics show that we have taken the safety of our employees seriously for many years. Injuries and sickness absence in our group hit a record low in 2006, and we delivered the same low result for lost-time injuries as in 2005. This yielded a lost-time injury frequency per million working hours of 1.3 – one of the very best results in the global paper industry.

However, much room for improvement remains. Only a few weeks after I took office as chief executive officer in June 2006, we suffered a fatal accident at Norske Skog Golbey



**Christian Rynning-Tønnesen**  
PRESIDENT AND CEO

## Norske Skog's environmental policy

in France. We take this very seriously, and are pursuing a thorough and wide-ranging investigation to identify the underlying causes of the incident. We will seek to ensure that a similar accident will not happen again.

Our group has been a pioneer in setting a global standard for social responsibility and worker-management relations. We were the first international paper manufacturer to sign an agreement with the International Federation of Chemical, Energy, Mine and General Workers' Unions (ICEM) and the Norwegian United Federation of Trade Unions concerning employee rights on a global basis. We were also an early adopter of the 10 principles in the UN Global Compact. Through our development programme for managers and employees, the whole organisation is being familiarised with the values, ethical standards and good business conduct on which we build our business.



**Christian Rynning-Tønnesen**  
President and CEO

**Norske Skog's environmental policy is an integral part of the strategy to achieve the overall corporate goal. It shall support sustainable development of environment and natural resources. The environmental commitments shall be viewed in context with the company's commitments to health, safety and corporate social responsibility. Norske Skog's environmental strategy and policy applies to all its business units. Norske Skog will work for similar environmental values in joint ventures and partially owned companies.**

- Norske Skog shall operate and develop its business units by continuously improving their environmental performance, and with a view to reducing the environmental impact to a minimum. The basic requirement is compliance with laws and regulations.
- Efficient production processes with high yield on raw material and energy utilisation shall be key objectives in all production units. Environmental aspects shall be integrated in strategic considerations and operational decisions.
- Environmental responsibilities and tasks shall be clearly defined and adhered to throughout the organisation. The business units shall educate and train their employees to know and understand the policy, its requirements and the work performance expectations.
- Certifiable internationally acknowledged environmental management systems shall be actively applied in the management in all production units.
- Norske Skog's production units shall have environmental programs with clear objectives and annually set targets supporting the company's environmental policy and strategic ambition.
- Norske Skog shall expect the same high environmental performance from suppliers of goods and services in the value chain as maintained in its own activities. Forest certification shall be encouraged and certified wood suppliers will be given priority.
- Norske Skog shall have an environmental performance that supports its customers in reaching their environmental objectives.
- Norske Skog shall operate and develop its business units with respect for, and understanding of, the social and cultural values that exist in the countries in which it operates.
- Norske Skog shall be open to and actively engage in dialogue with stakeholders and will communicate openly on environmental matters.



# Doing better by the climate

We are working actively to improve our climate change

performance by working in the whole value chain.

○ Continued improvement efforts in the whole value chain are needed in order to reduce our emissions of greenhouse gases, says Georg Carlberg, our vice president for the environment.

He emphasises that we already do a considerable amount to reduce greenhouse gas emissions. All our mills, regardless of their location, have the same objectives as expressed in our environment and energy policies.

## A KEY ISSUE

Climate developments are worrying people worldwide. Increasing emissions of greenhouse gases and weather trends in recent years make the climate a key environmental issue. It is important that industry plays an active role in this area. Together with other international companies, we

have made a commitment to ensuring that industry contributes to the process of putting a global, long-term, market based emissions reduction framework in place.

## GREENHOUSE GAS EMISSIONS

The main greenhouse gas emissions in our value chain are from the use of fossil fuels (either directly or indirectly) in the paper production process and in the transport of raw materials and finished goods. The main strategies to reduce greenhouse gas emissions therefore involve reductions in energy consumption and the use of alternative fuels and energy sources. Energy consumption can be reduced through optimisation of raw materials, production processes, logistics and investments. Increased use of bio energy decreases the use of fossil fuel.

Reductions may be via incre-



# 6 750 000 m<sup>3</sup>

Norges Skog's of roundwood and chips in 2006

## Backing a global climate initiative

Norske Skog is participating in the launch of a global industrial initiative to cut greenhouse gas emissions. Several international companies have already signed up to this Combating Climate Change (3C) initiative.

Norske Skog's attitude is that the industry can't sit on the fence and watch as changes to the world's climate accelerate and destroy opportunities for future generations. Industry must participate actively in this process and we want to take our share of the responsibility.

The aim of 3C is to achieve market-based solutions as part of the international agreements now being negotiated to replace the Kyoto protocol when the first commitment period expires in 2012.

There are clear indications of serious changes taking place in the planet's climate as a result of greenhouse gas emissions. If something is not done about this on a global level, it will affect conditions for all life on Earth and impose environmental, social and economic costs.

The 3C group believes that the only way to influence this development is for the world community to accept a collective responsibility for reducing emissions of greenhouse gases to an acceptable level as quickly as possible.

At the same time, industry must be supplied with energy to ensure stable global development.

Norske Skog has chosen to be an active participant in these efforts.

The companies which have already signed up for the 3C initiative are:

- |                    |               |          |
|--------------------|---------------|----------|
| ● General Electric | ● ABB         | ● Alstom |
| ● Bayer            | ● Duke Energy | ● Endesa |
| ● E.ON-Eskom       | ● Enel        | ● EnBW   |
| ● Norske Skog      | ● NRG Energy  | ● PG & E |
| ● Wallenius Lines  | ● Vattenfall  | ● Suez   |

mental continuous improvements in manufacturing processes or through investments and projects. Specific examples of energy or emission reduction projects from a number of different production sites are detailed in the energy section of this report.

Being a global producer of newsprint means that we can optimise our logistics in a way that also minimises the greenhouse gases from transport. The board have decided to move one of the paper machines from Norske Skog Union to the Norske Skog Pisa mill in Brazil. This will lead to reduced transport of newsprint from other parts of the world to Brazil, reducing the emission of greenhouse gases.

Our company already uses a large proportion of the organic waste it generates as an energy source to generate heat. A number of our production sites also use purchased biofuel. But Carlberg emphasises that scope still exists for increased use of biofuel to replace fossil energy.

Norske Skog Bio Bio and Norske Skog Boyer mills, in Chile and Australia respectively, are installing new biological treatment plants for dis-

charges to water. The biological treatment plant at Norske Skog Follum in Norway is also being substantially modernised and expanded. These investments will reduce our emissions to water and at the same time create a biomass waste which can be used as bio energy.

Sustainable forest management also has a role to play in addressing climate change issues. By developing and implementing policies which ensure that our wood comes from sustainably managed forests we are able to demonstrate that we are not involved in illegal logging and the deforestation processes which contribute to climate change.





128 000 000

Norske Skog's environmental investments 2006 (NOK)



# Continuously improving environmental performance

Our mills set annual targets for key environmental parameters and report their performance internally on a monthly basis.

Environmental performance forms part of the regular reporting by the mills to our corporate management and board.

We have developed our own environmental index, which expresses mill environmental performance and covers the following parameters:

- water consumption
- quality of treated effluent

discharges - measured using chemical oxygen demand (COD) and suspended solids as criteria

- air emissions of nitrogen oxides to the air
- waste to landfills
- total energy use.

Our overall environmental index is calculated as an average of each mill's index weighted by production volumes. Additional

Environmental index					
		Achieved 2005	Achieved 2006	Target 2006	Target 2007
Water consumption	(m³/tonne)	19.6	19.5	18.7	16.7
COD (kg/tonne)	(kg/tonne)	8.81	8.65	8.06	6.43
Suspended solids	(kg/tonne)	0.89	0.71	0.69	0.59
Nitrogen oxides	(g/GJ)	113	104	114	104
Waste to landfill	(kg/tonne)	19.6	19.5	20.7	23.6
Total energy consumption	(GJ/tonne)	12.6	12.6	12.6	11.5
Environmental index	excl. Asia	1.26	1.22	1.18	
Environmental index	incl. Asia		1.16		1.11

3 340 000

Norske Skog’s total consumption  
of recovered paper (tonnes)



targets may also be set by each mill for other environmental performance measures which are particularly significant for that facility.

Mill performance is measured in the index against a standard which should be attainable with the use of best available technique (BAT) or best practice. An index value at or below 1.0 indicates that the mill in question has an environmental standard which

satisfies the ambitious levels which can be attained with BAT or best practice. The attainment of BAT levels of performance is mill-specific and a function of age, technology, investment history and operational performance.

PERFORMANCE IN 2006

Our environmental policy commits us to continuous improvement in our

environmental performance. The environmental index can be used to track continuous improvement in the performance of a mill or the company as a whole. It can also be used as a tool to assist with investment planning.

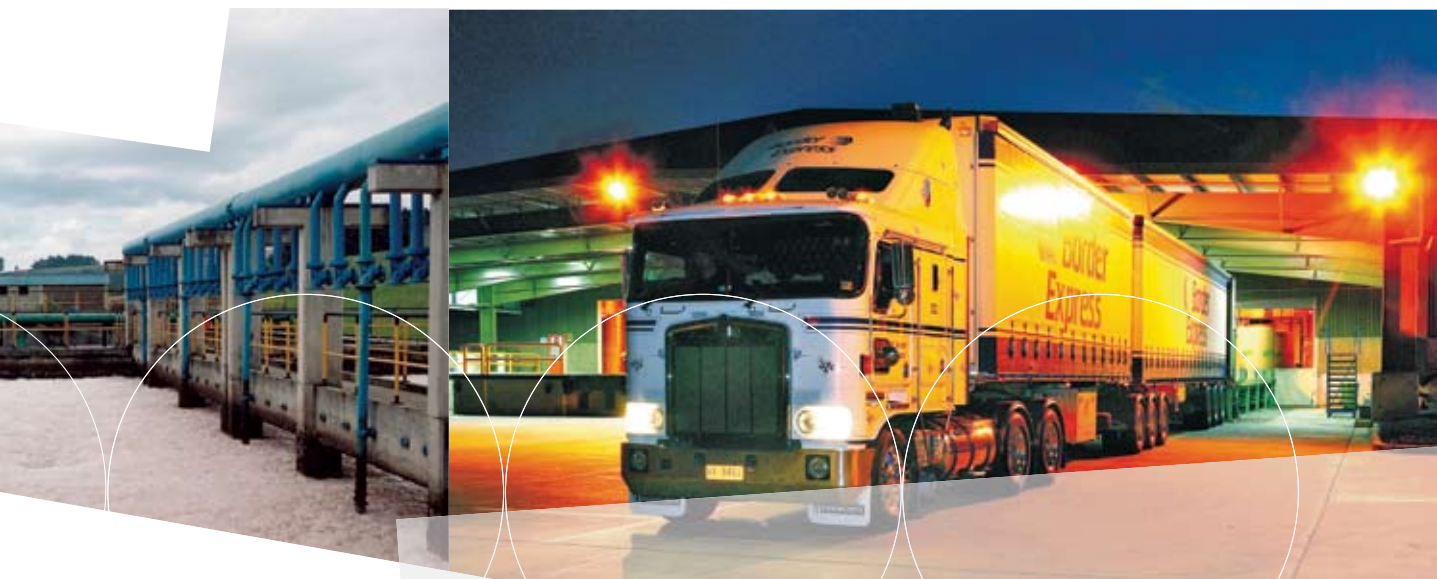
The table on the previous page shows the targets set in 2006 and 2007 for the various parameters included in the index, as well as the results achieved in 2005 and 2006. These figures represent a production-weighted average for all mills with the exception of Norske Skog Steti. The latter operates on an integrated site with other pulp and paper manufacturing activities which makes it difficult to obtain sufficiently accurate data to calculate the index (for example waste water is combined and treated jointly with the other effluents generated on the site). However, the mill still sets and reports against its own targets for the environmental parameters which can be measured with a reasonable degree of accuracy.

The data presented include the results from the Asian mills which were incorporated into the index for the first time in 2006. The inclusion of these mills has an impact on trends and the

Main figures for wholly-owned mills 2006

Consumption of raw materials		Emissions to air	
Roundwood	4 540 000 m³	CO <sub>2</sub>	1 175 000 tonne
Sawmill chips	2 210 000 m³	SO <sub>2</sub>	3 420 tonne
Recovered paper	3 340 000 tonne		
Purchased pulp	270 000 tonne		
Inorganic fillers	510 000 tonne		
Energy		Production waste	
Electricity	11 700 GWh	Sludge (wet)	745 000 tonne
Heat	9 500 GWh	Bark	195 000 tonne
		Other	81 000 tonne
Discharges to water		Products	
Water consumption	111 mill. m³	Newsprint grades	4 780 000 tonne
Organic material (COD)	41 200 tonne	Magazine paper	1 270 000 tonne
Suspended solids (SS)	3 880 tonne		
Phosphorus (Tot-P)	55 tonne		





Raw materials arrives at the mills by truck, rail and ships.

## Organisation of work on environment in Norske Skog

specific index results attained. In general they have a positive effect on the index for water and energy related parameters and a slightly negative impact on emissions to the air.

Nine of the 17 mills included in the environmental index achieved a result equal to or better than 1.0 in 2006, and 11 reached their own targets. As a whole, we failed to reach our index goals for 2006. This primarily reflected effluent treatment issues experienced at Norske Skog Saubrugs and Norske Skog Skogn mills and the volume of waste to landfill generated by Norske Skog Bio Bio.

A number of our mills are currently in the process of investing in new equipment in order to improve their environmental performance. This is expected to be reflected in future index scores. Norske Skog Bio Bio, Norske Skog Boyer and Norske Skog Follum are case in point.

### ● GLOBAL:

Norske Skog's chief executive officer has overall responsibility for the company's results, including its environmental performance. A separate corporate environment (CE) department is responsible for developing and maintaining the global environmental policy, and for specifying and following up strategic environmental targets on behalf of the chief executive officer. The CE department works to ensure that the mills (Business Units) and other functional units set their own environmental targets and perform in accordance with these. It receives monthly reports from the mills, which are collated and reported to the corporate management and quarterly to the board of directors. The department cooperates closely with other Norske Skog functions. It may also provide support or assistance to Business Units on specific issues.

### ● LOCAL:

Naturally enough, most of Norske Skog's environment-related work takes place in the mills. Each Business Unit manager has operational responsibility for meeting environmental targets at their facility. This responsibility is passed down to departmental managers and to each employee. All the mills have a dedicated manager, responsible for environmental matters, who reports directly to the mill manager. All mills cooperate closely with the CE department. A meeting is held once a quarter between the CE department and all the mills, primarily as a teleconference, in connection with the quarterly reporting.

# Forests for climate control

Forests play a vital role in the global and local climate equations and must obviously be an important element in a post-Kyoto package. However, much uncertainty is still connected to how forests and forestry can be utilised as a tool for combating climate change.

By Duncan Pollard, Director, Forests for Life programme  
WWF International

○ A multitude of proposals have already been launched, ranging from carbon sequestration through replanting deforested areas with oil palms to simplify protection of natural forest. There are lots of ideas and

questions on incentives for tackling deforestation, pricing of credits and so forth.

ciently known. It is not clear if a forest mechanism in a post-Kyoto regime could reduce incentives to cut industrial emission in some countries – and there is even no full agreement over what a forest actually is. The November 2006 climate convention conference in Nairobi did not contribute much to the clarification of these issues.

## WWF and Norske Skog

Our respect for the work carried out globally by the WWF has prompted us to invite this organisation to contribute to our sustainability report. Readers can thereby gain an insight into the challenges which it believes the international community faces in exploiting natural resources and preserving biological diversity.

WWF is one of the worlds most influential environmental organisations. We recently worked with the WWF Norway to establish the standards for the Living Forrest Programme.

A project is now planned (in 2007) working in collaboration with the WWF and newspapers in education in Thailand. Focussed on the environmental challenges in the greater Mekong region, the project will develop activities and information for Thai schoolchildren.

While the WWF welcomes the strong increase in attention being paid to climate issues after the launch of the 2007 report from the UN's Intergovernmental Panel on Climate Change (IPCC), we are also worried by the rush for quick fixes which has followed in its wake. The WWF has pointed out that there is no silver bullet in the quest to control global warming. Bio-energy is a case in point. Although biofuel is potentially carbon neutral, the expansion in palm oil and tropical crops for biofuel production could become a significant new driver of deforestation and result in increased net carbon dioxide emissions. Bio-energy developments must be tightly controlled to prevent further deforestation.

Last year, the governments of Papua New Guinea and Costa Rica proposed the inclusion of national commitments to reduce emissions from deforestation within the next commitment period of the Kyoto protocol. The countries using such a mechanism would set national targets based on a historic baseline from the 1980s or 1990s forest cover. A reduced deforestation rate would qualify for compensation from some global financial mechanism linked to the carbon quota system, and credits could potentially be interchangeable with industrial emissions.

Although clearly interesting, such a mechanism is complex and has many unknown details. For instance, the climate effects of deforestation versus forest degradation are insuffi-

As forests obviously do absorb carbon dioxide, increasing forest cover through tree planting can increase carbon sequestration, but the positive impact of this is far outweighed by the



*"Deforestation is responsible for 20% of global greenhouse gas emissions."*



negative impact of deforestation on atmospheric carbon dioxide, let alone wider ecosystem impacts.

Deforestation is responsible for 20% of global greenhouse gas emissions. Today, 10 countries account for 87% of global deforestation, with Brazil and Indonesia alone accounting for 54% of emissions. Tropical forests hold over 210 gigatonnes of carbon, and almost 500 gigatonnes in their soils (which is often released with land use change). Deforestation rates have remained constantly high over the past two decades. Without significant concerted action, these rates will prevail and result in annual emissions of 10 gigatonnes of carbon dioxide for 50-100 years. The WWF's conclusion is therefore that, whilst restoring forest cover is a benefit, the primary focus should be on reducing deforestation.

The causes of deforestation are wide ranging, and vary by country. They include agricultural expansion, cattle ranching, infrastructure development and logging, driven by population pressures, and helped by poor governance and inadequate land-use planning. Governments and the wide range of

market players must be effectively influenced to reduce these threats. At present, available data are provided by national governments and are not globally consistent. Establishing accurate data, and in particular agreeing new globally consistent definitions of deforestation and degradation at a forest biome level, is essential.

The impact of reducing deforestation rates on carbon emissions is much more significant than even massive tree planting efforts. If we were able to halve the rate of deforestation by 2015, and further reduce it to zero in 2020, the cumulative emission reductions would be 55 gigatonnes by 2020 and 155 gigatonnes in 2030. In contrast, planting fast-growing trees at the rate of three million hectares per year (equal to current rates) would result in a cumulative carbon absorption of about 10 gigatonnes by 2020.

To put this into context, current (2005) global carbon emissions are 36 gigatonnes.

To stabilise atmospheric carbon below 400 ppm and the "danger threshold" of an average 2 °C rise in global temperature, emissions should be reduced by 30% by 2020 and 60-80 % in 2050. Large scale deforestation reduction would therefore make a very impor-

tant contribution to the global carbon emission cuts needed.

The WWF will focus on four key measures to reduce atmospheric carbon through forest-based activities:

- International policy must provide new, efficient provisions and incentives in the post-2012 period to reduce deforestation rates. Baselines, national targets and biome based monitoring will be necessary.
- Governments must be engaged in developing national policies for curbing deforestation. National action plans will be needed to take account of local drivers. The WWF will focus particularly on engaging society in six-ten countries, especially Brazil and Indonesia.
- Fiscal incentives such as compensation payments for reducing deforestation and (as a secondary focus) increasing carbon sequestration must be establishing and facilitated.
- Finally the WWF will focus on market incentives and engage with companies to set ambitious environmental commitments.

We hope Norske Skog can be part of that effort.



©1986 Panda symbol WWF



4 540 000 m<sup>3</sup>

Norske Skog's total consumption of  
roundwood (tonnes)

# Responsible purchasing of raw materials

Norske Skog's mills consume fibre, inorganic fillers and chemicals to produce publication paper. We are concerned to ensure that our fibre raw material originates from forests which are managed for retained productivity and biological diversity.

○ The main raw materials for newsprint and magazine paper are roundwood, sawmill chips and recovered paper. Some paper grades also contain substantial amounts of purchased chemical pulp and inorganic fillers,

mainly kaolin and carbonate. This is particularly the case for magazine papers. The paper may also contain small amounts of binders, such as latex and starch, and pigments.

We are not a significant forest owner. Less than 4% of the wood we consume originates from our own forests in Australasia. In Brazil, we are developing plantations to supply Norske Skog Pisa, and these are due to start delivering in 2009.

Norske Skog recognises its responsibility as a wood purchaser through our global wood purchasing policy,

which states that all wood used in our paper originates from sustainably managed forests. Such forests are defined as:

- certified forests – we recognise the Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification (PEFC) systems
- forests covered by a written declaration that they are managed according to national laws and regulations (when certified volumes are insufficient).

While forest managers have systems for sustainable forest management (SFM), forest product traders rely on chain of custody (CoC) systems. These traceability systems play an important role in responsible purchasing. A CoC certificate provides an assurance that claims of “certified wood” can be substantiated. CoC systems also require responsible purchasing of non-certified wood. They are crucial in the work to stop illegal logging.





At Norske Skog, we encourage both SFM and CoC certification of our suppliers. These certificates are the most credible guarantees available to us for responsible purchasing of wood. Other important tools include environmental management systems such as ISO 14001, environmental clauses in purchase contracts, supplier self-declarations, and control systems for uncertified suppliers.

WOOD SUPPLY TO THE NORWEGIAN MILLS

Norwegian and most Swedish wood is supplied to these mills through Wood and Logistics AS, owned by Norske Skog and Södra. Where supplies from further afield are concerned, we cooperate with a few selected companies. All wood is delivered through supply chains with environmental management systems certified in accordance with ISO 14001 and the PEFC CoC wood traceability systems. The mills mainly use spruce (*Picea abies*) and small quantities of *Picea sitchensis*. Norway is dominated by forests and mountains. Most of the forest land (about 80%) is privately owned, and the average property is quite

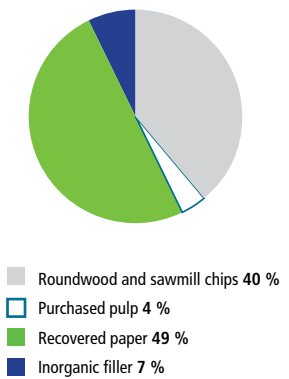
small (about 50 hectares). The annual increment exceeds annual felling (24 million cubic metres compared with eight million), but large areas cannot be harvested for economic or environmental reasons. Almost all commercial forest land is certified in accordance with the standards developed by the Living Forest Project in 1998, which involved all the relevant stakeholders and was endorsed by the PEFC in 2000. The Living Forest standards were revised in 2006.

About half the forest land in Sweden is privately owned, with the rest belonging to the State, the industry and others. The State is a major forest owner in the Baltic states, but privatisation processes are underway.

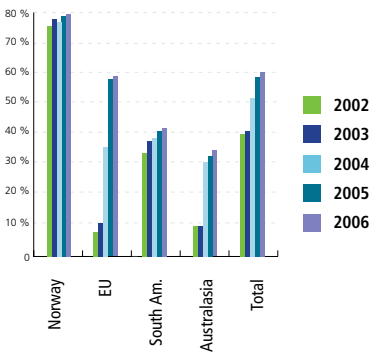
Most of the wood used in the Norwegian mills originates in Norway, Sweden or the Baltic states.

- Norske Skog Follum is located 50 kilometres north-west of Oslo. Almost all its wood comes from local forests and is delivered by road.
- Norske Skog Saugbrugs is located close to the Swedish boarder. Its wood comes mainly from Norway and Sweden. Nearly 60 % is

Consumption of raw materials



Percentage of certified wood fibre 2002-2006





Our South America mills are supplied from plantations

delivered by road, the rest mainly by rail.

- Norske Skog Skogn, in mid-Norway, has its own quay and receives wood from Norwegian, Swedish and more distant sources by sea, rail and road.

#### WOOD SUPPLY TO MILLS IN THE EU

All wood supplied to these mills is delivered through supply chains with environmental management systems certified in accordance with the PEFC CoC and with wood traceability systems. Only wood from *Picea abies* (Norwegian spruce) is used.

Norske Skog Golbey, Norske Skog Parenco and Norske Skog Walsum use Sapin SA as their sole supplier. In addition to a shareholding in this company, we have board representation. Sapin's purchases are mainly made in northern France, western and southern Germany, Belgium, Luxemburg and the Netherlands. Roughly half the forest land in these countries is privately owned, with the proportion somewhat higher in France. About 60% of the annual forest increment is harvested in this part of Europe.

The mills supplied by SAPIN are:

- Norske Skog Golbey, near Nancy in northern France, receives most of its wood from French sources as well as some from Germany and

Belgium. Nearly all these deliveries are transported by road.

- Norske Skog Parenco is located in the Netherlands, close to the German border, and receives wood from Belgium, the Netherlands, Germany and Luxemburg. It arrives by road apart from some river-borne deliveries from Germany.
- Norske Skog Walsum, near Duisburg in Germany, is supplied almost wholly with German wood. Most is transported by road, while a small quantity arrives by river.

Norske Skog Bruck in Austria has a single supplier – PapierHolz Austria GmbH. We have a shareholding in this company and are represented on its board. The bulk of Austrian forest land (80%) is privately owned. Small-scale forestry dominates. Austria has one of the highest proportions of land under forest in relation to total surface area, at 47% (four million hectares). The dominant tree species is spruce. While the annual increment is 30 million cubic metres, only 20 million are harvested. Almost all forest land in Austria is certified. Most of Norske Skog Bruck's wood is delivered by road, with about one quarter transported by rail.

The Norske Skog Steti mill in the Czech Republic is supplied by the company Wood and Paper AS. We are represented on the board. The

state owns 64% of Czech forest land, with the remainder held by private individuals and local authorities. Strict forestry laws apply in the Czech Republic, which limit the size of clear-cut areas to one hectare and require replanting of all clear-cut areas within two years. The dominant species is spruce, but pine, larch and different broadleaf species also grow in the country. While the total annual increment is 18 million cubic metres, cutting is 15 million. About two-thirds of the wood reaches Norske Skog Steti by rail and the rest by road.

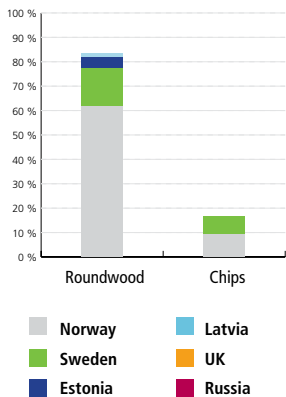
#### WOOD SUPPLY TO THE MILLS IN SOUTH AMERICA

Our South American mills are supplied from plantations.

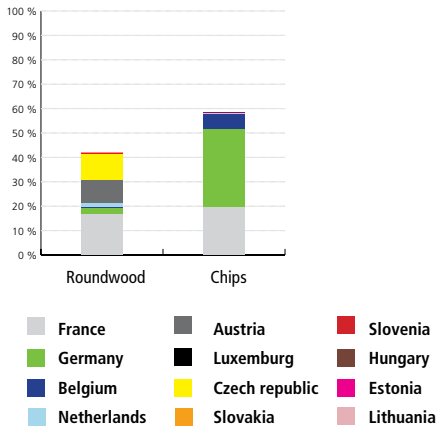
Fibre raw material for Norske Skog Bio Bio, in the Eighth Region of southern Chile, is the pine species *Pinus radiata*. The Eighth Region has 45% of the 1.5 million hectares of *Pinus radiata* plantations in the country. Norske Skog Bio Bio receives its wood from large and small suppliers under six-monthly supply agreements. All the wood is transported by road.

Norske Skog Pisa is located in southern Brazil and gets its wood from pine plantations, cultivating mainly *Pinus taeda* but also *Pinus serotina* and *Pinus oocarpa*. About two-thirds of the roundwood supply is secured under a single long-term contract

Countries of origin  
Wood to the Norwegian mills



Countries of origin  
Wood to the mills in the EU



covering wood from FSC-certified plantations. To meet the rest of its needs, Norske Skog Pisa has annual contracts with other suppliers of both roundwood and sawmill chips. Priority is given to buying certified wood. The forests and sawmills supplying Norske Skog Pisa are located close to the mill, and the wood is transported by road.

WOOD SUPPLY TO THE MILLS IN AUSTRALASIA

Norske Skog Albury uses only *Pinus radiata* from plantations. About 85% of its virgin fibre is supplied directly from forest owners on the basis of delivery to the roadside (in other words, the forest grower is also the harvester). The remaining 15% of the wood fibre comprises sawmill residues sourced from a single supplier. Roundwood and chips are delivered to the mill by a single transport provider, directly contracted and supervised by us. No wood is purchased through third parties. All roundwood delivered to the mill is readily traceable back to the source forest by a mill-based forest inventory management system known as Artlis. Roundwood deliveries come from a supply zone within 150 kilometres of the mill on the south-western slopes of New South Wales and north-eastern Victoria, and are transported by road. Norske Skog Boyer, located on the Derwent River in southern Tasma-

nia, sources 70% *Pinus radiata* from plantations and 30% young regrowth eucalyptus. Pine is used in the thermo-mechanical pulping (TMP) process, and eucalyptus in the cold caustic soda pulping process. 50% of the pine is sourced from plantations we manage, 35% from other plantation growers and 15% from chips supplied by a single sawmill in north-eastern Tasmania. Most of the eucalyptus is delivered to the mill door by Forestry Tasmania, whose forests are certified to the Australian Forestry Standard. All the wood sourced derives from sustainably managed forests which meet the requirements of Tasmania's Forest Practices Code. Transport is by road. Norske Skog Tasman is located at Kawerau on the Bay of Plenty in New Zealand. This country has a forested area of eight million hectares, which makes up 30% of the total land area. Of the forested area, 1.8 million hectares are plantation forests dominated by *Pinus radiata* and other softwoods. 26% is owned by public companies, 66% by private companies, and the balance by the state. Of the 66% in private ownership, more than 50% is concentrated in relatively small holdings. Major forestry companies and conservation groups signed the New Zealand Forest Accord in 1991. This defines and acknowledges which areas are unsuitable for commercial forestry, while recognising commercial forestry

as essential. The FSC certification system is the one most widely used in New Zealand. 42% of the plantation forest by area or 33% by volume harvested is currently certified. All fibre consumed at Norske Skog Tasman comes from plantation forests (*Pinus radiata*), sourced from various parts of North Island. Both roundwood and sawmill chips are used. The bulk of the volume is transported by road, but a small proportion travels by rail.

WOOD SUPPLY TO THE MILLS IN ASIA

Most mills in the Asian region rely on recovered paper for their fibre raw material. Only Norske Skog Jeonju in Korea uses wood. Meeting about 5% of its raw material requirements, this comes from a local red pine (*Pinus densiflora*). About half the wood is supplied as chips by a single sawmill and four chip suppliers. The remainder comes from ten small log-traders who have annual contracts with us. Transport is by road.



# Energy consumption

During the last year the issue of energy consumption and greenhouse gas emissions has become even more pressing.

The production of paper demands high energy consumption, there are however many different ways to reduce consumption, with particular focus on energy savings and alternative energy sources.

Norske Skog is working on various ways of saving energy, and many different projects have been initiated.

The production of thermo-mechanical pulp (TMP) is the most energy demanding part of the production process. In this process the wood fibers are separated by mechanical processing of the wood. Many of the projects and research are focused on reduction of energy consumption in this phase. There is also focus on increasing use of recycled fiber as a replacement for the more energy demanding TMP.

Energy reduction projects in the TMP process have been approved at two mills. Extensive trials conducted at our plants indicate that reduc-

tions of 3-5% per tonne of TMP are achievable after installation of advanced control equipment.

Energy saving projects at the mills have received support from various authorities in several countries. One example is a project at Norske Skog Skogn, described on the next page.

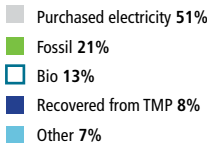
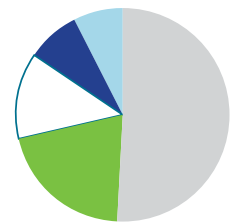
The recovery of heat from the Norske Skog Albury TMP plant has allowed it to reduce the consumption of natural gas whilst at the same time generating CO<sub>2</sub> credits.

### NEW DEVELOPMENTS

Research has been undertaken on woodchip pretreatment combined with various refining techniques. This has delivered promising energy reduction results and is now in an implementation phase in a number of locations.

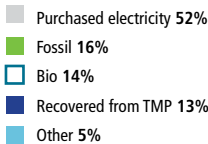
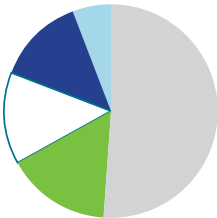
Norske Skog is also in discussions regarding the potential for a new power station based on natural gas

Energy consumption by source



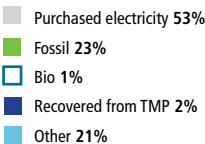
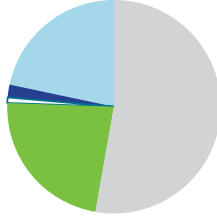
Europe

Total 12 100 GWh, 3.57 MWh/tonnes



Australasia

Total 4 120 GWh, 5.15 MWh/tonne



and biofuel at Skogn. The steam from the power station would be utilized in the production process at Norske Skog Skogn.

Norske Skog Tasman in New Zealand is situated in a geothermal area, and the company was instrumental in securing local authorities' approval for the construction of a geothermal power plant there. Construction has started, and the power plant will be finished at the end of 2008.

BIOFUEL

Where possible organic waste from the production processes is used as biofuel at the mills. In addition, several mills purchase biofuel. Norske Skog is a leading producer of bioenergy.

The re-use of heat energy from the TMP process for paper production is a strategy that is given high priority, in part to reduce greenhouse gas emissions.

In Asia the mills are using less oil as

an energy source, and are shifting to alternative sources, such as biofuel where possible. Oil consumption in the two Korean mills reduced by 18% from 2005 to 2006. An additional reduction of 17% is expected in 2007.

Energy management is included in the new global project Norske Skog Production System (NSPS). This will enable all of the mills to share the best technical and operational resources, and assist with the implementation of best practice.

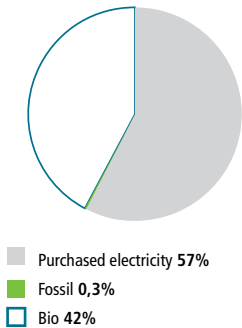
Investing NOK 330 million

Norske Skog is to invest NOK 330 million at its Norske Skog Skogn mill in mid-Norway in order to boost its competitiveness and further improve the quality of the paper it produces. The project will cut annual electricity consumption at the mill by 17%. State-owned company Enova is contributing NOK 50 million to the work.

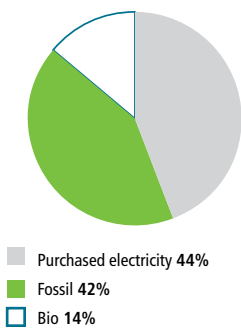
The project will commence this year, and is due to be completed by the end of 2009.

The project will allow for increased use of fillers and recovered paper in the production process. This will enhance the mill's competitiveness while meeting customer requirements for a larger proportion of recycled fibre in their newsprint.

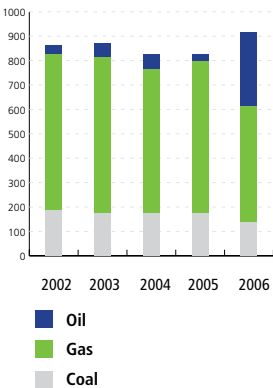
South-America  
Total 1 360 GWh, 4.57 MWh/tonne



Asia  
Total 3 600 GWh, 2.30 MWh/tonne



Norske Skog use of fossil fuels  
(kWh/tonne paper)





# Emissions and discharges

Discharges to water from the production process consist primarily of fibre and dissolved organic material. Roughly 95% of the chips and roundwood used and about 80% of the recovered paper received are converted to products.

○ The remainder ends up as solid waste or sludge, or is discharged from the manufacturing process with the waste water. The latter is treated in various types of effluent treatment plants before being discharged

to the receiving environment. Emissions to the air occur primarily from energy generation. Most of our mills have their own boilers or incinerators for producing thermal energy (heat). Modern mills utilise by-products, such as sludge from waste water treatment and deinking plants, and other organic waste from the production process as biofuel for thermal energy production. Fossil fuels in the form of gas, oil or coal may also be used. Environmental loads primarily relate to emissions of sulphur dioxide and nitrogen oxides as well as carbon dioxide from the combustion of fossil fuels.

The inclusion of the Asian mills in

our environmental statistics for the first time in 2006 and the closure of the Union mill had an impact on the year-on-year performance trends. Our average performance figures related to water use and effluent treatment showed a positive trend. Average carbon dioxide emissions per unit of output have increased.

Emissions and discharges from all the mills are measured regularly, but measuring and reporting routines may vary in line with national requirements and regulations. No acute incidents or major infringements of the emission limits set by the regulatory authorities occurred at our mills in 2006, although the Norske Skog Skogn and Norske Skog Follum mills experienced effluent treatment issues which exceeded permit conditions for extended periods in early 2006.

## EUROPEAN MILLS

The European mills must hold emission permits by the end of 2007 which accord with the EU's integrated pollution prevention and control (IPPC) directive. This includes provisions on





58%

of mill waste used as an energy source

determining standards for emissions to the air, discharges to water, noise and waste management. It also permits the regulatory authorities to set requirements for energy consumption. All mills will hold such permits by the end of 2007.

With the exception of Norske Skog Follum, all our European mills already have emission discharge levels which accord with the use of best available

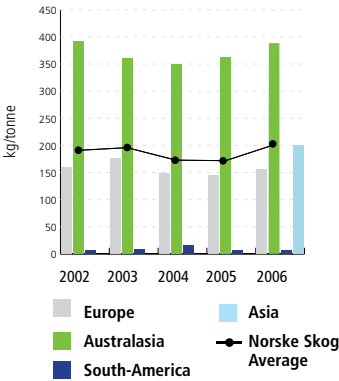
technique (BAT). A project to upgrade the Norske Skog Follum effluent treatment plant will be completed and operational by the end of 2007. Reducing water consumption has been a goal for several of our European mills in recent years. After continuous improvements over a long period, discharges in 2006 were at similar levels to the previous year. Specific discharges of organic material (chemi-

cal oxygen demand - COD) in treated effluent also remained at levels similar to previous years, averaging just below five kilograms per tonne of paper.

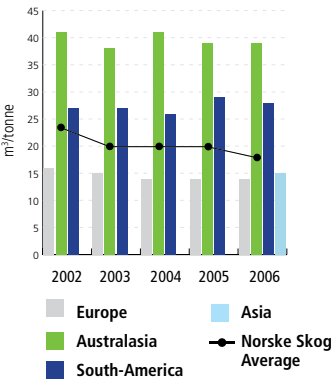
AUSTRALASIAN MILLS

Specific water use has declined slightly over the past three years and remains a priority area for 2007. On average, water use is significantly higher than at the European mills. This partly reflects

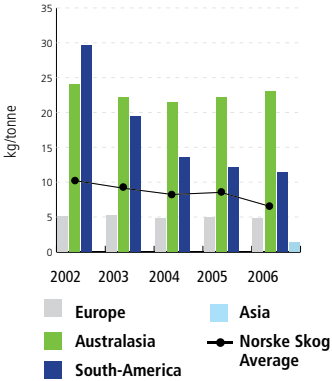
Emissions of CO<sub>2</sub>



Water discharges



Discharges of organic substances (COD)



special conditions at Norske Skog Boyer, which utilises a eucalyptus pulp production plant which yields higher specific discharges than traditional softwood pulp production. Work began in 2006 on the construction of a biological effluent treatment plant at Boyer. This is due to be operational by the third quarter of 2007.

Paper machine rebuilds occurred at both the Norske Skog Albury and Norske Skog Tasman mills in 2006. The Norske Skog Albury rebuild included an upgrade of its biological effluent treatment system to cater for greater treatment demands associated with increased production.

The use of coal at Norske Skog Boyer is the main reason why the Australasian mills generally have higher specific greenhouse gas emissions than facilities in other regions. Emissions per tonne of output in 2006 were above 2005 levels.

**SOUTH AMERICAN MILLS**

Discharges of organic materials to water at Norske Skog Bio Bio in Chile have continued to decline since its new sedimentation plant for waste water treatment became operational in May 2003. This facility has significantly reduced discharges of dissolved organic substances and suspended solids. Additional investment in effluent treatment is required in order for the mill to meet the new national discharge standard for easily degradable organic material (biochemical oxygen demand over five days – BOD5). The installation of secondary (biological) effluent treatment is under way at Norske Skog Bio Bio for commissioning in early 2008.

Specific waste water generation rates declined slightly in 2006. The significant use of biofuels to generate process heat at the South American mills can be seen in the relatively low specific emission figures for carbon dioxide.

The installation of a second paper machine at the Norske Skog Pisa mill

will include the construction of additional effluent treatment capacity.

**ASIAN MILLS**

The mills in Asia are included in our environmental statistics for the first time in 2006. Whilst no trend exists for emissions data the observed environmental performance of the mills is, in many cases, consistent with or better than BAT standards.

**NOISE AND VIBRATION**

All our mills operate in accordance with noise standards set by the regulatory authorities. However, measurements carried out in 2002 at Norske Skog Tasman indicated that this facility may exceed local noise guidelines from time to time in an area close to the facility. No complaints have been received and no remedial measures have been required by the authorities.

Five of the mills received complaints about noise from neighbours in 2006, primarily as a result of acute incidents where remedial action was taken immediately. Two complaints were also received by Norske Skog Parencio about ground vibration in a property near the mill. This has been an issue for a number of years, and the mill has worked systematically to identify its cause. The position improved somewhat after the installation of new equipment in 2003, but complaints are still being received. The mill will continue to focus on identifying the cause in order to eliminate the problem. Norske Skog Chongwon was one of eight businesses in its area cited in a general complaint about noise submitted to the local authorities. The mill implemented noise reduction measures in December 2006 as a contribution to reducing the noise impact.

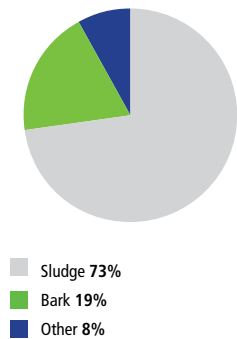
**WASTE**

Biomass from effluent treatment and deinking plants for recovered paper and bark represent the principal types

of organic waste at the mills. Before final disposal, the sludge is dewatered in various types of presses to produce a residue which normally represents 35-65% of the original volume. Waste at our mills in 2006 totalled just over one million tonnes. Most of the sludge, bark and other wood waste is incinerated and used to generate thermal energy. Such incineration yields substantial quantities of ash – just under 320 000 tonnes in 2006. More than 60% of this volume was used as a raw material in cement production, while the rest largely went to landfills. Hazardous materials account for less than 1% of the waste produced at our mills.

Acquiring the five Asian mills resulted in a substantial increase in our waste volumes for 2006. This largely reflects the fact that these mills are based on recovered paper, and have extensive effluent treatment plants which generate considerable volumes of sludge. This is particularly the case for the Korean mills. The Asian facilities account for more than 35% of the total waste we generate, compared with 25% of our production. To deal with the waste volumes, substantial investments have been made in dewatering equipment and energy recovery. The aim is to exploit as much organic

**Total production waste generated by Norske Skog 2006**  
1 020 000 tonne (dry)



waste as possible for biofuel. With the exception of Norske Skog Singburi, most of the organic waste is used for energy purposes at the mills in Europe, South America and Asia. Norske Skog Singburi delivers its waste to an external company, which is responsible for acceptable disposal or utilisation. The mill initiated a project in 2006 to look at the opportunities for and cost of energy production based on its own organic waste in combination with other fuels. Sludge and ash in Australasia are largely used for soil improvement in agriculture or sent to landfills.

TRANSPORT OF RAW MATERIALS

The mix of transport methods used to bring raw materials to the mills varies greatly from region to region, reflecting differences in mill location, local infrastructure and established transport patterns. Road transport dominated in 2006, with a share of more than 80%. Rail and maritime transport accounted for about 10% each. The share of road transport increased from 2005, partly because Asia was included in the 2006 accounts. Almost 90% of raw materials in Asia are transported by road. The closure of

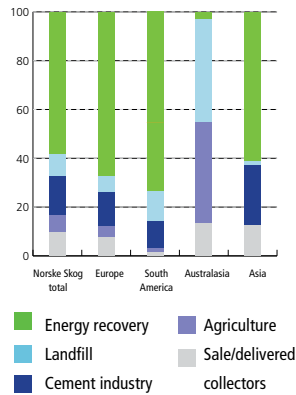
Norske Skog Union contributed to an increase in the share of road transport in Europe, since almost 60% of movements to this mill used other methods. Road transport accordingly saw its share increase at the European mills from 68% to 72%, while maritime and rail shipments accounted for roughly 14% each. Virtually all transport in South America goes by road. In Australasia, road transport increased from the previous year and accounted for roughly 90% in 2006. The remainder was carried by railway.

TRANSPORT OF PRODUCTS

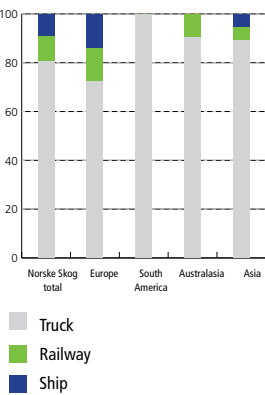
Road transport of finished products from the mills increased from the previous year and accounted for roughly half the volume in 2006. Rail movements increased from 26% to 29%, while shipping declined from 30% to 23%. These marked changes are almost entirely due to the inclusion of the Asian mills in 2006. Road transport accounted for 76% of finished product movements in Asia during 2006. Some increase in rail transport occurred in Europe, with a corresponding decline in road movements.

Shipping transport was unchanged from 2005. Road transport declined in South America and shipping shipments rose, while Australasia moved more by rail with a corresponding decline in maritime transport. We implemented a specific environmental policy in 2006 for transporting raw materials and products, which applies to all our operations.

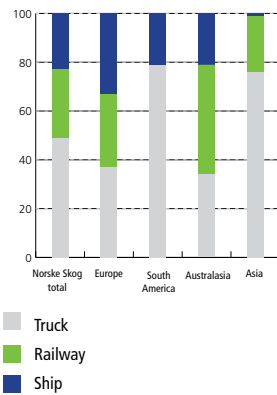
Disposal of mill waste 2006 (%)



Transport of raw materials (%)



Transport of products (%)







Efficient treatment plant and TNP plant under construction of Norske Skog Follum.

# Investing to meet future challenges

Environmental investments totalling NOK 128 million

were made at our mills in 2006. Most of this spending went to reduce the consumption of and discharges to water and on energy saving.

Measures to use less water or cut discharges to it accounted for more than half our total investment in environmental improvements, while energy saving accounted for just over 20%. Other spending

related to reducing emissions to the air and noise pollution as well as to waste treatment.

Norske Skog Follum received a new licence from the Norwegian authorities in 2006 which sets stricter discharge limits. As a result, and as part of a modernisation of the mill which also includes transferring the TMP plant from the Union mill, its biological treatment plant is to be expanded. Initiated in the autumn of 2006, this work is scheduled to cost some NOK 90 million. About NOK 14 million was spent in 2006. A further investment of roughly NOK 5 million

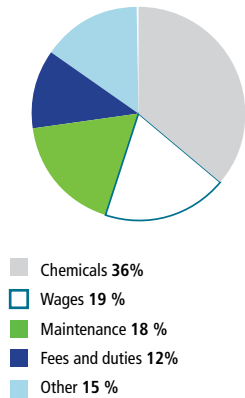
was also made in monitoring equipment on the multifuel boiler and in measures to reduce dust emissions.

The construction of a new biological effluent treatment plant at Norske Skog Boyer commenced in 2006 and is due to be completed in 2007 at a total cost of NOK 70 million, including NOK 6 million spent in 2006. Prior to building the treatment plant, about NOK 30 million was invested in a new high-consistency bleaching plant which helps to reduce water and chemical consumption. Some NOK 5 million was spent on refurbishing the buildings belonging to an old chlorine plant shut down in the 1990s.

Just under NOK 7 million was invested at Norske Skog Golbey to generate “green” electricity from biofuel. Test operation began in late 2006. This project also includes the construction of three new boilers based on natural gas.

Norske Skog Pisa invested a little

Environment-related operating costs by type of cost 2006



over NOK 6 million in a new flotation plant for treatment of effluent from the TMP process. This facility contributes to increased fibre recovery, and thereby reduces discharges from the mill.

Several energy saving projects were pursued at Norske Skog Jeonju at a total cost of NOK 25 million. These included the installation of equipment in the TMP plant which makes it possible to utilise steam from this process directly in the recovered paper pulping plant and in heat exchangers for recovering heat from one of the paper machines.

The decision was taken at Norske Skog Bio Bio in 2006 to build a new biological treatment plant. This work has commenced and is due for completion in 2008.

ENVIRONMENT-RELATED OPERATING COSTS

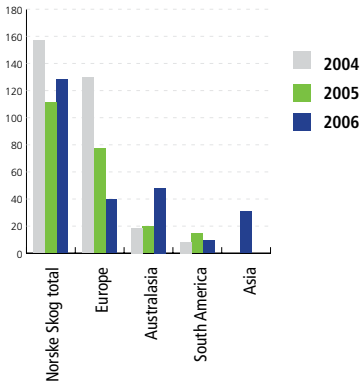
Our environment-related operating costs totalled almost NOK 450 million in 2006, corresponding to NOK 74 per tonne of product. This was a good deal higher than in earlier years, primarily because the Asian mills were included in the accounting. The strict discharge standards applying in Korea require extensive treatment facilities and a high consumption of chemicals in these processes.

The cost of chemicals in treatment plants and sludge dewatering accounted for more than a third of this spending, while payroll costs and maintenance were each responsible for about 20%. Government taxes and various other charges relating to operating and monitoring treatment plants and waste management accounted for the remainder.

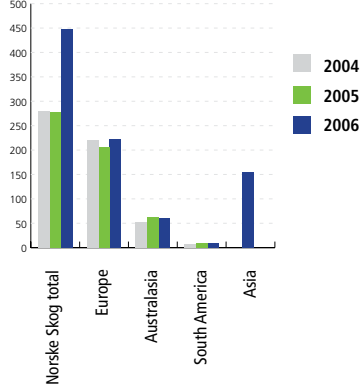
ENVIRONMENTAL INVESTMENT ALSO YIELDS SAVINGS

The presentation of our environment-related investment covers only the expenditure side. However, many of these measures also produce savings. Examples include spending on new equipment which consumes less energy. Effluent treatment yields organic sludge which can be used as biofuel, and thereby reduces the volume of purchased fuels. Other examples are better sludge dewatering, which increases its calorific value and further reduces the need to buy fuel. Using less water also cuts energy consumption because smaller volumes need to be heated or pumped around a mills production system.

Environment-related investments (million NOK)



Environment-related operating costs (million NOK)



**Environment-related costs include environmental investments and environment-related operating costs. Costs shown are based on best estimates, and on spending which we believe has primarily been made to achieve environmental improvements.**

● Environmental investments are defined as costs relating to the installation of treatment plants and waste-handling equipment, measures to reduce noise, energy saving, environmental monitoring equipment and environment-related rehabilitation.

● Environment-related operating costs are defined as the cost of chemicals for treatment plant and sludge dewatering, maintenance of such facilities, pay for employees involved in environment-related work and treatment plant operation, environment-related trials, surveys, fees and taxes, and the operation and maintenance of waste disposal facilities.



# Biggest user of recovered paper

Norske Skog consumed 3.3 million tonnes of recovered paper in 2006. This makes Norske Skog the largest global user of recovered magazines and newspapers for publication grade paper.

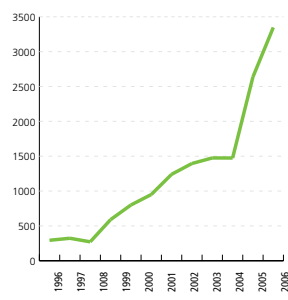
Globally Norske Skog has 12 mills that use recovered paper for the production of newsprint. Regionally, Asia consumes the most within the company, using 1.8 million tonnes of recovered paper in 2006.

### PRICE INCREASE

2006 saw an increase in the price for recovered paper. This development came after three

- years of declining recovered paper prices. The main reasons for this new trend were.
- Increased consumption of recovered paper due to new mills in China that do not have access to wood resources suitable for newsprint and therefore rely on recovered paper.
  - Higher energy prices in 2006 which made it more attractive to use recovered paper than wood as it requires lower energy consumption than wood for newsprint production.
  - Increased wood prices which make it more attractive to consume recovered paper.

Use of recovered paper 1996-2006 ('000 tonnes)



Recovered paper in newsprint prod.	
Norske Skog Albury, Australia	36 %
Norske Skog Boyer, Australia	22 %
Norske Skog Bruck, Austria	87 %
Norske Skog Golbey, France	66 %
Norske Skog Parencio, Netherlands	78 %
Norske Skog Skogn, Norway	26 %
Norske Skog Steti, Czech Republic	44 %
Norske Skog Cheongwon, Korea	100 %
Norske Skog Jeonju, Korea	96 %
Norske Skog Singburi, Thailand	100 %
HNLC Hebei, China	100 %
SNP Shanghai, China	100 %

### NEW OFFICE IN LOS ANGELES

In 2006, Norske Skog established a new office for recovered paper in Los Angeles, California. The global co-ordination of recovered paper is done from Antwerpen.



# Independent auditor's report

We have reviewed certain aspects of the Norske Skog Environmental Report 2006 presented on pages 4 – 29 and the Global Reporting Initiative (GRI) table and the UN Global Compact table presented on pages 47 – 52 (in total referred to as the "Report") in the Norske Skog Sustainability Report 2006. The Report is the responsibility of and has been approved by the management of the Company. Our responsibility is to draw a conclusion based on our review.

We have based our work on the international standard ISAE 3000 "Assurance Engagements other than Audits and Reviews of Historical Financial Information", issued by the International Auditing and Assurance Standards Board. The objective and scope of the engagement were agreed with the management of the Company and included those subject matters on which we have concluded below.

Based on an assessment of materiality and risks, our work included analytical procedures and interviews as well as a review on a sample basis of evidence supporting the subject matters referred to above. We believe that our work provides an appropriate basis for us to conclude with a limited level of assurance on the subject matters. In such an engagement, less assurance is obtained than would be the case had an audit-level engagement been performed.

## CONCLUSIONS

In conclusion, in all material respects, nothing has come to our attention that causes us not to believe that:

- The environmental aspects presented in the Report comprise the most significant ones at Group level.
- Norske Skog has applied procedures, summarised on page 27, for the purpose of collecting, compiling and validating environmental data from its reporting units for inclusion in the Report.

- The aggregated information accumulated as a result of the procedures noted above is consistent with the data reported from reporting units and appropriately reflected in the Report.
- The environmental information for 2006 reported from a sample of two reporting units visited (Norske Skog Skogn and Norske Skog Bruck) was reported according to the procedures noted above and was consistent with the source documentation presented to us.
- Norske Skog applies a reporting practice for its environmental reporting aligned with the GRI reporting principles. The GRI Index presented on pages 48 – 52 in the Report appropriately reflects where relevant information on each of the elements and core indicators of the GRI Sustainability Reporting Guidelines 2006 is to be found within the Norske Skog Sustainability Report and the Norske Skog Annual Report for 2006. References made in the UN Global Compact table on page 47, appropriately reflects where relevant information is presented in the Norske Skog Sustainability Report and the Norske Skog Annual Report 2006.

Oslo, 1 March, 2007

Deloitte

Statsautoriseret Revisionsaktieselskab



Preben J. Sørensen

State Authorised Public Accountant

Environment & Sustainability Services

## About the environmental reporting

The environmental report contains information which Norske Skog believes to cover the most important environmental aspects of the company's business. The environmental accounts cover the wholly-owned paper mills which formed part of the company at 31 December 2006. The last paper machine at Norske Skog Union was stopped on 1 March. For practical purposes this mill is not included in the environmental accounts for 2006. Data for the environmental accounts have been collected from the mills in ac-

cordance with established reporting routines. These consist of monthly standardised reporting of the most relevant environmental data, as well as supplementary information collected annually – again in accordance with standardised routines. The monthly reporting includes production volumes, consumption of raw materials, use of energy, emissions and waste handling. Figures from the reports are compared and compiled by the corporate environment department into standardised monthly reports

for the corporate management and quarterly reports to the board. Figures in the environmental report are compared and compiled with a view to presenting the data as uniformly and relevantly as possible. Although great efforts have been made to ensure that information is complete and correct, some uncertainty may attach to parts of the statistical material. In keeping with Norske Skog's efforts to ensure open communication on environmental issues, the company wants the report to be

reliable and quality-assured. As a result, the environmental report has been reviewed for the past 11 years by Deloitte. Norske Skog takes the view that such a review increases the report's credibility. It also provides greater assurance within the company that the data in the report are based on information which has been collected and collated on a systematic basis, and that the necessary documentation is available.

# Mill data 2006

		BRUCK	FOLLUM	GOLBEY	PARENCO	SAUGBRUGS	SKOGN	STETI
<b>Production</b>								
Paper	1 000 tonnes	365	391	599	431	528	584	125
<b>Consumption</b>								
Roundwood	1 000 m <sup>3</sup>	176	717	265	47	623	806	176
Sawmill chips	1 000 m <sup>3</sup>	0	117	327	203	93	223	0
Recovered paper	1 000 tonnes	209	0	498	421	0	177	67
Purchased pulp	1 000 tonnes	33	21	0	0	68	2	8
Pigments and fillers	1 000 tonnes	90	42	8	8	183	0	1
Electric power	MWh/tonne	1.17	2.76	1.72	1.40	2.59	2.55	1.46
	GWh	427	1 082	1 027	602	1 368	1 489	182
Thermal energy	GJ/tonne	4.60	6.20	5.01	5.21	5.62	5.69	4.61
	TJ	1 677	2 427	2 999	2 244	2 967	3 324	577
<b>Discharge to water</b>								
Water consumption	m <sup>3</sup> /tonne	12.1	15.9	9.3	11.0	16.6	13.0	26.1
	1000 m <sup>3</sup>	4 400	6 200	5 600	4 700	8 800	7 600	3 300
Organic material (COD)	kg/tonne	3.0	14.8	1.6	2.5	5.8	3.4	
	tonnes	1 097	5 774	958	1 064	3 046	1 986	
Suspended solids (SS)	kg/tonne	0.2	0.8	0.1	0.1	0.3	0.7	
	tonnes	80	303	54	39	132	426	
Phosphorus (tot-P)	g/tonne	2.7	4.1	7.4	12.4	4.8	14.5	
	tonnes	1.0	1.6	4.4	5.3	2.5	8.5	
<b>Air emission</b>								
Carbon dioxide (fossil)	kg/tonne	591	39	68	466	62	6	
	tonnes	216 000	15 000	41 000	201 000	33 000	3 000	
<b>Waste</b>								
Waste to landfill	kg/tonne	0.0	12.8	5.9	0.7	16.1	27.2	2.7
	tonnes	7	5 018	3 532	280	8 500	15 890	340
<b>Management systems</b>								
Environmental MS <sup>1</sup>	Certificate	ISO	ISO	ISO	ISO	ISO	ISO	ISO
CoC-systems	Certificate	PEFC	PEFC		PEFC	PEFC	PEFC	PEFC
<b>Forestry certification<sup>2</sup></b>								
Certified (PEFC or FSC)	%	66	96	50	38	74	68	58

Norske Skog Union mill data is not included, it was gradually closed down in January and February 2006.

<sup>1</sup> ISO = ISO 14001 EMAS = EU Eco management and audit scheme

<sup>2</sup> Of the quantity roundwood + sawmill chips + purchased pulp

WALSUM	ALBURY	BOYER	TASMAN	BIO BIO	PISA	CHONGWON	JEONJU	SINGBURI	HNLC	SNP
378	244	294	310	122	175	173	872	130	241	137
0	274	496	225	304	341	0	40	0	0	0
412	47	51	513	0	164	0	46	0	0	0
0	150	0	0	0	0	224	942	168	307	177
65	0	60	9	10	10	0	38	0	0	0
134	0	9	5	1	0	1	26	0	0	0
2.09	2.37	2.16	3.32	2.26	3.18	0.98	1.14	0.84	1.04	0.91
791	578	634	1 030	276	556	170	996	109	249	125
6.19	5.77	8.13	9.57	4.61	7.60	4.52	4.42	4.52	4.10	5.78
2 341	1 410	2 386	2 965	564	1 330	783	3 853	588	987	793
14.6	8.0	42.1	65.9	40.2	21.8	17.5	12.3	15.1	10.2	24.7
5 500	2 000	12 400	20 400	4 900	3 800	3 000	10 700	2 000	2 500	3 400
3.8	2.2	56.4	7.7	22.8	3.4	1.0	1.2	3.7	1.2	1.2
1 448	548	16 554	2 386	2 788	595	170	1 029	475	277	167
0.3	0.1	3.8	2.3	1.2	0.1	0.1	0.4	0.4	0.3	0.8
109	23	1 115	713	147	10	21	323	55	77	106
6.3	2.8	23.6	n.r.	53.0	11.5	17.3	8.6	1.9		
2.4	0.7	6.9	n.r	6.5	2.0	3.0	7.5	0.2		
56	276	837	55	16	0	167	129	339	272	452
21 000	67 000	246 000	17 000	2 000	0	29 000	112 000	44 000	66 000	62 000
0.0	12.4	113.6	33.0	47.5	3.1	9.4	0.3	255.7	27.2	24.7
5	3 019	33 343	10 234	5 808	542	1 633	279	33 260	6 546	3 388
ISO/EMAS PEFC	ISO	ISO	ISO	ISO	ISO	ISO	ISO	ISO		
75	18	27	46	16	56	n.a.	0	n.a.	n.a.	n.a.





8 053

Number of employees in Norske Skog

# Injury level at record low

A stronger focus on risk prevention activities yielded

our lowest ever level of injuries and sickness absence in 2006.

But a tragic accident in France served as a powerful reminder that health and safety are more than statistics.

A record performance made us one of the best in class for health and safety in 2006.

Regardless of industry, this result belongs absolutely in the top global rank.

We committed substantial resources during the

year to analysing the risk picture and focusing on preventive activities.

Nevertheless, what must not happen did occur. One of our employees at Norske Skog Golbey in France died as the result of a work accident.

We take all accidents and undesirable incidents very seriously, and investigate them systematically to identify the underlying causes as a basis for proposing preventive measures and new procedures. But we may equally often conclude that the procedures were adequate, and that more effort must be devoted to changing behaviour. One measure for achieving that is education and training, and we have accordingly developed various activities in these areas. Exercises are also staged.

After the accident at Norske Skog Golbey, the mill has reviewed its in-house routines and practice to identify improvement areas. These have now been given priority, and a number of activities are already under way. One of these is H&S leadership training.

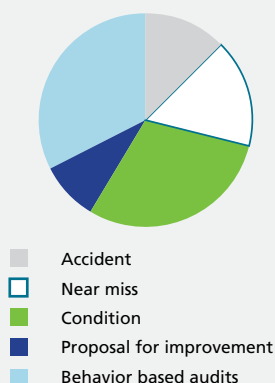
## INTEGRATED RISK PICTURE

Assisted self-assessment (ASA) is a tool for evaluating risk at our mills. It has now been implemented at most of our facilities, and has generally caused a shift from priority areas for reducing risk to checking residual risk. Interviews with operatives, supervisors and senior managers are used to help build a complete picture of all potential risk factors.

The results allow mills to work in a structured way on activities which reduce the overall risk picture. Managers at all levels are involved to ensure that the H&S mindset forms an integrated part of work routines.

The structure for H&S work during 2006 was the same as in previous years, from the corporate H&S function to local H&S officers who implement the various measures together with the

Reported cases in 2006



# OUR VISION

A safe environment and healthy people. This can only be achieved if the entire organisation is committed to working together in the spirit of our core values and beliefs.

# OUR BELIEFS

- Everyone has the right to a healthy and safe working environment. We believe health and safety is a 24 hour responsibility. We will encourage the same attitude and behaviour when people are at work, home or leisure.
- We will advocate similar health and safety values with our suppliers, in joint ventures and partially owned companies.



organised safety service, union officials and each worker. In our group, H&S forms an integrated part of work and is a clear line management responsibility, from the chief executive down to the individual employee – without exceptions.

An H&S engineer reporting to the vice president H&S was appointed in 2006 to reinforce our commitment in this area. One of this person’s principal jobs is to conduct quality assurance of figures, analyses and information from the mills in our global Synergi management system for H&S.

Our local emergency response team

plays an important role in risk control and preventive activities. We depend on these teams to limit injuries and secure residual asset value not only through prevention but also in dealing with accidents.

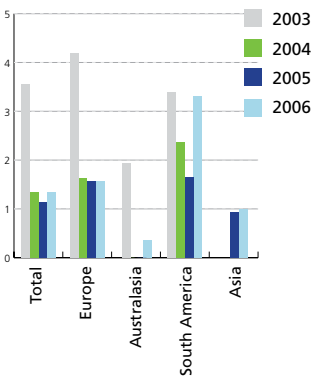
## WON AGAIN

Norske Skog Pisa in Brazil won the president’s HSE prize for the second time in 2006. This mill is approaching four years without a lost-time injury. Presenting the award, chief executive Christian Rynning-Tønnesen commented: “The Norske Skog Pisa workforce has succeeded in placing health

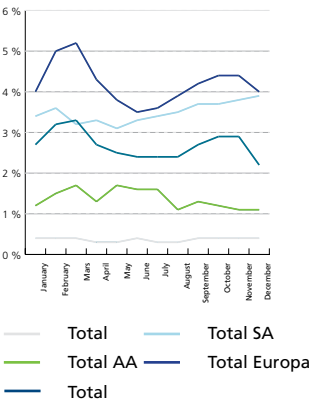
and safety at the top of everyone’s agenda. Looking after their own health and that of their colleagues has become a natural part of their working day”. H&S manager Sergio Escarpante at the mill reports a strong focus on activities to reduce the risk level during 2006.

However, personnel at Norske Skog Pisa take nothing for granted. They think health and safety all the time by working actively to create a safer workplace for each other. Preventive H&S work has taken new forms. All employees assemble at the mill every morning for 10 minutes of physical

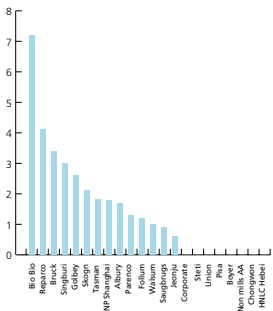
LTI frequency per continent 2003-2006



Sickness absence 2006



LTI frequency by mill in 2006







**CHANTING ECHOED:** Each shift at Norske Skog Jeonju in Korea starts with a chanting session on health and safety. This routine has now also been adopted by Norske Skog Pisa in Brazil.



**STABLE:** Collar and board are used to stabilise neck and back respectively before an injured person can be lifted out of a car, explains Ricardo Domke.

exercise. A new feature in 2006 was a routine where the arriving shift gathers in a circle to chant and shout slogans. Important rules for avoiding accidents are reviewed, and the session ends with everyone yelling “no injuries, no injuries, no injuries”. This routine has been adopted from Korea’s Norske Skog Jeonju mill.

### CARE MORE

The great variety of people and cultures embraced by our group yielded positive synergies in H&S work during 2006.

Big variations exist between the mills for sickness absence. The mills in Korea and China are close to zero, whilst others can lie rather higher. However, these figures are not directly comparable. They conceal major cultural differences.

The mills have a common electronic management system for H&S. Procedures are same. People and culture make the difference, says Jens Borge, vice president H&S.

To become even better, we must care more for each other. That means not only showing care for work colleagues, but also speaking out and reacting when we observe

hazardous conditions and dangerous behaviour. That will bring us several steps further in 2007.

### CHALLENGES FOR 2007

Each mill has been given a more independent role than before in the new corporate structure. The challenge then will be to benefit from the collective H&S expertise of all the mills and build further with a focus on risk prevention routines, attitudes and working methods.

Transferring systems from the closed Union mill to Norske Skog Follum and Norske Skog Pisa will also pose extraordinary challenges in H&S. But we have long experience of project work, and these moves must be viewed as a similar kind of activity.

## Saved colleague

**Good health and safety work can not only prevent accidents but also save lives, as a recent incident at Norske Skog Bio Bio in Chile illustrates.**

The traffic light was on green when Ximena Manriquez drove out of the mill. That did not prevent a lorry jumping the lights and smashing into her car at 80 kilometres per hour just outside the gates.

Things could have gone very badly on that summer day in 2006 had it not been for colleague Ricardo Domke, who was on a firefighting exercise at the mill after his shift. On hearing the crash, he grabbed the first-aid kit in the fire engine and ran to the collision site.

Manriquez was trapped inside the wreck, suffering from shock and in great pain from serious injuries. She nevertheless remembers Domke’s arrival well.

“He reassured me by talking the whole time,” she says. “Then he told me in detail how he was going to lift me out of the car, so I was no longer so scared.”

Domke stabilised Manriquez’s neck with a collar and then placed a small board under her back to ensure she was in a stable position before being lifted onto a larger board. Small errors can be fatal when freeing injured people from a car wreck. Back and neck must be stabilised, and sudden movements avoided.

After the incident, the mill organised a first-aid course for the children of employees – with Domke as the instructor.

“Both my children signed up,” says Manriquez, who is now fully restored to health. “They wanted to learn how to help others the way Ricardo helped me.”

# Stronger commitment to internal communication

The news that capacity in Brazil is to be doubled was conveyed to employees through a webcast from head office at Oksenøya as part of efforts to improve communication with our workforce.

○ Major challenges in communicating with employees were faced in 2006. As part of efforts to tackle this issue, direct webcasting was tried out for the first time. The initial transmission involved a piece of good news – the decision to double production capacity in Brazil by moving a paper machine from the former Union mill.

Weak results in a global market under pressure have called for counter-measures which affect all our employees in one way or another. As a result of overcapacity, we sought to reduce production capacity in Europe, Asia and Australia. At the same time, conditions varied greatly from region to region as well as within regions.

Implementation of a new decentralised corporate structure began in October 2006. An initial consequence involved reducing our head office staff by 40 people. The regional functions in Singapore, Australia and Brazil were also discontinued. Our workforce is being reduced by roughly 1 000. At the same time, the reorganisation gives each of our mills greater freedom of action and is expected to strengthen us overall. Feedback from customers in late 2006 confirmed that they appreciate the closer attention they are receiving from us.

The biggest challenge in this turnaround process was to convey the main message to all our employees – that we are a leading global player making an aggressive commitment to the future, and will remain an attractive place to work with development opportunities which is well worth sticking to.

“Ahead of the restructuring, the management of each mill received communication packages with information videos,” explains chief shop steward Kåre Leira. “Most of the units already have a good dialogue with their employees, but 2006 also revealed mills where communication failed to function as it should.”

## EXPANDED WORKFORCE

Our acquisition of the remaining 50% of the shares in Pan Asia Paper Co was announced in late 2005. This meant the addition of five mills and 2 864 employees in Thailand, Korea, China and Singapore.

Contact was established with this new workforce during 2006 through meetings involving the chief shop steward and representatives from the human resources department.

Agreements and works councils already existed at national, regional and global level in our other regions – Europe, South America and Australasia. The process of incorporating



Robert Wood, General manager at NSPCC, the common sales company for the mills in China.

our Asian employees in this structure was initiated in 2006. Time will be devoted to becoming familiar with this workforce and developing collaborative arrangements based on local cultures and our own values of openness, honesty and cooperation.

The first Global Employee Forum (GEF) to include representatives from our Asian businesses will be held in 2007.

### FOUND NEW JOBS

The decision to shut down Norske Skog Union in Skien was taken in 2005, and the last reel of paper left the mill in March 2006. Many negative newspaper stories accompanied the closure of this mill with 360 employees.

Both the mood and the headlines gradually changed as the former Union workers found new jobs during 2006. Our human resources department devoted considerable resources to supporting them with severance packages and help in finding other work. Combined with a good labour market, this commitment meant that virtually the whole workforce has found new employment.

A paper machine at Norske Skog Tasman in New Zealand was shut down in February 2006, and 130 workers went through a similar process of severance packages and support. The same occurred when Norske Skog

Jeonju in Korea stopped operating two paper machines in October 2006. A total of 160 employees at the mill received severance packages and other arrangements. Major resources were devoted to minimising the impact on these workers.

### CHALLENGES

An expansion in the workforce is being planned in Brazil ahead of a doubling of capacity following the transfer of Union's PM7 to Norske Skog Pisa.

We face a different kind of challenge in China. As a result of strong competition over labour and big mobility, annual employee turnover is no less than 20%. That compares with 2-3% for our group as a whole.

"The process of restructuring the group can create uncertainty," says human resources vice president Axel Thuve. "We don't want to lose more good people than absolutely necessary. So we must focus on the values we stand for. The workforce must know that we are a preferred supplier in several regions of the world, with good opportunities for personal development and promotion."

### WORLD SUCCESS

Our papermaking course is becoming a world success. In cooperation with the Norwegian Industries College, we

have contributed to a web-based education in our business. A supplement to the normal apprentice course for process technicians, it covers physics, mathematics and chemistry as well as a detailed introduction to production and processes. The goal is to equip technicians to work more independently and to understand the overall picture. Employees in France, the Czech Republic, Brazil and Chile as well as Norway took the papermaking course in 2006. It is being steadily translated into additional languages, and is also in demand externally. The in-house management course was upgraded and is now called Keys to Leadership.

### ORGANISED

With a new structure and greater independence for each mill, it is relevant to ask how cooperation with employees will be organised across regions and mills in 2007.

"Implementation of the Norske Skog production system (NSPS) began in 2006, and this quality programme will play a central part in all improvement activities at our mills," says Thuve. "NSPS is largely personnel-related, with a focus on training and expertise development."

# Cooperation with employees

We have developed special guidelines for collaborating with union representatives in the company on the basis of our core values of honesty, openness and cooperation.

○ An agreement was also concluded in 2002 with the International Federation of Chemical, Energy, Mine and General Workers (ICEM), which sets minimum global standards for employment, health and safety, and human rights. This was the first deal of its kind in the pulp and paper industry, and has since been extended.

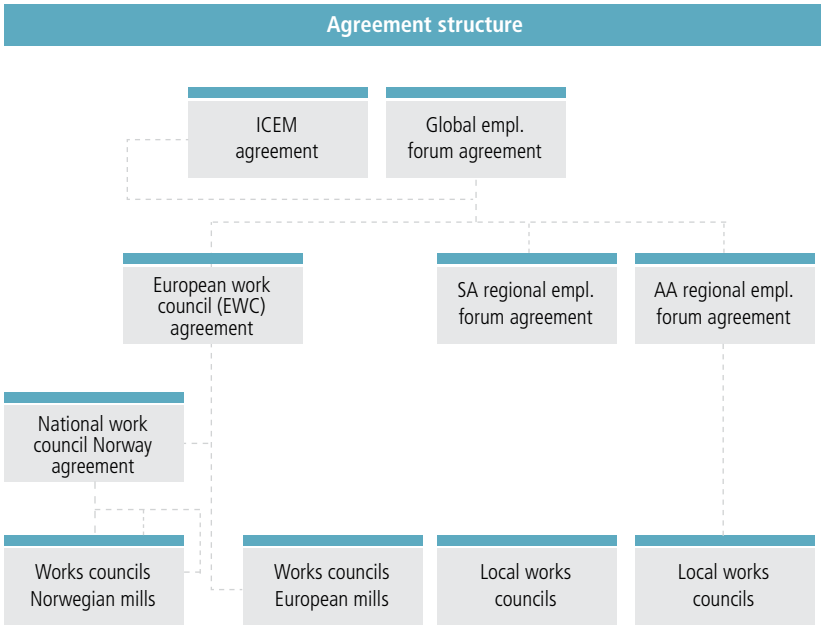
In addition, formal agreements on exchange of information and consultation have been established with union officials at all levels in our organisation.

- The Global Employee Forum (GEF) embraces union officials from all our mills. The first meeting of this body was held in August 2005.
- Agreements have been reached on works councils for Australasia, South America and Europe.
- Systems have been established at all our mills to provide a structured and open process for cooperation, information and consultation, based on local agreements and legislation.
- We have also agreed on a national Norwegian works council with all the local unions, covering information and cooperation on issues of common interest relating to our activities and businesses in Norway.

Following the acquisition of Abitibi's 50% holding in PanAsia during the autumn, an integration process was initiated which also covers cooperation aspects in Asia. Our mills in China and Korea currently have no unions or elected officials as at our other units. Based on good experience in Korea, efforts have been initiated to establish local works councils at the mills. This will provide opportunities for develop-

ing good and structured relationships which allow local managements and worker representatives to exchange information and discuss issues of mutual interest. A works council has been established at Norske Skog Singburi in Thailand for several years.

Our current agreement structure is as follows:





## Employee figures

### MILL - UNIT

	NUMBER OF EMPLOYEES (FTE) END 2006			TOTAL	MALE AND FEMALE EMPLOYEES IN %		% OF EMPLOYEES TRADE UNIONS COVERED	AVERAGE HOURS TRAINING/YEAR/ EMPLOYEE
	ORDINARY	TEMPORARY	OTHER EMPLOYEES		MALE END 2006	FEMALE END 2006		
Albury	240	25	3	268	92	8	71	59
Boyer	353	51	24	428	95	5	71	71
Tasman	414	14	0	428	90	10	73	85
Sydney (sales + reg. staff)	65	2	0	67	69	31	0	40
<b>AA Total</b>	<b>1072</b>	<b>92</b>	<b>27</b>	<b>1191</b>	<b>91.1</b>	<b>8.9</b>		
Bio Bio + Sales Chile	239	16	9	264	93	7	61	85
Pisa incl. regional staffs	324	21	3	348	92	8	100	44
<b>SA Total</b>	<b>563</b>	<b>37</b>	<b>12</b>	<b>612</b>	<b>92.4</b>	<b>7.6</b>		
Bruck	469	4	17	490	91	9	100	43
Follum	497	44	6	547	89	11	91	20
Golbey	446	24	20	490	87	13	99	30
Parenco	431	0	10	441	97	3	99	28
Saugbrugs	670	52	13	735	93	7	90	22
Skogn	517	32	2	551	95	5	92	65
Steti	206	18	0	224	73	27	39	15
Union	35	1	0	36	99	1	NA	NA
Walsum	556	0	6	562	94	6	85	24
Sales offices Europe+US	121	0	0	121	53	47	NA	NA
Antwerp (BSC, LOG, RP incl. US)	38	4	0	42	54	46	NA	NA
Corporate + corp. functions	160	5	48	213	61	39	NA	NA
Forestia (sold 2006)	0	0	0	0	NA	NA	NA	NA
Reparco	97	15	0	112	90	10	NA	NA
<b>Europe Total</b>	<b>4243</b>	<b>199</b>	<b>122</b>	<b>4564</b>	<b>88.7</b>	<b>11.3</b>		
Jeonju	559	5	5	569	98	2	0	34
Chonwong	143	2	0	145	97	3	0	56
Seoul office	53	2	0	55	87	13	0	100
SNP Shanghai	267	0	0	267	88	12	0	35
Sales Korea	26	0	0	26	54	46	0	38
HNLC Hebei	309	0	17	326	90	10	0	11
Singburi	259	1	0	260	75	25	92	40
Singapore - NSPA	18	2	3	23	52	48	0	15
<b>Asia total</b>	<b>1634</b>	<b>12</b>	<b>25</b>	<b>1671</b>	<b>89.5</b>	<b>10.5</b>		
<b>Totals</b>	<b>7512</b>	<b>340</b>	<b>186</b>	<b>8038</b>	<b>89.5</b>	<b>10.5</b>		

## Equal opportunities in Norske Skog

Norway's Equal Opportunities Act requires Norwegian companies to report on this issue. We have observed that a general consensus on equal opportunities is gaining ground in the rest of Europe and other regions where we have operations.

We already take a global perspective in our guidelines on equal opportunities, and aim to facilitate a further increase in the proportion of women in

senior positions. In line with that goal, we have appointed a woman as senior vice president for human resources and organisation. Kristin Slyngstad Klitzing took over this job on 1 January 2007.

Our group belongs to an industry which has traditionally been male-dominated, with far more men than women in its workforce. We still have only one women mill manager at our 18 production facilities.

### Statistics for 2006

- Proportion of women directors: 3 of 9
- Proportion of women among shareholder-elected directors: 3 of 6
- Proportion of women in the workforce: 10.5%

# Global learning

Workers at our mill in Chile get up at 05.00 to listen to lectures transmitted by our NSI Academy directly from a studio in Helsinki, Finland. It is mid-morning for their colleagues in Europe and evening in New Zealand. Dialogue between students and tutors takes place over the web and by phone.

The NSI Academy was launched in April 2004. Each of its courses has a unique professional content and runs for about three-four months with lectures, homework and a written exam. The sixth course is currently under way.

About 70 people signed up during 2006 for the stock preparation course. They came from all the regions in which we have mills – South America, Europe, Australasia and Asia. Forty-two students completed the course in 2006.

Experienced operatives with an engineering or graduate engineering background can apply to the NSI Academy. Entry standards are high. Students must have at least five to 10 years of experience even to be considered.

Internationally-recognised specialists at university level and experts from the major consultancies in paper production are brought in as lecturers. The drop-out rate is on a par with demanding university courses.

DVDs containing the lectures are subsequently sent to the human resources department at each mill. Those who fail to complete the course first time round can thereby resume the study or pursue revision.

# Seeking to facilitate whistleblowing

**We are developing a special policy on whistleblowers as part of a revision of our ethical code of conduct in 2007.**

“We want to facilitate an open and honest corporate culture,” says Tom Bratlie, vice president corporate communications. “Examples from industry both in Norway and internationally have shown us that we need a culture for whistleblowing.”

Norway’s Working Environment Act is due to be updated with regulations on how employers and employees should behave in raising concerns. We want to develop our own guidelines on this issue for our whole global group.

Great weight is given by us to ethical standards. “We work every day on our core values of openness, honesty and cooperation,” says Bratlie. “A good corporate culture also means that we must be open to criticism and to people calling attention to criticisable conditions.”

Establishing secure channels which let whistleblowers know how to proceed is also important. “It should basically

**Whistleblowing** involves raising conditions open to criticism in a company with somebody who can do something about them. This usually has positive consequences for the company concerned and society, because corrective action can be taken. Employees who are willing to blow the whistle are accordingly an important resource.

be possible to go to your immediate superior with information about unacceptable conditions,” Bratlie notes. “To report more serious concerns, however, you might have to go higher – and ultimately to the board.”

## BRAVE

Whistleblowing has become a familiar concept after major corruption cases and swindles which have attracted massive media coverage. They would not have been exposed without brave employees who dared to speak out. But criticisable conditions can be both major and minor, and relate to in-house issues as well as relations with customers, suppliers and society at large. “Bullying, harassment, unethical treatment of customers and suppliers and environ-

mental crime are examples of conditions we can’t accept in Norske Skog,” says Bratlie.

## GLOBAL STANDARD

Our executive management and governing bodies are due to review our ethical code of conduct and the new guidelines on whistleblowing during 2007.

“Our core values are just as important and relevant for all employees, regardless of where in the world they work and their cultural background,” says Bratlie. “I am concerned to ensure that our ethical guidelines are robust and formulated in a way which has practical significance for our whole organisation.”

## Art projects with newsprint

Newsprint and the arts are a perfect match. Norske Skog Walsum and pupils at a local school joined together for the art project 'People & Paper,' using newsprint in artwork. In Oslo, five rolls of Follum paper were exhibited in an art gallery along with two litres of blue ink. Icelandic artist Kristjan Gudmundsson created the artwork.

## Norske Skog recommends Ibsen

Norske Skog donated NOK 200 000 to Ibsenlauget, an organisation started by Norwegian companies. The funds were used to organise events celebrating the great Norwegian dramatist Henrik Ibsen during 2006, the 100th anniversary of his death.

## Union deal in Malaysia

Official recognition of the right to unionise has been won by the paper-makers at MNI in Malaysia after much hard work backed by Norske Skog's unions and its global union agreement.

Employees at MNI have thereby put a couple of disputatious years behind them. After forming a union in early 2005, they had to negotiate on two fronts – with MNI to get the union recognised and with the PPMEU paper workers' union and MNI over a pay deal.

Personnel at the mill can thank Norske Skog's global deal with the International Federation of Chemical, Energy, Mine and General Workers' Unions (ICEM) and the Norwegian United Federation of Trade Unions for their success, says Mikael Sterbäck.



## Norske Skog "Best in Class"

Norske Skog has for the second time earned "Best in Class" status for its leading environmental and social performance and therefore qualifies for investment in Storebrand's Social Responsible Investment (SRI) mandates.

Storebrand's Socially Responsible Investment team performs periodic analyses of companies listed in the Morgan Stanley Capital International World Index. These analyses cover environmental and social responsibility performance.

Those companies ranking among the top 30 of Storebrand's SRI assessment earn the Storebrand Best in Class qualification.

## School in Zululand

South African orphans are to get school materials with help from Norske Skog, which has donated NOK 100 000 to the ZuluMentor organisation formed a year ago by Norwegian actor and author Mari Maurstad. Helping to develop education provision for the 350 children in Eshowe, a district in Zululand, forms part of Norske Skog's Young Reader project.

# Helping young people to read

Three years of experience with the Young Reader programme, show that we have achieved awareness and knowledge in the market about our company and its involvement in this area.

Our involvement with the Young Reader programme has a form and content which identify us as a different kind of company

We are the only paper manufacturer to get to

More than 50 customers sent their publications to us to be evaluated by our young reader expert at IfraExpo. After visiting us at this show, Polish publishers have taken the initiative on holding a young reader seminar next year.

Another customer response has been capitalised over the past two years in two major collaboration projects in Brazil, where 18 million schoolchildren will be given access to the country's newspapers in combination with relevant teaching materials. Teachers will be sent on courses to learn how to exploit newspapers as an educational resource.

With the help of our annual contribution to the WAN's Young Reader programme, the Newspapers in Education concept is being introduced in a growing number of countries. More than 70 nations now participate in Young Reader activities. Since our collaboration with the WAN began in 2003, projects have largely been launched in new democracies where the free press has gained better working conditions.

In the time to come, however, a commitment will also be made to mature markets where newspaper circulations are in decline and the work of attracting young readers must be intensified.

We are the only paper manufacturer to get to grips with one of the biggest challenges facing our industry and our customers – helping children and young people to learn to read and new generations to appreciate the benefits and pleasures of a lifelong relationship with the print media.

We cooperate with the whole international newspaper industry through the World Association of Newspapers (WAN), which operates Young Reader projects in more than 60 countries.

This collaboration has also brought us many invitations to cooperate in Young Reader activities. We have defined our role as a catalyst in helping customers to learn as much as possible about the best methods for recruiting new generations of readers.

Activities include organising customer seminars or round-table conferences, and disseminating information on the subject at industry conferences and exhibitions, such as IfraExpo.

The response from our customers has not been lacking. They are aware of our cooperation with the WAN, and that we also get involved in specific activities which both we and our customers find interesting.

## Social goals

- encourage children worldwide to become good citizens by stimulating and improving their reading skills
- help to promote freedom of expression and encourage the development of new democracies
- promote newspapers as an appropriate educational tool in developing countries, in line with the UN millennium goal and Global Compact for fighting poverty.

## Commercial goals

- promote increased sales through local goodwill and relationship-building in both new and established markets
- enhance our reputation and image both nationally and internationally
- help to safeguard our customer base for future generations
- build in-house pride and commitment.





*"We couldn't have accomplished a 10th of this without Norske Skog."*

## Interview with Aralynn McMane, head of the Young Reader programme at the World Association of Newspapers (WAN).

### 1 What were the most important advances made by the programme in 2006?

- For the first time, the programme was given a leading role in our most prestigious event – the annual World Congress for Newspapers – through a roundtable conference. Although two such discussions were also taking place at the same time, we were packed out with more than 100 participants. Many had to stand.
- We also expanded the prize for the world's young readers to four categories. No less than 116 contributions were received, more than three times our previous record.
- The World Newspaper Passport developed along exciting lines, including a Russian version. With good support from Norske Skog UK, we have had two versions printed in newspapers – including one devoted to football.
- We launched a new worldwide survey to identify the needs of young people for news and information in order to equip publishers with the information they need for a media reality characterised by major changes.
- We followed up important News-

paper in Education schemes in the Asia/Pacific region (12 countries), with tailored projects in Indonesia and Thailand, in South America (six countries – Mexico, Argentina, Chile, Ecuador, Guatemala and Peru), and in the Baltic states (Latvia and Estonia). In other parts of the world, we followed up work by teachers and/or editors in Bosnia-Herzegovina, in Cairo for Iraqi teachers, Liberia, Russia and South Africa.

- At the request of a former winner of our Golden Pen award, we launched an Newspaper in education project in Sudan.

- We also made contributions to conferences in Canada, Germany and the USA, because we know that a big need to spread the positive message also exists in the "developed" part of the world.

### 2 What is the biggest benefit of reading newspapers for the younger generation, compared with reading news stories on the internet?

They get time to read and reflect over developments in the world, with news from a credible source in a setting

where they can also ask somebody to go into the issues in greater depth. A newspaper demands by definition a quiet time to reflect, regardless of where it is read. The internet can offer in-depth information, but that calls for more work and much of what is to be found cannot be described as reliable.

### 3 Studies show that new newspapers are more concerned with social mobility, which strengthens participation and democracy. Are established newspapers aware of this?

One of our clear goals for 2007 is to help newspapers convey to teachers and parents that newspaper reading is good for children and for the future of their country, and to tell advertisers that young newspaper readers are and will continue to be good customers.

### 4 Have Norske Skog's sponsor funds meant anything for Young Reader projects in 2006, and if so, what?

That's an easy one to answer. We couldn't have accomplished a 10th of this without Norske Skog.

Number of brazilian children participating in Young Reades programme

18 000 000



## Young readers speak out

Children and young people were invited to influence the content of newspapers during 2006 through our sponsorship collaboration with the World Association of Newspapers (WAN).

○ We sponsor newspaper reading in more than 70 nations worldwide through the Young Readers project. Indonesia, Thailand, Liberia and Iraq are the latest countries to join this drive, which uses

newspapers to add relevance through current news to literature curricula in schools, enhance understanding of democracy and social development, and encourage pupils to continue reading the press as adults.

While the project was originally based on conveying information from newspapers to young people, we have since found that schoolchildren actually have much to contribute in the other direction. Nobody knows better than them what they want to find in a newspaper. That makes young people an important resource for the world's publishers in the battle to recruit the next generation of their

readers. So much importance is attached to this aspect that 500 pupils from all over Europe were invited, for instance, to the European Parliament in Strasbourg during 2006 to put their views to 1 200 newspaper editors. At customer seminars in Russia, the UK, the Netherlands, France and Germany, too, schoolchildren have actively influenced the shaping of tomorrow's newspapers.

### SUBSTANCE SOUGHT

"One pupil wanted newspapers printed on chocolate, so that they can be eaten after reading," says Pål Stensaas, our representative on the world committee for Young Reader projects in the WAN. "Above all, however, young readers want substance and credible journalism. Constructive suggestions resulted in a large number of newspaper articles in 2006 with slants aimed at young readers."

The WAN is a global interest or-

## Winners on paper

Research by the Newspaper Association of America Foundation (NAAF) shows that schoolchildren who read newspapers score higher in mathematics, geography, social sciences and language than those who do not. Regardless of parental background, people who start reading papers at a young age also advance more easily up the career ladder.

When the Young Readers programme was launched, it was consciously steered towards new democracies and countries newly restored to peace. Suppressed views often find expression in new newspapers after the fall of totalitarian regimes. The number of publications blossoms, and consumption of newsprint rises.

Serbia was the first country in which we sponsored Young Readers. Today, all the Balkan countries use newspapers in education.

The commitment to young readers was also strengthened in mature markets during 2006 in order to ensure the recruitment of new readers.

## Boom for school papers

**A Norwegian school newspaper project was launched in 2005 together with the Norwegian Media Businesses' Association (MBL), Newspapers in Education and information technology company Hewlett Packard.**

The aim is to establish such publications and involve both teachers and pupils in journalistic work and editing so that schoolchildren can discover the newspaper as a useful and living medium. Activity increased in 2006, with many courses in various regions. These included two-day programmes for teachers and pupils in Elverum. Ten school newspapers were established in 2005, and another six

joined the project in 2006.

All the teachers from the pilot schools participated in a meeting for NIE instructors during the spring term.

A special handbook for school news-papers has been developed, and is much in demand. The quality of papers issued by schools is rising. At Vassenden in Sogn og Fjordane and the Elverum school district, collaboration has been established with the local paper.

Hewlett Packard, a supplier of IT equipment to Norske Skog, participates in the project by donating PCs, printers and digital cameras to the school editorial teams.

organisation for the newspaper industry, representing 18 000 publications and 72 national publisher organisations in 102 countries.

"Through conferences and seminars worldwide, we've helped to build a platform where our customers meet," says Stensaas. "The newspapers learn from each other and build networks to win young readers against stiff competition from new media.

"The industry's common goal is to strengthen the bedrock of newspaper readers. It survived the media revolutions which followed the appearance of radio and TV. The massive commitment to young readers reflects a strong faith that newspapers will retain a dominant position among news channels."

### LONG-TERM

We signed our first three-year sponsorship deal with the WAN in 2003, and this agreement has been

extended until 2008. The planned cooperation runs until 2013.

Young Readers is our biggest-ever sponsorship project, and we currently contribute NOK 4.5 million per year. We also spent NOK 1.5 million on customer activities in a number of markets and projects in Norwegian schools during 2006.

In Brazil, where we rank as the only newsprint supplier with domestic production, two major projects have been launched for our own account. Channelled through the Associacao Nacional de Jornais, the national publishers' association, they embrace 18 million schoolchildren and 100 newspapers.

### WORLD NEWSPAPER PASSPORT

Cooperation between schools and newspapers goes right back to the 19th century. However, it was first in 1991 that the WAN began to coordinate such activity on a global basis under

the Newspapers in Education (NIE) programme. Young Readers is the umbrella for NIE and numerous other commitments directed by the WAN at tomorrow's readers.

The World Newspaper Passport is one of the tools. This "reader's pass" is issued to pupils who have completed a booklet of assignments, which include an introduction to reading newspapers critically. A total of 225 000 World Newspaper Passports had been issued at 31 December 2006.

### POSITIVE FEEDBACK

Our sales personnel report much goodwill from customers in 2006 as a result of the sponsorship project. The dialogue is no longer confined to buying and selling paper. We have a common cause to fight for – winning young readers for newspapers.

# Sponsorship

Our mills are often the cornerstone of local communities, and many are the largest employer in their region. As well as providing both direct and indirect employment, these facilities work closely at the local level with communities to assist with other needs.

Social responsibility involves remaining sensitive to the needs of local communities and aware of the impact our operations have upon them. It means maintaining an open dialogue and responding with local measures. It also means showing respect for, and building upon, local cultures and traditions.

We sponsored a number of projects at both local and national levels in 2006. Some examples are:

- Newspapers in Education class for North Korean defectors in Korea
- Jeonju city festivals, including a Paper Festival in Korea
- Local sports activities and the Bellona environmental group at Norske Skog Saugbrugs
- Community theatre and sports in Hønefoss at Norske Skog Follum
- Local schools and sports clubs by Norske Skog Albury
- Drug and alcohol centre by Norske Skog Pisa
- Newspapers in Education for six million students in Brazil by Norske Skog Pisa
- Winter campaign providing poor people with warm clothes by Norske Skog Pisa
- Sponsorship of Zhaoxian Hospital by Norske Skog Hebei
- Sponsorship of Zhaoxian Orphanage by Norske Skog Hebei
- A campaign promoting recycling awareness at Norske Skog Singburi
- Scholarships for local students at Norske Skog Singburi
- Local sports activities, events, associations and artists at Norske Skog Bruck
- Newsprint for 150 000 copies of a newspaper for children dealing with paper and the environment at Norske Skog Golbey

## Local and national sponsorship

Behind these numbers there are lot of local engagement and activities. The budgets could look limited, but our support and intitatives have positive impact on millions of people in their local environment.

BUSINESS UNIT	LOCAL COMMUNITY	JOINT SPONSOR	PROJECT NATIONAL LEVEL
Jeonju/Cheongwon	USD 16 600	USD 213 000	USD 103 000
Hebei	USD 6 218		USD 769
Singburi	USD 108 000		USD 2 100
Pisa	RL 79 624	RL 55 000	RL 160 000
Bio Bio	USD 16 000		
Albury	AUD 20 000	AUD 29 700	
Boyer	AUD 81 051		
Tasman	AUD 117 132		
Saugbrugs	NOK 275 000		
Follum	NOK 285 000		
Skogn	NOK 480 000		
Walsum	EUR 2 450		
Golbey	EUR 8 600		Paper donations
Bruck	EUR 60 000	EUR 5 860	EUR 12 000
Steti	CZK 358 000		CZK 35 000
Parenco	EUR 13 170	EUR 10 080	EUR 5 300



# Advancing the Global Compact



Norske Skog is committed to contributing to sustainable development. Customers, suppliers and the world at large can rely on us. We take work on issues relating to the environment and social responsibility seriously. Our core values of openness, honesty and cooperation as well as our policies and guidelines build on the UN Universal Declaration of Human Rights and the 10 principles of UN Global Compact.

- We were accordingly the first international pulp and paper company to sign a global agreement on employee rights with the International Federation of Chemical, Energy, Mine and General Workers' Unions (ICEM).
- We have a close and good collaboration with our unions through several channels – reinforced most recently through the creation of a Global Employee Forum. The latter provides a common meeting place for employees and management, where we can give and receive information and discuss relevant issues relating to Norske Skog.
- We accept our social responsibility to the local communities in which our operations are pursued. Business units and employees involve themselves in a number of areas in these communities, supporting activities which help to improve the quality of life, health and knowledge.
- Education is defined as our contribution to the UN's millennium development goal, and has been visualised through our commitment to improving the reading skills of young people through the use of newspapers in education. A particular effort is being made in new democracies where the free press has achieved better conditions.
- We and the World Association of Newspapers have established a close relationship in developing Young Reader programmes in both developing and mature markets. Originally a five-year programme, this work has been expanded for another five years from 2008 to 2013.
- We are a member of the Global Compact Nordic network (GCNN), where participants from Denmark,

- Finland, Norway and Sweden discuss the implementation of the 10 principles and common challenges.
- Understanding and living our values, corporate conduct and CSR commitments form part of our leadership programmes, and of the Norske Skog Spirit programme which embraces all our employees.
  - We promote diversity through our leadership planning process, and are one of the few Norwegian companies to have a board of directors with a 50-50 split between men and women.

**The UN Global Compact** is a voluntary international corporate citizenship network initiated to support the participation of both the private sector and other social players in advancing responsible corporate citizenship and universal social and environmental principles to meet the challenges of globalisation.

UN Global Compact Principles	Corresponding on GRI Indicators	Sustainability report 2006 page
<b>Principle 1</b> Human Rights: Business should support and respect the protection of internationally proclaimed human rights within their sphere of influence	HR 1-9	S: 4-5, 38-41
<b>Principle 2</b> Human Rights: Make sure that they are not complicit in human rights abuses	HR 1-2 HR 8	S: 4-5, 38-41
<b>Principle 3</b> Labour: Business should uphold the freedom of association and the effective recognition of the right to collective bargaining	HR 5, LA4-5	S: 4-5, 38-41
<b>Principle 4</b> Labour: The elimination of all forms of forced and compulsory labour	HR 7	S: 4-5, 38-41
<b>Principle 5</b> Labour: The effective abolition of child labour	HR 6	S: 4-5, 38-41
<b>Principle 6</b> Labour: The effective abolition of child labour employment and occupation	HR4, LA2 LA 13-14	S: 4-5, 38-41
<b>Principle 7</b> Environment: Business should support a precautionary approach to environmental challenges	Profile disclosure 4.11	S 4-26
<b>Principle 8</b> Environment: Undertake initiatives to promote greater environmental responsibility	EN2, EN5-7, EN10 EN13,14,18,21,22, 26,27,30	S: 4-29
<b>Principle 9</b> Environment: Encourage the development and diffusion of environmentally friendly technologies	EN 2,5,6,7 10,18,26,27	S: 4-29
<b>Principle 10</b> Anticorruption: Business should work against all forms of corruption, including extortion and bribery	SO4	S: 4-5, 38-41

# Global Reporting Initiative (GRI)

The GRI's guidelines for sustainability reporting have been developed through a process involving a broad-based group of interests. Intended for voluntary use, the guidelines cover reporting under the three pillars for sustainable development: economic growth, environmental performance and social responsibility.

Norske Skog supports the work of establishing a global standard for sustainability reporting. The report is created in cooperation with relevant departments

in the company and is also based on feedback from stakeholders, and the GRI guidelines have been used since 2003 as a tool in the work of developing such reporting. Norske Skog has sought as far as possible to report in accordance with the new version. In the company's view, its reporting practice is almost wholly in line with the GRI's principles.

Nevertheless, the company does not report fully on all the elements and indicators specified in the GRI guidelines.

That applies primarily to issues which have little relevance to its operations. The chart indicates where relevant information on the various items and core indicators can be found in the annual report and sustainability report. This information may be provided in several places, and will overall meet the GRI guidelines fully or in part.

For more information on the GRI, see [www.globalreporting.org](http://www.globalreporting.org).

A: Annual report   S: Sustainability report

	GRI guidelines	Reference
1	Strategy and Analysis	
1.1	Statement from the most senior decision maker of the organization (e.g., CEO, chair, or equivalent senior position) about the relevance of sustainability to the organization and its strategy.	S: 4-5
1.2	Description of key impacts, risks, and opportunities.	S: 4-5   A: 2,5,16-17, 26-27, 50-55
2	Organizational Profile	
2.1	Name of the organization	A: cover, 43
2.2	Primary brands, products, and/or services	A: 11
2.3	Operational structure of the organisation, including main divisions, operating companies, subsidiaries, and joint ventures	A: cover, 75-77
2.4	Location of organization's headquarters	A: cover, 43
2.5	Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered by the report	A: cover, 14-15
2.6	Nature of ownership and legal form	A: 43
2.7	Markets served (including geographic breakdown, sectors served, and types of customers/ beneficiaries	A: 7-10, 47-48
2.8	Scale of the reporting organisation, including: Number of employees; Net sales (private organizations) or net revenue (public sector organizations); Total capitalization broken down in terms of debt and equity (private sector org); and Quantity of products or services provided	A: cover, 10, 14-15, 39, 56-57
2.9	Significant changes during the reporting period regarding size, structure, or ownership ....	A: 2-5, 45, 52-53
2.10	Awards received in the reporting period	S: 41
3	Report Parameters	
	<b>Report Profile</b>	
3.1	Reporting period (e.g. fiscal/calendar year) for information provided	A: cover,
3.2	Date of most recent previous report (if any)	"Annual report 2005"
3.3	Reporting cycle (annual, biennial, etc.)	"Annually"
3.4	Contact point for questions regarding the report or its content	S: cover   A: cover,
	<b>Report Scope and Boundary</b>	
3.5	Process for defining report content, including:	S: cover, 48
3.6	Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers).	A: 60-63   S: 27
3.7	State any specific limitations on the scope of boundary of the report	A: 60-63   S: 27
3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations	A: 60-63   S: 27

	GRI guidelines	Reference
3.9	Data measurements techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the indicators and other information in the report	A: 60-63    S: 9-10, 27
3.10	Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement (e.g., mergers/acquisitions, change of base years/-periods, nature of business, measurements methods)	A: 60-63
3.11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report	"no significant changes"
	<b>GRI Content Index</b>	
3.12	Table identifying the location of the Standard Disclosures in the report.	S: 48-52
	<b>Assurance</b>	
3.13	Policy and current practice with regards to seeking external assurance for the report. If not included in the assurance report accompanying the sustainability report, explain the scope and basis of any external assurance provided. Also explain the relationship between the reporting organization and the assurance provider(s)	A: 38-39    S: 27
4	<b>Governance, Commitments and Engagement</b>	
	<b>Governance</b>	
4.1	Governance structure of the organisation, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight	A: 35-43
4.2	Indicate whether the Chair of the highest governance body is also an executive officer (and, if so, their function within the organization's management and the reasons for this arrangement)	A: 37
4.3	For organizations that have a unitary board structure, state the number of members of the highest governance body that are independent and/or non-executive members. (State how the organization defines 'independent' and 'non-executive'. Applies only for organizations that have unitary board structures).	n.a
4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body.	A: 36, 43
4.5	Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure managements), and the organization's performance (including social and environmental performance)	A: 30, 38-39, 51, 66-67
4.6	Processes in place for the highest governance body to ensure conflicts of interest are avoided.	A: 37-38
4.7	Process for determining the qualifications and expertise of the members of the highest governance body for guiding the organization's strategy on economic, environmental, and social topics	A: 36-38
4.8	Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation.	A: 2, 35, 38    S: 14, 34, 38
4.9	Procedures of the highest governance body for overseeing the organization's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, principles.	A: 37-38    S: 11
4.10	Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance.	A: 37-38
	<b>Commitments to external initiatives</b>	
4.11	Explanation of whether and how the precautionary approach or principles is addressed by the organisation	A: 50-51    S: 5
4.12	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organisation subscribes or endorses	S: 7,14-15,42,47-48
4.13	Memberships in associations (such as industry associations) and/or national/international advocacy organisations in which the organization: <ul style="list-style-type: none"> <li>• Has positions in governance bodies;</li> <li>• Participates in projects or committees;</li> <li>• Provides substantive funding beyond routine membership dues; or</li> <li>• Views membership as strategic.</li> </ul> This refers primarily to memberships maintained at the organizational level.	S: 38

	GRI guidelines	Reference
4.14 4.15 4.16 4.17	<b>Stakeholder Engagement</b> List of stakeholder groups engaged by the organization. Basis for identification and selection of stakeholders with whom to engage Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting.	S: cover S: cover S: cover, 7, 30-31, 38, 42 S: cover, 7, 12, 31-32, 38
	<b>Economic Performance Indicators (Core)</b> Disclosures of management approach <b>Economic Performance</b> EC1 Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments. EC2 Financial implications and other risks and opportunities for the organization's activities due to climate change. EC3 Coverage of the organization's defined benefit plan obligations. EC4 Significant financial assistance received from government. <b>Market Presence</b> EC6 Policy, practices, and proportion of spending on locally-based suppliers at significant location of operation. EC7 Procedures for local hiring proportion of senior management hired from the local community at locations of significant operation. <b>Indirect Economic Impact</b> EC8 Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement.	A: 2,16-17,23 A: cover, 29, 56-57      S: 46 S: 6-7, 12-13      A: 19-20 A: 68 S: 19 Not reported Not reported S: 30-31, 46
	<b>Environmental Performance Indicators (Core)</b> Disclosures of management approach <b>Employment</b> EN1 Materials used by weight or volume. EN2 Percentage of materials used that are recycled input materials. <b>Energy</b> EN3 Direct energy consumption by primary energy source. EN4 Indirect energy consumption by primary source <b>Water</b> EN8 Total water withdrawal by source <b>Biodiversity</b> EN11 Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas. EN12 Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas. <b>Emissions, Effluents, and Waste</b> EN16 Total direct and indirect greenhouse gas emissions by weight. EN17 Other relevant indirect greenhouse gas emissions by weight. EN19 Emissions of ozone-depleting substances by weight. EN20 NOx, SOx, and other significant air emissions by type and weight. EN21 Total water discharge by quality and destination.	S: 4-29 S: 10,14-17, 28-29 S: 26, 28-29 S: 10,18-19, 28-29 Not reported S: 10, 20-22, 28-29 S: 14 S: 14-17 S: 10, 21, 28-29 Not reported Not reported S: 9, 20 S: 10, 20-22, 28-29



	GRI guidelines	Reference
EN22 EN23	Total weight of waste by type and disposal method. Total number and volume of significant spills.	S: 10, 22-23, 28-29 S: 20
EN26 EN27	<b>Products and Services</b> Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation. Percentage of products sold and their packaging materials that are reclaimed by category.	S: 26 Not reported
EN28	<b>Compliance</b> Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.	S: 20, 22
<h2>Social Performance Indicators (Core)</h2> <h3>Labor Practices and Decent Work</h3> <p>Disclosures of management approach</p> <p><b>Employment</b></p> <p>LA1 Total workforce by employment type, employment contract, and region. LA2 Total number and rate of employee turnover by age group, gender, and region.</p> <p><b>Labor/management Relations</b></p> <p>LA4 Percentage of employees covered by collective bargaining agreements. LA5 Minimum notice period(s) regarding operational changes, including whether it is specified in collective agreements.</p> <p><b>Occupational Health and Safety</b></p> <p>LA7 Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region. LA8 Education, training, counselling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases.</p> <p><b>Training and education</b></p> <p>LA10 Average hours of training per year per employee by employee category.</p> <p><b>Diversity and Equal Opportunity</b></p> <p>LA13 Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity. LA14 Ratio of basic salary of men to women by employee category.</p>		
	<h2>Social Performance Indicators (Core)</h2> <h3>Human Rights</h3> <p>Disclosures of management approach</p> <p><b>Investment and Procurement Practice</b></p> <p>HR1 Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening. HR2 Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken.</p> <p><b>Non-discrimination</b></p> <p>HR4 Total number of discrimination and actions taken.</p> <p><b>Freedom of Association and Collective Bargaining</b></p> <p>HR5 Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and actions taken to support these rights.</p>	<p>S: 4-5, 33-40</p> <p>Not reported</p> <p>Not reported</p> <p>“Non registered”</p> <p>S: 38, 41</p>

	GRI guidelines	Reference
HR6	<b>Child labor</b> Operations identified as having significant risk of incidents of child labor, and measures taken to contribute to the elimination of child labor.	"Non registered"
HR7	<b>Forced and Compulsory Labor</b> Operations identified as having significant risk for incident of forced or compulsory labor, and measures to contribute to the elimination of forced or compulsory labor.	"Non registered"
<h2>Social Performance Indicators (Core)</h2> <h3>Society</h3> <p>Disclosures of management approach</p> <p><b>Community</b> Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting.</p> <p><b>Corruption</b> Percentage and total number of business units analyzed for risks related to corruption. Percentage of employees trained n organization's anti-corruption policies and procedure Actions taken in response to incidents of corruption.</p> <p><b>Public Policy</b> Public policy positions and participation in public policy development and lobbying.</p> <p><b>Compliance</b> Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations.</p>		
SO1		S: 4-5, 33-40
SO2		S: 30-31,36-37,46
SO3		Not reported
SO4		Not reported
SO5		"Non registered"
SO8		A: 53
		"Non registered"
<h2>Social Performance Indicators (Core)</h2> <h3>Product Responsibility</h3> <p>Disclosures of management approach</p> <p><b>Customer Health and Safety</b> Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.</p> <p><b>Product and Service Labelling</b> Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements.</p> <p><b>Marketing Communication</b> Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship.</p> <p><b>Compliance</b> Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services.</p>		
PR1		S: 4-5, 33-40
PR3		n.a
PR6		Not reported
PR9		n.a
		"Non registered"

Report Application Level	C	C+	B	B+	A	A+
G1 Profile Disclosures	Report on: 1.1 2.1-2.10 3.1-3.8, 3.10-3.12 4.1-4.4, 4.14-4.15	Report on all criteria listed for Level C plus: 2.2 3.9, 3.13 4.5-4.13, 4.16-4.17	Same as requirement for Level B			
G2 Management Approach Disclosures	Not Required	Management Approach Disclosures for each Indicator Category	Management Approach Disclosures for each Indicator Category			
G3 Performance Indicators & Sector Supplement Performance Indicators	Report on a minimum of 10 Performance Indicators, including at least one from each of: Economic, Social and Environmental.	Report on a minimum of 20 Performance Indicators, at least one from each of: Economic, Environmental, Human rights, Labor, Society, Product Responsibility.	Report on each core G3 and Sector Supplement* indicator with due regard to the Materiality Principle by either: a) reporting on the indicator or b) explaining the reason for its omission.			

\*Sector supplement in final version



\* only environmental reporting

# Glossary

**Basis weight (substance):**

The weight of paper in grams per squaremetre. In North America other units are used (lb per 3 000 square feet).

**Biofuel:**

Renewable fuel coming from the vegetable kingdom, such as bark, wood residues and sludge from wastewater treatment plants.

**Biological treatment**

A method of cleansing waste water in which micro organisms convert dissolved organic material in the effluent to water, CO<sub>2</sub> and combustible sludge.

**Bleaching:**

Removal or modification of the coloured components in the pulp to improve its brightness. Mechanical pulp is bleached mainly by sodium hydrosulphite and hydrogen peroxide.

**Cellulose:**

Organic substance, which is the most important component of the cell walls in wood fibre.

**Chemical oxygen demand (COD):**

Measure of the amount of oxygen needed to completely degrade the mainly organic compounds in the effluent.

**Chemical pulp:**

Pulp in which the fibres have been separated through a chemical process, normally through cooking. Chemical pulp consists mainly of cellulose.

**Coating:**

A process in which the paper sheet is given a thin coating of kaolin or other pigments, to give the sheet a good printing surface.

**De-inked pulp (DIP):**

Pulp produced by de-inking recovered paper from newspapers and magazines.

**Eco-Management and Audit Scheme (EMAS):**

EU standard for environmental management.

**Environmental Management System:**

An overall management system providing systematic implementation of the company's environment policy. Can be structured according to EMAS and/or ISO 14001.

**External treatment:**

Treatment of discharge water outside the actual production process. There are three main types; mechanical, biological and chemical treatment.

**Fillers:**

Inorganic fillers are used as additive in paper production to, among other things, give the paper a more even and brighter surface. Various types are used, as finely ground marble and kaolin.

**Groundwood pulp:**

Pulp produced by pressing debarked logs against a rotating grinding stone.

**H-value:**

Lost time injuries per million hour worked.

**ISO14001:**

International environmental management standard.

**Lignin:**

Organic substance binding the wood fibres together.

**Long fibre pulp:**

Chemical pulp produced from softwood such as spruce or pine.

**LWC (Light Weight Coated) magazine paper:**

Wood-containing coated publication paper.

**Mechanical pulp:**

A mixture of fibres having been separated through mechanical processing in refiners or grinders.

**Newsprint:**

Wood-containing publication paper containing up to 100 % mechanical pulp and/or de-inked pulp.

**Publication paper:**

A general term for newsprint and magazine paper grades.

**Pulp:**

Semi-finished product for papermaking, made from wood or recovered paper.

**Recovered paper:**

Used newspapers and magazines, paper recovered from offices and printing works, used packaging.

**Refiner:**

A machine which makes mechanical pulp by treating wood chips between rotating steel discs. The surface pattern of the discs helps separate the individual fibres in the wood.

**SC (Super Calendered) magazine paper:**

Wood-containing uncoated publication paper. This paper is given a mechanical surface treatment to give it a smoother surface and better printing characteristics.

**Sedimentation plant:**

Mechanical treatment of effluent in which fibre and suspended solids is separated out.

**Short fibre pulp:**

Chemical pulp produced from hardwood such as birch or eucalyptus.

**Suspended solids (SS):**

Amount of particles that can be separated/-filtered out from effluent with the help of a fine-meshed filter.

**Thermo Mechanical Pulp (TMP):**

Mechanical pulp produced by refining chips that are pre-heated to 100-115°C. The high temperature softens lignin and helps separate the fibres, thus yielding longer and stronger fibres than in grinding.

**Wood containing publication paper:**

General term for paper containing mainly mechanical pulp and/or de-inked pulp. The most common grades are newsprint, SC magazine paper and LWC magazine paper.

**Wood:**

General term for wood as a raw material to sawmills and pulp and paper mills.





# We listen to you

We have many groups of stakeholders. Employees and trade unions are two, owners and investors, customers, analysts, suppliers, the media and environmental organisations are others. We are concerned with the expectations these stakeholders have of us, and how we can get better at meeting their requirements. This is important for avoiding unrealistic expectations. We also get good suggestions for tailoring our interim and annual reports more closely to the needs of stakeholders.

Such input has been received through press conferences and meetings, general meetings, meetings with analysts, and external analyses and assessments of our reports.

## **What we do with suggestions**

We have received many important and useful suggestions. Satisfying all the requirements presented by every stakeholder group is a challenge. We try to

strike an appropriate balance between the provisions of the Norwegian Accounting Act concerning the contents of an annual report from a listed company, what the various stakeholder groups want to see and what we feel could be of interest.

## **Invitation to our readers**

Should there be topics we should have covered, facts which could be better documented, or other suggestions concerning our interim and annual reports – both positive and negative – please send an e-mail to [terje.dahlen@norskeskog.com](mailto:terje.dahlen@norskeskog.com).

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